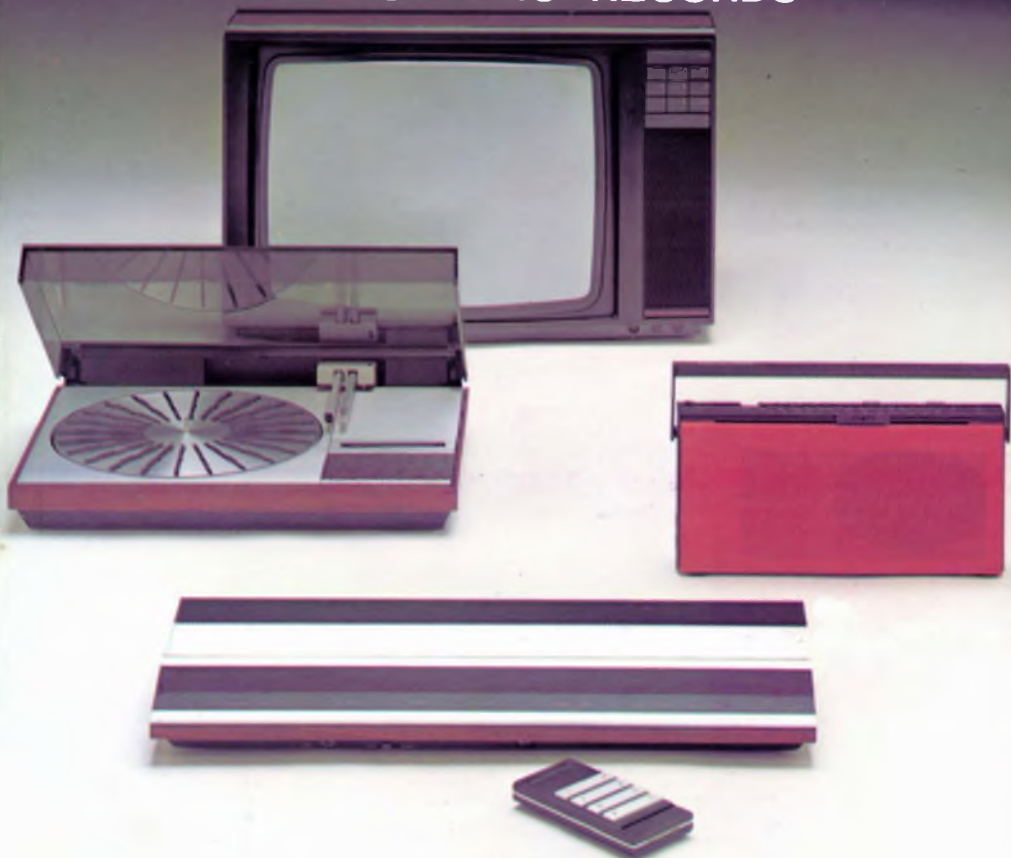


HI-FI YEAR BOOK

HOME ENTERTAINMENT

& 1980

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GAMES • VIDEO • RECORDS



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HIFI YEAR BOOK 1980

Edited by Kenneth Ellmore

Manager IPC Ancillary Publications and Year Books

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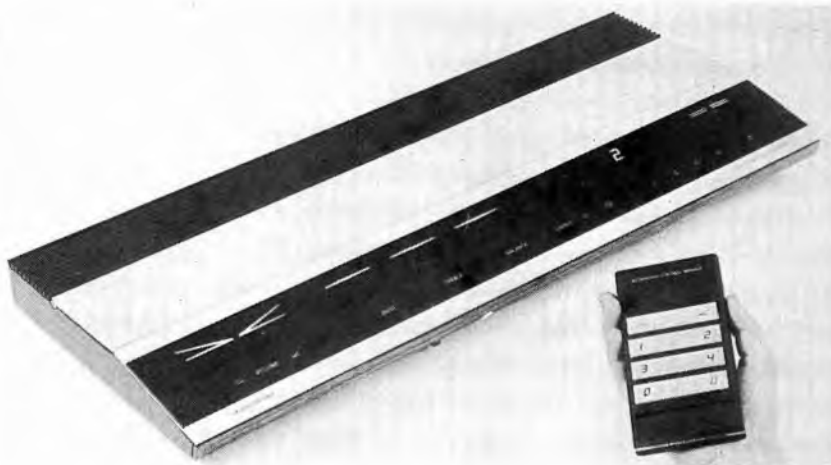
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Foreword

The Hi-Fi Year Book marches into the 80's by extending it's scope to cover additional forms of Home Entertainment. With the 1980 edition we have reached the grand age of 21 and time has come for a re-think of policy.

This does not mean that there will be any deterioration in Hi-Fi coverage. All the existing sections remain and in addition we have introduced Casseivers, Racking Systems, and a Miscellaneous slot to cover the numerous items that defy general classification. All this material is completely updated with new illustrations.

At the same time we are introducing new sections on Electronic Organs, Electronic and TV games, Video Cassette Equipment, Colour Television Sets, and top quality Radio, Radiograms and Cassettes. This, we hope, will provide a complete guide to the top end of the Home Entertainment market under one cover.

Naturally specifications have to be brief and prices should be regarded as a guide only. There is always a long gap between the time information is received and actual publication date with many prices invariably altering in the interim. In fact, all details in this edition were already in the hands of the printer when the VAT figure was upped to 15 per cent. If you want fuller details and up-to-date prices please contact your local dealer who will be happy to help.

You will find a list of Hi-Fi dealers at the back of the book. Alternatively most manufacturers are able and willing to supply information on their products. We do not have the facilities in this office to answer reader enquiries.

Once again I would like to express my gratitude to Geoff Shorter, Technical Editor of Wireless World for his help in compiling this book. Every effort has been made to make it as accurate and comprehensive as possible but the Publishers cannot take responsibility for any errors or omissions.

Abbreviations

A	-- ampere	LED	-- light emitting diode	VAT	-- Value added tax
A-B	-- comparison test	LP	-- long play (records or tape)	VHF	-- very high frequency (VHF radio approx 88-108MHz, VHF TV approx 174-216MHz)
AC	-- alternating current	LW	-- long waves (approx 1100-2000m)	V	-- volts or voltage
AGC	-- automatic frequency control	m	-- metres	VA	-- volt/ampere
AGC	-- automatic gain control	M	-- megohms (millions of ohms)	vci	-- voice coil impedance
AM	-- amplitude modulation	mA	-- milliamps (0.001A)	VU	-- volume units
ASA	-- Acoustical Society of America	mag	-- magnetic	W	-- watts
aux	-- auxiliary	ME	-- magic eye	W and F	-- wow and flutter
BAF	-- bonded acetate fibre	MC	-- moving coil	x tl	-- crystal (pickup or microphone)
CCIR	-- International Radio Consultative Committee	mg	-- milligram	Z	-- impedance
char	-- characteristic	MHz	-- megahertz (see Hz)	Miscellaneous	
cm	-- centimetre	mic	-- microphone	%	-- per cent
c/o	-- cut-off frequency	MOS	-- metal oxide semiconductor	<	-- greater than
coax	-- coaxial	mpx	-- multiplex	>	-- less than
dB	-- decibel	mV	-- millivolts (0.001V)	±	-- plus or minus
dBm	-- decibel/milliwatt	MW	-- medium waves (approx 185-570m)	≥	-- equal to or greater than
DC	-- direct current	N	-- newton (SI unit of force)	≤	-- equal to or less than
deg	-- degrees	NAB	-- National Association of Broadcasters (see also NARTB)	μ	-- mu (micro or millionth)
det	-- detector	NARTB	-- National Association of Radio and Television Broadcasters (USA)	μA	-- microamp
DIN	-- Deutscher Industrie Normen (German audio standards)	NL	-- noise level	μV	-- microvolt
disc	-- discriminator	PA	-- public address	μbar	-- microbar (air pressure equal to 1 dyne/cm ²)
FET	-- field effect transistor	Pat	-- power available for tuner		
FG	-- frequency generator	pF	-- picofarad (10 ⁻¹² farad)		
ffrs	-- full frequency stereo sound (D e c a)	PPM	-- peak programme meter		
f oz	-- fluid oz	Psn	-- power supply needed		
FL	-- fluorescent	PU	-- pickup cartridge		
FM	-- frequency modulation	Pw	-- playing weight		
FR	-- frequency response	Q	-- Q-factor (quality of tuned circuit)		
g	-- gramme	ref	-- recommended crossover frequency		
HC	-- handling capacity	rec load	-- recommended load		
HD	-- harmonic distortion	Replay			
HF	-- high frequency	char	-- replay characteristic		
H & N	-- hum and noise	RIAA	-- Record Industry Association of America		
Hz	-- hertz (cycles per second)	RMS	-- root mean square (0.707 peak value of AC)		
IC	-- integrated circuit	rpm	-- revolutions per minute		
IEC	-- International Electrotechnical Commission	sec	-- second (time)		
IF	-- intermediate frequency	sel	-- selector switch		
IHFHM	-- Institute of High Fidelity (USA)	S/N	-- signal-to-noise ratio		
imp	-- impedance	SW	-- short waves (approx 10-60m)		
in.	-- inches	THD	-- total harmonic distortion		
ind	-- inductor	thou	-- thousandths of an inch (0.001 in)		
i/s	-- inches per second	tpi	-- turns per inch (screw threads)		
K	-- kilohms (thousands of ohms)	UHF	-- ultra high frequency (approx 470-854MHz)		
kg	-- kilogramme				
kHz	-- kilohertz (see Hz)				
lb	-- pound (weight)				
L/C	-- inductance/capacitance				

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Odds and ends

Small Accessories for Disc and Tape

by Clement Brown

When, as a potential buyer, you are concentrating on the performance of major hi-fi products, it is only too easy to overlook all the little odds and bobs which make for convenience and efficiency. Some accessories are luxury items, of course, but many others seem much closer to the audio mainstream, and these are headed by the more specialised products designed for record-care and tape recorder maintenance.

Most audio enthusiasts will agree that a few minor items are bound to appear on the hi-fi shelf next to the equipment—sooner rather than later—and these will reflect the user's interests and the care he bestows on his hobby. Most such aids to "good housekeeping" cost only a few pounds, and they form the subject of this article. Any exceptions will become evident as we go along.

If the gentle art of record-care was once neglected, this can hardly be true today—in the hi-fi area, at least. The variety of disc-cleaning aids is considerable. If there is any problem here, it is that there is too much encouragement to constantly clean discs whether or not they need it. We are by no means free from a situation of controversy and misunderstanding over the safety and efficiency of alternative methods.

If you are in doubt about the extent to which you need to clean discs, or there is a question of safety of a particular method, you will be best advised to leave well alone, especially where the problem of dust is not obviously severe. Certainly this is preferable to frequent rubbing of disc surfaces or an assault by cleaning aids the effects of which are not well understood. The disc groove at its best takes a high polish in manufacture and permits a high signal-noise ratio in replay, particularly after a little use of an optimally adjusted lightweight pickup, so it is vital to be on guard against anything that may be hostile to this property.

Both abrasive and messy cleaning methods have been promoted but it is demonstrable that they can do harm. Rubbing with "cleaning" tools can only move dirt particles around the vulnerable grooves and increase the charge of static electricity (to which we return in a



Fig 1—A new domestic version of the KMAL record-cleaning machine.

moment). Moist cleaners usually leave residues in the form of dried-out mud which lies partly in the path of the stylus tip and thus can only be a hazard.

Indeed, there is no substance you can put into a groove in order to get dirt out. Most dangerous is the notion that a barely damp cloth or pad can properly clean discs, though it has often been advocated by record companies. What is "barely damp" to one person may be quite wet to another. However, the introduction of very slight local humidity to aid dust-collection may be possible, as the late C. E. Watts pointed out. Recommendations can be studied in the writings of that acknowledged authority.

Since dust and other pollution are the enemies of disc reproduction, the first requirement is to protect discs by means of dust-excluding storage. It should also be obvious that discs

must be returned to their sleeves as soon as they have been played. It is advisable to keep the lid of the player closed during playing.

However, even in the cleanest homes there is some dust which will reach the disc while it is exposed, and this is true whether or not the static electricity problem is seen to be very severe. A good regime consists of superficial and gentle dust-removal before playing, followed by collection of falling dust while the disc is being played. The latter process picks up particles which would otherwise collect around the stylus tip—a likely cause of distorted sound.

A useful pre-play precaution for nominally clean discs is the use of a simple dust-collector such as the Watts Preener or one of the soft brushes incorporating carbon-fibre filaments. The Goldring ExStatic and the Decca Brush are of this kind. A tracking dust-collector (Bib, Ross and others) augments this and can be used provided there is space on the deck and there is no effect on the turntable speed due to drag caused by the device. Such treatments do no harm and they are bound to collect at least some of the foreign particles. Precise installation is essential if a tracking device is to keep pace with the pickup as it traverses the disc.

More expensive, luxury-class accessories include the Groovac, which acts as a vacuum cleaner while tracking the disc. Then there are the Vac-O-Rec and similar devices which spin and brush the disc. Used with care such gadgets are unlikely to do any harm and they do remove a lot of dust, although in many cases it is probable that a simpler routine and less costly aids will prove adequate.

Much of the advice given on disc-care assumes the use of new discs. That is, the buyer is careful with his discs from the start, being determined to keep them in new condition. But a severe problem arises where grooves are already contaminated by unwisely applied "cleaning" substances or atmospheric pollution. The latter includes cooking vapours and tobacco tars—indeed, any aerosols which may occur in the home.

It is partly because of this problem that wet-playing achieved some limited acceptance. This must not be confused with wet cleaning methods, which are best avoided. With wet-playing a tracking device spreads a wet film on the disc and the stylus traces the groove through this film, foreign particles being kept in suspension until the moisture has either dried or been mopped up at the end of the disc side. The reasons for the limited use of this method are obvious from its nature. Wet-play gadgets by Lenco and Schweizer, though apparently not marketed at present, may occasionally be found in shops.

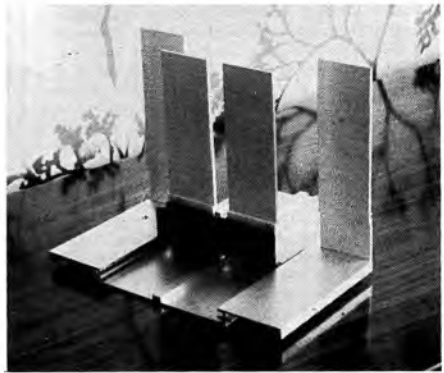


Fig 2—Expandable Record Rack by Metrosound.



Fig 3—Bib Groov-Kleen record cleaner.

As for desperate cases, sticky and stubborn contamination may be removed by a careful routine of washing, rinsing and drying, though it is only too easy to produce uneven results and, therefore, a noise level that fluctuates instead of remaining constant! Best of all is the efficient treatment provided by the KMAL professional cleaning machine, which is installed in a selection of record and hi-fi shops around the country. A list of users' addresses can be obtained by sending a large stamped envelope to Keith Monks Audio Ltd, 26-28 Reading Road South, Fleet, Hampshire.

As everyone realises sooner or later, strong electrostatic charges on discs attract and hold particles, making dust-collection more difficult. Static charges may rise to many thousands of volts, especially through friction and careless handling. A proper solution to the problem is for the record manufacturers to find, and one can only report that they have made only a little progress in a long time. On the other hand, the

importance of static to the individual user of discs depends on local conditions, and the phenomenon is not always the scourge that it is made out to be. In fact, many users are not really aware of static until it is pointed out to them.

There are new ideas for chemical treatments to be applied to discs before playing, but at this early stage it is difficult to be sure of their merits. To date the best known anti-static method is the creation of a suitably charged zone near the disc surface, and most devices to do this (the Zerostat and similar anti-static "guns") have incorporated piezo-electric elements to generate high voltages. An alternative is the Rib 3000, an electronic device which sets up the charged zone for as long as its operating button is depressed.

Such methods of relaxing static are not entirely predictable and they give only temporary and short-term relief, but any such treatment is perfectly safe and bound to make dust-collection easier. It is at its least effective when the disc is on the turntable, whether or not an anti-static mat (made of conductive rubber or other material) is in use. It is usually recommended that the disc is held in one hand or placed on a suitable surface while the "gun" is used. Incidentally, a strong draught (cold air or an air-motion due to a nearby heater) will make this routine virtually useless.

No advice on static can be responsibly offered without warning the record-user to interpret new developments with caution. It is of course easy to blame every pop and crackle on either static or the quality of disc pressings. Obviously, if a disc is intrinsically noisy it is a reject and must be treated as such. However, many complaints of noisy reproduction—spasmodic gritty noises or more explosive sounds—reflect either careless handling of discs or equipment faults.

The enthusiast who has spent a substantial

sum on an audio system is hardly likely to welcome the suggestion that he has overlooked basic technical requirements. Yet mismatching and other incompatibilities are often responsible for emphasising random noises which, in a well-planned system, would not intrude. Superior signal-noise ratio and transient response are central in hi-fi quality, and by implication a wide dynamic range is attained if intelligent planning is the prelude to purchase.

As a sidelight on noisy disc reproduction it may be noticed that a new disc sounds different at first and second playings. Some microscopically small features of the groove will be polished and some debris dislodged by the pickup stylus. So there is something to be said for playing a new disc through without seriously listening to it.

Preoccupation with discs should not be allowed to divert attention from the stylus. Contamination reaching discs is transferred to the stylus tip where it builds up, affecting tracing accuracy and causing distortion.

Neglect may result in a stubborn and hard encrustation that is difficult to remove, although patient use of neat alcohol may bring success. It is best to establish a routine of regular stylus cleaning, for which there are various proprietary aids (Rib, RCAF, Metrosound and others). A kit consisting of a cleaning solvent and a miniature applicator brush is the usual thing. A similar brush can be used—very gently—to remove any fluff that accumulates around the stylus.

Record storage takes us beyond the scope of minor accessories. There are some inexpensive racks and containers to take a few discs, but for substantial collections a purpose-made cabinet is best. A well-designed cabinet has dust-excluding doors and divides the discs into compartments, offering the right degree of lateral support to minimise the risk of warping.

For best protection against dust, store discs so that their sleeve openings are at the rear of the cabinet or shelf. Replace discs so that inner bag openings do not coincide with outer sleeve apertures. In unusually dirty conditions it is a good plan to fit p.v.c. bags over the LP sleeves.

Both discs and tapes are best stored at normal room temperatures. If storage in the listening-room is not possible, be sure to choose a place which is neither damp nor subject to extremes of temperature. Do not place recorded tapes close to strong magnetic fields. The risk is slight, but the most obvious precaution is to keep tapes away from hi-fi loudspeakers which may have stray magnetic fields of some influence.

By way of contrast with disc-cleaning, a feature of which has been the misguided use of questionable methods and quite unwarranted



Fig 4—Bib tape-head demagnetiser.

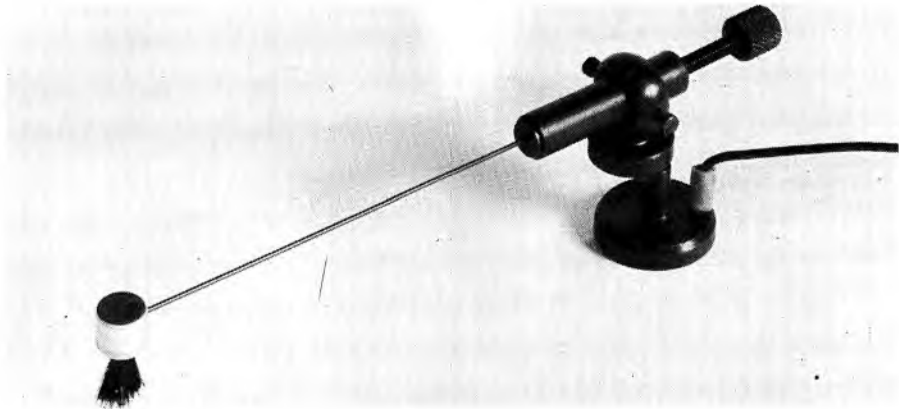


Fig 5—Record Sweep Brush by KMAL.

attacks on vulnerable grooves, the maintenance of tape decks can be summed up in one word—neglect. It is of course true that tape mechanisms require less attention nowadays, and the user is often warned against tampering with them, but some other areas of maintenance are important and well served by the accessory specialists.

Bib, Metrosound, Ross and QED are prominent in this field, and even a brief glance at their ranges of products will show what jobs should be tackled by the serious user of tape. In recent times the big manufacturers of tape have entered the scene with a variety of audio aids to meet such requirements as head-cleaning and demagnetising. Major suppliers include Agfa-Gevaert, BASF, EMI, Philips, Scotch and TDK.

Although many of these firms can supply cleaning fluids and applicators for treatment of heads and surrounding items, use of such aids may be difficult due to inaccessibility of parts within the deck. This is certainly true of the tape compartments in many cassette machines, and the criticism can also be directed at some open-spool decks.

Fortunately it is possible to remove tape-oxide particles and other debris with a cassette cleaner, which consists of a cleaning tape (a textile or a synthetic material) inside a standard cassette housing. A regime of use after every few playing hours (it takes only a minute or so) is advisable, although in practice even this simple routine is sadly neglected. There is also an open-spool cleaner known as Klensatape, by Metrosound.

Tape-head demagnetising is often recommended as a contribution to low noise levels. If the subject is not mentioned in the instruction manual for a particular machine, the advice of

the manufacturer or distributor should be sought. The best-known demag device is an AC-powered probe (Ross have alternative models) but sometimes it is difficult to reach the heads in cassette recorders. TDK have introduced a battery-powered device in the form of a cassette, which is loaded into the machine in exactly the same way as any standard cassette.

Other items include AC-powered bulk erasers which, as the name implies, enable recorded tapes to be erased completely and in one action, without unspooling. Then there are tape-editing aids (Bib and tape manufacturers) such as editing blocks and the special adhesive tape needed for strong and noise-free splices. Cassette tapes can be edited. Among Bib items are an empty cassette into which salvaged tapes can be wound, and a small mechanical cassette-winder, which will wind or rewind a cassette even faster than is possible on some machines.

Test discs should not be forgotten. Examples are the Shure series, the CBS discs and the popular HFS75, which places emphasis on pickup tracking and adjustment. Trade distributors of HFS75 are Howland-West Ltd, 3-5 Eden Grove, Holloway, London N7.

Stylus balances, for checking pickup tracking pressure, are supplied by Shure, Transcriptors, Bib and others. Made-up signal leads can save a lot of bother, especially when offered in an imaginative variety of terminations (Ross and Audio Packs). Small tools, tweezers and soldering instruments also deserve a mention. With comparators, switch-boxes attenuators and interference suppressors we are into the realms of more costly accessories. QED are particularly active here. And the smallest item of all, a supply of suitably rated cartridge fuses for mains plugs. They are never around when needed!

Trends in Amplifiers

By Gordon J. King

SINCE last discussing amplifiers in these pages there has been a general reconsideration of the requirements for home hi-fi reproduction, and some of this new thought is now beginning to percolate into most equipment of recent design. Although this applies essentially to all departments of the hi-fi chain from programme sources to loudspeakers, including pickups, record players, cassette decks and tuners, this article is focussed mainly on the amplification side of hi-fi.

Undoubtedly fostered by the popular hi-fi press, a good deal of emphasis over recent years has been given to the auditioning of hi-fi equipment. That is, how one item of equipment compares subjectively with a competing item of similar class in the listening room. At the climax of this sort of evaluation it was held by certain elements that pretty well all amplifiers audition differently regardless of their closeness of technical specification. It was then concluded that lab measurements were of minimal value and that the only realistic way of appraising and hence selecting an amplifier (and other types of equipment) was by listening to it.

This somewhat dangerous state of affairs prevailed (and to some degree is practised still) until carefully controlled listening tests^{1, 2} revealed that the subjective differences were far less marked than the non-engineering faction held when the equipment was, as it should be, operated correctly within the constraints of its technical design. It would appear that the balance is now being restored, and it is becoming accepted that for competent evaluation of hi-fi equipment it is necessary to subject it to both lab measurements and listening room auditions, one complementing the other.

Auditioning tests abound with problems, many being psychological in nature as would be expected, and others closely related to the method and accuracy of final analysis. The comparison of top-flight hi-fi equipment demands the listeners to detect extremely small differences and, as we are all likely to discern colours differently, so it follows that listeners are highly likely to discern the sounds of music differently. The aim of hi-fi, of course, is to

recreate with the utmost of fidelity the programme which originated in the concert hall, so without the original to form the datum for comparison, the best that a listening test can do is to establish that equipment which produces the most palatable sound to the person listening to it.

As different listeners have different thoughts on this the results of a number of listeners after analysis commonly resolve to a 'mean' value, or close to this, which implies that, on the whole, there is nothing or little to choose on a subjective basis between the various items. This is not always the case, however, for a tangible shortcoming of one item may be highlighted against the lack of this of a partnering item, all listeners then voting down the item of shortfall. This often happens when a number of amplifiers of different power ratings are compared at a high listening room sound intensity. On music peaks the lower power amplifier is likely to generate very irritating overload distortion, while the other amplifiers of the group accommodate the peaks without any distress at all.

Listening tests have exposed factors like this quite accurately and dramatically, not only in relation to under-rated amplifiers for the power used, but also in terms of the nature of the overload. For example, amplifiers incorporating a large amount of negative feedback tend to produce a very unpalatable distortion at the peak overload point, while amplifiers with less negative feedback, and certain valve amplifiers, exhibit a far less dramatic overload effect. That is, the overload condition occurs more gradually and the effect is far less disturbing.

Indeed, the fact that excessive negative feedback is not a cure for all amplifier ills and that under certain conditions it can detract from rather than enhance the sound experience is fast being rediscovered, and some of the new designs are actually being advertised as having limited or low negative feedback. The new *Harman Kardon* amplifier sections, for example, are advertised in this way, and tests in our lab and listening rooms certainly indicate that they benefit from it (or lack of it!).

Another thing that listening tests have revealed is that the subjective effect of some amplifiers is more affected by the electrical nature of the loudspeakers connected to them than others. Sadly, amplifiers are still being tested into pure resistive rather than loudspeaker-simulating loads. Clearly, real loudspeakers cannot be connected to amplifiers for high power measurements for they would not last a couple of minutes on continuous sine-wave signal, for the energy residing in such signal is far greater than that of music signal of similar peak value.

A real loudspeaker loads the amplifier with impedance rather than pure resistance at certain frequencies, and because impedance is frequency dependent the effective power developed in the load changes with frequency. Moreover, while the signal current remains in phase (step) with the signal voltage when a pure resistance constitutes the load, an out-of-phase current/voltage situation obtains when the load is reactive, as it is with real loudspeakers. Some amplifiers have difficulty in handling a loudspeaker-type load than one of pure resistance. Transistors need to be more delicately protected than relatively robust valves against overdrive and shortcircuiting, and this is achieved electronically within most transistor amplifiers. However, some protection circuits have a tendency to 'trigger' prematurely when the amplifier is driving into loudspeakers whose impedance falls to a relatively low value and which have a fairly wide out-of-phase current/voltage relationship at certain frequencies over the music spectrum. When this happens the effect is tantamount to severe clipping distortion, even though the full resistive-load-power of the amplifier is not realised. Some loudspeakers represent more of an amplifier load problem in this respect than others. Hence, the auditioning of an amplifier could well be affected by the nature of the load given by the loudspeaker.

Things like this must, therefore, be taken into account when setting up a listening test. There are other important factors, too, including the acoustics of the listening room³, the type and quality of the programme material, and the inter-system compatibility and quality of the ancillary items. For example, some cartridges are better suited to certain loudspeakers than others, while the intrinsic distortion carried by the programme material can be a whole magnitude or more above that produced by the amplifiers being tested! There is reason to believe that an amplifier that is not electrically precise may, under certain conditions, give a more favourable impression in the listening room than one whose electrical parameters are

exemplary.

It is possible that certain distortions present on the programme material itself, especially when from gramophone records, can be changed to more subjectively acceptable form by deliberately passing the signal through an amplifier which itself produces a type of distortion! A controlled degree of 2nd- and even-harmonic distortion would appear in some cases to be desirable, particularly when the harmonic order decays smoothly⁴. That the addition of even-order distortion can enhance the reproduction has been suggested^{5, 6} and mildly substantiated by listening tests.

It is sometimes claimed that valve amplifiers audition more favourably than highly specified transistor designs, but this, again, could arise from the masking effect of programme source distortion, for it will be generally accepted that most valve amplifiers yield more distortion than transistor counterparts and that the distortion produced is essentially even-harmonic. While the distortion produced by an amplifier at rated output can be as low as 0.01%, that produced by a gramophone record on heavy modulation (loud sounds) could well be as high as 5%, or even higher. The 'average' distortion of a valve amplifier might be around 0.3%, but since this is often even-harmonic there is a strong possibility that this could be modifying the far less palatable odd-order distortion of the source material so as to render the net result more palatable to the average listener.

In the days when hi-fi was a highly specialised subject and its devotees were few, the radio and radiogram of those days were invariably equipped with a so-called 'tone' control which did nothing more than roll-off the upper frequencies. However, in spite of the resulting 'distortion' to the frequency response the majority of listeners preferred to operate with this control fully (or almost) advanced. A study conducted at the time showed that the reason was because the control attenuated the odd-order distortion and that, on balance, a cut of this was preferred than 'extended' treble response.

Amplifiers today, of course, incorporate far more elaborate controlling of tone and filtering and the frequency response, instead of being restricted to 10kHz or below, now goes up to 100kHz or more! It is commonly asked why are amplifiers designed to go all that much above 15kHz when the frequencies of music rarely go above that frequency, anyway. It is true, of course, that live music has components up to 20kHz or so, and that music derived from discs cassette tapes and broadcasts *via* FM radio starts to droop rapidly above about 15kHz; but it is also true that in order to preserve the swift

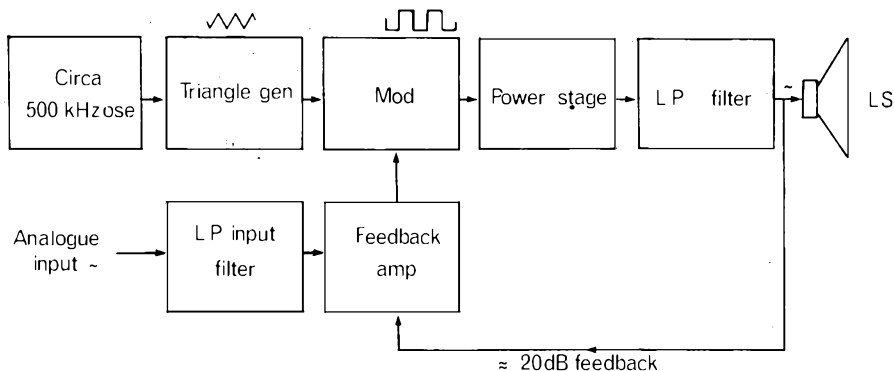


Fig 1. Simplified block diagram of class D (PWM) amplifier. See text for description.

rise of the 'envelopes' of the music components (they are not like simple sinewaves in this form) and hence the realism of the 'attack' of the music, the amplifier is obliged to change amplitude level very quickly, and it can only do this faithfully when the total bandwidth of the system is sufficiently wide.

Nevertheless, it is my judgement that a small signal bandwidth in advance of 40-50kHz is unnecessary. An upper-frequency response 2 to 2½ times higher than the upper frequency of music would appear to be adequate. Not all authorities agree on this, however, as witnessed by some amplifiers venturing well into the radio-frequency realm! With transistors it is not difficult for anyone to achieve a wide bandwidth (it was different in the valve days), and it seems to me that this 'ease' is sometimes exploited as a desirable parameter by copy-writers, leading the unwary to make a selection on a parameter of dubious value.

On the other hand, all this must not imply that I am in agreement with amplifiers of unduly restricted upper-frequency response. As already mentioned an upper-frequency response in advance of the basic frequency parameters of music is essential; but beyond this not only is unnecessary amplifier noise let through, but also the interaction of upper-frequency distortion products can generate products which fall in the audible band and help to impair the reproduction in this way. I can see no merit in designing for response in excess of 100kHz for an audio amplifier. For different applications, yes.

At the low-frequency end of the spectrum there are few signals recorded or transmitted much below 20Hz, yet some amplifiers are designed deliberately to respond right down to direct voltage. Below that sort of frequency the programme signal can be plagued with infrabass rubbish such as turntable rumble, disc ripple

effects and so forth. It seems pointless to have the amplifier responding to these singularly undesirable noises.

It is sometimes said (or intimated) that a response from virtually direct voltage up to 100kHz or more is necessary to avoid distortion of the signal component envelopes as the result of phase shift, group delay distortion and functions related to the 'timing' of the different frequency components making up a music envelope component. By passing unnatural signals (eg, very fast rise-time signals of low and high frequency repetition rates which have little or no relationship to real music signals) through an amplifier then better reproduction of those signals on the screen of an oscilloscope can be achieved when the bandwidth goes down to direct voltage and up to 100kHz or more than when the amplifier rolls off at the bass end at around 20Hz and at the treble end around 50kHz. Amplifiers, though, should be optimised for the reproduction of music not for the most accurate reproduction of oscilloscope displays.

This is the sort of thing that gives valid ammunition to the non-engineering types who regard lab tests as a waste of time. An amplifier designed for the accurate reproduction of video (TV) signal is capable of excellent impulse-type oscilloscope displays, but such an amplifier would hardly be used for the reproduction of music signal. For amplifier lab tests it is essential to restrict the signals used for the tests to the parameters of those which derive from real music. Designing for the accurate reproduction of signals which are not realistic in this respect can encourage side-effects which may not always be complimentary to the music reproduction!

The results of lab tests as published, for example, in the reputable home hi-fi and audio magazines can undoubtedly give an accurate

insight into the technical capabilities of an amplifier which cannot be matched by the listening experience alone. Even so, listening tests are useful to confirm the lab findings or, indeed, to help correlate the subjective and the objective. It is sometimes said that lab tests are incapable of revealing technical factors that affect the listening experience. I do not, personally, believe this. It is my contention that if a design failing is audible then it is capable of measurement. The problem is to know what measurements are required to expose the problem in objective terms.

Of recent times listening tests linked with lab tests have been used to bring to light factors that have hitherto defied analysis. A leading figure in this area of amplifier design is Matti Ojala, a native of Oulu in Finland, and whose thoughts are being reflected by the new *Harman Kardon* and other designs. Matti is one person of an increasing number who concurs that large amounts of negative feedback cannot cure amplifier shortcomings. It is not widely acknowledged that the indiscriminate application of negative feedback in an attempt to reduce distortion to infinitesimal values and to increase bandwidth well beyond the intrinsic speed of the power transistors can result in greater subjective irritation than operating the same basic amplifier with less feedback, even though this will result in greater subjective irritation than operating the same basic amplifier with less feedback, even though this will result in greater measured distortion and a more limited power bandwidth. It has also been clearly shown that the harmonic structure of the distortion can also change for the worst by turning up the negative feedback⁷.

Now a latter-day classic in one respect of this is Mr Ojala's papers on transient intermodulation distortion (which I shorten to TID). This work is far too technical to discuss in a popular article of this kind; but, basically, it resolves to the fact that relatively slow output transistors tend to delay the signal fed back to the mixing input of the feedback amplifier such that in the even of a swift, high amplitude transient the transient will arrive at the mixing input before the feedback signal arrives to take control. The net result is blocking of the drive amplifiers and hence severe distortion to the transient on its way through the amplifier. Again, basically, the problem can be resolved in two ways: one by restricting the upper-frequency response of the preamplifier stage feeding the power amplifier so that signal transients are effectively diminished in amplitude; or, two, by using much faster output transistors to reduce the delay applied to the feedback signal so that it arrives to reduce the effective gain of the

amplifier at the time that the peak of the input transient arrives at the mixing input^{8, 9, 10, 11, 12}. The audibility of TID and a method for its measurement have also received detailed consideration^{13, 14}.

This prolific engineer has also emphasised an associated effect termed 'slew induced distortion' (SID), which is a distortion leading to TID but which occurs more gradually; and an effect called 'interface intermodulation distortion' (IIM distortion)¹⁵, which is a distortion arising from the interaction of the loudspeaker with the output of the amplifier.

For example, owing to cone mass storage effects, at mechanical resonance frequencies the connected loudspeaker can act as a 'signal generator' and feed back to the amplifier (through its output terminals) much of this energy. Excitation can result from cone break-up and similar effects and, in some instances, from in-room sound reflected back to the cone. The signals so yielded gain admittance to the negative feedback circuits where they interact with the normal signals as the result of mild non-linearity and produce intermodulation products.

It will be appreciated that distortions of these types result from signals of a 'transient' variety as distinct from the steady-state sine wave signals with which amplifiers are more commonly measured. By adopting tests of this nature, therefore, it is apparent that the test engineer is able to probe more deeply into alleged subjective shortcomings of certain designs without having to compensate for opinion and the vague results of some listening tests. This is by no means to suggest, however, that there is not a lot more that the electronics engineer has yet to learn about the connection between ears and instruments. Moreover, as I have already stated, the use of tests which fall outside the scope of audio requirements can often be more confusing than valuable!

The majority of amplifiers still work on the analogue principle in spite of the prevailing digital age. This means that the push-pull output stage is suitably biased so that the continuously changing (analogue) signal works over the most linear parts of the input/output (transfer) characteristic. Linearity is enhanced by the use of negative feedback but, as has already been noted, excessive feedback is not necessarily a good thing. The trend is to secure the maximum of linearity with no feedback (open-loop condition), and then to add just that much feedback to make the parameters of the specification viable! Some non-linearity will for ever remain, but nowadays the mathematical nature of the transfer characteristic is chosen where possible to be of

even-order origin. This means that the distortion produced will be mostly 2nd-harmonic and even-order which is far easier to live with than odd-harmonic distortion, especially of high-order. Of recent times field effect transistors have been incorporated in power amplifiers, where hitherto they were used only in the small-signal stages. The high current, voltage and dissipation ratings have been secured by a special 'chip' formation such that the current path is vertically through the 'thick' part of the semiconductor. These FETs have thus been termed V-FETs, the V standing for vertical.

They are used by *Yamaha*, *Sony*, *Hitachi* and others, and while the first were essentially junction-gate FETs, the more recent ones are MOSFETs. Such devices, in fact, are used in the remarkable *Hitachi HMA-7500* power amplifier and other models in the series. Our lab uses this model amplifier for various test procedures: it has been in hard use now for almost two years (at the time of writing, early 1979) and is still working perfectly. It is thus an amplifier that I can thoroughly recommend.

Based on such fast-switching transistors (junction-gate devices so far as I am aware), a new breed of amplifier is just beginning to appear based on digital techniques. The amplifier is generally referred to as pulse width modulation (PWM for short). The term class D is sometimes applied to it since the letter 'D' follows on from the A, B, AB (audio) and C (RF) classes of amplification. Class D, however, must not be confused with the *Hitachi* range of Dynaharmony amplifiers which employ an auxiliary amplifier and power supply that switch in whenever the signal amplitude rises above the voltage capability of the main amplifier. In America these amplifiers are sometimes called Class E (because 'E' comes after 'D'), but in the UK they are mainly referred to as class G.

Class D

One such amplifier of the Class D or PWM type is the *Sony TA-N88*, of which I have first hand lab and listening room knowledge¹⁶. With this class of amplifier the input analogue signal is first converted into 'digital' form. This simply means that the amplitude information carried by the analogue signal is changed to pulses. The pulses are produced by a 500kHz oscillator which is followed by a circuit which changes their shape to a modulator, a second input port of which receives the analogue signal.

The modulator delivers rectangular waves and it is these which are applied to the push-pull pair of output transistors to switch them on and

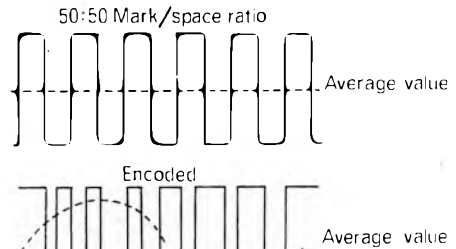


Fig 2. Unmodulated rectangle wave of 50:50 mark/space ratio showing steady average value (a). Modulated rectangle wave of varying mark/space ratio showing the average value of the analogue signal (b).

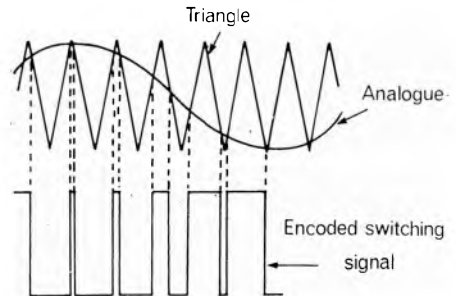


Fig 3. Showing how a constant repetition frequency triangle wave is modulated by the analogue sinewave signal to produce an encoded pulse chain.

off. Rectangular current waves are thus present at the output which, after low-pass filtering to reclaim the analogue information, are caused to drive the loudspeaker. A simple block diagram of the scheme is given in Fig 1.

With no analogue signal at the modulator the output rectangular waves have a 50:50 mark/space ratio. That is, the periods representing the 'on' and 'off' cycles are equal, as shown in Fig. 2(a). However, when analogue signal is present the periods of the 'on' and 'off' cycles are no longer equal. The wave is then 'width modulated', as shown in Fig. 2(b). The variation of the mark/space ratio is governed by the information contained in the analogue signal. The effect is thus analogue-to-digital conversion, and one way that this can be achieved, using a sinewave analogue signal for simplicity, is shown in Fig. 3. The effect is that the triangle wave is 'modulated' by the analogue signal such that the output is a 'squarewave' whose 'on' and 'off' periods relate to the amplitude of the analogue signal at any instant. It must be

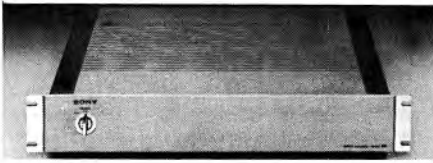


Fig 4. Sony 160 + 160W PWM Amplifier Model TA-N88.



Fig 5. Sony TA-N88 Preamplifier suitable for driving the TA-N88 Power Amplifier.

remembered, of course, that a very high (relative to audio) repetition frequency is adopted, so the resulting squarewaves will be much closer together relative to the waveform of the analogue signal than expressed by the simple diagram. The squarewaves are also arranged to have flat tops and bottoms.

The average value of a 50:50 pulse train can be referred to as zero; but when the mark/space ratio changes in accordance with the analogue signal, the average value will change in accordance with the encoded analogue information (see Fig. 2). Thus, the average value of the current through the loudspeaker will also change in accordance with the analogue signal after the low-pass filtering, this providing digital-to-analogue conversion. The low-pass filter also, of course, serves to eliminate most of the 500kHz switching signal.

One advantage of this mode of amplification over the more conventional analogue method is the gain in efficiency of the power stage. A practical efficiency of 90% is feasible, whereas the best efficiency of class A is only 50% and of class B 78.5%. This means that a powerful amplifier can be built into a relatively small space, as shown by the picture of the Sony TA-N88 in Fig. 4, which is capable of 160 + 160W continuous power output into 8-ohm loads. The TA-E88 preamplifier which can be used to drive the TA-N88 is shown in Fig. 5.

Another advantage is that a well engineered class D amplifier will have a similar open-loop linearity as a competently designed class A amplifier. Hence it is necessary to use only a relatively small amount of negative feedback to improve upon the already good linearity, rather than use much more feedback to correct intrinsic linearity shortcomings. A well designed class D amplifier, therefore, is capable of good auditioning performance.

One aspect of class D design which calls for extra special care is radiation from the high-frequency oscillator and of the switching pulses in the power stage. Early attempts of class D amplification failed on this score because of interference caused to nearby radio equipment. Modern design¹⁷, however, reduces this shortfall to insignificance, while latter-day fast-switching power transistors lead to high efficiency and low distortion.

There seems little doubt that we shall be seeing more hi-fi amplifiers using the class D principle as time goes on; and, indeed, more hi-fi equipment based on digital principles. Already there is a cassette deck and radio receiver using microprocessor control, so the time is very near when we shall be fully able to programme our hi-fi systems without the need of front panel controls!

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Recordings of the year

A personal selection chosen by the Editor

Prices are those applicable when going to press. Asterisks (*) denote recording quality. All records mentioned are presumed to be of reasonable standard, but those marked with one Asterisk (*) are of slightly superior sound, while two Asterisks (**) denotes first-class recording worthy of demonstration.

Record numbers quoted are for Stereo Discs with Tape and Quad references added where applicable.

THE RECORDINGS OF THE YEAR

Three discs have given me particular pleasure over the past year. Not only are the recordings first-class, but the content was either unusual or unexpected. Clementi's Symphonies are newly-discovered, Puccini's *Girl of the Golden West* hardly his most popular opera, and it is seldom that the modern symphony orchestra turns its attention to Broadway musicals.

****CLEMENTI:** *Four Symphonies. Philharmonia Orchestra conducted by Claudio Scimone. Erato STU 71174. Price £8.98.*

One of the great figures in musical history, Muzio Clementi—virtuoso pianist, teacher, publisher and piano maker had a fairy tale upbringing. Born of lower-middle class Roman parents, he was adopted by an English aristocrat and reared in the luxury of a Dorsetshire country estate. He became known as the "Father" of the piano and his *Gradus ad Parnassum* studies were standard teaching material for many years and much admired by Chopin. Clementi was born four years before Mozart and outlived both Beethoven and Schubert. All this is common knowledge and his Piano Sonatas are known to discerning pianists, but Clementi as a symphonist is a true surprise.

It appears that he composed a dozen symphonies, four of which were played regularly on his European tours and shared the bill when Haydn visited London. They were never published as the composer obviously feared comparison with Haydn and Beethoven (with whom he had a publishing contract). He was constantly revising the scores and after his death manuscripts were found in total disorder and

some parts were even burnt by a maid-servant. The rest found their way to the British Museum and to the private collection of a Mr. W. H. Cummings. In 1917 the whole set came up for auction at Sothebys and was purchased by the Washington Library of Congress.

In 1969 Pietro Spada began reconstructing and the result is four fine symphonies which shed a new light on Clementi's talents. Basically they are in classical mould à la Haydn but using more contrapuntal devices, and with large orchestra including trombones sounding in parts like Schubert, or even Brahms. All are in the traditional four movements but in every case the Minuet is taken at a fast pace like a Beethoven Scherzo. No. 4 in D was found virtually intact and this is by far the best of them all, worthy of a place in the concert repertoire. No. 3 in G is subtitled the *Great National Symphony* and makes use of the National Anthem in three of the movements, often cleverly disguised.

There is some good playing from the Philharmonia Orchestra, the recording is first-class, and as far as I am concerned this is the discovery of the year.

****PUCCINI:** *La Fanciulla Del West. Carol Neblett, Placido Domingo, Sherill Milnes, Covent Garden Opera Chorus and Orchestra conducted by Zubin Mehta. DG 2709 078/9. Price £13.05.*

Puccini's spaghetti western grows on one with successive hearings. So many things weigh against it to start with particularly as it is hard to equate Opera with the Wild West. Puccini's music conjures up the image of the East with Butterfly and Turandot and it is difficult to append it to hard-bitten Californian miners. The librettists, too, hardly help matters, especially in the opening scenes when practically every miner enters the "Polka" saloon with a polite "Hello", which when set to music sounds like a meeting of the local "Gay Lib".

Having said that, it is hard to imagine a better set of advocates than the present team. Zubin Mehta extracts some tremendous playing from the Covent Garden Orchestra and nicely paces

the work so that the climaxes really thrill the blood. There is tremendous tension in the card game which ends Act II and only one or two phony storm sound effects spoil the overall picture. Plácido Domingo is as sure and honey-toned as ever with Sherill Milnes a sympathetic Jack Rance far removed from the rough bully this character could easily become. But the surprise is the Minnie of Carol Neblett who sings with authority and power with a big round tone. The recording is first-class.

****GERSHWIN:** *Overtures. Buffalo Philharmonic conducted by Michael Tilson-Thomas. CBS 76632 (cassette 40-76632). Price £4.39.*

One of the happiest records of the year has been a selection of Overtures from the Gershwin Broadway musicals. Considering that most of these shows pre-date Gershwin's classical training with Ravel, they show a maturity of style and masterly grasp of form even if the orchestration was probably the work of others. Apart from this they contain a wealth of good tunes—*Do Do Do, Clap Yo' Hands, S'Wonderful, The Man I Love, I got Rhythm and Strike up the Band*. Many leading jazz players were in the original theatre bands, and for one show the pit orchestra included Benny Goodman, Glen Miller, Red Nichols, Gene Krupa, Jack Teagarden and Jimmy Dorsey. They would be proud of Michael Tilson-Thomas and the Buffalo Philharmonic.

CLASSICAL RELEASES

***BEETHOVEN:** *Piano Sonatas in C Min, F, D Op. 10. John Lill. Engima K53561. Price: £4.39.*

The three Sonatas Op. 10 offer a complete compendium of Beethoven's pianistic styles and John Lill is just the right person to present them. He has strength, clarity, and a sure grasp of Beethoven's musical thought. No. 1 in C Min is a "Sturm und Drang" piece, the fore-runner of the Pathétique and the embryo of the Fifth Symphony whose "Fate" theme was surely born out of the widely-used phrase in the Finale. Lill takes the first movement too classically for my taste and I think more romantic drive would be keeping with this particular period of the composer's development. The slow movement sings nicely and we are treated to some accurate fingerwork in the 64th note groupings.

The playful No. 2 in F is given a nicely turned skittish performance, although Mr. Lill does make heavy weather of the central Allegretto. No. 3 in D is the longest and most advanced Sonata of the set and I enjoyed the power of the opening Presto, the intensity of the long Largo



The Four Symphonies of Clementi in RCA boxed set.



The Girl of the Golden West.

with the simplicity of the Minuet coming as welcome relief. John Lill gets nice swinging rhythm to the Trio—very difficult to bring off with so much cross-hand work. The clean passage-work of the Finale rounds off a great performance. Thoroughly recommended.

****BEETHOVEN:** *Symphony No. 6 in F "Pastoral". Cleveland Orchestra conducted by Lorin Maazel. CBS 76727. Price: £4.39.*

These days the market is flooded with Beethoven symphonies whereas my generation tended to judge every performance against the recorded feats of Weingartner, Furtwangler, or Walter. I predict that in ten years to come the modern generation will point to this reading by Maazel with the same reverence that I accorded to Weingartner.

Maazel almost completely submits himself to

Beethoven's score, lets the composer do the talking, and includes the repeats in the first movement and exposition Scherzo. The few indulgences the conductor allows himself merely let the music breathe as in the slow movement where, on page 57 of the Eulenburg score, he lovingly holds back the violin semiquaver groupings. Tempos are somewhat faster than the metronome marking in the published score but I much prefer this to the deliberate ploddings of, say, Furtwangler.

Only in the coda of the Finale does Maazel spring a surprise. Contrary to the printed score he takes bars 327 to the end at a slow hymn-like pace which I find very effective. Orchestra playing is first-class as is the CBS recording. Recommended.

BEETHOVEN: *Violin Concerto in D. Salvatore Accardo with the Leipzig Gewandhaus Orchestra conducted by Kurt Masur. Philips 9500 407. Price: £4.50.*

I enjoyed this, although I am aware that some people will find Accardo too detached and ultra-cool. He uses the Joachim Cadenzas in the first and third movements and elects to omit the optional Cadenza between the second and third movements. I always think that Joachim should be preferred because it was he who popularised the work by playing it in London at the age of thirteen with Mendelssohn conducting. Until then it had always been regarded as too long and repetitive. Accardo can turn on the charm when need be as is shown at the solo entry on D and G strings immediately after the first movement Cadenza.

However, it is the orchestra who steal the honours. Kurt Masur sets excellent tempi and the wind section are superb. The recording, a co-production with VEB Deutsche Schallplatten Recordings, is good apart from a weak Bass range. The soloist is recorded too far forward and the opening drum taps are inaudible at normal volume.

BRUCKNER: *Symphony No. 5 in B flat. Berlin Philharmonic Orchestra conducted by Herbert von Karajan. DG 3370 025. Price: £8.70.*

Bruckner was fifty-one when he started the Fifth symphony in 1875. He completed it two years later and revised it thoroughly the following year, but even so it was not performed until 1884. This recording by Karajan follows the original score and, as might be expected, the Maestro gets some terrific playing from the Berlin Orchestra. Their fine gradations of tone and the accurate chording of the brass ensemble are only some of the joys to be sampled. Karajan keeps a firm grip on Bruckner's majestic score by keeping the momentum going.

In a symphony lasting some 90 minutes with all but 15 minutes marked Adagio, even the most angelic sounds can pall in the hands of an unsympathetic conductor. No wonder that this music was an enigma to the Viennese. Karajan's rivals on record are Haitink on Philips or Maazel on Decca. There is little to choose between them and the choice must be personal. I must say, however, that this recording is not one of DG's best. There is a considerable amount of pre-echo and my copy had a bad fault on Side 3 which I hope is not common.

DEBUSSY: *Preludes Book 1. Arturo Beneditti Michangeli. DG 2531 200. Price: £4.35.*

The super-pianist makes one of his rare appearances to display his legendary technique and uncanny accuracy. Every note is given its full value, every chord cleanly struck, and every making in the score faithfully followed. I doubt if his attack and rhythmic drive can ever be equalled in *Minstrels*, *La Sérénade Interompe* and *La Danse de Puck*. Elsewhere, however, he is less convincing. His pedalling is much too clean, the chord too sharply defined, passage-work so accurate as to lose all sense of mystique. This is most apparent in *La Cathédral Engloutie* and *La Fille aux Cheveux de Lin* where the former cries out for half-pedalling and hazy chording. My own personal preference is for Livia Rev on Saga 5391 who manages to produce the ethereal hazy sound which Debussy himself strived after, but every pianist will want to keep this version. There is some stupendous piano playing on it even if it is not always pure Debussy.

DELIUS: *Orchestra Works. Academy of St. Martin-in-the-Fields directed by Neville Marriner. Argo ZRG 875 (Cassette KZRC 875). Price: £4.50.*

A collection of the short orchestral pieces of Delius played with the style and precision we have come to expect from Neville Marriner. Although the Academy is obviously augmented some of the music cries out for a greater weight of string tone. The un-named violinist gives a sensitive account of the Hassan *Serenade* and Marriner gets a nice lilt in popular *La Calinda*. Also included is a rarely heard *Air and Dance* dating from 1915. Otherwise this is a standard collection—*Walk to the Paradise Garden*, *Song before Sunrise*, *Intermezzo from Fennimore and Gerda*, *On Hearing the First Cuckoo in Spring*, and *Summer Night on the river*. Prospective purchasers might like to consider an almost identical selection on the CFP bargain label with Vernon Handley conducting the London Philharmonic Orchestra reviewed under the heading "Bargain Basement".

ELGAR: *Sonata in G for Organ Op. 28/SCHUMANN; Four Sketches for Pedal Piano (arr. E. Power Biggs). Jennifer Bate at the Organ of the Royal Albert Hall. Enigm-K 53566. Price: £4.39.*

Although Elgar started his career as organist of St. George's, Worcester, he did not seem to have a natural affinity for keyboards when it came to writing music. The Organ Sonata of 1895 is conceived on a grand scale and as Jennifer Bate advocates in her sleeve notes "it displays Elgar's mastery of form, characteristic grandness and richness combined with musical development on a symphonic scale". Yet the touch of genius music is missing and I cannot agree with her that it "creates a new dimension in the organ repertoire". Similarly the four Schumann sketches for Pedal Piano do not really transcribe well for organ.

GLAZUNOV: *Piano Music Vol. II. Leslie Howard. Pearl SHE 548. Price: £3.99.*

Australian pianist Leslie Howard is making a gallant effort to familiarise the musical public with the piano music of Glazunov. He has already given us the *Piãno Sonatas* (SHE 538) and now opens his second recital with the next largest work *Variations on a Finnish Folk song*. The theme in F sharp minor is followed by 15 variations and an animated Coda. It is full of contrast and Howard gives it a powerful reading. The *Prelude, Caprice-Impromptu and Gavotte* Op. 49 was once fairly well known and while shorter than the *Variations* is a more pianistic piece. The three sections are unconnected and make a highly attractive concert item marred slightly here by the rather fast speed adopted for the *Gavotte*. The *Three Studies* Op. 31 are fine display pieces but the *Prelude and Fugue* lacks inspiration and is best forgotten as is the *Burcurolle and Novelette* which concludes the recital. Leslie Howard is a forceful player with crystal clear finger-work and a slightly percussive touch which he counterbalances by imaginative use of the sustaining pedal.

HOLST: *The Planets. London Philharmonic Orchestra, Geoffrey Mitchell Choir, conducted by Sir Adrian Boult. HMV ASD 3649. Price: £4.40.*

Sir Adrian gave the first performance of *The Planets* with the Queens Hall Orchestra in 1918, and has been associated with it ever since. Now, at the age of 90, he puts on record once more his definite version this time with the London Philharmonic. The days when Holst and his ilk were the prerogative of British conductors are over, and there is strong opposition from Previn, Karajan, Mehta, Steinberg, Ormaudy,



As a tribute to Sir Adrian Boult on his 90th birthday, KEF Electronics sponsored his new EMI recording of *The Planets*. Left, Raymond Cooke MD of KEF gives his cheque to Ramon Lopez, MD of EMI Records. Centre, John Patrick, Gen Mgr EMI Records Classical Division.

Haitink and Bernstein. Against these Boult may now seem pedestrian. Always steady in tempo, his *Mars* at first seems positively listless, but on reflection it is perhaps a surer way of pointing to the futility of war. *Jupiter*, too, is devoid of histrionics and the big tune underplayed. As an elderly gentleman (how can one think of him as old?) Boult is best in the slow and quieter movements. *Venus* gets a beautifully serene performance and *Saturn's* old age creeps on us with a slow deliberate tread. The distant choir in *Neptune* are more positive than ethereal, but *Mercury* flits by like quicksilver.

In short, Boult brings out the natural beauties of the score and the LPO responds magnificently to him, but if you want excitement then stick to Previn or the Continentals. The recording was made in association with KEF Electronics.

****HUMPERDINK:** *Hansel und Gretel. Brigitte Fassbaender, Lucia Popp, Julia Hamari, Walter Berry. Anny Schlemm, Norma Burrowes, Edita Gruberova. Vienna Boys Choir, Vienna Philharmonic Orchestra conducted by Sir Georg Solti. Decca D131D2 (Cassette K131K22). Price: £8.95.*

It was unfortunate for Decca that this new *Hansel und Gretel* co-incided with the re-issue of Karajan's magical 1954 HMV set featuring Schwarzkopf and Grummer, much-loved and treasured. The new Solti not only matches Karajan, but in many instances outshines him with the Vienna Philharmonic Orchestra bringing finesse and sophistication to the score



Hansel and Gretel from Decca.

especially in its sumptuous string tone. The Overture and all orchestral interludes are beautifully played and even the famous *Witches Ride* is marked by precision and elegance.

Brigitte Fassbaender and Lucia Popp make a well-matched pair of children with Popp producing some melting sounds and Fassbaender having the slightly harder voice more in keeping for a young boy. Anny Schlemm tends to over-act as the Witch but the part naturally invites this. Norma Burrows as the Sandman and Edita Gruberova as the Dew Fairy turn in nice little cameos in their fleeting appearances, and Julia Hamari is a suitably harassed Mother—what a uninspiring role this is. Walter Berry as Father steals the limelight with his happy, smooth and effortless singing. The recording was made in the Sofiensaal and produced by Christopher Raeburn who keeps technical wizardry in check until Act III where all the most evil utterances of the Witch are shrouded in echo.

LALO: *Symphonie Espagnole*/**BRUCH:** *Violin Concerto in G Min.* Pinchas Zukerman, Los Angeles Philharmonic Orchestra conducted by Zubin Mehta CBS 76726 (Cassette 40-76726). Price: £4 39 (tape £4 59).

The *Symphonie* is an unusual concerto in five movements with the Spanish flavour suggested rather than slavishly implanted. There has not been a really satisfactory modern recording for some time so this new account by Pinchas Zukerman was sorely needed. He is the complete fiddler, seemingly perfect in everything he touches. His clear and precise phrasing livens up the *Intermezzo* and brings impassioned interest to the *Andante*, the two

weakest episodes in the score. With the Bruch he is up against a dozen alternatives including superb readings by Itzak Perlman and Josef Suk. He more than holds his own with agile displays in the outer movements where the double-stopping in the *Finale* is seemingly tossed off with ease, while the lovely central *Adagio* is a joy.

MOZART: *Violin Concerti No. 3 in G/5 in A "Turkish"*. Anne-Sophie Mutter with the Berlin Philharmonic Orchestra conducted by Herbert Von Karajan. DG 2531 049. Price: £4 35.

Not every young violinist aged fifteen has the ability and confidence to make a record in company with such august names as Karajan and the great Berlin Philharmonic. Karajan has taken this young artist under his wing and hearing this performance it is easy to understand his interest in her. She is technically faultless although it must be said that the *Concerti* are not difficult, there being more taxing passages in the first violin parts of the *Divertimenti*. Nevertheless, young Fraulein Mutter displays a confidence and style far in advance of her years. Her old-fashioned approach and use of Joachim cadenzas may not please every Mozart purist, although it is in these very cadenzas that she shows her potential. Only in the ornaments did I feel that a more experienced player would have emphasised the leading note, and this was particularly noticeable in the "Turkish" music of K219. But there is no hiding the musical flair and with careful nurturing little Anne-Sophie will be one of the great players of the future.

***PROKOFIEV:** *Lieutenant Kijé/Scythian Suite (Ala und Lolly)*. Chicago Symphony Orchestra conducted by Claudio Abbado. DG 2530 967. Price: £4 35.

Extremes of recorded volume make this record difficult to listen to under normal domestic conditions. The opening off-stage cornet and tambourine taps are inaudible unless volume is turned up, and if this level is maintained the powerful brass in the wedding scene would blast you from the room. This is demonstration stuff played with electrifying precision on a superb recording with very wide dynamic range. Personally I find it too overpowering and, in any case, prefer the vocal version of *Kijé*. The *Scythian Suite* for large orchestra dates from 1916 and is made up of music from the rejected 1914 ballet *Ala und Lolly*. It is noisy, percussive, and mainly undistinguished but, again, good demonstration material.

RACHMANINOV: *Second Symphony in E Min Op. 27. Philharmonia Orchestra conducted by Ling Tung. Enigma K53568. Price: £4.39.*

Who is Ling Tung? would seem to be a good question for a radio or TV quiz game. From the photograph on the cover he appears to be Chinese, but equally could be Japanese, Vietnamese, Korean or Manchurian. What a pity the sleeve note doesn't tell us at least a little bit about him. Whoever he is, he gets a good response from the Philharmonia Orchestra and is well recorded on this Enigma disc on which inner parts come over with utmost clarity. Unfortunately Mr. Ling hasn't quite got the measure of Rachmaninov. He does everything right by the score, but it doesn't add up to Rachmaninov's style. The big sweeping tunes go for nought and even the heavy climaxes are just a build-up of noise and not emotion. First choice remains Previn on HMV ASD 2889 closely followed by Loughran on a bargain label CFP 40065.

SIBELIUS: *The Lemminkainen Legends Op. 22. Scottish National Orchestra conducted by Sir Alexander Gibson. RCA RL 25172 (Cassette RK 25172). Price: £4.25.*

A fine idiomatic performance by Gibson who has much affinity with his music. He sets a brisk pace throughout but the Scottish National Orchestra is not always up to his demands. They are a bit thin in string tone which sometimes upsets the overall balance. The Suite itself is a mixed bag containing the popular *Swan of Tuonela* and a very exciting Finale. The other two movements do not quite reach this level of inspiration. *The Maidens* is a pleasant harmless piece, but the picture of a Finnish Hell is frankly a bore.

***SMETANA:** *Symphonic Poems "Ma Vlast": Suisse Romande Orchestra conducted by Wolfgang Sawallisch. RCA 30459. Price: £7.98.* Sawallisch proves, as Sargent did in 1965, that you don't have to be a native to speak the language. It is clear from the first magical notes of *Vysehrad* that this is going to be a memorable experience and if Sawallisch misses the ultimate affection of his Czech rivals he makes up for this in thrilling sound. Since it is no fluke that the most popular numbers *Valava* and *Bohemia's Woods and Fields* are the finest in the set I would quite happily settle for a single disc omitting the patriotic banalities of *Tabor* and *Blanik*. As the whole cycle takes up four whole sides it means that some offer short measure, two playing for only 14 minutes. Suisse Romande is not one of Europe's best orchestras but their performance is adequate and with a fine RCA recording this must be first choice.

RICHARD STRAUSS: *Don Quixote/Don Juan. Tibor de Machau, Klaas Boon, with the Concertgebouw Orchestra of Amsterdam conducted by Bernard Haitink. Philips 9500 440. Price: £4.50.*

Tibor de Machau retired in 1977 after thirty years as principal cellist of the Concertgebouw and this issue is something of a tribute to his loyalty and work. He is a fine cellist but a bit pallid, almost lifeless at times, and this difficult work calls for a virtuoso soloist. The same can be said of the Viola, Klaas Boon, who is competent but not outstanding. Haitink, too, has had more inspired moments and at times I found his reading boring. I admit that *Don Quixote* is not one of my favourite pieces but with care and drive it can provide a thrilling sound. Haitink provides the care and his lyrical passages are a joy particularly the first twenty bars of the Finale, but there are long stretches where he lapses into the ordinary. *Don Juan* is a shorter, more compact, and better work. This version is a re-issue from 1975 and Haitink gives a virile, exciting reading with much attention to detail. The recording is spacious but somewhat restricted in range with string tone often lost.

STRAVINSKY: *Petrouchka (1947 version). Concertgebouw Orchestra of Amsterdam conducted by Colin Davis. Philips 9500 447. Price: £4.50.*

A magical performance by Colin Davis of the 1947 version of *Petrouchka*. He gives a cultured reading emphasising the beauties of the score to the exclusion of some of the drama and extracts some fine playing from this Dutch orchestra except for the trumpet solo depicting the Ballerina which is poorly phrased and indistinct, perhaps intending to give an off-stage effect. The unnamed pianist is good if



Colin Davis conducts *Petrouchka* on Philips.

somewhat careful and the recording is nicely reverberant and clear, almost of demonstration class. Personally I find this version a little too refined and for personal choice opt out for the more barbaric approach of Boulez playing the original 1911 score on CBS 76418.

TSCHAIKOWSKY: *Ballet "The Sleeping Beauty"*. National Philharmonic Orchestra conducted by Richard Bonyngé. Decca D78D. Price: £9.95.

Bonyngé records the whole Tchaikovsky score even including two numbers in the last Act usually omitted and, frankly, best forgotten: i.e. the *Dance for Tom Thumb* and the *Sarabande*. The latter is the worst offender coming as it does between the great *Pas de Deux* and the exciting *Finale*, thus completely deflating the rising tension. This is a perfectly acceptable version spoiled only by some slack ensemble work from the orchestra and momentary lapses of concentration from the conductor especially in the *Pas de Six* of the Prologue. On the credit side Bonyngé manages to make the dull opening scene of Act I (the knitting women) unusually sprightly and follows this with a beautifully controlled Valse and sumptuous *Rose Adagio*. The recording is vivid with a slight over-emphasis on violins creating harshness in places.

TSCHAIKOWSKY: *Violin Concerto in D/ Meditation*. Issac Stern with the National Symphony Orchestra conducted by Mstislav Rostropovich. CBS 76725 (Cassette 40-76725). Price: £4.39.

Although Isaac Stern has recorded this concerto before (way back in 1960) his name does not spring readily to mind in connection with Tchaikovsky. Indeed this is a careful, meticulous reading in the classical style but beautifully phrased and impeccably played. If you are looking for fireworks then this is not the interpretation for you. Rostropovich I always find inclined towards sluggish tempi, but here it does enable him to bring out the beauties of the score. The *Meditation* was originally planned as the Slow Movement of the Concerto but eventually was published as part of a set of three pieces for Violin and Piano. This version has been orchestrated by Glazunov and it makes an enjoyable filler.

TSCHAIKOWSKY: *Readers Digest*.

This eight-record collection is distinguished by the superb *Francesca da Rimini* of the RPO under Munch, an impressive *1812* from the National Philharmonic conducted by Charles

Gerhardt, and an equally fine *Pathétique Symphony* from Alexander Gibson. Old reissues from Sir Adrian Boult reproduce surprisingly well but the Piano and Violin Concertos (Earl Wilde and Itzak Perlman respectively) show signs of age, and Horenstein's dull Fifth Symphony should have been ditched years ago. All in all good value for money and ideal for the music-lover who is starting to build a library and who, perhaps, owns moderately-priced equipment.

WAGNER: *Act 3 Scenes 2 & 3 Gotterdammerung*. Rita Hunter, Alberto Remedios, Sadlers' Wells Chorus and Orchestra conducted by Reginald Goodall. Unicorn UNS 245/6. Price: £4.99.

I am aware that this record is not new and that the whole of the Ring is available in English on HMV label. However, *Gotterdammerung* is a long work of over four hours solid music and some record collectors haven't the time or cash to devote to it all. Unicorn provides a possible alternative in this two record disc made in 1973. It begins at page 1076 of the Eulenburg score and takes in Siegfried's narration, his death and Funeral March, Brunnhilde's immolation, and the closing scene.

The cast is identical to the HMV except that here we have the added pleasure of hearing Norman Bailey as Gunther. Clifford Grant is a powerful Hagen and Margaret Curphy a rather undernourished Guttrune. Alberto Remedios is a fine Heldentenor, producing sounds of great beauty and able, somewhat unusually, to declaim his words with utmost clarity. Rita Hunter is, of course, incomparable and dominates every scene in which she appears. Reginald Goodall leads his orchestra into expansive, steady, phrases. It cannot compete with some of the leading European Ensembles but nevertheless gives a good account of itself. The brass ensemble is particularly good and there are some fine solo passages from all departments.

MID-PRICE

With the price of records rising sharply in the last year it is not surprising that mid-priced discs are becoming more popular.

RCA Gold Seal retails at £2.49 and collectors should snap up Previn's vital reading of **Walton's First Symphony** on GT42707 (Cassette GK 42707). It is by far the best available version and by now most of us have become reconciled to the fast tempi in the opening movement. The slow movement is expansive and the *Finale* picquant. The recording is good

although my copy had an excessive amount of surface noise.

Two extrovert items, **Hary Janos** and **Lt. Kijé** are coupled on GT 52698 (Cassette GK 42698): Prokofiev compiled a suite from his film music in 1933 and Erich Leinsdorf conducts the Boston Symphony Orchestra in the version using Baritone soloist. David Clatworthy gives a truly Russian sound to the *Romance* and *Troika*, and the orchestra are in brilliant form. Kodaly's famous Hary appeared on stage seven years earlier and the six-movement suite has always been a firm favourite. The sleeve contains an interesting note by the composer. Recording is bright and clear.

United Artists break into the classical field for the first time with the Cadenza label retailing at £2.99 and launch straight-away into a major project—the complete cycle of **Mozart Quartets** played by the Dimov Quartet of Sofia. First issues concentrate on the early works and I sampled UACL 10000 which contains K.159, K.160, K.168 and K.169. These date from 1773 when the composer was aged seventeen and, by his standards, a mature craftsman. The first two were unpretentious divertimenti written during the Italian tour, and the latter of a more serious content composed on his return to Vienna. Only K.169 is known and has been well-recorded before. The Dimov Quartet give an aggressive account of these little gems and are lacking in tonal beauty, points which are emphasised by a close recording. Nevertheless, the ensemble is good and this record gave me immense pleasure.

Meridian label features mostly chamber groups and solo instruments and also sells at £2.99. **The Romantic Englishman** (E77002) is a collection of Glee's, Partsongs, and Ballads ranging from Battishall c. 1750 to Hubert Parry's *Love Wakes* composed about 1900 all sung in chronological order. The Savoy Operas have dwarfed Sullivan's other achievements and it is nice to have *The Long Day Closes* to remind us that he was also one of the most prolific and successful of Victorian song-writers. *The Moon has raised her lamp above* is another reminder from a once favourite opera. The Hilliard Ensemble produce some firm chords, sing with clear diction, and go to work with great gusto. Sometimes they sound forced, usually when attempting to "guy" some of the pieces. I can't help feeling that a little more genuine feeling towards the music would have brought even better results, but this issue makes a refreshing change and I recommend it wholeheartedly.

On CBS Embassy 30105 comes one of those infuriating performances by Eugene Ormandy and the Philadelphia of the popular **Handel Water and Firework Music**. Infuriating because

these are big sweeping romantic interpretations with large orchestra with everything contrary to Baroque practice and yet (I should blush with shame) I enjoy them so much! *The Water Music* in Ormandy's own transcription sounds identical to that of Sir Hamilton Harty with a few minor embellishments, and *The Fireworks Music* is given in Harty's version but definitely in the Ormandy style. The opening Maestoso is very slow and mannered and the following Allegro is given crescendoes and diminuendoes which would have surprised Handel, while in the Bouree Ormandy makes an enormous rallentando at the close. Not Baroque, not Handel, but certainly a gorgeous sound and undoubtedly effective. The filler is an uncharacteristic suite of Corelli pieces arranged by Ettore Pinelli which probably served a useful purpose twenty years ago when Baroque music was virtually unknown. Recording is not kind to the strings which are strangely distant while brass and wind are sometimes too close and harsh for comfort.

BARGAIN BASEMENT

Last year I recommended a newly-recorded Pickwick double album entitled **Music You Have Loved** which featured the London Symphony Orchestra conducted by Vilem Tausky. Pickwick has now re-issued a single disc on the Hallmark label under the same title (SHM 944/HSC 317/H.8317) consisting of the first record of the original set. This features leader John Georgiadis in a beautiful version of the Meditation from *Thais* and Maurice Murphy playing the sparkling Rondo from Hummel's Trumpet Concerto. Vilem Tausky is a master of light music and I can thoroughly recommend this selection of popular music by Verdi, Grieg, Mendelssohn, Delibes, and Gounod. It also re-introduces the charming *Elizabethan Serenade* by Ronald Binge. Pickwick records now retail at £1.49 with cassette and 8-track versions at £1.95.

Lambert and Butler has now taken over sponsorship of the Master series on Classics For Pleasure and one of their first releases is **Delius** (CFP 40304) with Vernon Handley conducting the London Philharmonic Orchestra. It appeared the same month as an identical record from Argo which was unfortunate for both companies. Frankly there is little to choose between the two versions. Handley brings a greater sense of urgency to the music and there is no doubt that the more numerous strings of the LPO are vital to this music. On the other hand many listeners will prefer Marriner's precision and he certainly captures the pulse of *La Calinda* better than Handley. The CFP record-

ing by Brian Culverhouse is equal to the Argo in every way and possibly the price (£1.49) will be the all-important factor.

The **Dvorak** recbrd with the same orchestra conducted by Walter Susskind (CFP 40303) does not quite reach the same heights but is still good value for money. The conductor gets a good response in the Symphony No. 8 in G, but lacks rhythm, charm, and refinement. He is at his best in the two inner movements of the symphony but manages to make the final Allegro *ma non troppo* quite a bore. *Carnival Overture* makes a sensible filler and is given a bright and breezy performance. The recording is adequate but on the dull side and the inner parts lack clarity.

LIGHT MUSIC

A superb account of **Cox and Box** and **The Zoo** appeared on Decca TXS 128 (Cassette KTCS 128) with the D'Oyly Carte Company, Royal Philharmonic Orchestra conducted by Royston Nash. *Cox and Box* was once an hour-long entertainment but is now cut to about half-an-hour to make a curtain-raiser for the shorter Savoy Operas.

The stilted delivery of the dialogue—so quaint and comical on stage—can become tiresome on repeated hearings especially as F. C. Burnand was no Gilbert. The interest in the piece is that it was a training ground for Sullivan from which he launched into the later master-pieces. Even so, there are plenty of good moments here especially the military *Rataplan* copied from Offenbach, the *Buttercup* duet rehashed from an earlier drawing room duet *The Dicky Bird and the Owl*, and the melodramatic Suicide scene near the end. The singers—Gareth Jones, Geoffrey Shovelton and Michael Rayner—cannot be faulted.

The Zoo appeared three months after *Trial by Jury* but could not compete with the general excellence of Sullivan's collaboration with W. S. Gilbert. This piece is a pleasant, tuneful burlesque with a few felicitous touches but not one tune which stays in the memory. Opening zoo noises and narrative are unnecessary but probably inserted due to the absence of a printed score. D'Oyly Carte stalwarts Kenneth Sandford, John Ayldon and Julia Goss are in fine fettle and supported by Meston Reid and Jane Metcalfe. The well-filled sides both play for about 35 mins or more, and the recording is most realistic.

Dancing in Old Vienna is the title of Enigma K53577 which features the London Symphony Orchestra under John Georgiadis who, like Willi Boskovsky and Strauss himself, directs the orchestra violin in hand. It must be said

at once that he cannot match Boskovsky's vital Viennese schmaltz, and in some places, such as the introduction to *Wiener Blut* he sounds positively pedestrian. But lack of style is usually compensated for by sheer drive and enthusiasm backed by a vivid recording with fairly wide dynamic range. The programme is well-balanced with popular Waltzes and Polkas by Johann, Polkas by brother Josef, and finishing with the inevitable *Radetzky March* by the elder Strauss.

The success of a miscellaneous collection entitled **Melodies for You** has prompted Decca to issue Volume II (MOR 514, cassette KMORC 514) with four new recordings by the BBC Concert Orchestra conducted by Ashley Lawrence. They include the charming Austrian traditional Schuh Platter Dance, the Tarantella from Coleridge-Taylor's *Petite Suite de Concert*, and the Overture *Susanna's Secret*. The opening *Marche Joyeuse* of Chabrier is nicely played but shows up the lack of string power. The rest of the disc is made up of reissues from the Decca catalogue including some fantastic fiddling from Ruggiero Ricci, Hilde Gueden singing *My Hero* and George Malcolm reminding us of his own pastiche *Bach before the Mast*. Less successful is the Coronation Scene from *Boris* in a version by Camerata and the Kingsway Symphony Orchestra which is much too light and underscored, a mannered Figaro from Sherrill Milnes and a Chopin Etude from Ashkenazy which sounds as if it was recorded in the bath tub!

Waldteufel Waltzes on EMI ESD 7070 are conducted by Willi Boskovsky and if he seems slightly less at home than usual it is because Waldteufel does not have the sheer verve and brilliance of the Strauss family. His attraction



Waldteufel Waltzes on EMI mid-price Green-sleeve label.

lies in the broad sweeping melodies which, in the initial stages, found more favour in England than his native France. These broad tunes are much in evidence in *Très Jolie* and the hauntingly beautiful *Les Sirènes* with its interesting woodwind Introduction. Least successful on this recording is *The Grenadiers*. I don't mind the ultra-fast Introduction, but the Waltzes themselves are pulled about unmercifully and the excessive rallentando on the first beat of Waltz One is simply frightful. A blemish in an otherwise successful issue. The orchestra is the London Philharmonic.

Twenty-one choirs from as far afield as Crewe, Reading, Luton and Manchester come together in the Royal Albert Hall for the very first **Festival of Massed English Male Choirs** (Grosvenor GRS 1071). According to the sleeve note they had but one rehearsal under conductor Edward Walters before the real thing in May 1978, and this being so, it says much for the ability of the singers and the expertise of Mr. Walters that their renderings are well nigh perfect. In particular I liked the pianissimo singing in Schubert's *Rest*, and the varied programme includes *Calvary of the Steppes*, *Deus Salutis*, and Choruses from *Faust* and *Tannhauser*. If you don't object to announcements and applause this is an example of English Choral Music at its best.

I have never heard (or heard of) the Mirrlees Works Band before, but on the strength of **Snapshots** (Grosvenor GRS 1069) this is my great loss. They are comparatively new to the field being formed in 1949, but have won 42 prizes and since 1965 have been elevated to Championship Status. How well they play—light, rhythmic, and with good chording. Some items are unknown to me but they all make up a pleasant concert programme together with such stirring favourites as Ansell's *Plymouth Hoe* and Rimmers *Rule Britannia*. Cornet soloist Mark Beckett produces a beautiful tone and Mike Kilroy plays the Euphonium solo in a typical brass band arrangement of *Blayden Races*. Conducting is shared between musical director Kenneth Dennison and resident conductor Eric Pinkerton who both should be proud of their achievements. A very good record.

NOSTALGIA

This year there has been a flood of re-issues from the 'twenties and 'thirties and the record companies have been falling over themselves to delve into their vaults for this buried treasure. **Pennies From Heaven** Decca DDV 5007/8—Cassette KZGCU 8105) refers to the BBC TV series of that name and has the title tune sung by the Street Singer himself, Arthur Tracey. The



Victoriana — songs and melodies from the Parlour Quartet.

mellifluous Bert Ambrose, flamboyant Roy Fox and that excellent all-rounder Lew Stone all feature together with vocalists Al Bowley, Denny Dennis, Phyllis Robins, and Connie Boswell. As a youngster I well remember being partial to Primo Scala's Accordion Band, and I am delighted that a medley by them is included. All tracks date from 1929-1938 and transfers have been splendidly done.

Reader's Digest has also cashed in on the current trend with two timely collections. **TV Music Spectacular** includes some of the familiar ditties that have featured in our everyday lives presenting over 100 tunes on eight stereo LP's or four double-play cassettes. Powerful themes like *The Onedin Line*, *The Sky at Night*, a sporting collection including *Match of the Day*, thrillers with *Kojak* and *Z-Cars* and Westerns with *The Virginian* together with atmospheric tunes like *Whc Pays the Ferryman*. TV Music Spectacular costs £19.95 and comes with a free bonus issue of fourteen Eurovision Song Contest hits of past years.

Going back even further is **The Fabulous Fifties**, a collection of ten discs plus a bonus in the form of a pocket radio. Hits from 1950-59 is certain to include someone's favourite. Orchestras of Edmundo Ros, Billy Cotton, are joined by the recording stars of that era: Lonnie Donnegan, Anne Shelton, Russ Conway, Gracie Fields and many others. Most tracks are transfers from old 78 rpm records but have been refurbished with care to reproduce satisfactorily on modern stereo players. Both sets can be ordered direct from Reader's Digest, 7-10 Old Bailey, London EC99 1AA or bought across the counter in any of the company shops around the country.

Maureen Keetch, Sylvia Eaves and Robert

Carpenter Turner, together with pianist Kenneth Barclay have had considerable success up and down the country with their singing of typical Victorian parlour songs and The Parlour Quartet-**Victoriana** (Pearl SHE 550) presents a selection from their repertoire. *Sweethearts, Revenge* and *Grandfather's Clock* are joined by excerpts from operetta and concert numbers such as *Vilanelle* and *Parted* (Tosti). All sung pleasantly without trace of patronage with Mr. Barclay a model accompanist. In fact his solo *Maypole Dance* reveals Sydney Smith as a master of the salon style with a finesse which borders on Chopin in places, and which collapses only by excessive use of tremolo.

Mention of Percy Grainger immediately brings to mind those happy folksy tunes like *Country Gardens* and *Shepherd's Hey*, and many people forget that he was also a first-rate concert pianist. It is therefore good to be reminded of his prodigious technique (GEM 143) even if some of these early disc recordings are truncated to accommodate the limitations of a 4½ minute side. The Chopin *Polonaise in A flat* is given a noble, spacious reading with hammer-like left hand octaves in the central section. The *Prelude in A flat* is too mannered for my liking but Liszt's *Polonaise in E* benefits from the crisp rhythm and attack. His version of Tchaikowsky's *Valse des Fleurs* is a veritable tour de force in which he makes the grand piano sound like a full symphony orchestra. His own compositions are very difficult to play, their tunefulness and outward simplicity masking huge stretches and finger-twisting passage-work. Even Grainger sometimes had difficulty and after several fluffs in *Shepherd's Hey* one can hear him remark "I think we had better do that again", which only goes to show that even super-pianists are human.

LIGHT POPULAR

Billie Jo Spears, that lovely Country and Western star, presents a programme of ballads sung in impeccable style backed by a 20-piece band and vocal group. Arrangements by Bill Justis tend to be stereotyped, but this is good middle-of-the-road stuff well recorded in Nashville. The album is entitled **Love ain't gonna wait for us** and is on United Artists UAS 30205.

Don Lusher is one of our finest instrumentalists and those of us who remember him with the Ted Heath and Cyril Stapleton bands will always regard him as the Prince of trombonists. **The Lusher Side of Brighthouse and Rastrick Band** (Grosvenor 1050) features him not only as soloist, but as composer (*Concert Variations* and *The Trombone Men*) and arranger (*Making Whoopee* and *The Type-*

writer). Combine these talents with one of our top Brass Bands and you have an enjoyable hour of light music. Most of the other arrangements are by the Band's conductor Derek Broadbent.

Rex Harrison records **His Favourite Songs** on PYENSP 18595 (Cassette ZCP 18595). He has never aspired to a singing voice, but the technique of declaiming in time to music cultivated for *My Fair Lady* is attractive. Perfect diction and dramatic impact imparted to each lyric brings an intensity normally reserved for Shakespeare. One song entitled *I thought I had time* has been specially written for the album by producer Norman Newell and arranger Roger Webb, who also conducts. Naturally *I've grown accustomed to her face* is included, but other songs such as *Gigi*, *As Time Goes By* and *Try a Little Tenderness* respond well to the treatment. Recording is a bit fierce but can be recommended for all Harrison fans.

Michael Strogoff (Cube HFLY 30 or cassette ZCFLY 30) is definitely only for those who found the TV series compelling viewing. There is one nice tune *Nadia's Theme* but the rest, pseudo-Tartar and Russian native music, quickly becomes tedious. Composer Vladimir Cosma conducts.

Brian Sharp is an extremely competent organist and demonstrator for the Bentley Organ Company. **Swings and Strings** (Grosvenor GRS 1027) creates the illusion of a whole orchestra using a variety of instruments including the Ace Tone GT7 two-manual portable plus 760 Leslie speakers, and the Eminent 310 Concerto. The latter is a conventional organ capable of giving authentic string sound via a specially designed Orbitone speaker cabinet. Also in the specification is an ARP Pro-Soloist synthesizer which simulates brass and woodwind. To complete the line-up Brian also performs on a Challen grand plus an electric piano. Tracks include popular numbers such as *Eye Level*, *Light My Fire* and *Clair*.

On the jazz front **Count Basie plays Neal Hefti and Quincy Jones** on Vogue VJD 558. Quincy Jones was responsible for a remarkable range of scores for film and TV as well as being closely involved in the world of the big band. His scores for Basie are recorded on this double album and were originally released in 1958 and 1959.

Earl Hines' disc **One For My Baby** (Black Lion) BLP 30197 consists entirely of music by Harold Arlen and was recorded at WARP studios, New York, in 1974. **Jamento: The Monty Alexander 7** (Pablo Deluxe 2310 826) is a mixture of Calypso, Reggae and Jazz and features the music in such a way as to enable each one to retain a national identity, either



Shirley Bassey on Pickwick.

American or Jamaican, while being subjected to the jazz treatment. **Sweet Tracks** is a good-value double LP Vogue VJD 547 featuring Harry

Edison on trumpet and Jimmy Forrest on piano, both ex-Basie alumni with their progressive-style versions of 24 standards.

Kiss Me Honey Honey Kiss Me sings Shirley Bassey on Pickwick SH01 967, and who can resist an invitation like that especially when backed up by Twelve hit songs including *Johnny One-Note*, *Strangers in the Night*, *Shadow of your smile* and *The Sound of Music*. Miss Bassey is in ebullient form and this Pickwick album has bright clear sound, a real bargain at £1.49.

Even more of a bargain is **The Elton John Live Collection** (PDA 047) a double album for only £2.75. It gives a reminder of two important events in the career of this pop superstar. Tracks are taken from live concerts at the Festival Hall and from Madison Square Gardens, New York, the latter being booked for a radio broadcast in November 1970. Fifteen numbers in all, which can't be bad, including *Take me to the Pilot*, *Honkey Tonk Woman*, *Crocodile Rock* and the enigmatic *Funeral for a Friend*.

High Rise Hi-Fi

by Donald Aldous

TODAY'S advances in audio circuit technology and improvements in loudspeaker design go hand-in-hand with new styles of hi-fi system presentation. An important step forward from the now familiar 'music-centre' is the 'rack' concept, in which a group of units (tuner/amplifier, tape cassette unit, with record player on top, and record/tape storage below), all mounted together in a specially designed vertical (or horizontal) housing.

These compact hi-fi systems have been given many names from 'rackable stereo' to 'towers of power' and are achieving increasing popularity in world markets. Compared with music-centres, which are an all-or-nothing purchase, other than loudspeakers sometimes, the console or rack combination offers flexibility of assembly by buying units separately, when funds are available. As well as giving the system a professional appearance, the rack format is neat, with minimum wiring trailing around the listening room, allied to taking up only a small area when using the 'high-rise' vertical cabinets.

All these features delight the distaff side of the household. These versatile audio racks can be simple wooden units or more elaborate types, with standard EIA mounting facilities, in black or silver finish. Of course, the cost of these racks has to be added to the overall outlay for your hi-fi system, by they do offer several advantages, as outlined here. Prices range from the **Amstrad** Executive wooden cabinet with its RRP of £29, selling for a typical discount price of £20 to models from **Sansui** costing from £67.50 (GX-100) and £74.30 to £84.80 for models GX-5WR and GX-200 respectively. The attractive and robust Sansui GX-5WR rack measures 482mm wide with a height of 967mm including strong castor rollers. A record deck can be placed on the top.

Surveying the available 'stacked' systems, **Pioneer** with its Rack JAR-2S features the advanced SPEC-4 split power amplifier, the SPEC-3 pre-amplifier, the RI-707 open reel tape deck, all intended for rack mounting, with the TX-9500-11 tuner and SG-9500 graphic equaliser in special adaptor frames, type



Sansui Audio Rack.

JAR-101. This unit has big castor rollers, but no record storage space.

The SPEC-4 professional standard amplifier has a continuous power output of 150W per channel minimum rms at 8 ohms, from 20Hz to 20kHz, with no more than 0.01 per cent THD and IMD. The differential amplifier is current mirror-loaded with three-stage Darlington parallel push-pull direct coupled OCL. The SPEC-3 pre-amp has facilities for two gram inputs, two auxiliary, two tape monitoring and dubbing, plus DIN tape jack. There are also subsonic filter, four-gang attenuator type volume control, audio muting, power switch mute, three-stage turnover tone controls, tone defeat switch and eight cartridge load settings.

Pioneer has created its own 'mini-rack' system, model 3000, and in mid-1979 replaced its X-50, X-70 and X-90 systems with a new X-33, X-55, X-77 and X-99 range. These incorporate an integrated amplifier, tuner, turntable, cassette-deck, with a pair of high-grade speakers. Several different styles of cabinet are available, vertical and horizontal spacing.

Another upmarket combination emanates from the **Grundig** establishment. Christened Super HiFi Compact Systems, these towers offer a series of combinations: Tower 10/25 consists of one PS1010 record deck, one CNF 250 cassette deck, one receiver 25, plus a tower rack. The Tower 20/45 comprises one PS10/20 record deck, one CNF 350 cassette deck, one receiver 34, and the tower mounting rack.

Looking at the System 10/25 in more detail, it has an S-type pickup arm, fitted with Shure M75B magnetic cartridge on a two-speed turntable. The Grundig R35 receiver has a field-strength meter to simplify tuning, sensors with LED display for function and programme selection, and sockets for two stereo headsets.

The CNF250 stereo cassette deck has Dolby NR, switchable aurally compensated volume control (contour/linear), and switchable noise filter, tape selector for all types of tape. It has a large storage cupboard at bottom of rack, protected by smoked transparent doors. Dimensions are about 60 x 98 x 43cm, and although the record player and cassette deck are fixed components of these systems, the Grundig receivers can be varied. The selected loudspeakers must be able to handle not less than 50W of music power, approximately 40W rms.

Toshiba has an extensive array of racking systems, including models 220, 330, 335 and 420, offering power outputs from 2 x 22W up to 2 x 42W rms, with a variety of modules, tape and record storage, and differing physical dimensions of the audio rack housings. The 225 and 230 systems are sold complete with loudspeakers. The 230 system consists of the SR-A230 semi-automatic belt-drive turntable, amplifier, tuner and cassette deck, with two SS-230 loudspeakers. These speakers are fitted with Sonaudax 22cm diameter bass units, which have 2.5cm aluminium speech coils, plus a Sonaudax 1.9cm polycarbonate dome HF speaker. The power rating is 35W continuous programme signal.

JVC has several hi-fi stacks in its range, which it describes as combination hi-fi systems, mounted in audio racks. The modest System G incorporates the JR-S61L VHF-FM/MW/LW receiver, JL-A20 belt-drive auto-return turntable, and KD-10 cassette deck fitted into the LK-12 audio rack, with a shelf at the



Grundig Super Compact Hi-Fi System 10.



Grundig Super Compact Hi-Fi System 30.

base for gramophone records. The tape deck has Dolby NR and peak reading lights to indicate distortion overload, with adjustable switches to obtain optimum results from different brands of tape.

The JVC System-E is a more advanced design, with its JA-S22 integrated amplifier, capable of handling signals down to DC, a JT-V22FM stereo/MW tuner, SEA Graphic Equaliser, with its ten-frequency Tone-Zone control, plus a KD-25 stereo cassette deck using JVC's sen-alloy tape head with Permalloy core. On top of the rack can be mounted the JVC quartz-locked direct-drive turntable, employing a servo system that compares the speed of the disc platter with the accuracy of a quartz-crystal oscillator. With this method, any variations of temperature or load likely to modify the speed of rotation are corrected by the quartz-locked motor. The LK/MK-44 Audio Rack with this array of modules has an LP storage section with Perspex door.

Teleton's Hi-Fi Centres TC-302 and TC-202B have all the advantages, it is claimed, of hi-fi separates brought together in a high-performance stacked system. The former assembly includes the A500 amplifier (30 watts of continuous power from each channel), the T500 tuner, C500 cassette deck (with switching for CrO₂ and FeCr type cassettes, with switchable Dolby B noise reduction), TRP 200W record deck (placed on top), and two LS303 infinite baffle loudspeakers. The TC-202B system includes their SX.500 cassette, which is a four waveband receiver, with a front loading cassette section. Output is 20 watts rms per channel. The TRP200 record deck has a semi-automatic turntable, belt drive with S-shaped pickup arm. The 3-way loudspeakers have been designed to match this Teleton system, as is the cabinet with a functional design enabling useful storage of cassettes and records. The 'Post Box' type cassette player/recorder has a simply operated cassette eject facility.

Sony, too, is well up in the 'stackables' league, 'taming wild hifi', to quote its slogan. Their systems offer a range of five hi-fi combinations to choose from, tailored to suit both living room requirements and the customer's pocket. Systems 1 and 2, along with all the other models, include the PS212 direct-drive turntable. System 1 includes a 15W per channel amplifier and a separate tuner. Its companion, System 2, also features a 15W per channel amplifier, plus a stereo receiver with programme sensors. The TCU2 Dolby cassette deck is also fitted. Systems 3 and 4 give 25W per channel output and other facilities, such as illuminated function indicators, separate signal strength and centre-tuning meters.



Toshiba 230.

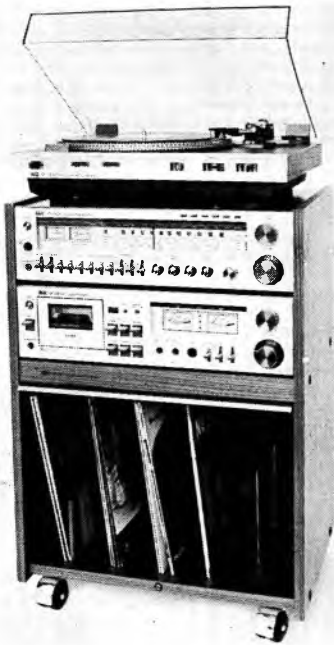


Ferguson Hi-Fi System 25.

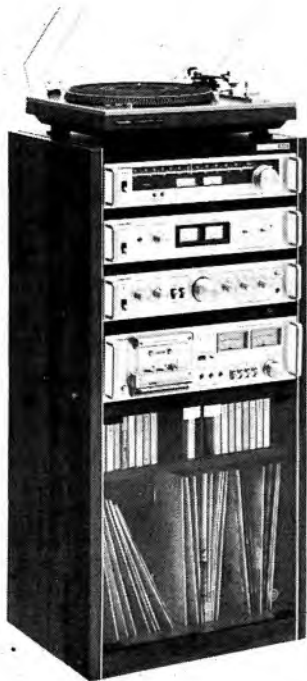
System 5 employs a horizontal type cabinet in teak effect, and the system overall permits the use of an additional pair of loudspeakers, plus a microphone mixing facility.

Hitachi's systems are called 'matched hifi consoles'. The HC500VM has a matt-black finish metal-framed cabinet with simulated teak sides, and is supplied with chrome-plated metal stand for cassettes and discs. This assembly consists of an HT 350 direct drive turntable, FT340 receiver, HA330-50 + 50 watts amplifier, D550 Dolby cassette deck, and the CVM3 console unit. Cabinet dimensions are: 48.5 (W) × 92 (H) × 36.5 (D) in cm. Overall height, including turntable, with cover raised, is about 1.32 metres.

The Hitachi model HC200HW is housed in a low-level horizontal cabinet in simulated teak. The two sliding doors enclose disc storage, and a tape cassette storage drawer with equipment store on the left. The system comprises HT350 direct-drive turntable, SR303L 20 + 20W three-band stereo receiver, D220 Dolby cassette deck, and the CHW5 console. Cabinet size is 89 (W)



ITT Hi-Fi 80.



Toshiba 330.

× 72 (H) × 42 (D) cm. The Hitachi matched hi-fi console HC500 VW console is a vertical design in simulated teak, with a cassette drawer and space for LP records, and equipment storage. The modules consist of HT350 direct drive turntable, FT340 receiver, HA 330-50 + 50W amplifier, D550 Dolby tape deck, and the CVW4 console housing. Its dimensions are 47 (W) × 94 (H) × 40 (D) cm. Loudspeakers, as desired by the purchaser, are extra.

Amstrad's Executive range of equipment, and their SR301 racking cabinet, mentioned at the beginning of this survey, has shelving that allows any combination of amplifier, tuner, front-loading cassette deck to be installed. As well as the budget racking systems 590, 682, and 683, Philips has launched its impressive 'Black Tulip' range AH 180 digital tuner, with frequency synthesiser, AH 281 stereo pre-amp, and AH 381 stereo power amplifier.

Only a few retail prices for any of these stacked systems have been given, as changes may have been made by the time of publication of this 1980 *Hi-Fi Year Book*, but a few typical costs — in mid-1979 — may be useful for reference. For example, the Grundig System 10/25 sells for about £700, reaching around £1,000 for the 20/45 Tower, both without loudspeakers. Suggested retail prices for the Sony systems range from Series 1 at £318 to £473.50 for the Series 5. Loudspeakers recommended are the Sony SS1030 at £21 each, and for the bigger systems, 3, 4 and 5, the model SS2030 speaker is listed at £48.25 each.

This catalogue of 'stacked' hi-fi systems is not complete, although representative of the styles and prices ranges now available in the UK, but other well-known brand names in this area include ITT, Pye, Goodmans, National Panasonic and Technics. Ferguson produce the System 25, which includes matching floor standing loudspeakers, fed from a stereo 25 watts rms per channel amplifier, stereo cassette deck, and radio-tuner, all with inter-linked power supplies needing only one mains lead for the whole system. The housing unit is supplied in a Flat Pack with full instructions for easy assembly. Matching Goodmans loudspeakers are an optional extra. Each unit of this Ferguson Hi-Fi System 25 is separately packed, and the total price, with loudspeakers, is below £500.

For completeness, mention must be made of the Dual System 3000 adaptable shelf modular system, which will accept the Dual International lines, as well as other makes of equipment. There is space for discs and cassettes. This system is distributed by Hayden Laboratories Ltd, of Chalfont St. Peter, Bucks.

Toshiba's latest series of micro-components could well point to a trend in future domestic



New Philips rack Hi-Fi system

hi-fi systems, as the entire system of four units (amplifier, pre-amplifier, digital synthesiser, FM tuner and cassette deck) can be stacked together with overall dimensions of only 12.75in high, by 10.5in wide and 8.5in deep. This **Aurex** array is an outstanding example of the latest micro-circuitry, with 40W + 40W at 20Hz to 20kHz into 8 ohms, a micro-digital synthesiser FM tuner, using LSI circuits, and a digital LED frequency readout. The micro-cassette deck has double-flywheels and two motors, Dolby, NR and connections for ADRES, which is Toshiba's own noise reduction system. This special deck features memory, auto-play, accurate LED peak meters, and a socket for RM-15, their remote control accessory. Incidentally, only selected dealers in the UK will stock the full Aurex range.

Mention of the Aurex remote control facility directs attention to remote control developments of considerable appeal to the tired audiophile. For instance, the **Fisher** Cassette Deck, Model CR5125, a three-head Dolby unit, can be supplied with a hand-held remote control that activates a solenoid to start and stop motion and record functions. At the time of writing, this new Fisher design is not available yet in the UK.

BSR's ADC Accutrac 4000 computerised turntable, operated by remote control has been available for some years, and consists of three separate, but inter-related, components, a space-age type remote receiver, and a hand-held cordless transmitter. Up to 24 commands can be programmed in any order required. The transmitter can also be set to reject, cue, repeat and clear, as well as play. A new **ADC** Professional Product design, known as the Accutrac + 6 is at present only available in the USA. This is a multi-play computerised design that plays six records, but does not drop them on to the turntable. Each disc is lowered, like an elevator, into position on the Accuglide spindle that spirals up through the platter. After all the six records

have been played, it lifts them back into the 'start' position.

BSR's X-10 systems permits control, through a microprocessor, of any appliance or lights in the home from any position within the house. Pushbuttons on the Command Console control, up to 16 remote modules that plug in between, say, appliances, lamps and their respective AC outlets. In addition to the Command Console, smaller units are available to operate the console ultrasonically at distances up to 30ft.

This **BSR** unit is again not yet available in the UK, we understand, but **Home Automation Ltd** have their **Ambic 2000** range of remote control dimmers and switches, using infra-red transmitters radiating impulses to trigger the switches.

Lastly, the **Bang & Olufsen** Beomaster 2400 FM receiver which has touch-control switching and preset FM stations, has an optional remote control device. **B & O's** latest series of hi-fi furniture units is designed to house their equipment including a model suitable for use as a room divider. This system has full remote control facilities for receiver and record player.

To complete this review, here is a list of furniture manufacturers making hi-fi equipment mounting systems, although not for any particular manufacturer's products:

Click Systems Ltd., Low Moor Road, Kirkby-in-Ashfield, Notts. NG17 7LH.

Edwards Construction Ltd., 4 Brunswick Drive, Harrogate, Yorks.

Holder Pearce Ltd., 66 Grove Road, Eastbourne, East Sussex BN21 4UH.

Jensen Brothers (Furniture) Ltd., Hillside Works, Livesey Fold, Darwen, Lancs. B33 1QG.

Leisure Time Ltd., Crozier Road, Mutley, Plymouth.

MFI Furniture Centres, throughout the UK. Portwood Furniture Ltd., Portwood, Stockport SK1 2JA.

Record Housing, Field & Co. Ltd., Brook Road, Wood Green, London N22.

21st Century Antiques, 494 Bexhill Road, St. Leonards-on-Sea, East Sussex.

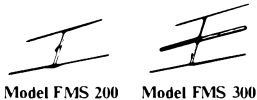
Hamilton Jones Ltd., 129 Marlowes, Hemel Hempstead, Herts. HP11 8B.



Tune into Aerialite's new range of Stereo Aerials

If you've invested in top class audio equipment or recently bought an expensive tuner, you've the right to expect perfection. Unfortunately, you may still have neglected one vital aspect of stereo radio. The aerial. Without the right aerial, your equipment can be operating way below potential. FM stereo needs up to ten times the level of signal required for mono. Given this plain fact, even the world's finest FM tuner is totally dependent on the strength and quality of the received signal.

To give you the finest stereo reception possible from your equipment, Aerialite have designed a superb range of stereo aerials. They'll eliminate background noise, cut out unwanted signals and interference, and just as important, give high directional selectivity to minimise multipath reception. Flawless stereo reception is a rewarding experience. The sooner you contact your nearest hi-fi/radio centre or Aerial Contractor, the sooner you'll achieve perfection.



Model FMS 200 Model FMS 300



Model FMS 400 Model FMS 600

Aerialite Aerials

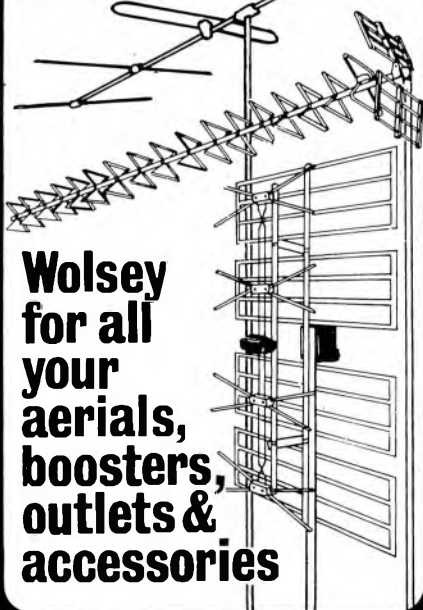
Whitegate, Broadway, Chadderton,
Oldham, OL9 9QG Lancs.
Tel: 061-652 1111



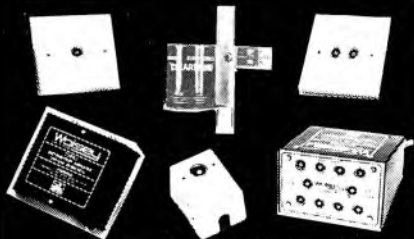
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Telex 49405

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Aerials FM/VHF

* Indicates entry is illustrated.

Abbreviations used in this section are given on page 5.

■ ADASTRA

Adastra Electronics Ltd,
Unit 22, Cricklewood Trading Estate,
Claremont Road, London NW2.
Tel: 01-452 6288.

P200

FM/VHF folded dipole ribbon indoor aerial.
Price: 66p (plus VAT).

P201

FM/VHF folded dipole ribbon indoor aerial
with FM plug fitted. Price: 84p (plus VAT).

■ AERIALITE

Aerialite Aerials Ltd,
Broadway, Chadderton, Oldham,
Greater Manchester OL9 9QE.
Tel: 061-652 1111.

FMS200*

FM/stereo dipole and reflector array with 1-2in
mast attachment bracket. Price: £9.14 (plus
VAT).

FMS300*

FM/stereo three-element array with 1-2in mast
attachment bracket. Price: £12.35 (plus VAT).

FMS400*

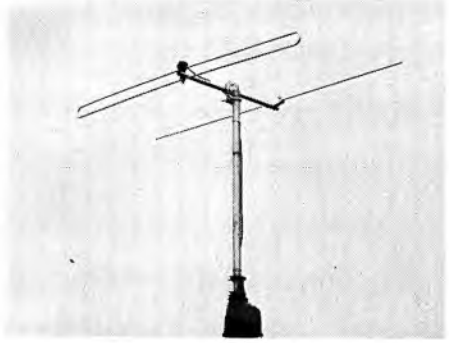
High power stereo four-element array with
1-2in mast attachment bracket. Price: £13.59
(plus VAT).

FMS600*

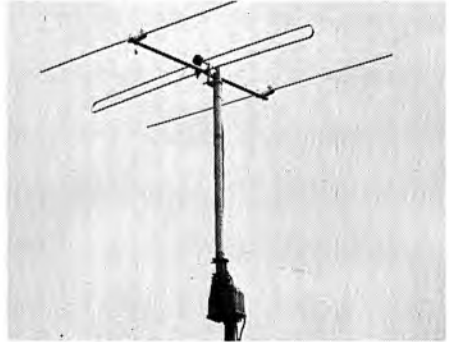
Six-element extra high power (array only)
stereo/FM, with 1-2in mast attachment
bracket. Price: £20.50 (plus VAT).

FMS Kit

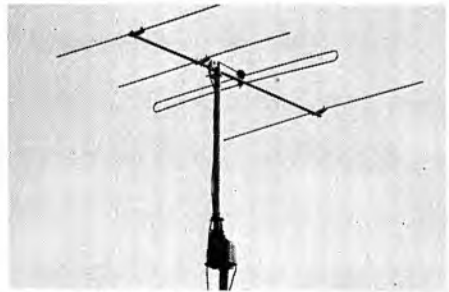
Comprising FMS300 aerial, WS/45 loft arm, 20
metres of low loss co-axial cable, 1 co-axial
plug, staples. Price: £21.24 (plus VAT).



Aerialite FMS 200



Aerialite FMS 300



Aerialite FMS 400



Aerialite FMS 600

*Indicates entry is illustrated

■ ANTIFERRENCE

Antiferrence Ltd, Bicester Road, Aylesbury, Bucks HP19 3BJ. Tel: Aylesbury (0296) 82511.

FM224 Mushkiller

Dipole and reflector 'H' type array. Complete with universal mast/boom clamp. For use in good reception areas. Price: £7.20 (plus VAT).

FM234T Mushkiller*

Three-element array with Trumatch dipole, complete with universal mast/boom clamp, for medium range FM stereo reception. Price: £10.50 (plus VAT).

FM244T Mushkiller

Four-element array with Trumatch dipole, complete with universal mast/boom clamp. Price: £11.50 (plus VAT).

FM264T Mushkiller*

Six-element array with Trumatch dipole, complete with universal mast/boom clamp. Suitable for medium and long-range FM stereo reception. Price: £17.50 (plus VAT).

FM284T Mushkiller*

Eight-element array with Trumatch dipole complete with universal mast/boom clamp. Price: £22.50 (plus VAT).

FM235T Mushkiller

Three-element array with Trumatch dipole suitable for outdoor or loft fitting. Supplied with loft-mounting arm bracket and clamp plus a universal clamp for outdoor fixing. Price: £10.50 (plus VAT).

FM255T D.I.Y. Mushkiller

Five-element array with Trumatch dipole suitable for outdoor or loft fitting. Supplied with loft mounting arm bracket and clamp plus a universal clamp for outdoor fixing. For medium to long range reception. Price: £13.50 (plus VAT).

MA102 FM Mast Head Amplifier

Masthead amplifier in fully weatherproof housing complete with perforated strip and bracket for mast or surface mounting. Typical gain: 15dB. Price: £11.74 (plus VAT).

PU102 Power Unit

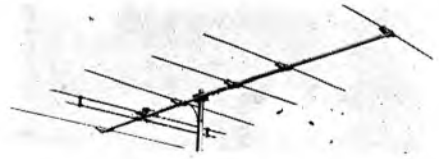
Power unit for MA102 FM. Fully insulated housing. Price: £9.96 (plus VAT).

TRR/V/SP Receiver Transformer

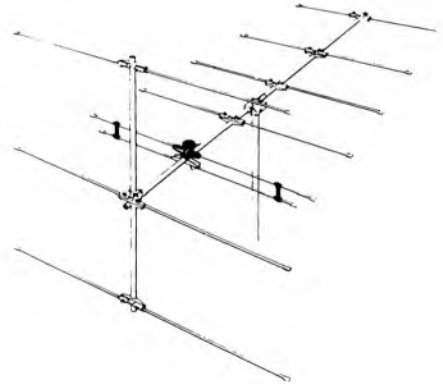
Matches 75 ohms coaxial input feeder into 300 ohms aerial sockets on imported tuners and tuner/amplifiers. Price: £2.55 (plus VAT).



Antiferrence FM234T Mushkiller



Antiferrence FM264T Mushkiller



Antiferrence FM284T Mushkiller



Eagle FMA 20

UF2/SP TV/FM Aerial Combiner

In fully weatherproof housing complete with perforated strip and bracket for mast or surface mounting. Price: £3.00 (plus VAT).

Y12SP TV/FM Aerial Outlet

With built-in diplexer to separate TV and FM signals from a common download. Can also be used indoors to combined TV and FM aerials. Surface mounting. Price: £2.30 (plus VAT).

FMS/2 Stacking Kit

For stacking two Mushkillers. Price: £4.00 (plus VAT).

■ EAGLE

Eagle International, Heather Park Drive, Wembley HA0 1SU. Tel: 01-902 8832.

FMA 10

Band II dipole for loft mounting. Price: £3.75 (plus VAT).

FMA 20*

Band II FM aerial outdoor or loft mounting, 3dB gain. Front to back ratio of 6dB. Price: £4.95 (plus VAT).

FMA 30

Band II FM aerial outdoor or loft mounting, 6dB gain, front to back ratio 8dB. Acceptance angle 40 degrees. Price: £6.95 (plus VAT).

FMA 40

Band II aerial, 4-element, outdoor or loft mounting, 7.5dB, front to back ratio 25dB, acceptance angle 35 degrees. Price: £8.95 (including VAT).

FMA 50

Band II aerial, 2-director, double reflector, 8dB gain, front to back ratio 32dB, acceptance angle 35 degrees. Price: £12.80 (plus VAT).

DA1

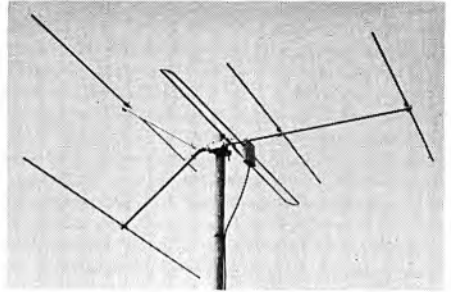
Complete 75 ohms indoor aerial with lead. Price: £3.90 (plus VAT).

■ EXATOR

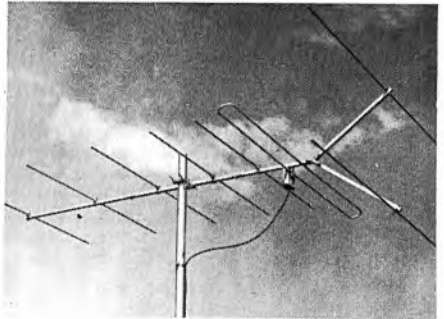
Audio Workshops Ltd, 33 London Road, Southborough, Tunbridge Wells, Kent TN4 0PB.
Tel: Tunbridge Wells (0892) 39222.

Exa Stereo UKW 5

A 5-element aerial for medium/long range reception. Gain 7dB. Front-to-back ratio 22.5dB. Gold anodised finish. 75 ohms



Fuba Uka Stereo 5



Fuba Uka Stereo 8

unbalanced output. Price: £15.12 (including VAT).

Exa UKW 3

A 3-element FM aerial for local/medium range reception. Gain 5.0dB. Front-to-back ratio 15dB. Gold anodised finish. 75 ohms unbalanced output. Price: £8.40 (including VAT).

■ FUBA

Audio Workshops Ltd, 33 London Road, Southborough, Tunbridge Wells, Kent TN4 0PG.
Tel: Tunbridge Wells (0892) 39222.

Uka Stereo 8*

A semi-professional 8-element FM aerial for very difficult positions and when only the very best is good enough. Gain 9.9dB. Front-to-back ratio 24dB. Output imp 75 ohms unbalanced. Gold anodised finish. Price: £36.65.

Uka Stereo 5*

A semi-professional 5-element FM aerial for very difficult positions. Gain 7.9dB. Front-to-back ratio 23dB. Output imp 75 ohms unbalanced. Gold anodised finish. Price: £24.40.

*Indicates entry is illustrated

Uka Stereo 2

A high quality aerial for local/medium range reception. Gold anodised finish. Gain 3dB. Front-to-back ratio 10dB. Price: £12.70.

Uka 061

An omni-directional broadband FM aerial utilising the crossed dipole technique. Gain -3dB. Output imp 75 ohms balanced. Gold anodised finish. Price: £17.30.

VMB 420

Masthead amplifier covering the FM band from 87.5MHz - 104MHz. Gain 15dB. Price: £34.00 (including VAT).



Jaybeam Stereobeam SBM2



Jaybeam Stereobeam SBM3

■ JAYBEAM

Jaybeam Ltd,
Sandfield Close, Moulton Park
Industrial Estate, Northampton NN3 1QQ.
Tel: Northampton (0604) 46611.

Stereobeam SBM2*

Band II folded dipole and reflector on boom. Supplied complete with fixing clamp for masts up to 2in diameter. Gain: 3dB. Reduces interference from rear. Price: £8.00 (plus VAT).

Stereobeam SBM3*

Band II aerial comprising folded dipole, reflector and director on boom. Supplied complete with clamp to fit masts up to 2in diameter. Gain: 6dB. Gives protection against signals more than 40° off bearing. Price: £11.60 (plus VAT).

Stereobeam SBM4

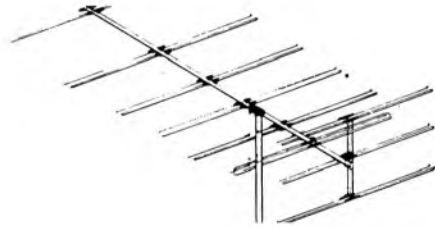
Band II aerial comprising folded dipole, reflector and two directors on boom. Supplied complete with clamp to fit masts up to 2in diameter. Suitable for medium fringe areas where large input signal is required for optimum performance. Gain: 7dB. Price: £13.50 (plus VAT).

Stereobeam SBM6

High-gain Band II aerial comprising folded dipole, reflector and four directors on boom. Supplied with clamp to fit masts up to 2in diameter. Suitable for use over the whole of the FM/VHF band, including the more powerful continental stations in favourable locations. Gain: 8.5dB. Price: £19.00 (plus VAT).

FM9S Super Fringe Area FM Antenna*

Consists of folded dipole, five directors and triple reflector unit with universal mast clamp. Price: £34.20 (plus VAT).



Jaybeam FM9S

Stacking Kit PM3

For extreme long range reception two SMB4 or SMB6 arrays can be stacked together using phasing and matching harness PM3. Price: £5.80 (plus VAT).

■ LEGEND

Legend Electronics Ltd, 25 East Street,
Bromley, Kent BR1 1QE.
Tel: 01-460 3313.

LA 903

FM Aerial and Spade Terminals. Suitable for frequencies 88-108MHz and consisting of twin flat 300 ohms ribbon cable formed into a traditional "T" pattern. At aerial centre and ends are simple fixing points to permit attachments to skirting board or wall.

LA 904

FM Aerial and Plug. Details as above.

■ **MAXVIEW**

Maxview Aerials Ltd, Maxview Works, Setch, King's Lynn, Norfolk.
Tel: King's Lynn (0553) 810591/810376.

Maxview D/DW

Band II wall-mounting dipole with stand-off arm and adjustable swivel fitting. Price: £2.74 (plus VAT).

Maxview D/DM

Band II dipole array with bracket for mast fitting. Price: £2.62 (plus VAT).

Maxview D/HM

Band II array comprising dipole and reflector on boom. Bracket for mast mounting. Price: £4.51 (plus VAT).

Maxview D/S3

Band II three-element array comprising director, dipole and reflector. Bracket for mast mounting. Price: £6.20 (plus VAT).

Maxview D/FD3*

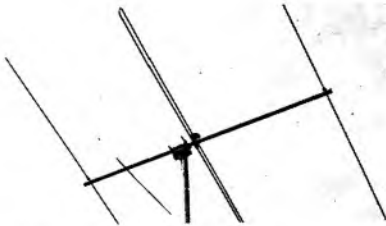
Band II three-element array comprising director, folded dipole and reflector. Bracket for mast mounting. Price: £7.90 (plus VAT).

Stereomax 4

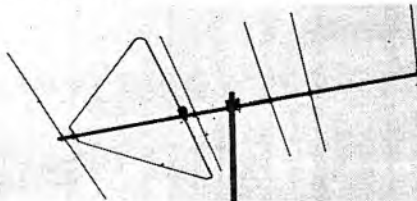
Tripole, two directors and reflector. Price: £12.00 (plus VAT).

Stereomax 6*

Tripole, four directors and reflector. Price: £15.84 (plus VAT).



Maxview D/FD3



Maxview Stereomax 6

Stereomax 9

Tripole, four directors and four reflectors. Price: £22.98 (plus VAT).

■ **PREMIER**

Premier Industries Ltd, 297-345 High Street, Cheltenham Spa, Gloucestershire GL50 3HS.
Tel: Cheltenham (0242) 27782.

TS4

Four-element Band II array comprising two directors, folded dipole and reflector with easier assembly. Bright alloy and very robust. Price: £12.94 (plus VAT).

TS6*

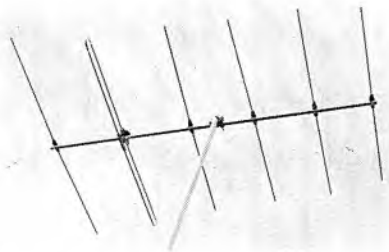
Six-element Band II array comprising four directors, folded dipole and reflector with easier assembly. Bright alloy and very robust. Price: £15.32 (plus VAT).

Clarity PH/ST

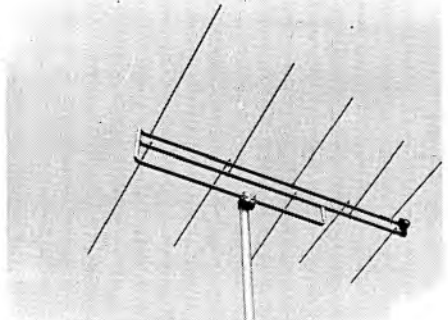
Phasing harness for coupling two TS4 or two TS6 arrays for extra long distance reception. Price: £4.64 (plus VAT).

TS1

Single dipole Band II array. Supplied with 2in universal mast clamp. Price: £4.08 (plus VAT).



Premier TS6



Premier Soundtrack

*Indicates entry is illustrated

TS2

H Band II array. As above. Price: £6.06 (plus VAT).

TS3

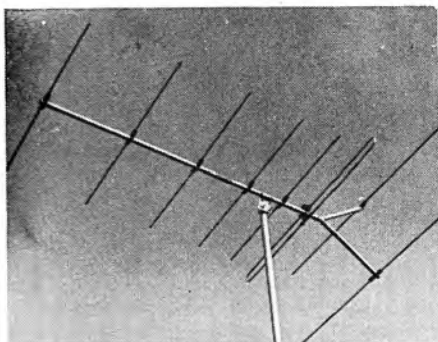
Three element array, folded dipole. Price: £9.76 (plus VAT).

Soundtrack*

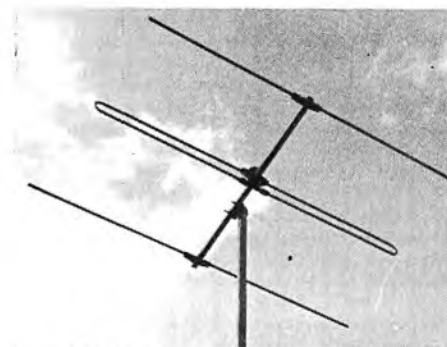
Five element on round boom construction for areas where trouble with interference is prevalent. Price: £20.72 (plus VAT).

TS3L

Loft version of TS3 and therefore lightweight construction but supplied with mounting arm. Price: £5.68.



Vorta Octophonic OST 8



Vorta Three Element VS3

VS1

Single dipole. Deluxe Band II aerial. Dipole mounted on 25mm sq section stand-off arm 30mm in length. Complete with mast fixing clamp. Gold finish. Price: £5.78 (plus VAT).

VS2

Dipole and reflector ('H' type) deluxe Band II aerial. Robustly constructed on 25mm sq section boom. Complete with mast fixing clamp. Gold finish. Price: £9.36 (plus VAT).

VS3*

3-element deluxe Band II aerial. Comprising 1 director, folded dipole, folded reflector. Robustly constructed on 25mm sq section boom. Complete with mast fixing clamp. Gold finish. Price: £13.98 (plus VAT).

Axiomatic

18-foot AM Skyrod finished in radiant blue plastic sheath. Supplied with mountings and isolation arm, two transformers and special download. Price: £30.67 (plus VAT).

■ ROSS

Ross Electronics, 32 Rathbone Place,
London W1P 1AD.
Tel: 01-580 7112.

RE-530K/RE-534K

RE-530K and RE-534K are folded dipole indoor aerials of 300 ohms ribbon twin feeder, each fitted with a 2-metre lead-in. Simple fixing points at aerial centre and ends permit simple attachment. RE-530K is fitted with spade terminals, RE-534K with a standard FM plug. Prices: RE-530K - 60p (plus VAT). RE-534K - 84p (plus VAT).

■ VORTA

Premier Industries (Cheltenham) Ltd,
343-345 High Street,
Cheltenham Spa, Glos GL50 3HS.
Tel: Cheltenham (0242) 31166.

Octophonic-OST8*

Continental style 8-element Band II aerial, comprising 5 directors, folded dipole (75/300 ohms matching transformer built-in), and a 2-element fish tail type of reflector. Robustly constructed on a 25mm sq section boom. Complete with mast fixing clamp. Gold finish. Gain: 10.27dB. Price: £30.16 (plus VAT).

Quinphonic-QST5

Continental style 5-element Band II aerial, comprising 2 directors, folded dipole (75/300 ohms matching transformer built-in), and a 2-element fish tail type of reflector. Robustly constructed on a 25mm sq section boom. Complete with mast fixing clamp. Gold finish. Price: £23.28 (plus VAT).

■ WOLSEY ELECTRONICS

Cymmer Road, Porth,
Mid Glamorgan CF39 9BT.
Tel: Porth (044 361) 2711.

FM2 (Single Dipole)

Rugged outdoor version of above with similar or improved performance. Price: £4.44 (plus VAT).

FM2 (Dipole and Reflector)

Economic design giving improved directional characteristics and higher gain in forward direction. Price: £7.37 (plus VAT).

FM4 (Four element)

Fringe area high gain array providing superior characteristics in both gain and directivity. Price: £13.14 (plus VAT).

FM6 (Six element)

Super gain array designed to give best results under most difficult conditions, especially useful in areas where multipath distortion is predominant. Price: £17.86 (plus VAT).

Clearsound Amplifier

With a minimum gain of 20dB this aerial booster amplifier has been designed for areas of weak signal. Operates with any 75 ohm impedance aerial, particularly effective with stereo reception on fringe or distant transmissions, even in areas of local high signal levels. Supplied with

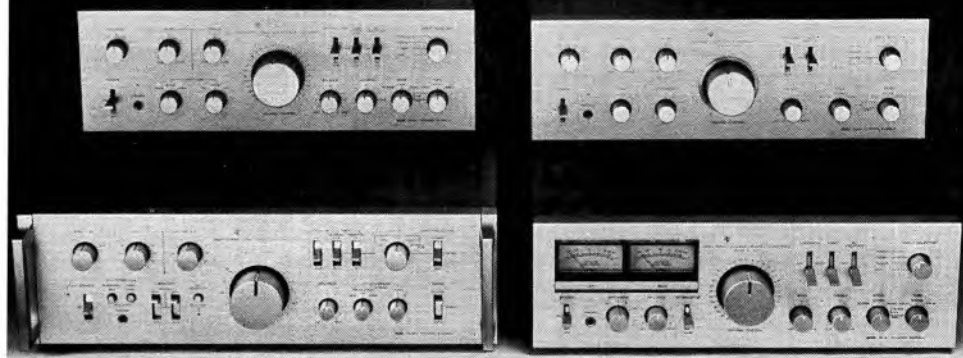


Wolsley Distribution Amplifier

separate mains power unit for installation near the tuner or receiver. Price: £26.16 (plus VAT).

Sapphire 41/81 Distribution Amplifier*

Ultra Broad Band Amplifiers with a single input. With either 4 or 8 padded outputs and one high level output in each version. These amplifiers are ideal for small installations, shops and showrooms, and are suitable for VHF/FM and Television. Price: Sapphire 41 £37.28 (plus VAT), Sapphire 81 £46.11 (plus VAT).



If other amplifiers are jets, ours are rockets.

If one were to play the sound of cymbals clashing through most amplifiers, the sound would be coloured and distorted.

Because most amplifiers simply can't react fast enough to sudden sounds, to reproduce them accurately.

And that's where the new range of Trio amplifiers score points.

They respond immediately, because they use High Speed circuitry.

In fact the "rise time," or the time it takes to react to a signal, is 0.9 microseconds and greater, with a slew rate of more than $\pm 120 \text{ V}/\mu\text{s}$, whereas most other amplifiers take as long as 3-5 microseconds and have a slew rate of only $\pm 40 \text{ V}/\mu\text{s}$.

Put it another way. Think of most amplifiers as jets and Trio amplifiers as rockets.

A jet needs a runway to gather speed before it takes off. A rocket is capable of rising immediately.

And if you're thinking that you've never heard anything like it in your life before.

You could be right. Because Trio High Speed Amplifiers have no competition.

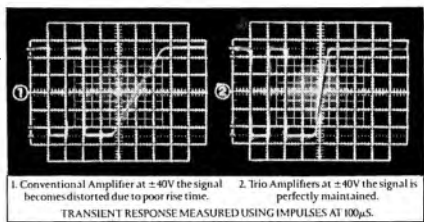
They are the only amplifiers to have ext-

ended their band-width into sub- and ultra-sonic sound (and without any of the usual adverse effects).

So they're the only amplifiers to be fitted with a revolutionary type of transistor, called the Emitter Ballast Transistor - which by extending the upper limit of the band-width, made possible the development of these high speed amplifiers in the first place.

We believe it was worth the extra effort. Because in breaking the sound barriers, we succeeded in building powerful amplifiers that are based on a new technology of speed, with a transient response superior to anything else in the world.

Now, seriously, which would you rather have, a jet or a rocket? **TRIO**



1. Conventional Amplifier at $\pm 40 \text{ V}$ the signal becomes distorted due to poor rise time.
 2. Trio Amplifiers at $\pm 40 \text{ V}$ the signal is perfectly maintained.
 TRANSIENT RESPONSE MEASURED USING IMPULSES AT $100 \mu\text{s}$.

I deserve a rocket. Please send me details of your new High Speed Amplifiers.

Name _____

Address _____

HFYB 79

To: B.H. Morris & Co. (Radio) Ltd.,
 Dept C, Precision Centre, Heather Park Drive,
 Wembley HA0 1SU. Agents in Eire: Peat Wholesale, Dublin.

Amplifiers and Control Units

* Indicates entry is illustrated

Abbreviations used in this section are given on page 5.

■ AIWA

Aiwa Sales and Service (UK) Ltd, 30-32 Concord Road, Westwood Park Trading Estate, London W3 0TH.
Tel: 01-993 1672.

AA 8700*

Integrated amplifier. Output: 75W into 8 ohms. THD: 0.01%. FR: 5Hz-100kHz + 0.3dB. Inputs: phono 1, phono 1/2 tuner, auxiliary, tape 1/2, DIN (tape 3), main in. Damping factor >40. Controls: tape monitor and copy for tapes 1/2/3, muting, loudness, turnover frequency selection and tone defeat, high and low filters, variable capacitive loading on phono 1. Dimensions: 44.8 × 37.5 × 15cm. Features: peak reading meters. Price: £313.71 (plus VAT).

■ AKAI

Akai (UK) Ltd, The Production Village, 82-106 Cricklewood Lane, London NW22 2DP.
Tel: 01-450 2011.

AM 2600

Integrated amplifier with output of 60W. THD: 0.08%. FR: 30Hz-15kHz ±0.8dB. Inputs: (1) 3mV/50K (2) 3mV/33, 47, 100K. Damping factor: >60 (1kHz, 8> ohms). Controls: power, speaker selector, audio mute, high and low filters, tone, bass, treble, meter, mode, loudness, selector, volume, balance. Dimensions: 44 × 33.1 × 14.1cm. Price: £277.07 (plus VAT).

AM 2800

Integrated amplifier with output of 80W. THD: <0.08%. FR: 30Hz-15kHz ±0.5dB. Inputs: (1) 3mV/50K (2) 3mV/33, 47, 100K. Damping factor: >60 (1kHz, 8 ohms). Controls: power, speaker selector, meter, audio mute, tone, bass, mid, treble, high and low filters, tape monitor, selector, volume, balance, mode, loudness. Dimensions: 44 × 39.6 × 16.5cm. Price: £286.80 (plus VAT).

AM 2250

Stereo integrated amplifier. Output: 25W into 8 ohms. THD: <0.02%. FR: 20Hz-20kHz. Damping factor: >50. Controls: bass, treble, loudness boost, tape monitoring and tape dubbing, volume. Dimensions: 38 × 13 × 22cm. Price: on application.

AM 2450

Stereo integrated amplifier. Output: 45W per channel. THD: <0.1%. FR: 30Hz-15kHz ±1dB. Damping factor: >30. Controls: speakers, bass, treble, balance, tape monitor, selector, volume, mode, loudness. Dimensions: 44 × 14.4 × 36.8cm. Features: left and right power meters, high and low filters, tone defeat, full tape monitoring, two way tape dubbing. Price: on application.

■ AI.RA

Alba (Radio & Television) Ltd, Bull Lane, Edmonton, London N18 1SD.
Tel: 01-803 4451.

2025

Integrated amplifier with output of 28W. THD: <0.1%. FR: 20Hz-20kHz. Inputs: phono, tuner, tape. Damping factor: at 20Hz >50. Controls: level, bass, balance, loudness, treble. Dimensions: 43.6 × 27.8 × 13cm. Features: speaker switching A-B. No rec. retail price.

2050*

Integrated amplifier with output of 50W. THD: <0.1%. FR: 20Hz-20kHz. Inputs: phono, tape, tuner. Damping factor: at 20Hz >50. Controls: volume, loudness, balance, treble, bass. Dimensions: 43.6 × 27.8 × 13cm. Features: speaker switching, variable input level controls. No rec. retail price.



Aiwa AA8700



Aiwa 2050

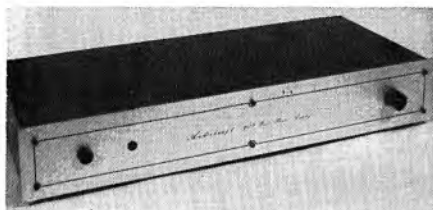
*Indicates entry is illustrated



Amstrad EX 220



Armstrong 621



Audio Kraft Power Amplifier



Audio Kraft Pre Amplifier

■ AMSTRAD

Amstrad Consumer Electronics Ltd,
1-7 Garman Road, London N17 0UF.
Tel: 01-801 4431.

FX 330

Integrated amplifier. Output: 35W per channel. THD: 0.1%. FR: 15Hz-30kHz ± 3 dB. Inputs: phono 1.5mV, 47K, aux 270mV 82K, tape 70mV-3V variable 56K, tuner 70mV 150K. Controls: bass, middle, treble, volume, balance, rumble filter, scratch filter, mono/stereo switch, loudness, meter range. Dimensions: 42 x 34 x 14.5cm. Features: 2 power meters (dual range), loudness switch, tape monitor. Price: £77.92 (plus VAT).

FX 220*

Integrated amplifier with output of 25W. THD: 0.1% at 1kHz full rate. FR: 15Hz-30kHz ± 3 dB, 20Hz-20kHz ± 2 dB. Inputs: phono, aux, tape, tuner. Controls: bass, treble. Dimensions: 42 x 34 x 14.5cm. Price: £52.34 (plus VAT).

■ A & R

Amplification and Recording (Cambridge) Ltd,
French's Mill, French's Road, Cambridge CB4
3NP.
Tel: Cambridge (0223) 54507.

A60

Integrated amplifier with output: 30W into 8 ohms. THD: <0.2% at 30W/8 ohms 20Hz-20kHz both channels driven. FR: Mag PU:

± 1 dB 40Hz-20kHz typ -6dB at 20Hz. Other Inputs: ± 1 dB 20Hz-20kHz. Inputs Sensitivity: Mag PU: 2mV 47K at 1kHz, overload margin 36dB. Others: 100mV 100K overload margin infinite. Damping factor: >25 into 8 ohms, >50 into 16 ohms at 40Hz. Controls: Input selector -Mag PU, tuner, aux, tape monitor, HF filter (12dB/octave, turnover, 7kHz), mono, volume, bass, treble, balance controls. Dimensions: 45 x 24 x 6cm. Features: Mag. PU. Input resistance and capacitance user-changeable via plug-in modules. Phones socket. Delayed electronic protection of power amplifier. Toroidal mains transformer, built-in rumble filter on RIAA. Low turnover frequency bass control. Single fibreglass p.c. board. Price: £140.00 (Teak, walnut); £144.00 (Black) (plus VAT).

A60 F

As A60 except DIN loudspeaker sockets are replaced with terminals capable of accepting both wires and 4mm plugs. Price: £146.00 (teak, walnut); £150.00 (black); (plus VAT).

■ ARMSTRONG

Armstrong Audio Ltd, Warters Road,
London N7 0RZ.
Tel: 01-607 3213.

621 *

Integrated stereo amplifier. 40W per channel into 8 ohms. THD: 0.08% at rated output. FR: 20Hz-20kHz ± 1 dB. Inputs: disc (1) 3.0mV 47K;

disc (2) 6.0mV 47K; tape 250mV 68K; tuner 120mV 68K; auxiliary 120mV 68K. Damping factor better than 50. S/N ratio: —65dB unweighted. Controls: volume, bass, treble, balance, input selector, loudspeakers 1+2. Loudness, monitor, mono/stereo, filter 1 & 2, slope and low filter. Dimensions: 31.2 × 28.5 × 8.2cm. Features include electronic gate switching on inputs, teak or rosewood case. Price: £150.00 (inc. VAT).

■ AUDIO KRAFT

Audio Kraft, 8a Clarence Road, South Benfleet, Essex.
Tel: South Benfleet (037 45) 58944.

PS 707CV

Integrated amplifier with output of 25W into 8 ohms. THD: less than 0.5%. FR: 15-30,000Hz. Inputs Sensitivity: PU 2mV RIAA 47K. Aux 1, 2 and tape 200mV, 100K. Controls: volume balance, bass, treble, filter, spk 1, spk 2, on-off. Features: Two sets speakers, filter, toroidal transformer. Price: £95.00 (inc. VAT).

Power Amplifier *

Output: 100W into 8 ohms. THD: 0.05%. FR: 5Hz-50kHz. Inputs sensitivity: 1V. Controls: Rt/Lft gain. Features: Half power switch suitable for both monitor speakers in Audio Kraft range. Supplied now in mono form. Price: £189.00 (inc. VAT).

Preamplifier*

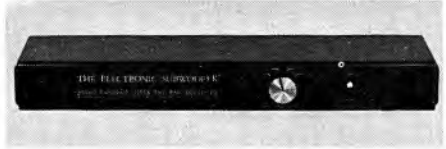
Controls: Volume, balance, input selector. Inputs: PU, aux, tape 1 and 2. FR: 5Hz-50kHz. THD: 0.05%. Output: 1V nominal, 10V max. Price: £145.00 (inc VAT).

■ AUDIO PRO

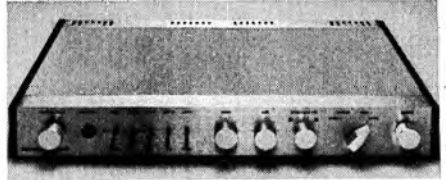
Audio Pro (Hi-Fi) Ltd, Brook House, Crewe Road, Wheelock, Sandbach, Cheshire CW11 9HT.
Tel: Sandbach (09367) 7520.

B2- 50 Sub-woofer *

Amplifier with peculiar output impedance characteristics in which inertial mass of any magnitude can be added to speaker cone without any extra weight, and thus without risk of sagging. Damping can be added or subtracted at will, so a long voice coil will not cause under-damped resonance. Electrically synthesized parameters are more linear than the inherent mechanical parameters in the speaker system, so reduction in distortion can be gained. They are also more stable so the speaker is relatively unaffected by temperature, humidity and ageing. Distortion: less than 2% at 96dB, 20Hz, upper limit. FRL 20Hz-200Hz + 0—3dB



Audio Pro Subwoofer



Cambridge Audio F80 Amplifier Control Unit

upper limit adjustable 40Hz-200Hz. Controls: volume, crossover, on/auto selector. Dimensions: 18-3/8 × 17-7/16 × 21-1/8in. Price: £391.85 (plus VAT).

■ CAMBRIDGE AUDIO

Cambridge Audio Ltd, 105-109 Oyster Lane, Byfleet, Surrey KT14 7LA.
Tel: Byfleet (91) 51051.

P80 *

Integrated stereo amplifier. 40W per channel into 8 ohms. THD: less than 0.1% at 1kHz. FR: 25Hz-25kHz ±0.5dB. Inputs for phono 1mV 47K, radio 250mV 180K, cassette 150mV 100K, aux 150mV 100K, tape 1 & 2 400mV. Tape 1 & 2 cassette outputs 400mV. Damping factor 80 into 8 ohms. S/N ratio: phono 60dB tuner <70dB unweighted. Controls: balance, input selector, pre-amp volume control, treble, bass, power amp level, tape 1, tape 2. Dimensions: 41.9 × 24.4 × 5.1cm. Features include variable gain front end. Visual monitoring of signal levels, Equalised tape output facility. Price: £199 (plus VAT).

■ CERWIN-VEGA!

C. E. Hammond & Co. Ltd, 105-109 Oyster Lane, Byfleet, Surrey.
Tel: Byfleet (91) 51051.

A1800 HF

Power amplifier with output of 225W at 8 ohms or 350W into 4 ohms. THD: 0.08% or less. FR: 10Hz-60Hz. Inputs: 1.4V for 200W output 10K nominal. Controls: Gain (2). Dimensions: 48.25 × 29.20 × 17.80cm. Features: LED indicators for each channel. Standard rack mounting. Price: £451.00 (plus VAT).

*Indicates entry is illustrated

A 1800 M

As above with large illuminated output meters, headphone jack and switching for two sets of speakers. Price: £479.00 (plus VAT).

A 1800I

As above with VU meters, front mounted fuses, 250Hz passive crossovers. Price: £507.00 (plus VAT).

A 3000I

As above but with 365W per channel, 500W into 4 ohms with fan cooling. Price: £673.00 (plus VAT).

■ DUAL

Hayden Laboratories Ltd, Hayden House, Churchfield Road, Chalfont St. Peter, Bucks SL0 9EW.

Tel: Gerrards Cross (49) 88447.

CV 1600

Amplifier with music power output: $2 \times 120W$. Continuous power output: $2 \times 80W$. FR: 10Hz-40kHz $\pm 1.5dB$. THD: $<0.15\%$ Electronic overload protection. Finish: metallic brown or silver. Dimensions: 44 \times 15 \times 36cm. Price: £372.00 (plus VAT).

CV 1400

Amplifier with music power output: $2 \times 75W$. Continuous power output: $2 \times 50W$. FR: 10Hz-40kHz $\pm 1.5dB$. THD: $<0.2\%$ Electronic overload protection. Finish: metallic brown or silver. Dimensions: 44 \times 15 \times 35cm. Price: £274.00 (plus VAT).

CV 1200

Amplifier with music power output: $2 \times 60W$. Continuous power output: $2 \times 40W$. FR: 15Hz-25kHz $\pm 1.5dB$. THD: $<0.2\%$ Electronic overload protection. Finish: metallic brown or silver. Dimensions: 44 \times 11.5 \times 35cm. Price: £192.00 (plus VAT).

■ DENON

Eumig (UK) Ltd, 14 Priestley Way, London NW2 7TN.

Tel: 01-450 8070.

PMA-4000

Integrated amplifier with output of 50W per channel. THD: less than 0.05%. FR: 5Hz-100kHz. Inputs: tuner, aux, tape, phono. Dimensions: 43 \times 14.6 \times 32.1cm. Features: all silicon transistor. No rec. retail price.

PMA-200

Integrated amplifier with output of 55W per channel. THD: less than 0.08%. FR: 20Hz-



Denon PR-1001 Control Amplifier



Denon POA-1001 Control Amplifier

20kHz. Inputs: tuner, aux, tape, phono. Dimensions: 43 \times 14.3 \times 31cm. Features: all silicon transistor. No rec. retail price.

PMA-850

Premain amplifier, all stage pure complementary push-pull system DC circuit. Output: 110W per channel at 1kHz, 85W per channel at 20Hz-20kHz. THD: less than 0.01%. FR: 5Hz-100kHz $+0dB -1dB$. Inputs: tuner, aux, tape, phono. Dimensions: 43.4 \times 16.4 \times 40cm. No rec. retail price.

PMA-830

Premain amplifier, all stage pure complementary push-pull system DC circuit. Output: 90W (THD 0.02% into 4 ohms), 65W (THD 0.02% into 4 ohms), 15W (THD 0.005% into 8 ohms). THD: less than 0.01% B class, less than 0.005% A class. Inputs: tuner, aux, tapes, phono. Dimensions: 43.4 \times 16.4 \times 40cm. No rec. retail price.

PRA-1003

Stereo control amplifier with max allowable input 320mV (1kHz). RIAA deviation: $\pm 0.2dB$ (20Hz-20kHz). Max output/rated output: 10V/1V. THD: 0.003% (20Hz-20kHz) FR: 10Hz-100kHz $+0dB -1dB$. S/N ratio: better than 86dB. Dimensions: 41 \times 17 \times 27cm. No rec. retail price.

PRA-1001 *

Stereo control amplifier with max allowable input 300mV (1kHz). RIAA deviation: ± 2 dB (20Hz-20kHz). Max output/rated output: 10V/1V. THD: 0.003% FR: 10Hz-100kHz $+ 0.1$ dB $- 0.5$ dB. S/N ratio: better than 78dB. Dimensions: 41 x 15.2 x 27.1cm. No rec. retail price.

POA-1001 *

Silicon transistor DC power amplifier. Output: 125W per channel at 20Hz-20kHz into 4 ohms or 100W at 20Hz-20kHz into 8 ohms. THD: 0.05% at 20Hz-1kHz, 0.03% at 20kHz. FR: DC to 100kHz $+ 0$ dB $- 1$ dB. Damping factor: 0.08/100. Dimensions: 41 x 20 x 28cm. No rec. retail price.

POA-1003

Silicon transistor DC power amplifier. Output: 100W per channel at 20Hz-20kHz into 4 ohms or 85W at 20Hz-20kHz into 8 ohms. THD: 0.005% at 20Hz-1kHz, 0.03% at 20kHz. FR: DC to 100kHz $+ 0$ dB $- 1$ dB. Damping factor: 0.04/100. Dimensions: 41 x 20 x 28.5cm. No rec. retail price.

■ **EAGLE**

Eagle International, Precision Centre, Heather Park Drive, Wembley HA0 1SU. Tel: 01-902 8832.

A 7200 *

Integrated amplifier with output of 30W per channel. THD: 0.2%. FR: 18Hz-27kHz. Inputs: phono, tuner, aux, tape. Controls: Volume, balance, bass, treble, speakers, A/B/off/boost, loudness, tape source, monitor, inputs. Dimensions: 40 x 29 x 13.2cm. Price: £80.00 (plus VAT).

A 7400*

Integrated amplifier with output of 45W. Inputs: phono, aux, tuner, tape A, tape B, mic. Controls: volume, balance, bass, treble, input, speakers A and B, subsonic filter, mono/stereo, loudness, tape dubbing, tape monitor, mic level. Dimensions: 40 x 29 x 13.2cm. Features: microphone unit with mixing. Tape dubbing A to B/B to A, separable pre and power stages. Price: £120.00 (plus VAT).

A 7600

Integrated amplifier with outputs of 60W. Inputs: phono 1 & 2, aux 1 & 2, tuner, tape A, tape B, mic. Controls: volume, balance, treble, bass, input, speakers A and B, subsonic filter, mono/stereo, high filter, loudness, tone defeat, tape dubbing, tape monitoring, mic level. Dimensions: 40 x 29 x 13.2cm. Features: 8 inputs, mic input with mixing, tape dubbing A



Eagle A7200



Eagle A7400

to B/B to A. Separable pre and power stages, tone defeat, illuminated volume control. Price: £134.00 (plus VAT).

■ **ENGIMA AUDIO**

136a Portland Road, Hove, Sussex BN3 5QL. Tel: Brighton (0273) 723979

Variation 1

Pre-amplifier with THD: $< 0.1\%$. FR: 20Hz-20kHz. Inputs: disc 3.5mV, tuner 125mV, tape 125mV, aux 125mV-50K. Features: tone defeat. Price: £140.72 (plus VAT).

Variation 2

Power amplifier with output 60W per channel. THD: $< 0.05\%$ at 1kHz-35W; $< 0.1\%$ at all levels. FR: 20Hz-20kHz. Inputs: 1V into 6K. Price: £165.72 (plus VAT).

Variation 3

As above but rated at 100W per channel. Price: £212.00 (plus VAT).

Variation 4

Integrated amplifier with output of 45W per channel into 8 ohms. THD: less than 0.1%. FR: 20Hz-20kHz. Inputs: disc 3.5mV, tuner tape and auxiliary 126mV-50K. Price: £170.00 (plus VAT).

*Indicates entry is illustrated

■ EXPOSURE

Notes Electronics Ltd, 15 Holbein Place,
London SW1.
Tel: 01-730 2417.

Exposure III

Pre-amplifier with output 15V peak. THD: 0.002%. Inputs: 200 μ V for moving coil. Controls: volume and balance. Features: hand built. Price: on application.

Series II

Power amplifier with output: 70W into 8 ohms. Identical fuse-protected modules used for each channel with individual LED peak level indicators. Details on application. Price: on application.

■ HARMAN/KARDON

Harman UK, St. John's Road, Tyler's Green,
High Wycombe, Bucks.
Tel: High Wycombe (049 481) 5331.

503

Twin-powered integrated amplifier with output: 40W per channel into 8 ohms. THD: 0.03%. FR: 3Hz-140kHz. Damping factor: less than 8 ohms. Phono input imp: 47K. Sensitivity: 180mV. Dimensions: 42.5 x 13.3 x 34.9cm. Price: £221.33 (plus VAT).

505

Twin-powered integrated amplifier with output: 60W per channel into 8 ohms. THD: 0.04%. FR: 3Hz-140kHz. Damping factor: less than 8 ohms. Phono input imp: 47K. Sensitivity: 130mV. Dimensions: 42.5 x 13.3 x 34.9cm. Price: £301.33.

Citation Range

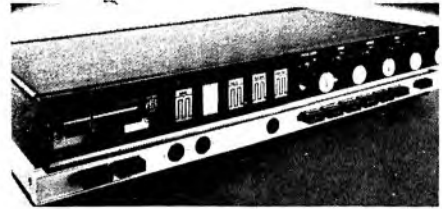
16A power amp 150+150W with LED display £665.78; without LED £576.89; 17 pre-amp with 5-band equaliser £488.00; without equaliser £381.33; 19 power amplifier 100+100W with LED £514.67. All plus VAT. Details on application.

■ HARRISON

Harrison-Chapman Ltd, 95 Gray's Inn Road,
London WC1. Tel: 01-405 9665.

S200*

Stereo integrated amplifier. Incorporates touch sense function switching, an LED output level meter and full output protection which is self-restoring. Inputs: mic 110mV 68K, phono 2.5mV 47K, two aux and radio adjustable 100mV 50K. Noise level: mic and phono 60dB ref 100W, aux and radio 70dB ref 100W.



Harrison S200

Output: 100W into 4 ohms, 75W into 7.5 ohms. Disc input overload margin 40dB. Damping factor: 100. THD: 0.05% at 100W, 1kHz. FR: 20Hz-20kHz \pm 0.5dB at 50W. Size: 17 x 10 $\frac{1}{2}$ x 3 3/8in. Price: £277.64 (plus VAT).

■ HITACHI

Hitachi Sales (UK) Ltd, Hitachi House, Station
Road, Hayes, Middlesex. Tel: 01-848 8787.

HA 2500

Integrated amplifier. Output 20W. THD: 0.07%. FR: 20Hz-20kHz. Inputs: 2.5. Damping factor: 30. Controls: speaker A + B, tape dub, low filter. Dimensions: 43.5 x 11 x 27.5cm. Features: Direct connect. Price: on application.

HA 3500

Integrated amplifier. Output: 33W. THD: 0.05%. FR: 20Hz-20kHz. Inputs: 2.5. Damping factor: 30. Controls: speaker A + B, low filter. Dimensions: 43.5 x 11 x 27.5cm. Features: Direct connect OCL circuit. High dynamic range, phono equaliser. Price: on application.

HA 4500

Integrated amplifier. Output: 43W. THD: 0.05%. FR: 20Hz-20kHz. Inputs: 2.5. Damping factor: 35. Controls: speaker A + B, power meter, low filter. Dimensions: 43.5 x 11 x 27.5cm. Features: high dynamic phono equaliser, independent monitoring and tape dubbing. Price: on application.

HA 5700

Integrated amplifier. Output: 50W. THD: 0.02%. FR: 20Hz-20kHz \pm 0.2dB. Inputs: 2.5. Damping factors: 60. Controls: speaker A + B, power meter, low filter, tone defeat switch. Dimensions: 43.5 x 11 x 38.3cm. Features: MOSFET amplifier, LED peak power indicator. Price: on application.

HMA 6500

Power amplifier. Output: 50W. THD: 0.02%. FR: 20Hz-20kHz. Damping factor: 50. Dimensions: 43.5 x 15.3 x 30.6cm. Features: MOS-

FET amplifier, wide range, power output metres. Price: on application.

HCA 6500

Control amplifier. Inputs: 2.5. Controls: tone defeat switch, muting, speaker A + B. Dimensions: 43.5 x 7.8 x 27.5cm. Features: equaliser with low distortion, high S/N, ICL DC configured amplifier equaliser. Price: on application.

HA 7700

Integrated amplifier. Output: 60W. THD: 0.02%. FR: 20Hz-20kHz. Inputs: 2.5. Damping factor: 60. Controls: speaker A + B, low filter. Dimensions: 43.5 x 16.4 x 38.3cm. Features: power MOSFET, DC circuit, built-in MC head. Price: on application.

■ **JR**

JR Loudspeakers Ltd, 114 Ashley Road, St. Albans, Herts. Tel: St. Albans (56) 64337.

EX1*

Electronic Crossover suitable for pre-amp control unit output of 200mV to 1V. Input: 150K. FR: 20Hz-20kHz. Dimensions: 25.4 x 22.9 x 8.9cm. Price: £90.00 (plus VAT).

PA50

Mono bass amplifier for use with EX1 crossover. Output: 60W. Dimensions: 25.4 x 22.9 x 8.9cm. Price: £60.00 (plus VAT).

■ **JVC**

JVC (UK) Ltd, Eldonwall Trading Estate, Staples Corner, 6-8 Priestley Way, London NW2 7AF. Tel: 01-450 2621.

P-3030*

Stereo control pre-amplifier with built-in MC head amplifier. Output Imp: tape rec out 140mV/2K; output 1, 2 1V/600 ohms rated or 20V/600 ohms maximum. Power Consumption: 10W. THD: phono 1, 2 less than 0.005%, phono 3 less than 0.05%, aux less than 0.005%. FR: Phono 1, 2 20Hz-20kHz ±0.3dB. Phono 3 30Hz-20,000Hz ±0.5dB; Aux 10Hz-40,000Hz ±0.5dB. Inputs: phono 1, 2, 3, tuner, aux, tape play 1, 2. Dimensions: 6.1 x 4.2 x 34.8cm. Price: £313.95 (including VAT).

M-3030*

Stereo power amplifier. Output: 100W per channel. THD: 0.007% or less rated output at 1kHz. FR: DC-100,000Hz ±1dB. Inputs: 1.0V/ more than 50K. Damping factor: 75. Dimensions: 16.6 x 42 x 30cm. Price: £477.75 (including VAT).



Jennings EX1



JVC P-3030



JVC M-3030



JVC JV-S77

JAS-11G

Integrated amplifier. Output: 33W. THD: 0.06%. FR: 25Hz-40kHz. Inputs: phono, tape, tuner, aux. Damping factor: 30. Controls: balance, volume, tape, bass, treble, source, speakers. Dimensions: 39 x 33 x 15.2cm. Price: on application.

A-55

Integrated amplifier. Output: 35W. THD: 0.08%. FR: 25Hz-40kHz. Damping factor: 50. Controls: balance, volume, tape dub, loudness, bass, treble, speakers, tape. Price: on application.

*Indicates entry is illustrated



JVC JA-S55

JA-S77*

Integrated stereo amplifier. Output: $2 \times 70\text{W}$. Details on applications. Price: £299.00 (including VAT).

JA-S55*

Integrated stereo amplifier. Output: $2 \times 55\text{W}$. Details on application. Price: £255.00 (including VAT).

Other Models

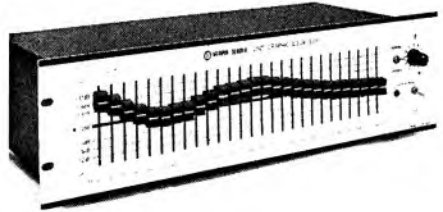
JA-S44 £212.00; JA-S22 £125.00; JA-S10 £79.50 (all including VAT).

■ **KLARK-TEKNIK**

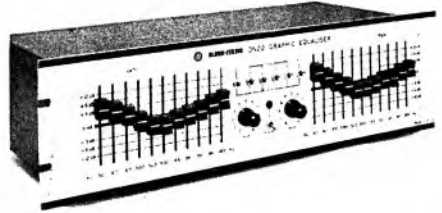
Klark-Teknik Research Ltd,
Summerfield, Kidderminster, Wores.
Tel: Kidderminster (0562) 64027/63467

DN27*

Mono graphic equaliser with 27 variable filters giving 12dB of boost or cut at the following frequency centres: 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1K, 1.25K, 1.6K, 2K, 2.5K, 3.15K, 4K, 5K, 6.3K, 8K, 10K, 12.5K, and 16kHz. Each filter has a band width of two-thirds of an octave. Specification: Distortion: $<0.01\%$ 1kHz at +4dBm into a 600 ohm load; $<0.5\%$ 20Hz at +18dB into a 600 ohm load. Calibration accuracy: -5dB. Hum and noise: 20Hz-20kHz unweighted $<-90\text{dBm}$. Centre frequency accuracy: $\pm 2\%$. Input imp: unbalanced 10K nominal. Output imp: unbalanced <10 ohms, short circuit protected. Operating level: -20dBm to +24dBm input protection -60V RMS. Balanced Floating inputs and outputs available. Input: 10K. Output: 600 ohms. Output clipping point: +22dBm into 600 ohm load. 6dB of gain is available adjusted by the front panel control. This can be increased to 20dB by an internal preset. Panel controls include a mains on/off switch with LED indicator, level control and equalisation bypass switch. Size $19 \times 5\frac{1}{4} \times 8\frac{1}{2}\text{in}$. Price: on application.



Klark Teknik DN27



Klark Teknik DN22



Klark Teknik DN15

DN22*

Two channel graphic equaliser. Each channel has 11 variable filters and is particularly suitable for room acoustic correction. A separate high pass and low pass filter, bypass control and a main level control are included on each channel. A maximum of 12dB of boost or cut is available on each of the 11 individual controls which have frequency centres at: 50, 90, 160, 300, 500, 900, 1.6K, 3K, 5K, 9K and 16kHz. Specifications as in DN27.

DN15*

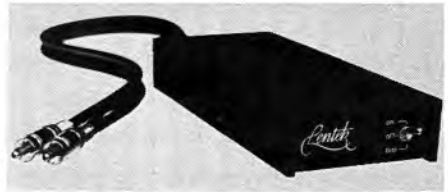
Stereo 11 band graphic equaliser which includes a stereo preamplifier. Graphic equaliser section is similar to the DN22. Preamplifier includes the following switchable inputs: phono, auxiliary, tuner, tape 1, tape 2. Input imp: phono 47K, other 47K. S/N: phono 80dB, others 90dB. Outputs: +21dBm into a 600 ohm load. Distortion: $<0.1\%$ at all levels and frequencies. Size $19 \times 5\frac{1}{4} \times 8\frac{1}{2}\text{in}$. Price: on application.

■ LENTEK AUDIO

Lentek Audio Ltd,
Edison Road Industrial Estate,
St. Ives, Huntingdon,
Cambs. PE17 4LF.
Tel: St. Ives (0480) 62225.

Moving Coil Cartridge Pre-amplifier*

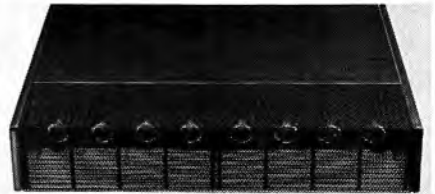
Designed to amplify the signal from low output moving coil cartridges. Battery powered with life of approx 500 hours. Gold plated connectors, magnetic shielding, and excellent rejection of RF noise and interference. Gain: 28dB. FR: 20Hz-20kHz ± 0 dB. Distortion: less than 0.05% (100mV output 1kHz). Max output: 300mV. Imp: 100 ohms. Dimensions: 15.4 \times 6.4 \times 2.8cm. Price including battery: £50.39 (plus VAT).



Lentek MC Pre-amp

Stereo Integrated Amplifier

Output: 65W into 8 ohms. THD: less than 0.1%. FR: better than 20Hz-20kHz ± 1 dB. Inputs: Mic sensitivity adjustable from 0.125 to 0.5mV Impedance 30-500 ohms; MM — 2.5mV Impedance, capacitance also adjustable; Aux: 100mV 50K; Tuner 100mV 50K. Controls: Full facilities for two tape decks, volume, balance, input selector, pick-up cartridge matching, Hi-pass filter, mono/stereo switch. Dimensions: 44.5 \times 34.6 \times 13cm. Features: Gold plated phono inputs, overload indicator, toroidal transformer, modular type construction. Full details and price on request.



Lux M12



Lux L5

■ LUX

Howland West Ltd, 3-5 Eden Grove,
London N7 8EQ.
Tel: 01-609 0293-4-5.

M6000

Power amplifier with output of 300W into 8 ohms. THD: 0.5%. FR: 5Hz-50,000Hz ± 1 dB. Inputs: 1.25V. Damping factor: 100. Controls: Power switch, left and right attenuator controls. Dimensions: 57 \times 42.5 \times 220cm. Features: left and right VU meters, peak power LED display safety switch, four protection circuits, one for speaker and three for amp. Price: £1,775.00 (plus VAT).



Lux L11

C1000

Preamplifier. THD: 0.007%. FR: 2Hz-80,000Hz —0.5dB. Inputs: aux, tuner, phono (2). Controls: input selector switch, bass/treble controls, bass-treble frequency selector switch, touch, mute switch. Features: touch muting function, linear equaliser, output signal muting, speaker, select, remote control, phono gain control. Price: £655.00 (plus VAT).



Lux L3

*Indicates entry is illustrated

MQ3600

Valve power amplifier with output of 50W. THD: 0.5%. FR: 10Hz-35kHz —1dB. Inputs: 850mV. Damping factor: 14. Dimensions: 46.5 × 20.6 × 16.8cm. Price: £505.00 (plus VAT).

CL 32

Valve preamplifier. THD: 0.03%. FR: 10Hz-40,000Hz —1dB. Inputs: tuner, phono (2), aux, tape. Controls: volume, linear equaliser, selector switch. Dimensions: 43.8 × 32.2 × 77.4cm. Features: Two pairs monitor and dubbing circuits. Dual pairs preamp-out terminals. Price: £515.00 (plus VAT).

M4000

Power amplifier with output of 180W into 8 ohms. THD: 0.05%. FR: 3Hz-100,000Hz. Inputs: 1V (8 ohms 180W/ch 1kHz) 50K. Damping factor: 100. Controls: power switch, left and right attenuators. Dimensions: 48.5 × 39 × 17.5cm. Features: Two VU meters, peak LED displays, sensitivity button, speaker protection circuitry, input level setter, three protection circuits for amplifier. Price: £1,180.00 (plus VAT).

5L15

DC integrated amplifier with output of 80W. THD: 0.02%. FR: Phono-20Hz-20,000Hz ±0.2dB. Tuner DC-100,000Hz; Aux 1.2 DC-100,000Hz; Main in DC-100,000Hz. Inputs: phono 2.7mV, tuner 300mV, aux 1.2 300mV. Main 300mV. Damping factor: 80 (8 ohms 1kHz). Controls: volume, phono, tuner, aux, selector switch. Dimensions: 44.2 × 40 × 14.6cm. Features: power meters, circuit prevention selector, input capacitor in/out switch, peak indicator, connector, phono subsonic circuit, tape monitor and dubbing, audio attenuator. Price: £670.00 (plus VAT).

5M21

DC power amplifier with output of 100W. THD: 0.005%. FR: DC-100,000Hz (—1dB). Inputs: 890mV, 50K. Damping factor: 80 (8 ohm-1kHz). Controls: power switch. Dimensions: 44.2 × 40 × 14.6cm. Features: VU meter for left and right channels, meter sensitivity switch, input capacitor in/out switch, audio attenuator for both channels. Price: £1,020.00 (plus VAT).

5C50

DC preamplifier. THD: Phono 1.2-0.005%, Tuner/Aux — 0.005%, Monitor 1.2-0.005%. FR: Phono 1.2-20Hz-20,000Hz (±2dB), Tuner/Aux — 1Hz-200,000Hz (—0.5dB), Monitor 1.2-1Hz-200,000Hz (—0.5dB). Inputs: Phono 1.2-2.5mV, Tuner/Aux 150mV, Moni-

tor 1.2-150mV, Phono 1.2-30K-50K-100 ohms (variable), Tuner/Aux — 50K. Controls: Volume, balance, linear equaliser, phono, tuner aux, selector switch. Dimensions: 44.2 × 40 × 10.1cm. Features: subsonic filter, high filter, input impedance adjustor, tape monitoring, tape dubbing, auditor attenuator, socket for MC input, transformer. Price: £645.00 (plus VAT).

M12*

Power amplifier DC. Output: 80W per channel. THD: 0.006%. FR: DC-100kHz —1dB. Inputs: 600mV 20K. Damping factor: 150 (8 ohms 1kHz). Power control. Dimensions: 43.6 × 32.8 × 9.5cm. Features: attenuator both channels, Input capacitor in/out selector, speaker protection circuit, overcurrent protection circuit. Price: £565.00 (plus VAT)

B12

Power amplifier mono DC. Output: 150W mono. THD: 0.006%. FR: DC-100kHz —1dB. Inputs: 900mV 20K. Damping factor: 120 (8 ohms 1kHz). Power control. Dimensions: 43.6 × 32.8 × 9.5cm. Features: speaker protection circuit, overcurrent protection circuit. Price: £510.00 (plus VAT).

L5*

Integrated amplifier. Output: 60W THD: 0.02%. FR: phono 20Hz-20kHz ±0.5dB, tuner 10Hz-100kHz +0 —1dB, aux and mono 10Hz-100K +0 —1dB, main-in 5Hz-100kHz +0 —1dB. Inputs: phono 1-2 1.5mV 50K, aux 150mV 50K, tuner 150mV 50K, mono 1-2 150mV 50K, main-in 1.3mV 50K. Damping factor: 80 ohms (8 ohms 1kHz). Controls: power, volume, balance, treble, bass, input selector. Dimensions: 43.8 × 28.9 × 10.5cm. Features: high, low, subsonic filters, speaker protection circuit, tape dubbing circuit, bass/treble turnover. Price: £330.00 (plus VAT).

L11*

Integrated amplifier, DC configuration. Output: 100W. THD: 0.02%. FR: phono 20Hz-20kHz, tuner 10Hz-90kHz —1dB, aux 10Hz-90kHz —1dB, mono 10Hz-90kHz —1dB, main-in 3Hz-100kHz —1dB. Inputs: phono 1 and phono 2 2.5mV 250μV, tuner 150mV 15mV, aux 150mV 15mV, mono 1-2 150mV 15mV, main-in 1.6V 160mV. Controls: power, volume, balance, phono impedance selector, speaker selector. Dimensions: 43.8 × 28.9 × 10.5cm. Features: linear free equaliser, phono m/c position, electrostatic speaker filter, headphone, speaker protection circuit, pilot lamp, overcurrent protection circuit. Price: £625.00 (plus VAT).

L2*

Integrated amplifier. Output: 33W minimum. THD: 0.03%. FR: 15Hz-60kHz \pm 1dB. Inputs: phono 2.5mV 50K, tuner 145mV 50K, aux 145mV 50K, mono 1 145mV 50K, mono 2 145mV 50K. Controls: power switch, volume, balance, treble, bass, input selector, monitors, dubbing, subsonic hi-cut, filters, loudness. Dimensions: 43.8 x 28.9 x 10.5cm. Features: tape monitor (dual) and tape dubbing (dual), separate tone control for each channel. Speaker terminals A, B, DIN connector, headphone. Price: £150.00 (plus VAT).



Lux L2

L3*

Integrated amplifier. Output: 42W. THD: 0.04%. FR: 15Hz-60kHz \pm 1dB. Inputs: as for L2. Controls: power switch, volume, filters, treble, bass, balance, loudness, mode selectors, two-tape inputs, dubbing. Dimensions: 43.8 x 28.9 x 10.5cm. Features: as for L2. Price: £200.00 (plus VAT).



Lux C12

L10

Integrated DC amplifier. Output: 55W continuous per channel. THD: 0.015%. FR: phono 20Hz-20kHz \pm 0.2dB, tuner/aux DC-100kHz -1dB, main in DC-100kHz -1dB. Inputs: phono 3mV, tuner/aux 300mV, main in 300mV. Controls: power, volume, two tap inputs, treble, bass, 1-2 tap recs, input selector, headphones. Dimensions: 43.8 x 36.3 x 7.8cm. Features: subsonic filter, bass/treble tone compensator, turnover facility, speaker protection circuit, excessive current protection circuit. Price: £485.00 (plus VAT)

Damping factor: greater than 40. Controls: tone, bass, treble. Dimensions: 44 x 26 x 95cm. Features: tape monitor, headphone socket, two AC outlets. Price: £84.75 (plus VAT).

C12*

Pre-amplifier (DC). THD: 0.005% FR: phono 1, 2 20Hz-20kHz \pm 0.2dB, tuner/aux 1, 2 mono 1, 2 1Hz-200kHz -0.5dB. Controls: power, tapé monitor, volume, tape dubbing, filter, balance, mode selector, input selector. Dimensions: 43.8 x 36.3 x 7.8cm. Features: linear equaliser, subsonic filter, input adjustment (impedance), audio attenuator. Price: £485.00 (plus VAT).

■ **MARANTZ**

Audio UK Ltd, Debmarc House, 203 London Road, Staines, Middlesex. Tel: Staines (81) 50132.

1152DC

Integrated amplifier with output: 100W. THD: 0.03%. FR: DC-70kHz. Inputs: phono 1.8mV 47K, aux/tape 200mV 25K. Damping factor: 50. Controls: contour, 100Hz/10K turnover centre, bass, mid, treble, low and high filters, two-tape monitor, tape copy mode, tone defeat. Dimensions: 41.6 x 31.6 x 14.6cm. Features: as 1122DC. Price: £306.50 (plus VAT).

■ **McLAREN**

GR International Electronics Ltd, Almond Bank, Perthshire. Tel: Almondbank (073 833) 441

L111A

Integrated amplifier with output 2 x 2W into 8 ohms. THD: 0.15% full rated output. FR: 30Hz-20kHz \pm 1.5dB filter out. Inputs: pick-up 0.4mV/47K/1kHz magnetic or 150mV/1M/1K ceramic. Tape, tuner, aux 150mV/1M/1kHz.

1180DC

Integrated amplifier with 115W output. THD: 0.03%. FR: DC-70kHz. Inputs: phono 1.8mV 47K, aux/tape 200mV 25K, 1.8mV 47K. Damping factor: 60. Controls: calibrated for contour control, bass, mid, treble, low and hi filters, two tape monitor, tape copy mode, tone defeat. Dimensions: 41.6 x 31.6 x 14.6cm. Features: LED peak indicator. Price: £373.20 (plus VAT).

*Indicates entry is illustrated



Marantz 1050 Stereo Amplifier



Marantz 3250B Stereo Pre-amp



Marantz 300 DC Stereo Power Amp



Marantz 1090 Stereo Console Amp



Marantz 170 DC Stereo Power Amp

1090

Integrated amplifier with 67W output into 8 ohms. THD: 0.5%. FR: 10Hz-60kHz. Inputs: phono 1.8mV 47K, aux/tape 200mV 25K. Damping factor: 50. Controls: treble, mid, bass, mode switch, two tape, low filter. Dimensions: 41.6 x 30 x 14.6cm. Price: £137.70 (plus VAT).

1122 DC

Integrated amplifier with output: 87W into 8 ohms. THD: 0.03%. FR: DC-70kHz. Inputs: phono 1.8mV 47K, aux/tape 200mV 25K. Damping factor: 50. Controls: treble, mid, bass, mode switch, two tape, high and low filters, tone defeat. Features: direct coupled output. Dimensions: 41.6 x 31.6 x 14.6cm. Price: £244.30 (plus VAT).

1050*

Integrated amplifier. Output: 40W. THD: 0.1%. FR: 20Hz-50kHz. Inputs: 2.1mV 47K, 180mV 25K. Damping factor: 45. Controls: bass, treble, input selector, low filter, loudness, two speaker switching, tape monitor and mono. Dimensions: 41.6 x 24 x 14.6cm. Features: slider bass treble and balance controls. Price: £84.37 (plus VAT).

1072

Integrated amplifier. Output: 50W. THD: 0.08%. FR: 15Hz-60kHz. Inputs: 2.9mV 47K, 180mV 25K. Damping factor: 45. Controls: bass, treble, input selector, low filter, loudness, two speaker switching, tape monitor and mono. Dimensions: 41.6 x 24 x 14.6cm. Features: slider bass, treble and balance controls. Price: £111.00 (plus VAT).

300 DC*

Stereo power amplifier. Output: 200W. THD: 0.015%. FR: DC-70kHz. Inputs: 1.5V 30K. Damping factor: 60. Controls: L and R levels. Dimensions: 41.6 x 30 x 14.6cm. Features: power output, meters of switchable sensitivity. Peak LED's. Price: £444.00 (plus VAT).

3650

Pre-amplifier. FR: 0.1Hz-200kHz. Inputs: 1.8 47K, 180mV 50k, 1.8mV 47K. Dimensions: 41.6 x 30.2 x 14.6cm. Features: moving coil pickup input. Price: £327.90 (plus VAT).

170 DC*

Stereo power amplifier. Output: 122W. THD: 0.03%. FR: DC-70kHz. Inputs: 1.5V 34K. Damping factor: 50. Controls: L & R level controls. Dimensions: 41.6 x 30 x 14.6cm. Features: power output meters of switchable sensitivity. Peak LED's. Price: £279.00 (plus VAT).

1300 DC

Integrated amplifier. Output: 190W per channel. THD: 0.1%. FR: DC-200kHz. Inputs: 1.8mV 47K, 180mV 25K. Damping factor: 60.

Controls: bass mid and treble for channel high and low filters, contour and mode controls. Dimensions: 41.6 × 31.6 × 14.6cm. Features: variable cartridge load switching, two record selector, LED peak indicators. Price: £522.00 (plus VAT).

3250B*

Stereo pre-amplifier. FR: 5Hz-60Hz. Inputs: 1.8mV 47K, 180mV 20K, 1.8mV 47K. Dimensions: 41.6 × 30.2 × 14.6cm. Features: moving coil pickup input. Price: £195.50 (plus VAT).

MISSION

Mission Electronics Ltd, PO Box 65,
London SW7 1PP.
Tel: 01-589 0048.

771 Pre-Amplifier*

Frequency response: 5Hz-50kHz —1dB. Voltage head-rooms: peak to peak better than >70V. Inputs: moving-coil pickup 70µV, moving-magnet pickup 2mV, auxiliary/tape 110mV (all for 1.6V output, balance control 0). Maximum input signal: moving-coil 10mV, moving-magnet (1kHz) 450mV. Output voltage and impedance: nominal output level 1.6V RMS. Maximum output level 25V RMS. Output impedance DC-coupled 100 ohms (1kHz). Output impedance AC-coupled 100 ohms (1kHz), 2mF. Overall gain: moving-coil pickup 88dB, moving-magnet pickup 55dB, line input 23dB (measured balance control 0). Tape output: gain, tape-in to tape 10dB, gain, tape-in to tape 2 20dB. Maximum output level 7.5V RMS. Hum and noise: moving-magnet pickup —80dB (below rated output). Line-input —90dB (below rated output) (measured 20Hz-20kHz CCIR weighted). THD <0.02% (20Hz-20kHz). Intermodulation distortion <0.05% (60Hz: 7kHz, 4:1 ratio both measured at rated output into 50K ohms). Dimensions 11.0 × 49.5



Mission 771 Pre-amp and 772 power amp

× 30.7cm. Finish: Black with solid aluminium casing. Price: £650.00 (inc VAT).

772 Power Amplifier

Non-current limiting wide open-loop bandwidth V-Amplifier. Output: 10ms 250W, 1sec 200W, Continuous 35V RMS 150W, all into 8 ohm. FR: 20Hz-20kHz. Input: for 35V RMS output, 8 ohms 1.6V RMS (across 10K ohms). Power bandwidth: Ref 8 ohms load 5Hz-65kHz, THD 0.06% (20Hz-20kHz), 0.005 (1kHz) *(measured at all power levels excl. noise). Slewing rate: Faster than >40V per millisecond. Minimum output load 2 ohms. Dimensions: 12.5 × 49.5 × 31.7cm. Finish: Black with solid aluminium casing. Price: £500.00 (inc VAT).

MONOGRAM

Monogram Professional Audio,
281 Balmoral Drive, Hayes, Middlesex.
Tel: 01-573 1566.

3100

Power amplifier as 3200 Series. Output 100W into 8 ohms. Price: £385.00 (plus VAT).

3200*

Power amplifier class A auto AB + B. Output. 150W into 8 ohms. THD: 0.01%. FR: DC-32kHz, 100kHz optional. Inputs: 0dB-0.775V. Damping factor: 500. Controls: 2 gain speakers A + AB. Dimensions: 19 × 12 × 5¼ in. Features: 12 LED power indicators. 2 separate power supplies. Price: £485.00 (plus VAT).



Monogram 3000

*Indicates entry is illustrated

330

Class A Switching power amplifier. Output: 200W into 8 ohms. THD: 0.01%. FR: DC-32kHz, 100kHz optional. Inputs sensitivity: 0dB-0.775V. Damping factor: 600. Controls: 2 gain speakers A + AB. Dimensions: 19 × 12 × 7½in. Features: 12 LED power indicators, subsonic filter, 2 separate power supplies. Price: £595.00 (plus VAT).

3000

Class A pre-amp with output of 2-10V. THD: 0.006%. FR: 2Hz-100kHz —3dB. 15Hz-32kHz + 0-0.2dB. Inputs: phono, tuner, aux, tape. Controls: selector, bass, mid, treble, volume, three filter, two tape three turnover freq. Dimensions: 19 × 12 × 3in. Features: high and low filter, two tape, aux monitor, amp out, three turnover freq, two phono. Precision thick film attenuators. Bi-amp variable output. Stabilised power supply. Delayed relay turn on. Price: £285.00 (plus VAT).

■ MUSTANG COMMUNICATIONS

Mustang Communications, Nelson Street, Scarborough, North Yorks YO12 7SZ.
Tel: Scarborough (0723) 63298

SS.50

Power amplifier. Output: 100W. THD: less than 0.5% (typically 0.1%). FR: (Ref. 1kHz) —0.2dB at 10Hz and —0.2dB at 20kHz. Inputs: standard jack (others to order) 0.775V into 10K. Damping factor: 200. S/N ratio: 90dB. Controls: gain control, VU meter and mains illuminated on and off switch. Output fully protected. Unit is rack mounted in chassis form. A range of steel cabinets are available. Dimensions: 48.3 × 33.7 × 8.9cm. Price: £132.57 (plus VAT).

SS.100*

Power amplifier. Output: 175W. Details as per SS.50. Price: £169.03 (plus VAT).

■ NAIM AUDIO LTD

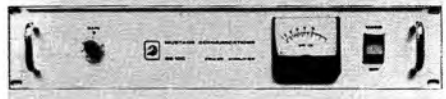
11 Salt Lane, Salisbury, Wilts SP1 1DT.
Tel: Salisbury (0722) 3746.

NAP 160

High power amp delivering continuously 50W into 8 ohms from each channel. Inputs: 1.4V/22V. Dimensions: 76 × 43 × 30cm. Price: on application.

NAC 12S

Preamplifier designed to meet basic requirements. Volume and balance controls. Magnetic



Mustang SS100



Naim NAP 250



Naim NAC32

input with R1AA equalisation, tuner and tape. Tape socket has input/output connections, main preamp output is separate socket. Power is supplied by a regulated supply in NAP 160 amplifier or separate supply is available. Overload capability allows maximum of 2V input at 20kHz. Alternative RIAA preamplifiers available to suit a variety of cartridges. Dimensions: 76 × 14.4 × 30cm. Prices: on application.

NAP 250*

Power amplifier with output of 70W into 8 ohms. Inputs: 1.6V/22K. Controls: on/off. Dimensions: 7.6 × 43 × 30cm. Price: on application.

NAC 32*

Preamplifier. Inputs: 100µV/47µV, 2mµ/47K, 75 mµ/100K. Controls: volume, balance, selector, mono/stereo, tape monitor. Dimensions: 7.6 × 21.4 × 30cm. Price: on application.

■ NAKAMICHI

Natural Sound Systems Ltd, 10 Byron Road, Wealdstone, Harrow, Middlesex HA3 7TL.
Tel: 01-863 8622.

410

Pre-amplifier. Inputs: phono, aux, tape. FR: 20Hz-50kHz + 0-1.5dB. Dimensions: 40 × 8 × 21.5cm. Full details on application. Price: £266.40 (plus VAT).

420

Power amplifier. Output: 60W per channel into 4 ohms, 50W into 8 ohms. FR: 5Hz-20kHz. THD: 0.05%. Inputs: 1V 10K. Damping factor: greater than 100. Dimensions: 40 × 8 × 22.5cm. Price: £266.40 (plus VAT).

■ **OPTONICA**

Sharp Electronics, 107 Hulme Hall Lane, Manchester.
Tel: 061-205 7321.

SM3636C

Integrated amplifier with output of 40W per channel into 8 ohms. THD: 0.05%. FR: 10Hz-100kHz power, 10Hz-70K pre. Inputs: phono 2.5mV 47K. Damping factor: >40. Controls: bass, treble, balance, filter, loudness. Dimensions: 44 × 14 × 36cm. Price: £195.46 (plus VAT).

SM4646C

Integrated amplifier with output of 60W per channel into 8 ohms. THD: 0.05%. FR: 10Hz-100K power, 10Hz-70K pre. Inputs: phono 2.5mV 22/47/100K. Damping factor: >50. Controls: bass, treble, balance, filters, loudness. Dimensions: 44 × 14 × 36cm. Price: £239.90 (plus VAT).

SM5100N

Integrated amplifier with output of 40W per channel. THD: 0.05%. FR: 10Hz-100K. Inputs: phono 2.8mV 47K. Damping factor: >50. Dimensions: 43 × 38 × 7.5cm. Features: LED function and toroidal trans. Price: £120.00 (plus VAT).

SM7100N

As above except Output: 65W. FET input (phono). Price: £185.00 (plus VAT).

SO9100N

Pre-amplifier. Inputs: phono 3mV 47K, tuner 160mV 47K, tape 160mV 47K. Dimensions: 43 × 38 × 7.5cm. Features: MC head amp use of FET's. Price: £160.00 (plus VAT).

SX9100N

Power amplifier. Output: 100W. THD: 0.01%. Dimensions: 43 × 45 × 7.5cm. Features: LED spectrum readout. Price: £328.00 (plus VAT).

■ **PANASONIC**

National Panasonic (UK) Ltd,
107-109 Whitby Road, Slough,
Berks SL1 3DR.
Tel: Slough (75) 27516.

SU-2400

Integrated amplifier with output: 30W into 4 ohms. THD: 0.8%. FR: 15Hz-30kHz (-3dB). Inputs: phono, tuner, aux, tape. Damping factor: 20 (4 ohms) 40 (8 ohms). Controls: volume, bass, treble, balance, loudness. Dimensions: 41.5 × 25 × 10.5cm. Features: two direct read-out power meters, 41 step volume control, tape monitor. Price: £79.95 (plus VAT).

■ **PHILIPS**

Philips Electrical Ltd, City House,
420 London Road, Croydon, Surrey.
Tel: 01-689 2166 .

AH384

Integrated amplifier with output of 40W. Features: switching for two pairs of speakers, headphone socket, high and low filters, audio mute, tape dubbing, mic socket, power output meters, two phono sockets. THD: 0.1%. Other details on application. Price: £139.20 (plus VAT).

AH386*

Integrated amplifier with output of 65W, otherwise similar to AH384. Price: £156.60 (plus VAT).

AH270

Slimline preamplifier with output of 1V per channel. THD: 0.1%. FR: 15Hz-25kHz ±1.5dB. Inputs: phono 2.5mV into 47K, tuner 250mV into 100K, tape A 250mV into 180K, tape B 250mV into 100K, monitor 200mV into



Philips AH590



Philips AH386

*Indicates entry is illustrated

100K. Controls: volume, balance, bass, treble, high filter, low filter, loudness, mute, input selection, mono/stereo. Dimensions: 48.2 × 28 × 7.8cm. Features: suitable for Philips MFB speakers or for external power amp, eg matching AH370. Price: £96.00 (plus VAT).

AH590*

Integrated amplifier only available with AH690 tuner. Output: 20W. THD: less than 1%. FR: 30Hz-16kHz ±1dB. Inputs: phono 2.5mV into 47K, tuner 140mV into 47K, tape 1-200mV into 47K, tape 2-200mV into 47K. Damping factor: 15. Controls: volume, bass, treble, mono/stereo, input selection. Dimensions: 38 × 22 × 14cm. Features: facility for two tape decks, headphone socket. Price: £83.40 (plus VAT).

■ PIONEER

Pioneer High Fidelity GB Ltd, Pioneer House, The Ridgeway, Iver, Bucks.

Tel: Iver (0753) 652222.

SA 9800*

Integrated amplifier. Output: 100W at 8 ohms. THD: 0.005%. FR: 5Hz-200kHz +0dB—2dB. Inputs: phono (1) 2.5mV 50K, phono (2) 2.5mV 50K, tuner 150mV 50K, tape x 2 150mV 50K, aux 150mV 50K. Damping factor: 55 at 8 ohms. Controls: bass, treble, turnover filter, balance, loudness, tape duplicate, muting, cartridge load. Dimensions: 42 × 42.5 × 15cm. Features: non-switching circuit, fluorescent peak meters, A—B, A + B speakers switching, all DC pre-amp. Price: on application.

SA 8800*

Integrated amplifier. Output: 80W at 8 ohms. THD: 5Hz-200kHz +0dB—2dB. Inputs: phono (1/2) 2.5mV 50K, tuner 150mV 50K, tape x 2 150mV 50K, aux 150mV 50K. Damping factor: 55 at 8 ohms. Controls: bass, treble, loudness filter, muting, balance, tape duplicate, cartridge load. Dimensions: 42 × 42.5 × 15cm. Features: non-switching circuit, fluorescent peak meters. A—B, A + B speaker switching, all DC pre-amp. Price: on application.

SA 7800

Integrated amplifier. Output: 65W at 8 ohms. THD: 0.009%. FR: 20Hz-20kHz ±0.2dB. Inputs: phono 2.5mV 50K, tuner 150mV 50K, tape 1/2 150mV 50K, aux 150mV 50K. Damping factor: 55 at 8 ohms. Controls: bass, treble, loudness, muting, filter, balance, tape duplicate. Dimensions: 45.3 × 37.6 × 15.5cm. Features: non-switching circuit, fluorescent peak meters. Price: on application.



Pioneer SA 9800



Pioneer SA 8800



Pioneer SA 708

SA 708*

Integrated amplifier. Output: 65W at 8 ohms. THD: 0.03%. FR: 10Hz-50kHz ±1dB. Inputs: phono 2.5mV 50K, tuner 150mV 50K, tape x 2 150mV 50K, aux 150mV 50K. Damping factor: 30 at 8 ohms. Controls: bass, treble, loudness, muting, filter, balance, tape duplicate. Dimensions: 42 × 33.7 × 15cm. Features: fluorescent peak meters, A—B, A + B speaker switching. Price: on application.

SA 608*

Integrated amplifier. Output: 45W at 8 ohms. THD: 0.03%. Inputs: phono 2.5mV 50K, tuner 150mV 50K, tape 150mV 50K, aux 150mV 50K. Damping factor: 30Hz-20kHz. Controls: bass, treble, loudness, filter, balance, tape monitor. Features: fluorescent peak meters. Price: on application.



Pioneer SA 608

SA 508

Integrated amplifier. Output: 25W at 8 ohms. THD: 0.05%. Other details as SA 608.

SA 408

Integrated amplifier. Output: 20W. THD: 0.5%. Inputs: phono, tuner, tape, aux, 150mV 50K. Damping factor: 30. Controls: bass, treble, tape monitor, speakers A—B off, A + B. Dimensions: 42 x 22 x 8.8cm. Price: on application.

■ **PYE**

Pye Ltd, 137 Ditton Walk, Cambridge CB5 8QD.

Tel: Teversham (022 05) 2781.

A 12000*

Integrated amplifier with output of 65W per channel (8 ohms) 75W (4 ohms) per channel. THD: 0.3%. FR: 20Hz-20,000Hz + 0.5—5dB. Inputs: phono (1, 2), mic, aux, tape/monitor (A, B). Outputs: Loudspeakers, headphones. Controls include contour, bass, treble, low and high filters, audio muting. Dimensions: 48 x 15 x 38cm. Price: £176.89 (plus VAT).

A 8000*

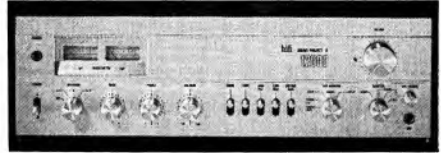
Integrated amplifier with output of 45W per channel (8 ohms) 50W (4 ohms). THD: 0.3%. FR: 20Hz-20,000Hz + 0.5-1.5dB. Inputs: phono (1, 2), aux, tape/monitor (A, B). Controls include contour, bass, treble, low and high filter, audio muting. Dimensions: 48 x 15 x 38cm. Price: £150.22 (plus VAT).

■ **QUAD**

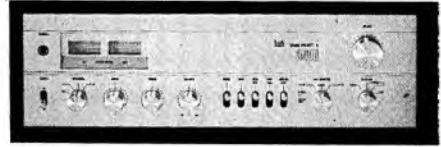
The Acoustical Manufacturing Co. Ltd, St. Peters Road, Huntingdon PE18 7DB. Tel: Huntingdon (0480) 52561.

Quad 33*

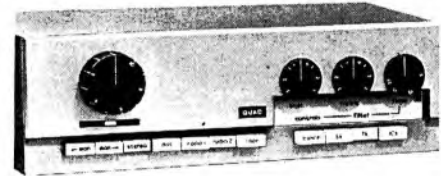
Preamplifier. Output: 0.5V into not less than 10K (3.7mV, 20mV or 100mV to recorder). THD: 0.02%. FR: 30Hz-20kHz ±0.5dB.



Pye A 12000



Pye A 8000



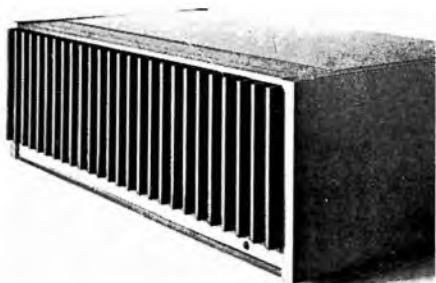
Quad 33



Quad 303 power amp

Inputs/imp: radio (x 2) 100mV into 100K; tape 100mV, 400mV or 1V pre-set, 40K; disc pre-set for cartridges of 0.5-6mV/cm/sec magnetic or 25-80mV/cm/sec ceramic S/N ratio: (0-30 phono weighting 15 7kHz bandwidth) —90dB. Controls: volume/on-off, balance, bass, treble, filter slope and frequency, channel selection, source selection. Features/facilities: variable slope filter switched at half octave intervals 5-10Hz; pre-set adjustments on plug-in boards for pick-up and tape parameters. Dimensions: 26 x 9.2 x 16.5cm. Price: £132.00 (inc VAT).

*Indicates entry is illustrated



Quad 405

Quad 303*

Power amplifier. Output: 45W per channel into 8 ohms. THD: 0.03%. FR: (within 1dB) 30Hz-35kHz into 8 ohms and 20Hz-35kHz into 16 ohms. Inputs/imp: 0.5V RMS 22K in parallel with 60pF. Damping factor: output source 0.3 ohms in series with 2000 μ F and 6 μ H. S/N ratio: -100dB. Features/facilities: unconditional stability, triple output circuit; output protected by current and voltage limiters. Dimensions: 12 x 15.9 x 32.4cm. Price: £126.00 (inc VAT).

Quad 405*

Power amplifier. Output: 100W per channel. THD: 0.1%. FR: (Ref. 1kHz) -1dB at 20Hz, -0.5dB at 20kHz, -3dB at 50kHz. Inputs/imp: 0.5V RMS 20K in parallel with 50pF. Damping factor: source 0.03 ohms in series with 3.3 μ H. S/N ratio: ('A' weighted) -95dB, (unweighted) -90dB (15.7kHz bandwidth). Features/facilities: new current dumping circuit, instantaneous recovery up to +20dB overload, unconditional stability, output current limiter, pre-set power limiter for 50W, excellent input slew and output offset. Dimensions: 11.5 x 34 x 19.5cm. Price: £196.00 (inc VAT).

Quad 50E

Power amplifier. Output: 50W per channel. THD: 0.1% at 1kHz. FR: (unbalanced input) -1dB at 30Hz and 20kHz, (balanced input) -2dB at 30Hz and 20kHz (Ref. 1kHz). Inputs/imp: 0.5V RMS., (unbalanced) 14-50K depending on pre-set gain, (balanced) >14K in parallel with 50H. Damping factor: source 0.5 ohms in series with 2.5 μ H for 17V output. S/N ratio: -80dB. Controls: continuously variable screwdriver pre-set gain. Features/facilities: input bridging for monitoring 600 ohms lines; output adjustable for any load 4-200 ohms; unconditional stability. Dimensions: 12 x 32.4 x 15.9cm. Price: £99.00 (inc VAT).

■ RADFORD

Radford High Fidelity International Ltd,
4 Somerville Road, Bristol BS7 9AA.
Tel: Bristol (0272) 40878.

ZD22

High definition stereo pre-amplifier control centre. Dual channel, virtually zero distortion. Intended for driving high quality power amps, it operates from disc, tuner and two tape machines. FR: 50Hz-20kHz disc, 20Hz-32kHz -1dB line input. Inputs: disc 47K, line nominally 27K varying with input level control setting. Controls: bass \pm 11dB at 30Hz, treble \pm 12dB at 20kHz. Dimensions: 43 x 11.5 x 28cm. Price: £190.00 (plus VAT).

ZD50

Stereo transistor power amplifier. Suitable for driving any loudspeaker of nominal impedance 8 ohms regardless of impedance/phase v. frequency characteristic without distortion, and loudspeakers of nominal impedance 4 ohms with reasonable impedance/phase v. frequency characteristic. Output: 70W into 8 ohms, 120W into 4 ohms, 130W into 3 ohms per channel. Sensitivity: 1.0V for 70W into 8 ohms. THD: 1kHz 8 ohms and 4 ohms less than 0.004%, typically 0.0015%; 10kHz 8 ohms less than 0.004% 4 ohms less than 0.008%. FR: low -3dB at 8Hz maximally flat 12dB/oct roll off; High -3dB at 50kHz 6dB/oct roll off. Inputs: 1V for rated output 47K. Dimensions: 44 x 13 x 30cm. Price: £250.00 (plus VAT).

ZD100*

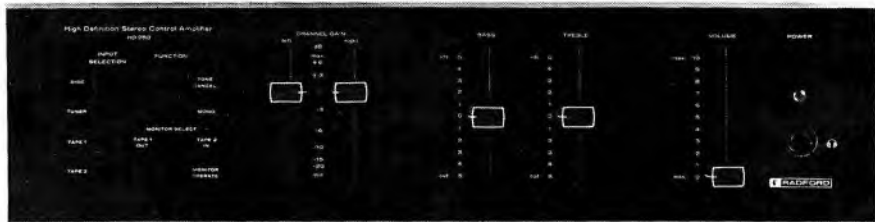
Stereo power amplifier suitable for driving any loudspeaker of nominal impedance 8 ohms or 4 ohms. Designed for professional use but suitable for home use where higher sound pressure level or greater reserve power is required. Output: 90W into 8 ohms, 150W into 4 ohms, 200W into 2.8 ohms per channel sensitivity: 1.0V for rated power output. Other details as ZD50. Dimensions: 44 x 13 x 36cm. Price: £350.00 (plus VAT).

HD 250*

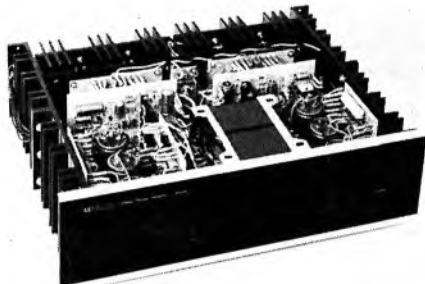
Stereo integrated amplifier. Uses ZD22 pre-amplifier with power amp having power output in excess of 50W per channel into 4-8 ohms. THD: less than 0.02% at rated power, typically less than 0.01%. Inputs: disc, tuner, two tape machines. Sensitivity: disc 1mV, aux 50mV. Dimensions: 43 x 11.5 x 28cm. Price: £250.00 (plus VAT).

IT150

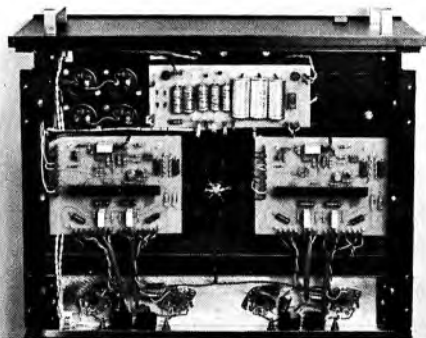
Stereo power amplifier with transistor input stages driving an output stage using KT77 tubes



Radford HD 250



Radford ZD100 with case removed



Radford TT100 underside view with panel removed



Radford TT100 rear view



Radford TT100 front view

and providing nominal average power output of 50W per channel. Output impedance matching for 4-16 ohms loudspeakers. Sensitivity: 1.0V for rated power output. Dimensions: 44 x 14 x 35cm. Price: £425.00 (plus VAT).

TT 100*

Stereo power amplifier providing nominal average power output of 100W per channel. Professional option available using XLR-3 input sockets and output terminals mounted on front panel. A available 4-16 ohms and 50V/100V output matching. Amplifier suitable for guitar and music groups generally. Dimensions: 44 x 20 x 35cm. Price: £575.00 (plus VAT).

■ **RAPPAPORT**

Trasonic Imports (Acoustical) Ltd, Brooks Court, Stamford, Lincs.

PRE-1E

Pre-amp with integral power supply. Price: £395.00 (plus VAT).

PRE-1A

Pre-amp with separate power supply. Price: £475.00 (plus VAT).

PRE-2

Pre-amp with integral power supply. Price: £345.00 (plus VAT).

PRE-3

Pre-amp. Details on request.

*Indicates entry is illustrated



Rappaport PRE-2 Pre-amp

AMP-1

Power amp. Details on request.

Full details

All details of above on application.

REALISTIC

Tandy Corporation (Branch UK),
Bilston Road, Wednesbury, Staffs WS10 7JN.
Tel: 021-556 6101/2.

SA 800B

Integrated amplifier with output 20W per channel. THD: Less than 1% 20-20,000Hz ± 3 dB. Inputs: 2.8mV phono, 160mV aux/tape. S/N ratio: 65dB phono, 70dB aux/tape. Controls: selector, bass midrange, treble, balance, volume, mono/stereo, tape monitor, loudness, speakers A/B/Rev. Dimensions: 38.7 \times 29.2 \times 11.7cm. Finish: walnut veneer case. Price: £99.95 (inc VAT).

SA 1001

Integrated amplifier with output of 45W per channel. THD: 0.5% at 30W 20-20,000Hz ± 1.5 dB. Inputs: 2.2mV phono, 150mV



Revox A722

aux/tape/tuner. S/N ratio: 65dB phono, 80dB aux. Controls: bass, midrange, treble, selector, 2 aux, phono, tuner, balance, volume, mono/stereo, tape monitor, loudness, lo-filter, speakers A/B. Dimensions: 41 \times 30.5 \times 14.6cm. Features: dual headphone sockets. Finish: walnut veneer case. Price: £129.95 (inc VAT).

SA 2001

Integrated amplifier with output of 58W per channel. THD: 0.02% at 50W. 20-20,000Hz ± 1.5 dB. Inputs: phono 1 1.5mV/3mV switchable, phono 2 3mV, aux/tape/tuner 200mV. S/N ratio: phono 1 60dB, 65dB, 70dB, phono 2 65dB, aux/tape/tuner 85dB. Controls: Speakers A/B, volume, perfect loudness-loudness defeat, mono/stereo, balance, hi-filter, lo-filter (10kHz) (18Hz), dual range bass and treble, phono 1, 2, tuner, aux. Dimensions: 41 \times 30.5 \times 14.6cm. Features: dual range output meters (watts/8 ohms). Finish: walnut veneer case. Price: £189.95 (inc VAT).

REVOX

F. W. O. Bauch Ltd., 49 Theobald Street,
Borehamwood, Herts. WD6 4RZ.
Tel: 01-953 0091.

A722*

Stereo power amplifier. Inputs: 0.75V 20K for (60W/4 ohms). Outputs: 60W per channel 4 ohms, 45W per channel into 8 ohms, 30W per channel into 16 ohms. THD: less than 0.1% at rated power into 4 ohms. 1kHz. FR: 20Hz-20kHz — 1dB, into 4 ohms. Power bandwidth: 10Hz-50kHz (DIN) into 4 ohms. S/N ratio: better than 90dB (ref. 60W/4 ohms). Price: £247.00 (plus VAT).



Revox A740



Revox B750

A740*

Stereo power amplifier, 175W/channel into 4 ohms. THD: less than 0.1% up to rated output. FR: 20Hz-20kHz +0 -0.7dB. THD: zero. S/N ratio better than 100dB. (ref. 175W/4 ohms). Price: £750.00 (plus VAT).

B750 Mark II*

Integrated amplifier with output 75W into 8 ohms. THD: >0.1%. FR: 20Hz-20kHz ± 0.5 dB. Inputs: phono (2) optional, tuner, aux, tape (2), power amp in. Damping factor: >80 into 8 ohms. Controls: bass, treble, presence. Dimensions: 45.2 \times 34.8 \times 15.1cm. Features: tape copy facility, pre-amp/power amp are electronically separable. Price: £365.00 (plus VAT).

■ ROGERS

Swisstone Electronics Ltd., Barmeston Road, London SE6 3BN. Tel: 01-697 8511.

A75 Series 2*

Integrated amplifier with output 45W per channel. THD: <0.08% at 1kHz <0.03% 40Hz-20kHz. FR: ± 1 dB 25Hz-20kHz, ± 2 dB 20Hz-50kHz. Inputs sensitivity: Disc: RIAA 2.7mV 47K ohms. Tuner, cassette, tape 180mV into 100K. Damping factor: 30 at 50Hz. Controls: bass, treble variable low pass filter, speaker selection, input selection and tape dubbing. Dimensions: 26 \times 28.5 \times 11.5cm. Features: DC coupled units. Darlington output devices. Price: £174.50 (plus VAT).

■ SAKAI

Wren Electronics Ltd, Dawson Road, Mount Farm Estate, Milton Keynes, Bucks.
Tel: Milton Keynes (0908) 71611.

PA 3050

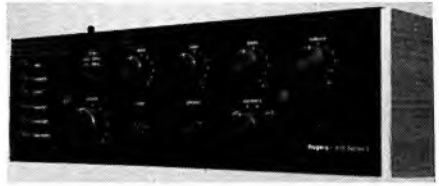
Output: 2 \times 50W. THD: 0.1%. FR: 20Hz-20kHz. Inputs: phono 2.5 47K, aux 150 47K, tape 150 47K. Damping factor: 30. Controls: two tape dubbing, volume, two-tone, muting, loudness, low filter, tone defeat. Dimensions: 44.4 \times 34.9 \times 12.9cm. No rec retail price.

■ SANSUI

Sansui Audio Europe NV, Unit 10A, Lyon Industrial Estate, Lyon Way, Rockware Avenue, Greenford, Middlesex UB6 0AA.
Tel: 01-565 1133.

AU 317 Mk II

Integrated amplifier. Output: 60W. THD: 0.03%. FR: 5Hz-100kHz +0 -1.8dB. Inputs: phono 2.5mV 47K, aux 150mV 47K, mic 8 mV



Rogers A75 Series 2

10K. Damping factor: 70. Controls: bass/treble filters, loudness. Dimensions: 43 \times 34 \times 11cm. DC circuitry. Price on application.

AU 217 Mk II

Integrated amplifier. Output: 40W. THD: 0.06%. FR: 10Hz-50kHz +0.5 -1.5dB. Inputs: phono 2.5mV 47K, aux 150mV 47K. Damping factor: 80. Controls: bass/treble filters, loudness. Dimensions: 43 \times 34 \times 11cm. Price: on application.

AU 117 Mk II

Integrated amplifier. Output: 25W. THD: 0.17%. FR: 10Hz-40kHz +0.5 -2dB. Inputs: phono 2.5mV 47K, aux 150mV 47K. Damping factor: 50. Controls: bass/treble, high filter, loudness. Dimensions: 43 \times 34 \times 11cm. Price on application.

AU-X1

Integrated amplifier, Output: 160W. THD: 0.007%. FR: DC-500kHz +0 -3dB. Inputs: phono 2.5mV 47K, phono 0.1mV 200K, aux/tuner/tape: 200mV 47K. Damping factor: 100. Dimensions: 48 \times 45 \times 19.7cm. Features: moving coil phono input. Price: on application.

AU 919

Integrated amplifier. Output: 100W. THD: 0.008%. FR: 5Hz-100Hz +0 -3dB. Inputs: phono 2.5mV 47K, moving coil 0.1mV 33K, aux/tuner/tape 150mV 47K. Damping factor: 100. Dimensions: 43 \times 42.8 \times 16.8cm. Features: two turnover frequencies for treble/bass. Moving coil phono input. Price: £432.00 (plus VAT).

AU 719

Integrated amplifier. Output: 90W. THD: 0.008%. FR: as AU 919. Inputs: as AU 919. Damping factor: 100. Other details on request.

AU 417

Integrated amplifier. Output: 65W. THD: 0.02%. FR: 5Hz-100K +0 -3dB. Phono 1 + 2

*Indicates entry is illustrated

1.5mV 47K, aux/tuner/tape 150mV 47K. Damping factor: 60. Controls: bass/treble, loudness, subsonic filter. Dimensions: 43 × 39.5 × 16.8cm. Features: DC circuitry. Price: on application.

BA-F1

Power amplifier. Output: 110W. THD: 0.008%. FR: DC-600kHz +0 -3dB. Inputs: 1V 25K. Damping factor: 100 into 8 ohms. Dimensions: 43 × 43 × 18.7cm. Features: diamond differential, direct coupled, peak indicator. Price: on application.

CA-F1

Pre-amplifier. THD: 0.008%. FR: 5Hz-600kHz +0 -3dB. Inputs: phono moving coil 0.1mV 10K, phono 2.5mV 47K, aux 150mV 47K. Controls: selector, loudness, tone, defeat, subsonic filter. Dimensions: 43 × 43.5 × 60cm. Features: moving coil phono unit. Price: on application.

SHARP OPTONICA

Sharp Electronics (UK) Ltd, Sharp House, 107 Hulme Hall Lane, Manchester M10 8HL. Tel: 061-205 7321.

SM 1515

Preamplifier with direct coupled equaliser circuit; power amplifier all stage direct coupled ITL/CTL/OCL circuitry. Output: 33W into 8 ohms. THD: 0.2%. FR: 15Hz-60Hz +1B -3dB. Inputs: 150mV/40K. Damping factor: 40. Controls: Left right output power meters, tape dubbing, audio muting, low cut filter, loudness control. Dimensions: 40.8 × 25.3 × 14.4cm. Features: 41 click stop positions on volume control, independent bass and treble. Speaker balance. Price: £129 (plus VAT).

SM 3636

Pre-amp direct coupled equaliser circuit. Power amp all stage direct coupled complementary OCL circuitry. Output: 45W. THD: 0.05%. FR: 10Hz-100kHz +0dB -2dB. Inputs: 800mV/47K. Damping factor: 40. Controls: audio muting, tape dubbing, high/low cut filter, frequency selectors, bass/treble. Dimensions: 44.2 × 36.3 × 14.4cm. Features: double protection circuitry, turnover frequency selectors, tone defeat switches, 32 positions. Price: £195.46 (plus VAT).

SM 4646

Pre-amp and power amp. Output: 70W. THD: 0.05%. FR: 10Hz-100kHz +0dB -2dB. Inputs: 650mV/47K. Damping factor: 50. Controls: double protection circuit. Turnover fre-



Sharp SM1616

quency selectors, treble tone control. 4-gang volume control. Audio muting switch. Dimensions: 44.2 × 36.3 × 14.4cm. Features: tape dubbing, high/low cut filter. Price: £239.90 (plus VAT).

SM 1616*

Similar to SM1515 but bigger to match the rest of Optonica range with power output of 40W per channel into 8 ohms. THD: 0.2%.

SONY (UK) LTD

Consumer Information:
134 Regent Street, London W1R 6DJ.
Tel: 01-439 3874.

TA E88B

Stereo preamplifier with THD: <0.002% (10V output). FR: DC--500kHz +0 -1dB tuner tape aux. Inputs: phono 1 & 2, head amp, tuner, tape 1, 2, aux. Controls: power attenuator, output level, balance, mode monitor. Dimensions: 48 × 37 × 8cm. Features: rugged classic construction. Price: £699.00 (inc VAT).

TA N88B

Stereo power amplifier with 160W output per channel. THD: <0.5%. FR: 5Hz-40kHz +0.5dB -5dB. Inputs: 1.4V-50K. Damping factor: 20. Controls: power on/off. Dimensions: 48 × 36 × 8cm. Features: professional pulse width modulation amplifier which combines high power in a compact cabinet weighing only 11kg. Price: £699.00 (inc VAT).

TA E7B*

Stereo preamplifier with THD less than 0.003%. FR: 1Hz-150kHz +0 -1dB tuner, aux, tape. Inputs: phono 1, 2, head amp. tuner, aux 1, 2, tape 2. Controls: volume, muting, bass, treble, balance, mode, tape and tape copy, high and low filters. Dimensions: 43 × 32 × 17cm. Features: Amplifier adjustable to suit most moving coil cartridges. Price: £533.00 (inc. VAT).

TA N7B

Stereo power amplifier with output of 100W per



Sony TA-E7B and TA-N7B Pre-amp



Sony TA-F7B



Sony TA-F5A



Sony TA-F4A

channel both channels operating into 8 ohms at 20Hz-20,000Hz. THD: <0.01% at rated output 20Hz-20,000Hz. FR: DC-100kHz + 0db -1dB direct. Inputs: 1.3V-50K. Controls: power on/off. Dimensions: 43 x 34 x 17cm. Features: two toroidal transformers. Price: £580.00 (inc VAT).

TA F7B*

Integrated amplifier with output of 70W per channel at 20Hz-20kHz into 8 ohms. THD: <0.015% at rated output. FR: 5Hz-10kHz +0 -1dB. Inputs: aux, tuner, tape. Damping factor: 60 (8 ohms) at 1kHz. Controls: volume, muting, function, bass, treble, balance, tape monitor and copy, mode, low, high filters. Dimensions: 43 x 42 x 17cm. Features: high power V-Fet output stage. Price: £667.00 (inc VAT).

TA 313

Integrated amplifier with output of 25W per channel 20Hz-20kHz into 8 ohms. THD: 0.5% at 1kHz, 0.2% at 1W. FR: 10Hz-50kHz +0 -3dB. Inputs: phono 2.5mV 50K; mic 2mV 10K; tuner/aux 150mV 50K. Damping factor: 30 (8 ohms) at 1kHz. Controls: volume, bass, treble, balance, loudness, mixing, reverb, function. Dimensions: 41 x 28 x 14.5cm.

Features: speaker switches, power meters, mic mixing. Price: on application.

TA 515

Integrated amplifier with output of 40W per channel 20Hz-20kHz into 8 ohms. Otherwise as TA 313.

TA-F 4A*

Integrated amplifier with output of 40W per channel into 8 ohms. THD: 0.3% at 1kHz, 0.1% at 1W. FR: 5Hz-100kHz ±0.5dB. Inputs: phono 2.5mV 50K, high level inputs. Damping factor: 35 (8 ohms) at 1kHz. Controls: bass, treble, loudness. Price: on application.

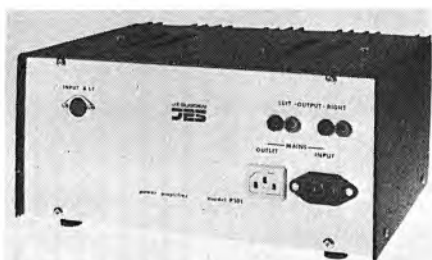
TAF 5A*

Integrated amplifier with output of 70W per channel into 8 ohms. THD: 0.04% at 1kHz, 0.02% at 10W. FR: 3Hz-70kHz +0 -1dB. Inputs: phono 2.5mV 50K, high level inputs. Damping factor: 40 (8 ohms) at 1kHz. Dimensions: 41 x 14.5 x 37.5cm. Price: on application.

Other models

TA 212, TA F 3A, TA N86B, TA E 86B: details on application.

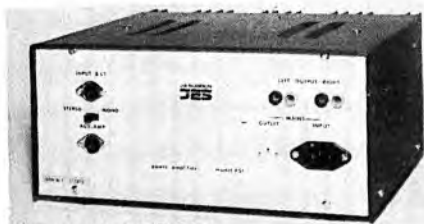
*Indicates entry is illustrated



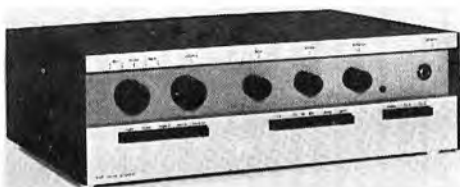
J. E. Sugden P.101



J. E. Sugden C.51



J. E. Sugden P.51



J. E. Sugden A.48

■ J. E. SUGDEN

J. E. Sugden & Co Ltd, Carr Street,
Cleckheaton, Yorks BD19 5LA.

Tel: Cleckheaton (0274) 872501

C51 control unit*

Transistorised stereo control unit designed for use with P51 power amplifier. Inputs: radio, tape and aux, each 150mV into 250K for flat response. Phono (1) 2.5mV 47K R1AA. Phono (2) same as phono (1) or any characteristic to choice with basic sensitivity 0.25mV. Controls: bass ± 14 dB at 40Hz, treble ± 14 dB at 10kHz, volume ± 1 dB per channel, balance ± 6 dB for 180° rotation fade out at full rotation. Rumble filter: 12dB/octave below 30Hz. Treble filter: 4kHz, 7kHz and 10kHz. Treble filter slope: gradual 6dB/octave, steep 18dB/octave. HD: better than 0.1% at rated output. S/N: better than 85dB on 150mV inputs, better than 75dB on PU inputs. Pushbutton selection of inputs and operating mode. Power: obtained from P51 amplifier. Size: 11 x 3½ x 7in. Price: £112.00 (plus VAT).

A48 Series Two*

Integrated stereo amplifier. Inputs: mag PU 2.5mV 47K, radio 100mV 200K, two tapes 100mV 200K. Noise level: (PU input) -70dB, (other inputs) -82dB. Overload capability: (PU input) 100mV, (other inputs) infinite. Output: 45W into 8 ohms. Controls: bass ± 14 dB at 40Hz, treble ± 14 dB at 10kHz, balance ± 6 dB at 180° rotation, fade out at full rotation, volume,

input selectors, LF filter 18dB/octave from 70Hz, HF filter at 4, 7 or 10kHz, pushbutton selection of slope (steep 18dB/octave, gradual 6dB/octave), quiet button (-16dB loudness compensated), mono/stereo, stereo reverse. HD: <0.1%. FR: 30Hz-30kHz ± 1 dB at all output levels. Size: 16 x 5¼ x 11 1/8in. Finish: Nextel with brushed aluminium panel. Special output stage. Price: £192.00 (plus VAT).

P51*

Mono or stereo power amplifier. 21 transistors, 20 diodes. Input: 500mV 300K. Noise level: -90dB. Output: 50W RMS into 8 or 4 ohms, or with mono connection 100W into 8 ohms. Mono/stereo switch. HD: 0.05% at 8 ohms, 0.1% at 4 ohms. FR: 30Hz-20kHz ± 0.75 dB at all power levels. Finish: case finished in embossed PVC with matt PVC facing on aluminium panel. Price: £136.00 (plus VAT).

P101*

Power amplifier with output of 100W per channel. THD: 0.05%. FR: 30Hz-20kHz ± 0.75 dB all power levels. Inputs: 500mV 300K. Damping factor: 30. Dimensions: 29 x 25 x 14cm. Price: £176.00 (plus VAT).

■ SES

Sussex Electronic Services,
Unit 15, Highfield Industrial Estate,
Eastbourne, Sussex.

Tel: Eastbourne(0323) 57780.

CU2000

Master control unit/preamplifier, CU2000 which powers all power amp. modules. Dimensions: Same as power amp. Facilities: Illuminated on-off button, 6-channel touch control, microprocessor addressed input selector, comprising magnetic phono input, moving coil input, tuner input, tape I input. Cartridge loading: 20-channel selection for top quality moving coil and magnetic cartridges. Balance and volume: Tape 'IN' Tape 'OUT' switch. 12dB/octave filter, switchable. Mono/stereo switch. Tape monitor switch. All inputs and outputs RCA type phono and bi-polar sockets. Full details on application.

PA1000

Power amp class B o/p. Output: 100W. THD: 0.05% at 1kHz. FR: 10Hz-22kHz +0dB -0.2dB. Inputs: 0.775V 47K at 4-8 ohms. Damping factor: Greater than 200 at 1kHz. Controls: by pre-amp. Dimensions: 35.5 × 33 × 8.9cm. Features: 30amp loudspeaker connection terminals, peak overload display. Price: on application.

PA1500

Power amp class B o/p. Output: 150W. THD: 0.05% at 1kHz. FR: 10Hz-22kHz +0dB -0.2dB. Inputs: 0.775V 47K at 4-8 ohms. Controls: by pre-amp. Dimensions: 35.5 × 33 × 8.9cm. Features: 30amp loudspeaker connection terminals, peak overload display. Price: on application.

■ TEAC

Harmon UK,
St. John's Road, Tyler's Green,
High Wycombe, Bucks.
Tel: High Wycombe (0409-481) 5331

AS-M30

Integrated amplifier with output: 30 + 30W. Details on application. Price: £105.78 (plus VAT).

AS-M50

Integrated amplifier with output: 50 + 50W. Details on application. Price: £168.00 (plus VAT).

■ TECHNICS

National Panasonic (UK) Ltd, 107-109
Whitby Road, Slough, Berks, SL1 3DR.
Tel: Slough (75) 27516.

SU8011

Integrated amplifier. Output: 27W. THD: 0.08%. FR: 20Hz-20kHz ±0.8dB. Inputs:

phono 2.5mV 47K, tuner, aux 150mV 27K, tape 180mV 33K. Damping factor: 30. Controls: volume, bass, treble, balance, selector, loudness, tape monitor, two speakers. Dimension: 43 × 24 × 9.7cm. Price: £97.73 (plus VAT).

SU8033/8022K

As above but output of 38W and separate record mode switch. Price: £124.00 (plus VAT).

SU8044

Integrated amplifier. Output: 40W. THD: 0.02%. FR: 20Hz-20kHz ±0.5dB. Inputs: phono 2.5mV 47K, tuner, aux 150mV 47K, tape (1) 180mV 33K, tape (2) 150mV 33K. Damping factor: 32. Controls: volume, bass, treble, balance, selector, rec selector, loudness, Hi filter, speaker switch, meter range. Dimensions: 43 × 25.5 × 14.2cm. Features: FL power meters. Price: £158.18 (plus VAT).

SU8055

Integrated amplifier. Output: 50W. THD: 0.20%. FR: 20Hz-20kHz ±0.5dB. Inputs: phono MM 2.5V 47K, phono MC 170μV 100 ohms, tuner, aux 150mV 47K, tape (1) 180mV 33K, tape (2) 150mV 33K. Damping factor: 32. Controls: volume, bass, treble, balance, selector, rec selector, loudness, Hi filter, speaker SW, meter range. Dimensions: 43 × 25.5 × 14.2cm. Features: power meters. Price: £199.96 (plus VAT).

SU8077K

Integrated amplifier. Output: 62W. THD: 0.02%. FR: 20Hz-20kHz +0dB -0.1dB. Inputs: phono MM 2.5mV 47K, phono 170μV 47 ohms, tuner, aux 200mV 47K, tape (1) 200mV 47K, tape (2) 200 mV 47K. Damping factor: 40. Controls: volume, bass, treble, balance, input, selectors, record selector, muting, mode, loudness, high and low filter, meter range. Dimensions: 45 × 36 × 14.2cm. Features: power meters, moving coil input. Price: £293.29 (plus VAT).

SU8088K

Integrated amplifier. Output: 85W. THD: 0.01%. FR: 20Hz-20kHz +0dB-0.1dB. Inputs: phono MM 2.5mV 47K, phono MC 170μV 47 ohms, tuner, aux 200mV 47K, tape (1) 200mV 47K, tape (2) 200mV 47K. Damping factor: 40. Controls: volume, bass, treble, balance, input selectors, rec selector, muting, mode, loudness, Hi and Lo filter, meter dim, meter range, two turnover frequencies for bass and treble. Dimensions: 45 × 36 × 14.2cm. Features: power meters, moving coil input. Price: £364.40 (plus VAT).

*Indicates entry is illustrated

SU8099K

Integrated amplifier. Output: 120W. THD: 0.007%. FR: 20Hz-20kHz +0dB-0.1dB. Inputs: phono MM 2.5mV 47K, phono MC 100 μ V 47K, tuner, aux 200mV 47K, tapes 1 and 2 200mV 47K, Main in 1V 18K. Damping factor: 100. Controls: volume, bass, treble, balance, input selectors, rec selectors, speaker switch, muting mode, loudness, meter range, meter DIM, Hi and Lo filters, 3 turnover freqs bass and treble. Dimensions: 45 × 42 × 14.2cm. Features: power meters, moving coil input. Price: £577.73 (plus VAT).

SU9011

Preamplifier. FR: RIAA +0.2dB. Inputs: phono MM 2.5mV 47K, phono MC 70 μ V 10 ohms, tuner, aux, 150mV 47K, tape (1) 180mV 47K, tape (2) 150mV 47K mic 4mV 10K. Controls: volume, bass, treble, balance, input selector, tape mon select, Hi and Lo filter, mode, loudness, mic volume, MC/MM selector. Dimensions: 43 × 28.5 × 9.8cm. Features: moving coil input, mic input with sep volume control. Price: £168.84 (plus VAT).

SE9021

Power amplifier. Output: 65W. THD: 0.01%. FR: 20Hz-20kHz +0 —0.1dB. Inputs: 1V 47K. Damping factor: 100. Controls: DC operation 2Hz filter, two speaker switch. Dimensions: 43 × 33.1 × 9.8cm. Features: power meters. Price: £204.00 (plus VAT).

SE A1

Power amplifier. Output: 350W. THD: 0.003%. FR: DC-100kHz +0 —0.1dB. Inputs: 1V-10V 47K. Dimensions: 45 × 55 × 24.9cm. Features: class A + DC power amp. Price: £4,088.84 (plus VAT).

SU A2

Preamplifier. THD: 0.003%. FR: DC-20kHz +0 —0.1dB. Inputs: phono, tuner, aux, mic, tape. Dimensions: 45 × 57.4 × 20.5cm. Features: class A, DC coupled control pre-amp. Price £6, 133.29 (plus VAT).

SU9070

Preamplifier. THD: 0.003%. FR: 20Hz-20kHz +0 —0.5dB. Inputs: phono MM 2.5mV 47K, phono MC 60 μ V 47 ohms, tuner, aux 150mV 47K, tape 1, 2, 3 150mV 47K. Controls: volume, balance, muting, phono select, input select, rec select, mode, lo filter, output selector. Dimensions: 45 × 36.9 × 9.2cm. Features: flat pre-amplifier to select inputs used with SH9010 graphic equaliser. Price: £328.84 (plus VAT).

SE9060

Power amplifier. Output: 75W stereo 200W mono. THD: 0.02%. FR: DC-100kHz +0 —1dB. Inputs: 1V 47K. Damping factor: 100. Controls: left/right level, DC operation, 2Hz filter, two speaker switches. Dimensions: 45 × 37.6 × 9.2cm. Features: stereo or mono operation. Price: £328.84 (plus VAT).

SU CO1

Preamplifier. THD: 0.003%. FR: 20Hz-20kHz +0 —0.05dB. Inputs: phono MM 2.5mV 47K, phono MC 100 μ V 47K, tuner, aux 150mV 47K, tape 150mV 47K. Controls: volume, balance, bass, treble, selector, tape monitor, Hi and lo filter, loudness. Dimensions: 29.7 × 24.1 × 4.9cm. Features: moving coil input. Price: £152.96 (plus VAT).

SE CO1

Power amplifier. Output: 50W. THD: 0.03%. FR: DC-100kHz +0 —1dB. Inputs: 1V 47K. Damping factor: 50. Controls: meter range. Dimensions: 29.7 × 26.2 × 4.9cm. Features: LED power meter, pulse power supply. Price: £296.96 (plus VAT).

■ TELETON

Teleton Electro (UK) Co. Ltd,
Somerton Works, Prince Avenue,
Westcliff-on-Sea, Essex.
Tel: Southend (0702) 337681.

A500

Integrated amplifier. Output: 30W per channel. THD: 0.5% at 30W. FR: 35Hz-20kHz \pm 2dB. Inputs: phono (mag) 3mV, aux tuner 200mV 47K. Damping factor: 20. Controls: bass, treble, loudness, high filter, low filter. Dimensions: 42 × 29 × 12.3cm. Features: four speaker switching dubbing and monitoring. Price: on application.

■ TENSAN

Wren Electronics Ltd,
Dawson Road, Mount Farm, Estate,
Milton Keynes, Bucks.
Tel: Milton Keynes (0908) 71611.

TA2030

Stereo amplifier with output of 2 × 27W at 1kHz. THD: 0.1%. FR: 10Hz-40kHz \pm 3dB. Inputs: aux 160mV 47K, phono 2.5mV 47K. Damping factor: 80. Controls: two tone, volume, balance, two tape dubbing, loudness, high/low filter. Dimensions: 43 × 13.2 × 31.2cm. Features: tape dubbing, mic input. No rec retail price.



Tensai TA 2045

TA2045*

Stereo amplifier with output of $2 \times 48W$ at 1kHz. THD: 0.02%. FR: 10Hz-50kHz $\pm 3dB$. Inputs: aux 160mV 47K, phono 2.5mV 47K. Damping factor: 80. Controls: two tone, volume, balance, mic level, two tape dubbing, high/low filter, loudness. Dimensions: 43 \times 13.2 \times 33cm. Features: tape dubbing, VU meters, mic input. No rec retail price.

■ **TOSHIBA**

Toshiba (UK) Ltd, Toshiba House, Girling Way, Great South West Road, Feltham, Middlesex.
Tel: 01-751 1281.

SB-230*

Integrated amplifier with output of 35W per channel into 8 ohms or 40W into 4 ohms. THD: 0.2%. FR: tuner 10Hz-50kHz $\pm 2dB$ or phono 30Hz-15kHz $\pm 0.5dB$. Inputs: phono 2.5mV 47K, tuner 150mV 47K, tape 150mV 47K. Damping factor: 25. Controls: bass, treble, balance. Dimensions: 42 \times 14.6 \times 25.7cm. Features: power output meters, full mic mixing. Price: £97.33 (plus VAT).

SC-335

Power amplifier with output of 38W \times 2 into 8 ohms. THD: 0.1%. FR: 5Hz-80kHz $\pm 1dB$. Inputs: main input only 1V at 47K. Controls: input level controls. Dimensions: 42 \times 24 \times 9.6cm. Features: power output meters. Price: see 335 rack.

SC-330

Power amplifier with output 40W \times 2. THD: 0.1%. FR: 5Hz-60kHz $\pm 1dB$. Inputs: main input. Damping factor: 25. Controls: input level. Dimensions: 54 \times 24.8 \times 92.5cm. Features: output level meters. Price: see 330 rack.

SY-330

Preamplifier. THD: 0.1%. FR: 20Hz-40kHz $\pm 1dB$. Inputs: phono, tuner, aux/tape, mic. Controls: pre-out 1V, tape out 150mV. Dimensions: 45 \times 24.5 \times 9.7cm. Features: mic mixing with auto fade control. Price: see 330 rack.

SY-335

Preamplifier with output of 1V. THD: 0.1%. FR: 20Hz-40kHz $\pm 1dB$. Inputs: phono, tuner/aux, tape. Controls: bass, treble, balance. Dimensions: 42 \times 24 \times 9.6cm. Features: mic mixing. Price: see 335 rack.

SB-820

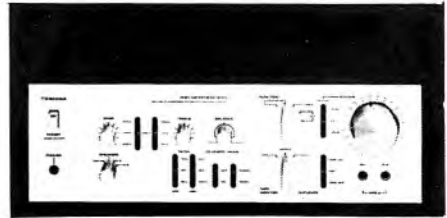
Stereo amplifier. Cascade connected differential first-stage followed by three-stage darlington connected driver section with constant current supplies to reduce distortion at low-listening volumes. Output: 82W. THD: 0.2%. FR: 20Hz-20kHz. Inputs: phono 2.0mV 50K, phono 2mV 50K, tuner 150mV 50K, aux 150mV 50K. Damping factor: 40. Dimensions: 45 \times 14.8 \times 37.5cm. Price: £301.78 (plus VAT).

SB-620*

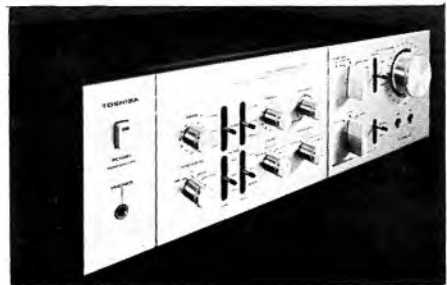
Stereo amplifier. Power amplifier section features cascade connected differential first-stage, direct coupled full complementary transistor configuration and OCL circuitry.



Toshiba SB 230



Toshiba SB 620



Toshiba SB 820

*Indicates entry is illustrated

Output: 62W. THD: 0.5%. FR: 20Hz-20kHz + 0dB-1dB. Inputs: phono 2.0mV 50K, phono 2.2mV 50K, tuner 150mV 50K, aux 150mV 50K. Damping factor: 30. Dimensions: 45 × 14.8 × 37.5cm. Price: £212.89 (plus VAT).

SB-420

Stereo amplifier. High power performance. Output: 42W into 8 ohms. THD: 0.3%. FR: 20Hz-20kHz. Inputs: phono 2.5mV 50K, tuner 150mV 50K, aux 150mV 50K. Damping factor: 25. Dimensions: 45 × 14.8 × 37.5cm. Price: £150.67 (plus VAT).

■ TRIO

B. H. Morris & Co. (Radio) Ltd, Precision Centre, Heather Park Drive, Wembley, Middlesex.
Tel: 01-902 9422.

KA 3700*

Integrated amplifier with output of 25W. THD: 0.08%. FR: 10Hz-50,000Hz. Inputs: phono, aux, tape, tuner. Damping factor: 30. Controls: bass, treble, volume, balance, monitor. Dimensions: 38 × 29 × 14cm. Features: direct coupled low noise phono pre-amp. Price: £79.55. (plus VAT).

L-07CII

Preamplifier. Output: max 10V into less than 10 ohms. THD: 0.003%. FR: 20Hz-20kHz ±2dB. Inputs: phono 1 2.5mV 50K, phono 2 0.2mV 600 ohms, tuner 140mV 25K, aux 140mV 25K. Controls: subsonic filter, balance, bass, treble, volume, tape, output. Dimensions: 48 × 34 × 10cm. Features: suitable for MM & MC. Price: on application.

L-07MII

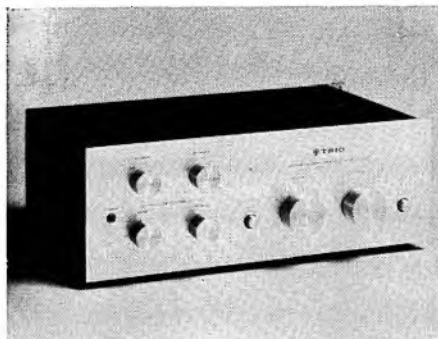
High speed power amplifier. Output: 150W. THD: 0.007%. FR: DC-600kHz + 0dB -3dB. Inputs: 1V 50K. Damping factor: 120. Dimensions: 20 × 39 × 15.5cm. Features: Rise time 0.55µs. Slew rate: 170V/µs. Price: on application.

L-05M

High speed power amplifier. Output: 100W. THD: 0.005%. FR: DC-600kHz + 0dB -3dB. Inputs: 1V 50K. Damping factor: 150. Dimensions: 20 × 39 × 15.5cm. Features: rise time 0.55µs. Slew rate: 170V/µs. Price: on application.

KA 907*

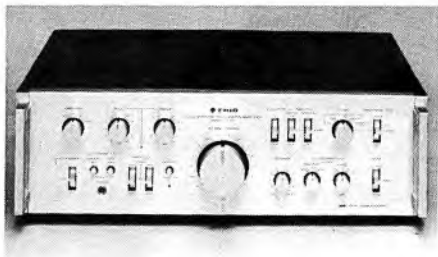
High speed integrated amplifier with output of 150W. THD: 0.01% rated power. FR: 0Hz-400kHz + 0dB -3dB. Inputs: moving coil



Trio KA 3700



Trio KA-701



Trio KA-907

0.1mV 100 ohms, moving magnet 2.5mV 47K, tuner aux and tape 150mV 50K. Damping factor: 100. Controls: bass, treble, subsonic, low and high filter, tone defeat, loudness, volume, balance. Dimensions: 46 × 46.3 × 16.1cm. Features: rise time 0.8µs. Slew rate + 230V/µs. Price: on application.

KA 801

High speed integrated amplifier with output of 110W. THD: 0.015% at rated power. FR: 0Hz-400kHz + 0dB -3dB. Inputs: two moving magnet 2.5mV 50K; tuner, aux, tape 200mV 50K. Damping factor: 100. Controls: bass, treble, subsonic, filter, volume, tone defeat, loudness, attenuator, balance. Dimensions: 44

× 40.7 × 15.3cm. Features: Rise time: 0.8μs. Slew rate: ±150V/μs, power meters. Price: on application.

KA 701*

High speed integrated amplifier with output of 80W. THD: 0.02% at rated power. FR: 0Hz-400K +0dB —3dB. Inputs: two moving magnet 2.5mV 50K; tuner, aux, tape 200mV 50K. Damping factor: 100. Controls: bass, treble, loudness, tone defeat, attenuator, subsonic, high filters, volume, balance. Dimensions: 44 × 40.7 × 15.3cm. Features: rise time 0.9μs. Slew rate: ±120v/μs. Price: on application.

KA 601

High speed integrated amplifier. Output 60W. THD: 0.02% at rated power. FR: 0Hz-400K +0dB —3dB. Inputs: two moving magnet 2.5mV 50K, tuner, aux, tape 200mV 50K. Damping factor: 100. Dimension: 44 × 40.7 × 15.3cm. Features: rise time 0.9μs. Slew rate: +120V/μs. Price: on application.

KA 305

Integrated amplifier with output of 40W. 1HD: 0.08%. FR: 3Hz-100kHz +0dB —3dB. Inputs: moving magnet 2.5mV 50K, tuner, aux, tape, 150mV 30K. Damping factor: 40. Controls: bass, treble, balance, volume, tone defeat, loudness. Dimensions: 40 × 29.9 × 13.9cm. Features: mic input with independent mic level control. Price: on application.

KA 501

Details on application.

KA 405

Details on application.

■ **VIDEOTONE**

Videotone Ltd, 98 Crofton Park Road, London SE4. Tel: 01-690 1914.

Sirac 50*

Power amplifier with output of 20W. THD:



Videotone Sirac 50

0.15% at 50W or 0.025% at 10W. FR: 10Hz-20kHz. Damping factor: 50. Dimensions: 17 1/4 × 14-3/8 × 7in. Price: £528.00 (plus VAT).

■ **YAMAHA**

Natural Sound Systems Ltd, 10 Byron Road, Wealdstone, Harrow, Middlesex HA3 7TL. Tel: 01-863 8622.

A-1

DC stereo integrated amplifier. Output: 70 + 70W into 8 ohms, 85 + 85W, 80 + 80W into 4ohms. 1HD: phono MM less than 0.005%, phono MC less than 0.01%, tuner less than 0.01%. FR: 20Hz-20kHz. Inputs: phono MM, phono MC, tape, aux, tuner. Damping factor: over 100. Dimensions: 43.5 × 11.7 × 38.1cm. Price on application.

CA 2010

Power amplifier. Output: 120W + 120W into 8 ohms. THD: 0.02%. FR: 20Hz-20kHz. Inputs: phono MC, phono MM, tuner, aux main. Damping factor: better than 45 into 8 ohms. Dimensions: 46.1 × 17 × 36cm. Price: £488.40 (plus VAT).

CA 1010

Stereo amplifier. Output: 90W + 90W into 8 ohms, 120 + 120W into 4 ohms, 18 + 18W into 8 ohms. THD: 0.02%. FR: 20Hz-20kHz. Inputs: phono MM, phono MC, tuner, aux, main. Damping factor: better than 45 into 8 ohms. Dimensions: 46.1 × 17 × 36cm. Price: £399.60 (plus VAT).

CA 810

Stereo amplifier. Output: 65 + 65W into 8 ohms, 80 + 80W into 4 ohms. THD: 0.05% FR: 20Hz-20kHz. Inputs: phono MM, phono MC, tuner, aux. Damping factor: better than 30 into 8 ohms. Dimensions: 43.5 × 16 × 33.7cm. Price: £293.04 (plus VAT).

CA 710

Stereo amplifier. Output: 45 + 45W. THD: 0.05%. FR: 20Hz-20kHz. Inputs: phono, aux, tape PB. Damping factor: better than 50 into 8 ohms. Dimensions: 43.5 × 16 × 33.5cm. Price: £213.31 (plus VAT).

CA 510

Stereo amplifier. Output: 35W + 35W. THD: 0.01%. FR: 20Hz-20kHz. Inputs: phono, tuner, aux, tape PB. Controls: bass, treble, high filter. Dimensions: 43.5 × 13.9 × 33.3cm. Price: £151.10 (plus VAT).

If QUAD amplifiers are so perfect, why does it still sound better in the concert hall?

In real life, the sounds from all the instruments and sometimes parts thereof are independently radiated and so are not 'phase locked' together nor are they subjected to common eigentones.

These mutually incoherent wavefronts are subjected to tiny but important reflections at the pinna and finally end up as just two channels representing the pressure at the two ear drums. It is not possible to achieve this transfer accurately by means of loud-speakers or headphones however good these components may be.

Nevertheless with good amplifiers and loudspeakers (and on those occasions when the people at the recording and transmitting end get it right) a musical experience can be achieved which is extremely satisfying and one of the greatest pleasures of our time.

For further details on the full range of QUAD products write to: Smyth Sound Equipment Limited, 595, Parc Industriel, Longueuil, Quebec.

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Casseivers

*Indicates entry is illustrated

Abbreviations used in this section are given on page 5.

■ AIWA

Aiwa Sales and Service (UK) Ltd, 30 and 32 Concord Road, Westwood Park Trading Estate, London W3 0TH.
Tel: 01-993 1672.

AF 3090*

Amplifier with output of 40W × 40W into 8 ohms. FR: 10Hz-80kHz. Radio tuner with FM and M band coverage. Tape deck with Dolby. W and F: 0.05%. Main unit measures 56 × 41 × 16cm. Features: separate three position tape selector, two peak indicators, timer start, record synchronisation with Aiwa turntable, cue/review facility. Price: £437.37 (plus VAT).

AF 3070*

Amplifier with output of 25W × 25W into 8 ohms. Radio tuner with FM, L, M, S. coverage. Tape deck with Dolby. W and F: 0.07%. Main unit measures 48.1 × 32.1 × 16.2cm. Features: Three-step tape selector, 6 FM pre-sets, cue/review facility, record synchronisation with Aiwa turntables. Price: £373.19 (plus VAT).

■ AKAI

Rank Hi Fi, PO Box 70, Great West Road, Brentford, Middlesex TW8 9HR.
Tel: 01-568 9222

AC 3500L*

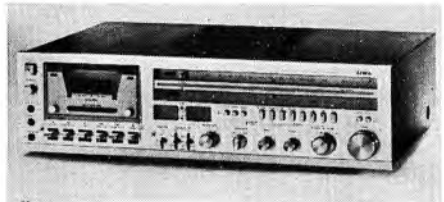
Amplifier with output of 25W × 25W into 8 ohms. Radio tuner with FM, L and M wavebands. Tape deck with Dolby. W and F: 0.08%. Main unit measures 50 × 15.7 × 40cm. Features: DIN and phono connections, headphone and microphone jacks. Finish: brush-grained metal facia and walnut cabinet. Price: on application.

■ BANG AND OLUFSEN (UK) LTD

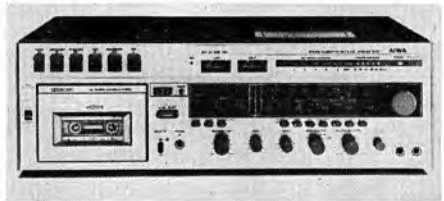
Eastbrook Road, Gloucester GL4 7DE.
Tel: Gloucester (0452) 21591.

Beocenter 4000*

FM/AM receiver and cassette recorder. Amplifier output: 2 × 40W into 4 ohms. FR: 20Hz-30kHz + 1.5dB. S/N: >60dB. Inputs: PU, tape. Output: tape, headphones. Two pairs loudspeakers/switchable. Tuner covers FM/AM. Variable tuning with 5 FM presets. Cassette system: C60, C90. FR: 30Hz-15kHz. LED record level indicator. Dimensions: 65.5 × 8.5 × 31cm. Finish in teak or rosewood. Price: £460.00 (plus VAT).



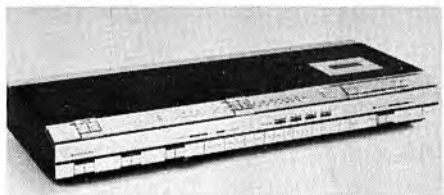
Aiwa AF 3090



Aiwa AF 3070



Akai AC 3500L



Beocenter 2600



Beocenter 4000

*Indicates entry is illustrated

Bencenter 2600*

FM/AM receiver and cassette recorder. Amplifier output: $2 \times 25W$. FR: 20Hz-35kHz. damping factor: >50 . Tuner covers FM/AM. Variable tuning with 4 presets on FM. Cassette system: C60, C90. W and F: $<\pm 0.2\%$. S/N: 64dB. FR: 30Hz-14kHz. Dimensions: $60 \times 9 \times 27cm$. Finish: Teak or rosewood. Price: £320.00 (plus VAT).

■ FERGUSON

Thorn Consumer Electronics, 284 Southbury Road, Enfield, Middlesex.
Tel: 01-363 5353

3926*

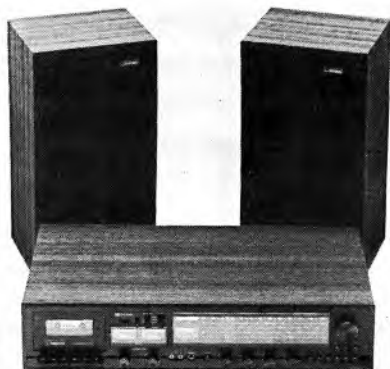
Stereo cassette. W and F: 0.15%. Dolby "B" noise reduction unit. FR: 60Hz-11kHz Fe_2O_3 , 60Hz-12kHz CrO_2 . Bias switch. Twin record level meters, LED record indicator. Inputs: magnetic PU 3.5mV 47K, tape 350mV 47K, microphone 0.2mV 2K. Outputs: tape 1mV/K, headphone 8-600K, headphone 13V 220K. Mains voltage: 240V. Dimensions: $59 \times 33.5 \times 13.5cm$. Price: £185.00 (plus VAT). Optional speakers 39267 approx £50.00.

3925B*

Stereo cassette. W and F: 0.35%. FR: 100Hz-6.5kHz. Twin record level meters, LED record indicator. Inputs: mag PU 3mV 47K, aux 300mV 1M, mic 3mV 1K, mixing 5.5mV 2K. Outputs: aux 1.2mV/K, headphone load imp 8-600K. Dimensions: $54.5 \times 30.5 \times 15cm$. Price: £130.00 (plus VAT). Optional speakers 39257.

■ GOODMAN'S

Goodmans Loudspeakers Ltd, Downley Road, Havant, Hants PO9 2NL.
Tel: Havant 486344



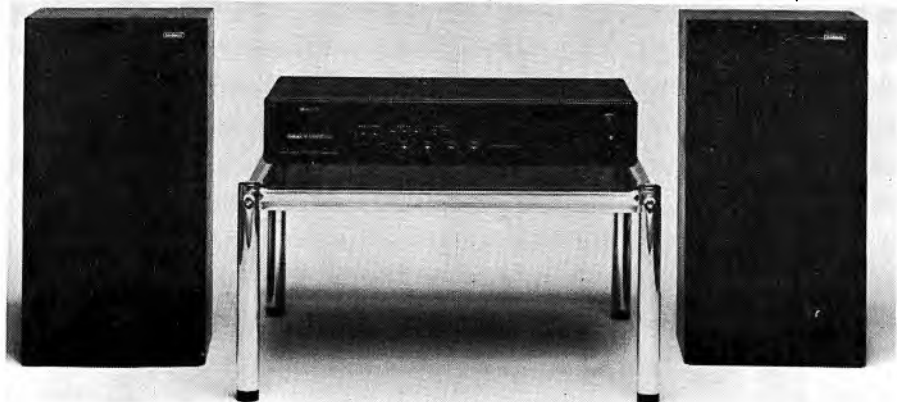
Ferguson 3926



Ferguson 3925B

4000*

Amplifier 28W and 28W output. FR: 30Hz-25kHz $\pm 1.5dB$. THD: less than 1%. Radio tuner: VHF/FM, L,M,S, Tape deck with Dolby noise reduction. Input: 3mV into 47K. W and F: better than 0.12% DIN. Speakers: MC35 two-way infinite baffle with 200mm bass plus 26mm



Goodmans 4000

dome HF. Crossover Freq: 4.5kHz. Dimensions: 62 × 32 × 25cm. Finish: Black ash effect. Main unit measures 65 × 36 × 13cm. Finish: black. Features: surround sound speaker facility. Tape to tape transfer. Bias/eq. for chrome, ferrichrome and ferric tape types. No rec. retail price.

■ GRUNDIG

Grundig International Ltd, Newlands Park, London SE26 5NQ.
Tel: 01-659 2468

RC 60

Combined Hi Fi receiver and cassette deck. Total power output: 100W. Dolby system. Wavebands: VHF, L, M. 8 programme selectors for VHF. Features: AFC, muting, linear, contour, noise filter controls. Front loading deck with variable fade in/out control. Tape selector. Dimensions: 63 × 15 × 34cm. Finish: black or metallic brown. No rec. retail price.

PreCeiver XC65

Preamplifier, receiver and front loading cassette deck, to be used in conjunction with Grundig Active Boxes. These boxes have built-in separate amplifiers, one for each channel. Receiver wavebands: VHF, L, M. 8 pre-set VHF programmes. Features: monitor, linear, contour, noise filter, muting and AFC, microphone socket, two tape recorder sockets. Dolby system, fade-in/out. Auto head cleaning. No rec. retail price.

■ PANASONIC

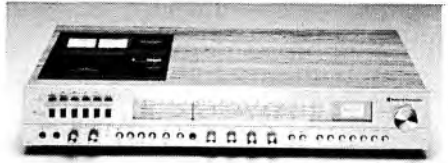
National Panasonic (UK) Ltd, 107-109 Whitby Road, Slough SL1 3DR.
Tel: Slough 22516

SG 70*

Amplifier output: 26W × 2 into 4 ohms. FR: 10Hz-25kHz ±1.5dB. THD: 1%. Radio tuner covers FM, L, M, S. Tape deck with Dolby B. W and F: 0.1%. Optional speakers. Main unit in simulated teak and aluminium measures 65.3 × 34 × 11.8cm. Features: loudness, three-position tape, memory rewind, two VU meters, tuning meter, oil damped eject, FM auto/FM mono selector, A/B speakers, external tape monitor, phono socket, external aerial sockets, full auto stop cassette. Price: £239.96 (plus VAT).

■ REALISTIC

Tandy Corporation (Branch UK), Bilston Road, Holyhead Road, Wednesbury, Staffs WS10 7JN.
Tel: 021-556 6101/2



Panasonic SG 70



Realistic SCR 1800

SCR 1800*

Amplifier section with output: 8W per channel. FR: 15Hz-25kHz. Inputs: phono 2.2mV, phono input overload for 0.5%. THD: 110mV, aux 200mV. S/N ratio: phono 65dB, aux 68dB. FM/AM tuner with FM sensitivity: 2.5µV. THD: 0.8% stereo. AM sensitivity: 10µV for 20dB. Variable tuning. Cassette takes CrO₂ tape and incorporates Dolby noise reduction unit. Eq/bias switches. FR: 40Hz-12kHz. Distortion: 1.5%. S/N ratio: 60dB. W and F: 0.09%. Dimensions: 53.8 × 39 × 17.7cm. Finish: walnut veneer. Price: £249.95 (inc. VAT).

■ SONY

Sony (UK) Ltd, Consumer Information, Sony Showroom, 134 Regent Street, London W1R 6DJ.

Tel: 01-439 3874

HST 89A*

Amplifier with output of 25W per channel. FR: 40Hz-20kHz±1dB. Radio with FM, L, M, S wavebands. Four-track cassette. S/N: 50dB normal. THD: 2%. Dimensions: 48.1 × 14.7 × 37.6cm. Features: accessories supplied include ribbon antenna, mains lead, head changing set, AM antenna wire. Price: £288.90 (inc. VAT).

HST-49*

Stereo cassette receiver with amplifier output of 18W per channel into 8 ohms. FR: 30Hz-30kHz. Radio with FM, L, M, S wavebands. Four-track cassette with Dolby noise reduction. W and F: 0.18%. S/N: 50dB (Cr)2 Dolby off. Dimensions: 48.2 × 22 × 23cm. Features: Three-

*Indicates entry is illustrated.



Sony HST-89A



Sony HST-49

position tape selector, 5 programme sensors on both VHF and LW, loudness switch, separate bass and treble controls, facilities for connecting two pairs of speakers, twin power meters, front panel connections for stereo mic. Price: on application.

■ TELETON

Teleton Electro (UK) Co Ltd, Somerton Works,
Prince Avenue, Westcliff-on-Sea, Essex.
Tel: Southend 337681

SX 500

Casseiver with amplifier output: 20W into 8 ohms. FR: 30Hz-25kHz. Damping Factor: 10. Inputs: phono, aux. Controls: muting, AFC high filter, loudness, tape phono, mono, bass, treble. Dolby noise reduction unit. Tapes: FeCr, CrO₂. Dimensions: 52 × 39 × 14.5cm. Price: on application.

Cassette Decks and Recorders

*Indicates entry is illustrated.

Abbreviations used in this section are given on page 5

■ AIWA

Aiwa Sales and Service (UK) Ltd,
30-32 Concord Road,
Westwood Park Trading Estate,
Western Avenue, London W3.
Tel: 01-993 1672.

AD 1250

Front loading stereo cassette deck with Dolby noise reduction system. W and F: 0.09%. FR: 30-16000Hz CrO₂. 3 position tape selector. Twin VU meters, LED peak/indicator. Inputs: line 50mV/50K ohms, DIN 0.1mV/K ohm/3K mic 0.3mV/200-10K. Outputs: line 0.775V/50K (0VU); DIN 0.775V/50K (0VU); headphones 1mV/8 ohms. Mains voltage: 12/240V 50/60Hz. Dimensions: 38.8 × 27.5 × 14.5cm. Price: £165.03 (plus VAT).

AD 6350*

Front loading stereo deck with Dolby noise reduction system. W and F: 0.08. FR: 25Hz-16000Hz FeCr tape (DIN). Separate three-step bias switch and equalisation switches for LH/CO₂/FeCr. VU meters and 2 LED peak indicators. Inputs: Line 50mV/50K; DIN 0.1mV/5K, mic 0.3mV/200-10K. Outputs: line 0.775/10K; DIN 0.775/10K ohms; headphones 1mV/8 ohms. Mains voltage: 120-240V. Dimensions: 42 × 33 × 16.5cm. Price: £174.00 (plus VAT).

AD 6800*

Front loading stereo cassette deck with Dolby system. W and F: 0.05%. FR: 25Hz-17,000Hz. 3 position tape selector. VU and peak meters. Inputs: mic, line, DIN. Outputs: line, DIN. Mains: 120/240V 50/60Hz. Dimensions: 45 × 33.5 × 16.2cm. Features: Fine bias adjustment for all tapes with three head flat frequency response tuning system. Double needle meters for VU and peak indication with peak hold facility. Record limiter. Automatic loading. Price: £369.60 (plus VAT).

AD 6400*

Front loading stereo cassette deck. W and F: 0.05%. Dolby NR system. FR: 25Hz-16,000Hz CrO₂ tape. Three position tape selector. VU, peak lights. Inputs: mic, line, DIN. Outputs: DIN and line. 38 pulse FG servo motor. Mains: 120/240V 50/60Hz. Dimensions: 42 × 33 × 15cm. Bias fine tuning for LH (normal) tape. Separate three step bias and equalisation selector, quick review/cue, full auto-stop, ferrite guard head. Price: £216.39 (plus VAT).

AD 6550*

As above with memory wind. Left VU meter can be used as 'remaining tape time meter'. Price: £253.63 (plus VAT).



Aiwa AD 6350



Aiwa AD 6400



Aiwa AD 6550



Aiwa AD 6800

*Indicates entry is illustrated

AD 6600

Front loading stereo cassette deck. W and F: 0.04%. Dolby noise reduction system. FR: 25Hz-17kHz. Separate three-position bias and eq selectors for LH, CrO₂. VU and multi-step peak indicator. Inputs: mic 0.3mV 200-10K, line 50mV 50K, DIN 0.1mV/K ohms 3K. Outputs: line 0.775 50K, DIN 0.775 50K, headphones 1.7mW 8 ohms. 38 pulse FG servo motor. Mains voltage: 120/240. Dimensions: 42 × 33 × 15cm. Price: £304.27 (plus VAT).

AD 6900*

Front loading stereo cassette deck. W and F: 0.04%. Dolby noise reduction system. FR: 25Hz-19kHz. Three-step separate bias and equalisation selectors. VU and peak indicators. Inputs: mic 0.25mV 10K, line 75mV 50K, DIN 0.1mV 3K. Outputs: line 0.41V 50K, DIN 0.41V 50K, headphone 2mW 8 ohms. 38 pulse FG servo motor. Mains voltage: 120/240. Dimensions: 45 × 32.7 × 12cm. Price: £431.11 (plus VAT).

AKAI

Akai (UK) Ltd,
82-106 Cricklewood, London NW22 2DB.
Tel: 01-450 2011.

GXC 709 D

Front loading stereo cassette deck. W and F: <0.06%. Dolby system. FR: 35Hz-16kHz (FeCr). Switch for LN/LH/CrO₂/FeCr. Two VU meters. Two peak level indicators. Inputs: mic, line. Outputs: line, phone. Load Imp: >20K. DC electronically controlled motor. Dimensions: 44 × 28.5 × 16.5cm. Price: £235.20 (plus VAT).

GXC 730 D

Stereo cassette deck. W and F: <0.08%. Dolby system. FR: 30Hz-17kHz (FeCr). Switch for LN/CrO₂/FeCr. Two VU meters, peak level indicator. Inputs: mic, line. Outputs: line, phono. Load Imp: >20K. 4-pole hysteresis synchronous motor. Dimensions: 44 × 30.2 × 17.5cm. Price: £302.44 (plus VAT).

GXC 725 D

Front loading stereo cassette deck. W and F: <0.06%. Dolby System. FR: 35Hz-17kHz (FeCr). Switch for LN/LH/CrO₂/FeCr. Two VU meters, peak level indicator. Inputs: mic, line. Outputs: line, phone. Load Imp: >20K. DC electronically controlled motor. Dimensions: 44 × 28.5 × 16.5cm. Price: £268.80 (plus VAT).

GXC 570 D

Front loading stereo cassette deck. W and F:

<0.06%. Dolby system. FR: 30Hz-19kHz (FeCr). Switch for CrO₂/LN/FeCr. Two VU meters, peak level indicator. Inputs: mic, line. Outputs: line, phone. DC electronically controlled motor. Dimensions: 44 × 22.5 × 22.5cm. Price: £568.09 (plus VAT).

CS 702 D II

Front loading stereo cassette. W and F: <0.08%. THD: <1.5%. FR: 40Hz-15kHz. Inputs: mic 0.3mV 2.2K, line(2) 70mV 100K, mic impedance 600 ohms. Dimensions: 38 × 15.7 × 28.7cm. Dolby noise reduction system. Price: on application.

GXC 706 D

Front loading stereo cassette with Dolby noise reduction system. W and F: <0.06%. THD: <1.3%. FR: 35Hz-15kHz. Inputs: mic(2) 2.5mV line(2) 70mV, mic impedance 600 ohms. Dimensions: 44 × 15 × 29cm. Price: on application.

GXC 750 D

Front loading stereo cassette with Dolby noise reduction system. W and F: <0.06%. THD: <1%. FR: 35Hz-15kHz low noise, L/N High output, 35Hz-16kHz chrome, 35Hz-18kHz ferrichrome. Inputs: mic(2) 0.25mV, line(2) 70mV, mic impedance 600 ohms. Dimensions: 44 × 15.7 × 31.8cm. Price: on application.

AMSTRAD

Amstrad Consumer Electronics Ltd,
1-7 Garman Street, London W17 0UF.
Tel: 01-801 4431.

EX 700*

Front loading stereo cassette deck with Dolby noise reduction system. W and F: 0.085%. FR: 25Hz-17kHz chrome. Bias switch, VU meter. Inputs: 5mV. Outputs: 0.58mV line, 0.820mV DIN variable. 12V DC motor. Mains voltage: 240AC. Dimensions: 42 × 25.5 × 14.5cm. Price: £112.55 (plus VAT).



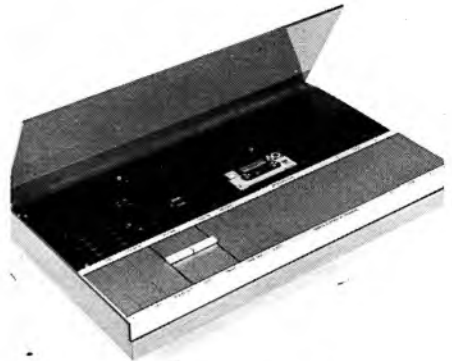
Amstrad EX 700

■ BEOCORD

Bang & Olufsen UK Ltd,
Eastbrook Road, Gloucester GL4 7DE.
Tel: Gloucester (0452) 21591.

5000*

Stereo cassette deck with Dolby B noise reduction system. W and F: $< \pm 0.15\%$ DIN. FR: 30Hz-15,000Hz DIN. Auto switch ferric or CrO₂ only. Peak programme meters. Inputs: radio, mic, aux. Outputs: amplifier 940mV/23K, headphones max 2.7V/22 ohms. Two motors, drive system servo controlled. Mains: 110-130-220-240V AC/50Hz. Dimensions: 47 x 28 x 8cm. Price: £298.50 (plus VAT).



Beocord 5000

1900*

Stereo cassette deck with Dolby. W and F: less than 0.15%. FR: 30Hz-15kHz. S/N ratio: better than 64dB. Bias switch for chrome and ferro-chrome. VU meter. Inputs: radio, mic. Outputs: Amplifier. Mains: 110-220. Features: Sendust combined record/replay head. Dimensions: 40 x 25 x 8cm. Price: £170.00 (plus VAT).



Beocord 1900

■ B-I-C

B-I-C/Avnet, c/o Parvic Electronics Ltd, 60-61
Leslie Park Road, Croydon, Surrey CR0 6TP.
Tel: 01-656 2631

T3*

Front loading stereo two speed cassette deck. W and F: 0.05% on 1-7/8 and 0.035% on 3/4. Dolby noise reduction system. FR: 25Hz-19kHz on 1-7/8, 25Hz-22kHz on 3/4. Three-position bias switch, two-position equalisation. Peak meters, LED multicolour indicator. Inputs: 200mV 8-600 ohms. Outputs: line 2.0V into 10K, headphones 0.7V into 100 ohms. Two speed tachometer, feedback DC servo motor. Mains: 220/240V. Dimensions: 45.5 x 26 x 16.5cm. Price: on application.



B.I.C. T1



B.I.C. T2

T1*

Front loading stereo two speed cassette deck. W and F: 0.06% on 1-7/8 and 0.04% on 3/4. Dolby noise reduction system. FR: 35Hz-17kHz on 1-7/8, 35Hz-20kHz on 3/4. Three position bias switch, two position equalisation. Peak meters, LED multicolour indicator. Inputs: 200mV 8-600 ohms. Outputs: line 1.0V into 10K, headphones 0.5V into 150 ohms. Two speed tachometer feedback DC servo motor. Mains: 220/240V. Dimensions: 39 x 23 x 15cm. Price: on application.



B I C T3

T2*

Front loading stereo two speed cassette deck. W

*Indicates entry is illustrated

and F 0.06% at 1-7/8, 0.04% at 3¼. Dolby noise reduction system. FR: 30Hz-18kHz on 1-7/8, 30Hz-21kHz on 3¼. Three position Bias switch, two position equalisation. Peak meters, LED multi-colour indicator. Inputs: 200mV 8-600 ohms. Outputs: line 2.0V into 10K, headphones 0.7V into 100 ohms. Two speed tachometer feedback DC servo motors. Mains: 220/240V. Dimensions: 42.5 × 23 × 15cm. Price: on application.

■ DUAL

Hayden Laboratories Ltd, Hayden House, Churchfield Road, Chalfont St. Peter, Bucks SL9 9EW.

Tel: Gerrards Cross (49) 88447

Cassette Decks

New models will feature electronic meters, direct load and lock cassette system, and metal tape capability. Details available on request.

■ EAGLE

Eagle International, Precision Centre, Heather Park Drive, Wembley, Middlesex HA0 1SU.

Tel: 01-902 8832

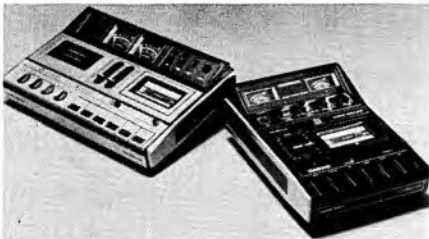
C 7800*

Front loading stereo cassette deck with Dolby noise reduction system. W and F: less than 0.07%. FR: 25Hz-16kHz ±3dB FeCr. Bias switch and equalisation. Twin large illuminated VU meters, record indicator, peak signal indicator, tape counter, timer pause control. Inputs: microphones 0.3mV 400ohms-10K, line in 60mV 47K, DIN 1mV 10K. Outputs: DIN/line out; 775mV adjustable 47K, headphone 0-60mV 8 ohms. Frequency generator servo DC motor. Mains: 240V. Dimensions: 43 × 15 × 29cm. Price: £125.00 (plus VAT).

■ GRUNDIG

Grundig International Ltd, Newlands Park, London SE26 5NQ.

Tel: 01-659 2468.



Grundig CN 830 & 930



Eagle C 7800



Grundig CNF 350



Grundig CN 1000

CN 930*

Stereo cassette deck with Dolby system. W and F: $\pm 0.15\%$. FR: 30Hz-14kHz. Bias switch for Fe/ferrochrome/CrO₂. VU meter. Dolby lamp, tape pilot, record lamp. Inputs sensitivity: mic/radio/diode, phono. Outputs: 0.5-1.5V adjustable approx. 22K. Mains: 110, 127/220-240V AC 50-60Hz. Dimensions: 46 × 11 × 27cm. No rec. retail price.

CN 830*

Stereo cassette deck. W and F: $\pm 0.15\%$. Dolby system. FR: 30Hz-14,000Hz. Bias switch for chrome and ferrochrome cassettes. Level indicator. Inputs: mic, radio, phono. Outputs: 0.5-1.5V adjustable. Load Imp: 22K. Mains: 110-240V. Dimensions: 23 × 13 × 32cm. No rec. retail price.

CNF 350 Hi-Fi*

Four-track front loading cassette deck. W and F: 0.1%. Dolby noise reduction unit. FR: 30Hz-16kHz when using CrO₂. Bias switch for chrome, Fe and FeCr tapes. Two level meters. Sockets for two mono mics or one stereo mic. Inputs: mic, p/u, radio. Outputs: 0.5V-2V 12K.

Features: slider controls, monitoring via headphone, MPX filter, 24-hour digital clock, memory counter. Mains voltage: 120, 127, 220, 240V 50/60Hz. Dimensions: 54 × 32 × 15cm. No rec. retail price.

CN 1000 Hi-Fi*

Stereo cassette recorder. W and F: 0.15%. Dolby noise reduction unit. FR: 30Hz-14kHz. Bias switch. Inputs: mic, p/u, radio. Outputs: two × 0.5-1.5V 22K. Two level meters. Features: motor and drive logic, tape selector switch, memory counter, pilot sound head, electronic touch controls. Mains voltage: 120, 127, 220, 240V 50/60Hz. Dimensions: 46 × 27 × 11cm. No rec. retail price.

■ HARMAN/KARDON

Harman UK, St. John's Road, Tyler's Green, High Wycombe, Bucks.
Tel: High Wycombe (049-481) 5331

1500

Stereo cassette deck. W and F: 0.06%. Dolby noise reduction system. FR: 30Hz-15.5kHz ±3dB. Bias and equalisation settings. Two VU meters. Inputs: 0.5mV mic, 50mV line. DC servo motor. Dimensions: 42.5 × 17.8 × 26cm. Price: £203.56 (plus VAT).

2500

Similar to above but FR: 20Hz-16kHz ±3dB. Price: £248.00 (plus VAT).

3500

Stereo cassette deck. W and F: 0.05%. Dolby noise reduction system. FR: 20Hz-17.5kHz ±3dB. Two VU meters. Bias and equalisation settings. Inputs: 0.5mV mic, 50mV line. DC servo motor to drive capstan, separate motor for forward and reverse. Inputs: 0.5mV mic, 50mV line. Dimensions: 42.5 × 17.8 × 26cm. Price: £408.00 (plus VAT).

■ HITACHI

Hitachi Sales (UK) Ltd,
Hitachi House, Station Road,
Hayes UB3 4DR.
Tel: 01-848 8787.

D230

Stereo cassette deck. W and F: 0.1% DIN. Dolby noise reduction system. FR: 30Hz-14kHz. Bias switch for chrome and ferrochrome. Twin VU meters. S/N: 54dB DIN Dolby off, 62dB DIN Dolby on. Distortion: 1.8%. DC Motor. Mains voltage: 240V. Dimensions: 39 × 25.4 × 14.3cm. Price: on application.

D980

Stereo cassette deck. W and F: 0.1% DIN. Dolby noise reduction system. FR: 30Hz-18kHz. Bias switch for chrome and ferrochrome cassettes. Twin VU meters. S/N: 59dB DIN Dolby off, 67dB DIN Dolby on. Distortion: 1.3% (0VU). 1 Uitorque motor, 1 DC motor. Mains voltage: 240V. Dimensions: 43.5 × 26.5 × 16.5cm. Price: on application.

D777

Stereo cassette deck. W and F: 0.18% DIN. Dolby noise reduction system. FR: 30Hz-15kHz. Bias switch for chrome and ferrochrome cassettes. Twin VU meters. S/N: 56dB DIN Dolby off, 63dB Dolby on. Distortion: 1.5% (0VU). Auto reverse mech, DC servo motor. Mains voltage: 240V. Dimensions: 43.5 × 25.6 × 16.5cm. Price: on application.

D5500

Stereo cassette deck. W and F: 0.09% DIN. Dolby noise reduction system. FR: 20Hz-20kHz. Bias switch for chrome and ferrochrome, auto-tape response system. Twin VU meters. S/N: 60dB DIN Dolby off, 68dB DIN Dolby on. Distortion: 1.2% (0VU). 1 Uitorque, 1 DC motor. Mains voltage: 240V. Dimensions: 43.5 × 32 × 13.6cm. Price: on application.

D 75S

Stereo cassette deck. W and F: 0.13%. Dolby noise reduction system. FR: 30Hz-17kHz. Bias switch for chrome and ferrochrome. Fluorescent display indicator. S/N: 57dB DIN Dolby off, 64dB DIN Dolby on. Distortion: 1.2%. 1 DC servo motor, 1 DC motor. Mains voltage: 240V. Dimensions: 43.5 × 26.7 × 11cm.

D 40 S

Stereo cassette deck. W and F: 0.18%. Dolby noise reduction system. FR: 30Hz-14kHz. Bias switch for chrome and ferrochrome cassettes. 5 LED peak indicators. S/N: 56dB DIN Dolby off, 63dB DIN Dolby on. Distortion: 1.8% (0VU). 1 DC motor. Mains voltage: 240V. Dimensions: 43.5 × 26.7 × 11cm. Price: on application.

D850

Stereo cassette deck. W and F: 0.18%. Dolby noise reduction system. FR: 30Hz-16kHz. Bias switch for chrome and ferrochrome cassettes. Twin VU meters. S/N: 63dB DIN Dolby on, 55dB Dolby off. 1 DC motor. Mains voltage: 240V. Dimensions: 43.5 × 25.4 × 14.3cm. Price: £259.00 (inc. VAT).

*Indicates entry is illustrated

D555

Stereo cassette deck. W and F: 0.2%. DIN, Dolby noise reduction system. FR: 30Hz-15kHz. Bias switch for chrome and ferrochrome cassettes. Twin VU meter. S/N: 62dB DIN Dolby on, 56dB DIN Dolby off. 1 DC servo motor, auto reverse. Mains voltage: 240V. Dimensions: 43.5 × 25.4 × 14.3cm. Price: £189.00 (inc. VAT).



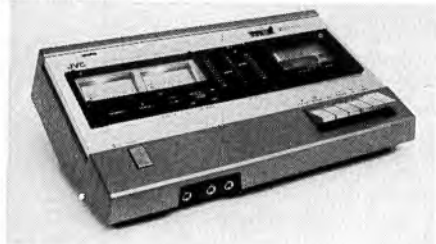
ITT Hi-Fi 80

■ ITT CONSUMER PRODUCTS (UK) LTD

Chester Hall Lane, Basildon, Essex.
Tel: Basildon (0268) 3040.

8021*

Stereo cassette deck. W and F: 0.2%. Dolby system. FR: 40Hz-12,500Hz Fe₂O₃, 40Hz-15,000Hz for Fe/Cr and CrO₂. Separate Bias and eq switches. Twin recording-level meters with LED peak indicator. Inputs: mic, aux. Outputs: 580mV. Load Imp: greater than 1K. DC FG Servo motor. Dimensions: 48 × 35 × 14cm. Price: £183.00 (inc. VAT).



JVC KD 720

8020

Stereo cassette deck. W and F: 0.06%. Dolby noise reduction unit. FR: 40Hz-12.5kHz, 40Hz-14kHz. Bias switch. Two level meters and peak indicator. Inputs: mic 0.3mV 2K, tuner/aux 1 0.2mV 10K tuner/aux 70mV 47K, aux 2 200mV 2K. Outputs: playback DIN and phono, headphones. Motors: One DC electronic speed control. Mains voltage tappings: 100-127/220/240V. Dimensions: 48 × 35 × 14cm. Price: £136.31 approx. (inc. VAT).



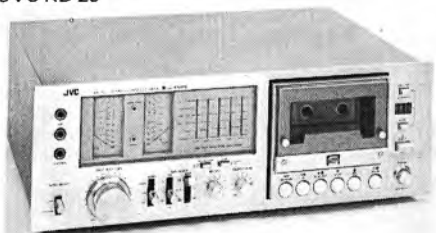
JVC KD 25

■ JVC

JVC (UK) Ltd, Eldonwall Trading Estate, Staples Corner, 6-8 Priestly Way, London NW2 7AF.
Tel: 01-450 2621.

KD-720*

Top loading stereo cassette deck with Dolby NR. W and F: 0.07%. FR: 40Hz-15,000Hz typical chrome, 40Hz-14,000Hz typical normal. Bias switch for ferric, chrome, and ferrichrome tapes. Electronic governor DC motor. Mains: 120/220/240V, 50/60Hz. Dimensions: 39 × 12.8 × 25cm. Price: £105.00 (inc. VAT).



JVC KD 85

typical. Dimensions: 8.8 × 42 × 27.7cm. Price: £248.00 (inc. VAT).

KD-95

Front loading stereo cassette deck. W and F: 0.20% (DIN). FR: 30Hz-16,000Hz chrome typical. Dimension: 21.1 × 42 × 32cm. Price: £432.00 (inc. VAT).

KD 10

Stereo cassette deck. W and F: 0.06%. Dolby noise reduction system. FR: 40Hz-15kHz. Bias switch for chrome. VU meters and five multi peak LED's. Inputs: 80mV 100K line, 0.1mV DIN. Outputs: 410mV 3K line, 0.3mV DIN. Motor: electronic governor DC. Mains voltage tappings: 240V. Dimensions: 42 × 26.4 × 14.7cm. Price: £121.62 (plus VAT).

CD-1770

Top loading stereo cassette deck. W and F: 0.18% (DIN). FR: 30Hz-16,000Hz chrome



JVC KDS 201

KD-A5

Stereo cassette deck. W and F: 0.04%. FR: 30Hz-16kHz. Bias switch FeCr, CrO₂, pure metal. VU and five multipeak LEDs. Mains: 240V. Dimensions: 42 × 30 × 12cm. Price: on application.

KD-21

Front loading stereo cassette deck. Dolby noise reduction system. W and F: 0.2%. FR: 30Hz-15kHz or more with Dolby in. Dimensions: 15.1 × 39 × 32.6cm. Price: £135.00 (inc. VAT).

KDS-201*

Front loading stereo cassette deck. W and F: 0.2%. FR: 30Hz-16kHz. Dimensions: 15.8 × 50.1 × 32.1cm. Price: £249.00 (inc. VAT).

KD-85*

Front loading stereo cassette deck. Super ANRS/solenoid operated, spectro peak indicator. Details on application. Price: £399.00 (inc. VAT).

KD-25*

Front loading stereo cassette deck. Dolby noise reduction unit. LED display. Details on application. Price: £189.00 (inc. VAT).

KD-65

Front loading stereo cassette deck. Super ANRS/spectro peak indicator. Details on application. Price: £272.00 (inc. VAT).

KD-55

Front loading stereo cassette deck. Super ANRS/SA head. Details on application. Price: £229.00 (plus VAT).

CD -1635-2B

Top loading stereo cassette deck. Super ANRS/portable. Details on application. Price: £239.50 (inc. VAT).

KD2*

Top loading stereo cassette deck. Super



JVC KD 12

ANRS/portable. Details on application. Price: £102.00 (plus VAT).

■ **McLAREN**

GR International Electronics, Almondbank, Perthshire.

Tel: Almondbank (073 883) 441.

L511A

Stereo cassette deck. W and F: 0.2%. Noise reduction unit. FR: 63Hz-10kHz. Ferric tape only. Automatic record level. Inputs: line 30mV 0dB, mic 500 microvolts to 300mV. Outputs: 500mV 3K. DC electronically governed motor. Mains: 200/240 preset for 240V. Dimensions: 28.6 × 26 × 95cm. Price: £69.35 (plus VAT).

■ **LUXMAN**

Howland-West, 3-5 Eden Grove, London N7 8EO.

Tel: 01-609 0293.

K 12*

Stereo cassette deck. W and F: 0.04%. Dolby noise reduction system. FR: 30Hz-21kHz metal tape, 30Hz-20kHz CrO₂, 30Hz-16kHz LH tape. Bias switch. Plasma level meter, digital tape counter. Inputs: line in 100mV 50K, mic 0.25mV. Outputs: line out 580mV ohms, headphone 1mW 8 ohms. Two motors: 1 servo capstan and one electronic governor reel drive. Mains: 220-240V. Dimensions: 43.8 × 37 × 12.6cm. Price: £622.00 (plus VAT).



Luxman 5K 12

*Indicates entry is illustrated



Luxman 5K 50

5K50*

Stereo cassette deck. W and F: 0.03%. Dolby noise reduction system. FR: 30Hz-18kHz CrO₂ tape, 25Hz-18kHz LH tape. Variable control bias switch. Plasma level meter, digital tape counter. Inputs: line 100mV 50K, mic 0.25mV, DIN. Outputs: line out 580mV 500 ohms, headphone 1mV 8 ohms. Three motors: capstan direct drive, two electronic governor reel drive. Mains: 220-240V. Dimensions; 44.2 × 36.2 × 13.2cm. Price: £1,020.00 (plus VAT).

■ MARANTZ

Audio UK Ltd, Debmarc House,
203 London Road, Staines, Middlesex.
Tel: Staines (81) 50132.

5010*

Stereo cassette deck. W and F: 0.1%. Dolby noise reduction system. FR: FeCr 35Hz-15kHz: CrO₂ 40Hz-14kHz: normal 40Hz-13kHz. Bias switch for chrome and ferrochrome cassettes. VU meter. DC servo motor. Mains: 240/110V. Dimensions: 44 × 14.6 × 29cm. Price: £142.00 (plus VAT).

5025*

Stereo cassette deck. W and F: 0.08%. Dolby noise reduction meter. FR: FeCr 35Hz-16K: CrO₂ 40Hz-15kHz: normal 40Hz-13.5kHz. VU meters and LED indicators. Bias switch for chrome and ferrochrome cassettes. DC servo motor. Mains: 110/240V. Dimensions: 44 × 29 × 14.6cm. Price: £213.25 (plus VAT).

5030*

Stereo cassette deck (three heads). W and F: 0.08%. Dolby noise reduction system. FR: FeCr 35Hz-15kHz; CrO₂ 40Hz-15kHz; normal 40Hz-13.5kHz. Bias switch for chrome and ferrochrome cassettes. VU meter and LED peak. Mains: 110/240V. Dimensions: 44 × 29 × 14.6cm. Price: £323.45 (plus VAT).

5000

Stereo cassette deck. W and F: 0.1%. Dolby noise reduction system. Bias switch for chrome



Marantz 5010, 5025, 5030



Marantz 5025B



Marantz 5030B

and ferrichrome. VU meters. Inputs: 80mV 47K. Outputs: 800mV 5K. DC servo motor. Mains: 240-110V. Dimensions: 41.6 × 24.3 × 14.6cm. Price: £119.90 (plus VAT).

■ NAKAMICHI

Natural Sound Systems Ltd, 10 Byron Road,
Wealdstone, Harrow, Middlesex HA3 7TL.
Tel: 01-863 8622.

580

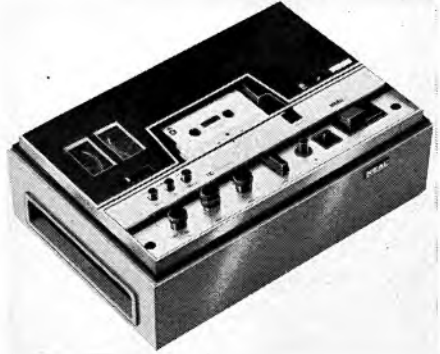
Two head cassette deck. W and F: less than 0.1%. FR: 20Hz-20kHz ±3dB. Inputs: 50mV 50K. Dimensions: 50 × 13 × 35cm. Price: £354.67 (plus VAT).

■ NEAL

North East Audio Ltd,
Simonside Works, South Shields,
Tyne and Wear NE34 9NX.
Tel: South Shields (0632) 566321.

Model 102V Mk II/Mk IV*

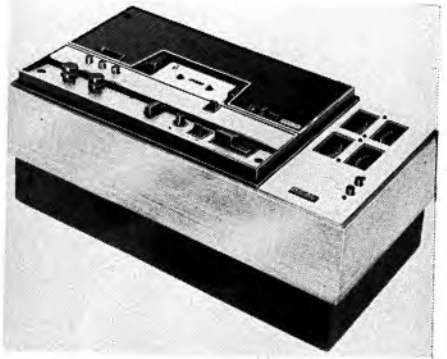
Transcription cassette recorder. Dolby B. 3M Wollensak deck. Two illuminated peak reading meters. Chrome and ferric equalisation and fully variable bias for both. Vartape facility — bias level may be displayed on meters. Controlled headphone output. Separate input amplifiers for mic, DIN and line. W and F: less than 0.09% RMS (DIN weighted). FR: 35Hz-12kHz ± 3 dB for FeO tape; 35Hz-15kHz ± 3 dB for CrO₂. Inputs: mic 500 μ V 2K, high level line 50mV 200K, DIN 2.5mV 10K. Outputs: Line and DIN 600mV 5K, phones variable to 2.5V 10 ohms. S/N ratio: CrO₂ (Dolby off) 55dB, CrO₂ (Dolby on) 64dB, ferric low noise (Dolby off) 53dB, ferric low noise (Dolby on) 62dB. Price: £271.43 (plus VAT).



Neal 102

Model 103

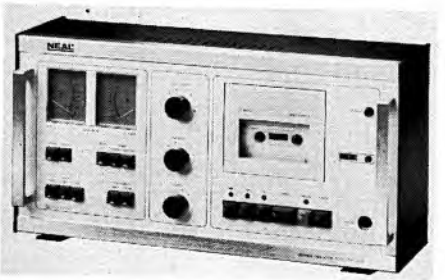
Transcription cassette recorder. Dolby B with built-in Dolby calibration oscillator. 3M Wollensak deck. Two illuminated peak reading meters. Chrome and ferric equalisation and fully variable bias for both. Bias level may be displayed on meters. Controlled headphone output. Separate amplifiers and input mixing for mic, DIN and line. W and F: less than 0.09% RMS (DIN weighted). Inputs: mic 200 μ V 2K, high level line 80mV 2M, DIN 5mV 10K. Replay amp distortion: less than 0.1% at 0dB. Inputs: mic 200 μ V 2K, high level line 80mV 2M, DIN 5mV 10K. Outputs: monitor 600mV 5K, DIN 600mV 5K, phones variable to 2.5V, 10 ohms. FR: (ferric tape) 35Hz-12kHz +1dB -3dB, CrO₂ tape 35Hz-15kHz +1dB -3dB. S/N ratio: CrO₂ (Dolby off) 55dB, CrO₂ (Dolby on) 64dB, ferric low noise (Dolby off) 53dB, ferric low noise (Dolby on) 62dB. Price: £300.00 (plus VAT).



Neal 140

Model 104

Replay only machine. Dolby B. 3M Wollensak deck. Chrome and ferric equalisation. Outputs: line and phone 2V variable, load 10 ohms. W and F: less than 0.09% RMS. (DIN weighted). FR: from DIN test tape (455 13/6) corrected to 3,180 μ S, ± 1 dB. S/N ratio: CrO₂ (Dolby off) 55dB, CrO₂ (Dolby on) 64dB, ferric low noise (Dolby off) 53dB, ferric low noise (Dolby on) 62dB. Price: £228.57 (plus VAT).



Neal 302

Model 110

Audio visual format cassette recorder. Mono audio with synchronising track. 3M Wollensak deck. Dolby B. Two illuminated peak reading meters. Chrome and ferric equalisation and bias. Separate recording/replay on each track. W and F: less than 0.09% RMS. (DIN weighted). Inputs: audio 100mV 10K sync 100mV 10K. Outputs: audio, line 600mV 100

ohms fixed, headphone 2.5V 10 ohms variable, sync, phono 600mV 100 ohms fixed, line 2.5V 10 ohms variable. FR: (audio) ferric tape 35Hz-12kHz +1 -3dB, CrO₂ tape 35Hz-15kHz +1 -3dB (sync) 100Hz-5kHz +1 -3dB. S/N ratio: CrO₂ (Dolby off) 55dB, CrO₂ (Dolby on) 63dB, ferric low noise (Dolby off) 53dB, ferric low noise (Dolby on) 61dB. Price: £320.00 (plus VAT).

*Indicates entry is illustrated

Model 102A

Stereo audio visual format cassette recorder. Audio details as for 102 V above. Sync/audio tracks can be recorded/replayed separately. Fully compatible with mono audio visual format and with standard stereo cassette format. Sync track details: Inputs, line 100mV 10K, DIN 100mV 10K. Outputs: line 600mV fixed 200 ohms, DIN 600mV fixed 200 ohms. FR: 100Hz-5kHz +1—3dB. Price: £387.15 (plus VAT).

Model 103AV

Stereo audio visual format cassette recorder. Audio details as for 103 above. Sync/audio tracks can be recorded/replayed separately. Fully compatible with mono audio visual format and with standard stereo cassette format. Sync track details: Inputs: line 100mV 10K, DIN 100mV 10K. Outputs: line 600mV fixed 200 ohms, DIN 600mV fixed 200 ohms. FR: 100Hz-5kHz +1—3dB. Price: £427.15 (plus VAT).

Model 140*

4 channel cassette recorder. 4 tracks can be recorded simultaneously or in two stereo pairs. Performance as 102V above except: DIN inputs and outputs omitted; headphone level fixed 1V; four peak reading meters; crosstalk 1-2, 3-4 better than 40dB, others better than 50dB. Price: £482.85 (plus VAT).

Professional Options

An extensive range of professional variants of these machines is available. Facilities and options to special order include: 3¼ ips tape speed, remote pause, balanced inputs and outputs, four channel operation. Details and prices on application.

302*

Stereo recorder, studio cassette deck with three AC motors and full logic control including motion sensor and full remote control facility. Horizontal and vertical operation. Dolby B with built-in calibration oscillator. Two large illuminated peak reading meters can also read fully variable bias in both normal and special tape settings. W and F: less than 0.09% DIN. FR: 35Hz-12kHz +1 —3dB normal; 35Hz-15kHz +1 —3dB special tape. S/N ratio: normal ferric and chrome (Dolby off) 53dB, (Dolby on) 62dB; special ferric and chrome (Dolby off) 55dB, (Dolby on) 64dB. Inputs: mic 500µV 2K, high level line 50mV 200K, phono, low level line 2.5mV 10k DIN. Overload better than 40dB. Outputs: line (phono) and DIN 600mV fixed 5K, headphone/high level line 2.5V 10 ohms variable. Mains

11,125/200-250V. Dimensions: 44.6 × 22.6 × 15.5cm. Price: £328.57 (plus VAT). Also available in black or two tone brown with solid wood end checks. Price: Walnut £334.27 (plus VAT), Teak £331.96 (plus VAT).

330

Three channel cassette recorder, 3 motor deck as 302. Stereo channels plus sync channel for audio visual applications. Audio/sync track can be recorded/replayed simultaneously or separately. Two audio channels have full metering facilities, Dolby B and selection for normal and special tape with 'Varitape' facility; performance spec. as 302. Sync channel for external pulse coding/decoding equipment but with built-in sync pulse generator decoded for direct connection to projector. Price: on application.

340

Four channel cassette recorder, 3 motor deck as 302. Tracks can be recorded simultaneously or in two stereo pairs. Four identical audio channels each having full metering facilities, Dolby B and selection for normal and special tape with 'Varitape' facility; performance spec. as 302. Price: on application.

■ OPTONICA

Sharp Electronics (UK) Ltd,
107 Hulme Hall Lane, Manchester M10 8HL.
Tel: 061-205 7321.

RT3838C

Stereo cassette deck with microprocessor control. W and F: 0.15%. Dolby B noise reduction system. FR: 30Hz-16kHz FeCr. Bias switch. VU and Peak LED indicator. Inputs: mic 0.2mV 40K, line 70mV 50K, DIN 0.1mV 40K. Outputs: line 0.775 50K, DIN 0.775 50K. Quartz lock PLL servo motor. Dimensions: 44 × 35 × 14cm. Price: £222.13 (plus VAT).

RT5100N

Stereo cassette deck. W and F: 0.18%. Dolby B noise reduction system. FR: 30Hz 16kHz CrO₂. Bias switch. Fluorescent display. Two FG DC motors. Dimensions: 43 × 38 × 15cm. Price: £137.00 (plus VAT).

RT7100N

Stereo cassette deck. W and F: 0.15% DIN. Dolby B noise reduction system. FR: 30Hz-17kHz. Bias switch. Fluorescent tube indicator. Two motors. Dimensions: 43 × 38 × 15cm. Price: on application.

RT9100N

Stereo cassette deck. W and F: 0.12% DIN.

Dolby B noise reduction unit. FR: 30Hz-20kHz FeCr. Bias switch for chrome, ferro-chrome and metal. Fluorescent tube indicator. Two motors. Dimensions: 43 × 38 × 15cm. Price: on application.

■ **PANASONIC**

National Panasonic (UK) Ltd,
107-109 Whitby Road, Slough, Berks.
SL1 3DR.
Tel: Slough (75) 27516.

RS 612 US

Stereo cassette deck with Dolby B. W and F: 0.12%. FR: 40Hz-12kHz, 40Hz-14kHz CrO₂. Separate bias and equalisation switches. Two VU meters. Inputs: line, mic, DIN. Outputs: line, DIN, headphone. Electronically controlled DC motor. Mains: 240V 50Hz. Dimensions: 41 × 21.4 × 13.6cm. Price: on application.

RS 611 US

Stereo cassette deck with Dolby B. W and F: 0.08%. FR: 30Hz-13kHz, 30Hz-14kHz CrO₂. Other features as above. Dimensions: 41 × 24.4 × 13.6cm. Price: on application.

■ **PHILIPS**

Philips Electrical Ltd, City House,
420 London Road, Croydon, Surrey.
Tel: 01-689 2166.

N 2534*

Front loading cassette deck with Dolby. W and F: 0.14%. FR: 40Hz-14kHz chromium 40Hz-12kHz ferro. Mains: 240V. Dimensions: 38 × 14.2 × 27.1cm. Price: £98.34 (plus VAT).

N 2538*

Front loading cassette deck with Dolby. W and F: 0.11%. FR: 40Hz-15kHz chromium 40Hz-17kHz ferro-chrome 40Hz-14kHz ferro tape. Dimensions: 38 × 14.2 × 26cm. Price: £127.14 (plus VAT).



Philips N2534

N 2533

Stereo cassette deck. W and F: 0.25%. Dolby B noise reduction unit. FR: 40Hz-14kHz (DIN 45511). Bias switch for chrome and ferro-chrome cassettes. Two peak reading meters. Inputs: line in DIN 0.2mV into 2K, phono 50mV into 220K; mic 0.25mV into 2K. Outputs: DIN/Phono 0.5V into 5K. Headphones suitable for 8-600 ohms phones. DC motor. Mains voltage: 240. Dimensions: 38 × 26.8 × 14.3cm. Price: £83.94 (plus VAT).

N 2537

Stereo cassette deck. W and F: 0.1%. Dolby B noise reduction unit. FR: 40Hz-14kHz (DIN 45511). Bias switch for chrome and ferro-chrome cassettes. Two peak reading meters. Inputs: DIN 0.7mV into 10K, phono 80mV into 80K, mic 0.1mV into 2K. Outputs: DIN/phono 0.7V into 22K adjustable. Headphone suitable for 8-600 ohms phones. DC motor. Mains: 240V. Dimensions: 48.2 × 26 × 15cm. Price: £138.60 (plus VAT).

■ **PIONEER**

Pioneer High Fidelity (GB) Ltd,
Pioneer House, The Ridgeway,
Iver, Bucks SL0 9JL.
Tel: Iver (0753) 652222/7.

CTF 500*

Stereo cassette deck. W and F: 0.05%. Dolby



Pioneer CTF 500



Philips N2538

*Indicates entry is illustrated



Pioneer CTF 900



Pioneer CTF 600



Pioneer CTF 800

noise reduction system. FR: 40Hz-15kHz. Bias switch for standard, chrome, ferri-chrome. Two VU meters. Inputs: mic 0.3mV-110mV 10K, line 65mV-14V 100K, DIN 9mV-2V 2.2K. Outputs: 700mV 50K, headphones 100mV 8 ohms. DC servo motor. Mains voltage: 220/240 50Hz. Dimensions: 38 × 16.1 × 14cm. Price: on application.

CTF 600*

Stereo cassette deck. W and F: 0.05%. Dolby noise reduction system. FR: 20Hz-16kHz. Bias switch for standard, chrome, ferri-chrome. Two VU meters. Input: 50mV-25V 100K line, 0.3mV-100mV 10K mic. Outputs: 450mV-630mV 50K, headphones 70mV-89mV 8 ohms. DC servo motor. Mains voltage: 220/240 50Hz. Dimensions: 42 × 28.9 × 14.3cm. Price: on application.

CTF 650

Stereo cassette deck. W and F: 0.05%. Dolby noise reduction unit. FR: 20Hz-18kHz metal tape. Bias equalisation four step. FLT meter. Inputs: line 65mV-25V 50K, mic 0.3mV-100mV 10K. Outputs: 450mV-640mV 50K, headphone 60mV-85mV 8 ohms. DC servo motor. Mains voltage: 220/240 50Hz. Dimensions: 42 × 24 × 15cm. Price: on application.

CTF 750

Specifications as above.

CTF 800*

Stereo cassette deck. W and F: 0.045%. Dolby noise reduction system. FR: 30Hz-17kHz. Bias switch for standard, chrome, ferri-chrome. FLT meter. Inputs: 64mV-25V line 85K, 0.3mV-100mV 10K mic. Outputs: 450mV 50K, headphones 60mV 8 ohms. DC servo motor. Mains: 220/240 50Hz. Dimensions: 42 × 35.5 × 15cm. Price: on application.

CTF 900*

Stereo cassette deck. W and F: 0.05%. Dolby noise reduction system. FR: 30Hz-15kHz. Bias switch for standard, chrome, ferri-chrome. FLT meter. Inputs: 60mV-25V line 100K, 0.3mV-100mV 30K mic. Outputs: 450mV-640mV 50K, headphones 90mV 8 ohms. DC servo motor (capstan), DC servo motor (FF/REW). Mains voltage: 220/240 50Hz. Dimensions: 42 × 36.2 × 18.7cm. Price: on application.

■ PLUSTRON

Plustronics Ltd, Hempstalls Lane,
Newcastle, Staffs ST5 0SW.
Tel: (0782) 615131.

CD-1000D

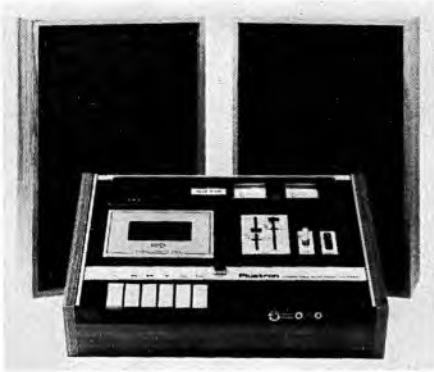
Stereo cassette deck. W and F: less than 0.25%. VU meter. Mains: 240V. Dimensions: 33 × 7.5 × 21cm. Price: £71.70 (plus VAT).

CD-1000R*

Top loading stereo cassette deck. W and F: 0.25%. VU meters. Load Imp: 4 ohms. Mains:



Plustron CD501



Plustron CD 1000R

240V. Dimensions: 33 × 7.5 × 21cm. Price: £99.11 (plus VAT).

CD-501*

Front loading stereo cassette deck. W and F: 0.1%. Dolby noise reduction system. FR: 30Hz-13kHz LN tape, 30Hz-15kHz CH tape, 30Hz-15kHz Fe tape. Bias switch for chrome and ferro-chrome. VU and peak LED indicators. Inputs: line in 30mV 100K, mic 10K, DIN 30K. Outputs: line out 0.58V, DIN 0.58V. Mains: 240V. Dimensions: 42 × 25 × 13.5cm. Price: £108.00 (plus VAT).

■ **PYE**

Pye Ltd,
137 Ditton Walk, Cambridge CB5 8QD.
Tel: Teversham (022-05) 2781.

3533*

Stereo cassette deck. W and F: <0.35%. Dolby noise reduction unit. FR: 40Hz-14kHz CrO₂, 40Hz-12kHz Bias switch for CrO₂, Ferro. Two level meters. Inputs: <0.25mV at 2K mic, <0.2mV at 2K DIN, <50mV at 220K line. Outputs: line out/DIN/phonos >0.5V into >50K. Motors: DC. Mains voltage tappings: 240V with service solution for 110-127-220V. Dimensions: 38 × 27 × 14cm. Price: £95.90 (plus VAT).

3537*

Stereo cassette deck. W and F: <0.15%. Dolby noise reduction system. FR: 40Hz-16kHz, 40Hz-18kHz, 40Hz-15kHz. Bias switch for CrO₂, FeCr, ferro. Two VU meters plus +3dB peak LED indicator. Inputs: <0.25mV at 33K mic, <0.25mV at 33K DIN, <100mV at 40K phono. Outputs: line out, DIN/phonos 0-0.7V into >22K. Motor: DC electronically con-



Pye 3537



Pye 3533



Realistic SCT 16

trolled. Mains voltage tappings: 240V. Dimensions: 48 × 26 × 15cm. Price: £135.56 (plus Vat).

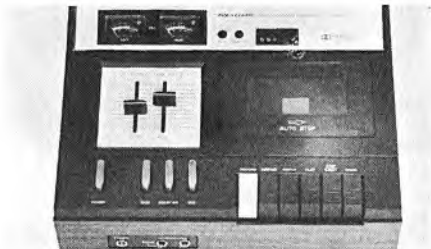
■ **REALISTIC**

Tandy Corporation (Branch UK),
Bilston Road, Holyhead Road,
Wednesbury, Staffs WS10 7JN.
Tel: 021-556 6101/2.

SCT 16*

Front loading stereo cassette deck with Dolby noise reduction system. W and F: 30Hz-15kHz ±3dB on CrO₂. Bias switch for CrO₂ and FeCr. Twin VU meters, Dolby and record indicators. Inputs: mic 0.44mV, aux 80mV. Outputs adjustable to 0.53V 10K. Mains 200/240V. Dimensions: 39.4 × 25.4 × 14.3cm. Price: £159.95 (inc. VAT).

*Indicates entry is illustrated



Realistic SCT 17



Realistic SCT 18



Sakai CD 3010



Sankyo STD 1800



Sankyo STD 1900

SCT 17*

Top loading stereo cassette deck with Dolby noise reduction system. W and F: less than 0.19%. FR: 40Hz-12,500Hz on CrO₂. Bias switch for CrO₂. Twin VU meters, CrO₂ and Dolby indicators. Output: 0.775V adjustable. Impedance less than 10K. Inputs: mic 600ohms, aux 90K. Mains: 220/240V. Dimensions: 30 × 23 × 8.7cm. Price: £89.95 (inc VAT).

SCT 18*

Front loading stereo cassette deck with Dolby noise reduction system. W and F: less than 0.12%. FR: 30Hz-14kHz CrO₂. Twin VU meters, Dolby and record indicators. Outputs adjustable to 0.7V. Mains: 220/240V. Dimensions: 39 × 24 × 14cm. Price: £129.95 (inc. VAT).

■ SAKAI

Wren Electronics Ltd,
Dawson Road, Mount Farm Estate,
Milton Keynes, Bucks.
Tel: Milton Keynes (0908) 71611.

CD 3010*

Front loading stereo cassettes. W and F: less than 0.07%. Dolby noise reduction system. FR: 20Hz-15kHz ferric, 20Hz-17kHz chrome and ferri-chrome all ±3dB. Bias switch for chrome and ferro-chrome cassettes. Level indicators. Inputs: mic 0.25mV 12K, line 70mV 20K. Outputs: 100V 550mV. DC motor. Mains: 240V. Dimensions: 44.4 × 34 × 13cm. No rec. retail price.

■ SANKYO

Webland International, Unit 4,
129 Waltham Green Court,
Moore Park Road, London SW6.
Tel: 01-385 9478.

STD-1800*

Front loading cassette deck with Dolby. W and F: 0.08%. FR: 40Hz-12.5kHz normal or 40Hz-15kHz CrO₂, FeCr tape. S/N ratio: 55dB Dolby off. Improves by 5dB at 1kHz and 10dB at 5kHz with Dolby. Inputs: line in, mic. Outputs: line out, headphone. Dimensions: 40 × 15 × 25cm. Price: £141.68 (plus VAT).

STD-1900*

Front loading cassette deck with Dolby. W and F: 0.07%. FR: 30Hz-13kHz normal or 30Hz-16kHz, CrO₂, FeCr tape. S/N ratio: 56dB Dolby off. Improves by 5dB at 1kHz and 10dB at 5kHz with Dolby. Inputs: line in, mic. Outputs: line out, headphone. Dimensions: 43.5 × 13.8 × 29.8cm. Price: £170.76 (plus VAT).

STD 2000*

Stereo cassette deck with W and F: 0.065%. Dolby noise reduction system. FR: 30Hz-14kHz, 30Hz-17kHz CrO₂. Bias switch for chrome. VU and lamp. Inputs: line 50mV 50K, mic 0.5mV 5 K, DIN 0.5mV 5K. Outputs: line out 400mV, DIN out 400mV, headphone 1mV 8 ohms. DC servo motor. Mains: 240V. Dimensions: 46 × 13.8 × 29.8cm. Price: £175.78 (plus VAT).

STD 1650

Stereo cassette deck with W and F: 0.25%. Dolby noise reduction system. FR: 40Hz 10K, 40Hz-12.5kHz CrO₂. VU meter. Inputs: line 50mV 600 ohms, mic 1mV 1K, DIN 1mV 1K. Outputs: line out 1.1V, DIN out 1.1V, headphone 1mV 8 ohms. DC servo motor. Mains: 240V. Dimensions: 36 × 20 × 14.3cm. Price: £79.96 (plus VAT).

■ **SANSUI**

Sansui Audio Europe NV,
Unit 10A, Lyon Industrial Estate,
Rockware Avenue, Greenford,
Middlesex UB6 0AA.
Tel: 01-575 1133.

SC-5100

Direct-O-matic cassette deck with non-jam front loading. 4 track rec/playback tape lead-in, tape type selector, Dolby. Auto stop, W and F: 0.05%. FR: 20Hz-17kHz (CrO₂). S/N ratio: 67dB with Dolby. Finish: Walnut. Dimensions: 49.6 × 20.5 × 32.5cm.

SC-3100

W and F: 0.06%. FR: 25Hz-16kHz (CrO₂). FR: 25Hz-16kHz. S/N ratio: 67dB with Dolby. Finish: Walnut. Features: as SC-5100. Dimensions: 45.6 × 19.8 × 32.2cm.

SC-2100

W and F: 0.08%. FR: 25Hz-16kHz (CrO₂). S/N ratio: 76dB with Dolby. Finish: Walnut. Features: as SC-5100. Dimensions: 45.6 × 19.8 × 32.2cm.

SC-1100

W and F: 0.08%. FR: 25Hz-16kHz (CrO₂). S/N ratio: 64dB with Dolby. Finish: Walnut. Features: as SC-5100. Dimensions: 45.1 × 17 × 30.2cm.

SC-5110

W and F: 0.05%. FR: 20Hz-17kHz (CrO₂). S/N ratio: 67dB with Dolby. Finish: matt black. Features: as SC-5100. Dimensions: 49.6 × 20.5 × 32.5cm.



Sankyn STD 2000

SC-3110

W and F: 0.06%. FR: 25Hz-16kHz (CrO₂). S/N ratio: 67dB with Dolby. Features: as SC-5100 with adaptor for rack-mounting. Finish: matt black. Dimensions: 43 × 17.1 × 32.2cm.

SC-2110

W and F: 0.08%. FR: 25Hz-16kHz (CrO₂). S/N ratio: 67dB with Dolby. Features: as SC-5100 with adaptor for rack-mounting. Finish: matt black. Dimensions: 43 × 17.1 × 32.2cm.

SC-1110

W and F: 0.08%. FR: 30Hz-16kHz. S/N ratio: 64dB with Dolby. Finish: matt black, with adaptor for rack-mounting. Dimensions: 43 × 16 × 30.2cm.

New Models

SC-5300/30, SC-3300/30, SC-1300/30 — details not yet available.

■ **SHARP OPTONICA**

Sharp Electronics (UK) Ltd,
107 Hulme Hall Lane,
Manchester M10 8HL.
Tel: 061-205 7321.

RT 3838

Stereo electronic tape processor, with Dolby. W and F: ±0.15% (DIN). FR: 30Hz-13,000Hz normal, 30Hz-16,000Hz FeCr, 30Hz-15,000 CrO₂. Bias switch for chrome and ferrochrome. Processor indicator VU meters (L/R). Inputs: line-in, record/playback. Outputs: 775mV 50K. Mains: AC 110/220/240V. Dimensions: 44.2 × 35.7 × 14.4cm. Price: £249.90 (inc. VAT).

RT 3535

Stereo front loading cassette deck, with Dolby. W and F: 0.15%. FR: 30Hz-17,000 FeCr, 30Hz-16,000 CrO₂, 30Hz-15,000Hz normal. Separate bias equaliser. Level indicator, record indicator APLD selector. Inputs: 70mV 50K, 0.1mV K. Outputs: 580mV, 58mV. Price: £249.90 (inc. VAT).

*Indicates entry is illustrated

RT 2050

Stereo front loading cassette deck. W and F: 0.18%. Dolby system. FR: 30Hz-14,000Hz FeCr, 30Hz-14,000Hz CrO₂, 30Hz-13,000Hz normal. Separate bias equaliser. Inputs: 70mV 70K. Imp: 1mV, 10K. Price: £199.90 (inc. VAT).

RT 1616*

Front loading stereo cassette deck with Dolby noise reduction unit and auto programme search system. W and F: 0.07%. FR: 40Hz-14kHz FeCr and CrO₂, 40Hz-12.5kHz normal. Inputs: 0.2mV 6.8K, 63mV 50K, 0.2mV 6.8K. Outputs: 500mV 50K, 500mV 50K, 0.5mV 8 ohm. Dimensions: 44.2 × 15.8 × 25.2cm. Price: on application.

■ SONY

Consumer Information, Sony Showroom, Regent Street, London W1R 6DJ. Tel: 01-439 3874.

EL 5 (Elcaset)

Stereo four track two channel cassette deck with Dolby B. W and F: 0.06%, 0.12% DIN. FR: 20Hz-20kHz. Bias and equalisation switch for tape types. VU indicator. Inputs sensitivity: mic 95m imp 100K. Mic 0.3mV low imp. Outputs: line 775mV imp: more than 10K, Din 775mV imp 50K. Mains: 110, 127, 220, 240V 50Hz. Dimensions: 43 × 32 × 17cm. No rec. retail price.

EL 7(Elcaset)

Details as per EL 5 except: W and F: 0.04%, ±0.12% DIN. FR: 25Hz-20kHz. Three motors. No rec. retail price.

TC-U5

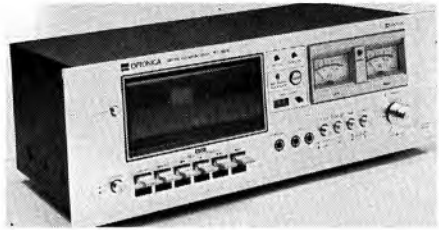
Front loading stereo cassette deck. W and F: 0.06%. Dolby noise reduction. FR: 30Hz-15kHz. Bias switch. VU meter. Inputs: Sensitivity 0.25mV, 77.4mV; impedance: 50K. Outputs: more than 10K. Mains: 110, 120, 220, 240V. Dimensions: 41 × 26 × 14.5cm. No rec. retail price.

TC-K5*

Front loading stereo cassette deck. W and F: 0.05%. Dolby noise reduction. FR: 30Hz-16kHz. Bias switch. VU meter. Inputs: sensitivity 0.25mV 77.5mV; impedance: 50K. Outputs: more than 10K. Mains: 240V. Dimensions: 41 × 29 × 14.5cm. No rec. retail price.

TC K 96R*

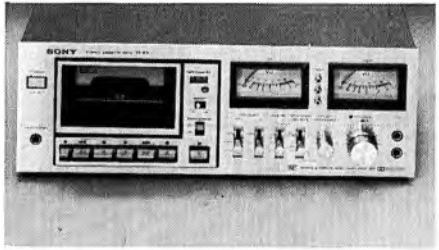
Front loading stereo cassette deck with Dolby noise reduction. W and F: 0.05%. FR: 30Hz-



Sharp Optonica RT1616



Sony TC-K96R



Sony TC-K5

16kHz ±3dB FeCr, 30Hz-16kHz DIN. Inputs: mic, line, DIN. Outputs: line, DIN, headphone. Mains: 110, 120, 220, 240V. Dimensions: 43 × 15.5 × 32.5cm. No rec. retail price.

TC K60*

Front loading stereo cassette deck with Dolby noise reduction. W and F: 0.05% FR: 30Hz-16kHz ±3dB FeCr; 30Hz-16kHz DIN. Inputs: mic, line, DIN. Outputs: line, DIN, headphone. Mains: 240V. Dimensions: 43 × 15.5 × 32.5cm. No rec. retail price.

TC U2*

Front loading stereo cassette with Dolby noise reduction. W and F: 0.08% ±0.25% DIN. FR: 50Hz-13kHz ±3dB FeCr; 50Hz-13kHz DIN. Inputs: line, mic, DIN. Outputs: line, DIN, headphone. Mains: 240V. Dimensions: 41 × 14.5 × 29cm. No rec. retail price.

TCK1A

Cassette deck, Four track-two channel. W and F: 0.008% ±2dB. FR: 50Hz-13kHz ±3dB FeCr, 50Hz-13kHz DIN. Inputs: line, mic, DIN. Outputs: line, DIN, headphone. Mains: 240V. Dimensions: 41 × 14.5 × 26cm. No rec. retail price.

TC K4A

Front loading stereo cassette deck with Dolby noise reduction. W and F: 0.006%. FR: 30Hz-15kHz ±3dB FeCr, 30Hz-15kHz DIN. Inputs: mic, line, DIN. Outputs: line, DIN, headphones. Mains: 110, 120, 220, 140V. Dimensions: 41 × 14.5 × 26cm. No rec. retail price.

TC K6B

Stereo cassette deck, four-track two-channel. W and F: 0.05% ±0.14% DIN. FR: 30Hz-16K ±3dB FeCr; 30Hz-16kHz DIN. Inputs: mic, line, DIN. Outputs: line, DIN, headphones. Mains: 110, 120, 220, 240V. Dimensions: 43 × 17 × 31cm. No rec. retail price.

TC K7B11

Front loading stereo cassette deck with Dolby noise reduction. W and F: 0.045%. FR: 30Hz-16kHz FeCr, 30Hz-16kHz DIN. Inputs: mic, line, DIN. Outputs: line, DIN, headphones. Mains: 110, 120, 220, 240V. Dimensions: 43 × 17 × 31cm. No rec. retail price.

TC K8B

Front loading stereo cassette deck with Dolby noise reduction. W and F: 0.045%. FR: 30Hz-16kHz ±3dB FeCr; 30Hz-16kHz DIN FeCr. Inputs: line, mic, DIN. Outputs: line, DIN, headphones. Mains: 110, 120, 220, 440V. Dimensions: 43 × 17 × 31cm. No rec. retail price.

■ **TANDBERG**

Tandberg (UK) Ltd, 81 Kirkstall Road, Leeds LS3 1HR.
Tel. Leeds (0532) 35111.

ICD 3 0A*

Three head, three motor, logic controlled deck equipped with Tandberg Actilinear recording system. W and F: 0.12%. Actilinear system claims capacity of more than 20dB above level of other cassette tape. Inputs: mic, line, radio, headphones. Features: equalised peak reading meters, variable input/output controls, Dolby B, tape selector switch, MPX filter, pneumatically damped cassette compartment. Dimensions: 47 × 10.5 × 23cm. Price: £488.01 (plus VAT).

TCD 320*

Improved version of TCD 310 Mk II with three motor dual capstan closed loop system giving accurate tape-transport and improved stability. Dolby B noise reduction system. W and F: 0.15% or 0.2%. FR: 30Hz-18,000Hz (DIN). Outputs: radio/line, headphone. Features: disengageable MPX filter which cuts out pilot signal when recording FM stereo. Slide controls for headphone and radio/line outputs. Functions all electrically operated. Pneumatically damped cassette compartment. Price: £262.23 (plus VAT).



Sony TC U2



Sony TC-K60



Tandberg TCD 320A



Tandberg TCD 340A

*Indicates entry is illustrated

■ TEAC

Harman UK, St. John's Road, Tyler's Green,
High Wycombe, Bucks.
Tel: High Wycombe (049-481) 5331.

A 103*

Stereo cassette deck with Dolby. W and F: 0.08%. FR: 30Hz-13kHz, CrO₂ 30Hz-16kHz. Bias switch for chrome/normal. VU meters. Inputs: 0.25mV 600 ohms. Outputs: 2 line 0.3 load. Imp: 50K, 1 stereo headphones jack 1mW, imp. 8 ohms. FG servo-controlled DC motor. Mains: 220V 50Hz. Dimensions: 41 × 29.2 × 16cm. Price: £141.33 (plus VAT).

A 105S

Details on application. Price: £168.00 (plus VAT).

A 106

Front loading stereo cassette deck. W and F: 0.08%. Dolby noise reduction system. FR: 30Hz-16kHz CrO₂, 30Hz-13kHz hi-fi tape. DC servo motor. VU meters. S/N ratio: 53dB, Dolby adds 10dB over 5kHz. Dimensions: 41 × 16 × 29.2cm. Price: £168.00 (plus VAT).

A 107

Front loading stereo cassette deck. W and F: 0.08%. Dolby noise reduction system. FR: 30Hz-16kHz CrO₂, 30Hz-13kHz hi-fi tape. DC transport motor. VU meters. S/N ratio: 55dB, Dolby adds 10dB over 5kHz. Independent bias/equalisation. selectors. Dimensions: 41 × 16 × 29.2cm. Price: £168.00 (plus VAT).

A 108

Simul-synch cassette deck. Details on application. Price: £200.00 (plus VAT).

A 109

Front loading cassette deck with fluorescent meters. Details on application. Price: £208.89 (plus VAT).

A 300

Three-head front loading cassette deck. Details on application. Price: £203.56 (plus VAT).

A 510

Cassette deck with fluorescent meters. Details on application. Price: £297.78 (plus VAT).

A 700

Front loading stereo cassette deck. W and F: 0.05%. Dolby noise reduction system. FR: 30Hz-16kHz CrO₂ tape, 30Hz-14kHz hi-fi tape. Heavy-duty two-motor tape transport. Peak meters. S/N ratio: 57dB, Dolby adds 10dB over 5kHz. Features: full solenoid logic control with touch buttons, remote control capability. Three-step bias/equalisation, memory. Dimensions: 44 × 17.7 × 31.5cm. Price: £354.67 (plus VAT).

A 800

Front loading, three-head, two-motor cassette deck with full logic control. W and F: 0.5%. Dolby noise reduction system. FR: 20Hz-20kHz CrO₂ tape, 20Hz-18kHz hi-fi tape. Three-stage bias/equalisation. Peak level meters. S/N ratio: 58dB, Dolby adds 10dB over 5kHz. Dimensions: 44 × 17.7 × 31.5cm. Features: independent erase, record, playback heads. Price: £443.56 (plus VAT).

C-1

Front loading, three-head, three-motor cassette deck with full logic control. W and F: 0.04%. Dolby noise reduction system. FR: 20Hz-20kHz CrO₂, 20Hz-18kHz hi-fi tape. Interchangeable bias/eq module for CrO₂ tapes. Peak programme meters. S/N ratio: 60dB CrO₂, 80dB. Dual capstans driven by PLL motor, DC core-less rotor reel motors. Dimensions: 48.2 × 16.1 × 35.3cm. Price: £888.00 (plus VAT).

A 601R

Auto-reverse cassette deck. Details on application. Price: £354.67 (plus VAT).

AI. 700 Elcaset Deck

Front loading. W and F: 0.04%. Dolby or outboard RX-10 dBx unit. FR: 25Hz-20kHz type I, 25Hz-22kHz type II, 25Hz-22kHz type III. Dimensions: 47 × 27.5 × 34cm. Price: £799.11 (plus VAT).

■ TECHNICS

National Panasonic (UK) Ltd,
107-109 Whitby Road, Slough
Berks SL1 3DR.
Tel: Slough (75) 27516.

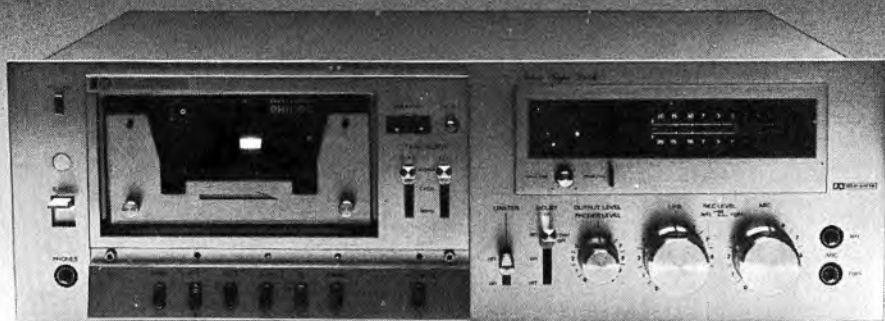
RS-646 DS

Four-track two-channel stereo recorder with Dolby. W and F: 0.10% ± 2%. FR: 40Hz-14kHz (DIN), 50Hz-14kHz ± 3dB. Inputs; mic, line DIN. Outputs: line, DIN, headphone. Elec-



Teac A 103

Metal powder tape facility, fluorescent tube display.



The facility for metal powder tape, with its superior frequency response and improved signal-to-noise ratio, plus the two channel peak reading fluorescent tube display are typical of the overall sophistication of the Pye 3630 cassette deck.

Other refinements include long life heads, electronic motor control, switchable MPX filter, full automatic stop and of course Dolby.[®]

Its functions are comprehensive – separate bias and equalisation settings for metal, chromium or ferro cassettes, separate line and microphone

recording level controls with mixing facility, illuminated cassette compartment with damped eject.

It has LED indicators for metal tape, Dolby, and the electronically controlled operating buttons.

The 3630 is just one of twenty units in the Pye Hi-Fi Sound Project range. See and hear them at your local Pye dealer.

THE PYE HI-FI SOUND PROJECT.

You can rely on Pye 

Pye Limited, 137 Ditton Walk, Cambridge CB5 8QD.

[®]Dolby is a registered trade mark of Dolby Laboratories Inc.

*Indicates entry is illustrated



Technics two part deck RS-990

tronic speed controlled DC motor $\times 1$. Mains: 240V 50Hz. Dimensions: 36.3 \times 10.6 \times 28cm. Price: £209.95 (inc. VAT).

RS-990*

Four-track two-channel stereo recorder with Dolby. W and F: 0.04% \pm 0.1% DIN. FR: 20Hz DIN, 25Hz-18kHz \pm 3dB; CrO₂ tape: 20Hz-20kHz DIN, 25Hz-20kHz \pm 3dB. Inputs: mic, line, aux, DIN. Output: line, through out, aux, DIN headphones. 3-motor closed loop double capstan system. Direct-drive DC brushless capstan motor $\times 1$ DC coreless motor for reel table drive $\times 2$. Mains: AC 110, 125, 220, 240V 50/60Hz. Dimensions: 48.3 \times 19.3 \times 37.5cm transport unit and 48.3 \times 17.3 \times 37.5cm amplifier unit. Price: £999.95 (inc. VAT).

RS M10

Stereo cassette deck. W and F: 0.06%. Dolby noise reduction system. FR: 40Hz-13kHz. Bias switch for chrome and ferro-chrome. VU meter. Inputs: mic 0.25mV 33K, line 60mV 47K, DIN 1mV 8.2K. Outputs: line 420mV 22K, headphone 65mV 8 ohms, DIN 420mV 47K. DC motor. Mains: 110, 125, 220, 240V. Dimensions: 43 \times 25.1 \times 14.2cm. Price: £115.51 (plus VAT).

RS M22

Stereo cassette deck. W and F: 0.05%. Dolby noise reduction systems. FR: 40Hz-14kHz. Bias switch for chrome and ferro-chrome cassettes. FL peak meter. Inputs: mic 0.25mV 7.2K, line 60mV 47K, DIN 0.21mV 4.7K. Outputs: line 650mV 22K, headphone 100mV 8 ohms, DIN 650mV 6K. DC motor. Mains voltage: 110, 125, 220, 240V. Dimensions: 43 \times 26.7 \times 14.2cm. Price: £164.40 (plus VAT).

RS M33

Stereo cassette deck. W and F: 0.05%. Dolby noise reduction system. FR: 40Hz-14kHz. Bias

switch for chrome and ferro chrome cassettes: FL peak meter. Inputs: mic 0.25mV 7.2K, line 60mV 47K, DIN 0.21mV 5.7K. Outputs: headphone 100mV 8 ohms, line 650mV 22K, DIN 650mV 6K. FG servo motor. Mains. Dimensions: 43 \times 26.7 \times 14.2cm. Price: £208.84 (plus VAT).

RS M56

As above. Price: £266.62 (plus VAT).

RS M85

Stereo cassette deck. W and F: 0.035%. Dolby noise reduction system. FR: 30Hz-16kHz. Bias switch for chrome and ferro-chrome cassettes. FL peak meter. Inputs: mic 0.25V 8K, line 60mV 68K, DIN 0.25mV 6.4K. Outputs: line 700mV 22K, headphone 140mV 8 ohms, DIN 700mV 1.5K. Two motors: 1 quartz locked, 1 DC. Mains voltage: 110, 125, 220, 240V. Dimensions: 45 \times 40.3 \times 9.7cm. Price: £422.18 (plus VAT).

RS M95

Stereo cassette recorder. W and F: 0.035%. Dolby noise reduction unit. Bias switch for chrome, ferro-chrome and metal tapes. FL peak meter. Other details not yet available.

RS 686

Stereo cassette recorder. W and F: 0.07%. Dolby noise reduction system. FR: 50Hz-16kHz. Bias switch for chrome and ferro-chrome cassettes. VU meter. Inputs: mic 0.25mV 8K, line 60mV 100K. Outputs: line 420mV 22K, headphone 65mV 8 ohms, earphone 65mV 8 ohms (mono). FG servo motor. Mains voltage: 110, 125, 220, 240V with AC adaptor. Dimensions: 24.3 \times 20 \times 7.7cm. Price: £426.62 (plus VAT).

RS M03

Stereo cassette deck. W and F: 0.05%. Dolby noise reduction system. FR: 40Hz-14kHz. Bias switch. LED peak meter. Inputs: mic, line, DIN. Outputs: line, headphone, DIN. DC motor. Mains voltage: 110, 125, 220, 240V. Dimensions: 29.7 \times 24 \times 14.7cm. Price: £198.18 (plus VAT).

RSM 63

Stereo cassette deck; W and F: 0.05%. Dolby noise reduction system. FR: 30Hz-16kHz. Bias switch for chrome, ferro-chrome and metal tapes. FL peak meter. Inputs: mic, line, DIN. Outputs: line, headphone, DIN. DC motor. Price: approx. £310.00 (plus VAT).

RS M65

Stereo cassette deck. W and F: 0.035%. Dolby noise reduction system. FR: 40Hz-14kHz. Bias switch for chrome and ferro-chrome. FL peak meter. Inputs: mic, line, DIN. Outputs: line, headphone, DIN. Two motors: 1 direct drive, 1 DC. Price: approx. £310.00 (plus VAT).

TELETON

Teleton Electro (UK) Co Ltd,
Somerton Works, Prince Avenue,
Westcliff-on-Sea, Essex.
Tel: Southend (0702) 337681.

C500

Stereo cassette deck. W and F: less than 0.095%. Dolby B noise reduction unit. FR: 40Hz-12.5kHz normal, 40Hz-14kHz CrO₂. Bias switch for chrome and ferro-chrome. Level indicator. Inputs: Input 0.2mV/KR, line input 25mV 470K, Mic output 0.4mV 10K. Outputs: DIN 750mV 6K, line O/P -380mV 1.5K. Mains: 240V. Dimensions: 42 × 25 × 15cm. Price: on application.

TENSAI

Wren Electronics Ltd,
Dawson Road, Mount Farm Estate,
Milton Keynes, Bucks.
Tel: Milton Keynes (0908) 71611.

TFL 805*

Front loading stereo cassette deck with Dolby noise reduction system. W and F: 0.15%. FR: 40Hz-14kHz ferric, 40Hz-16kHz ±3dB chrome. Bias switch for chrome and ferro-chrome cassettes. VU meters. Inputs: 60mV 80K, 7mV 10K. Outputs: 580mV RCA, 550mV DIN, 1K. DC motor. Mains: 240V. Dimensions: 43 × 13.5 × 34cm. No rec. retail price.

TOSHIBA

Toshiba (UK) Ltd, Toshiba House,
Great South West Road,
Greater London. Tel: 01-751 1281.

PC 4030 *

Stereo cassette deck with Dolby. W and F: 0.09%. S/N: 55dB normal. Equalisation/bias switches. dB meter. Inputs: line in, mic, DIN. DC servo motor with AC generator. Dimensions: 40 × 30 × 13.5cm. Price: £115.11 (plus VAT).

PC 6030*

Stereo cassette deck with Dolby. W and F: 0.07%. S/N: 58dB normal. Separate bias/equalisation switches. Peak reading meters. Inputs: line in, mic, DIN. Dimensions: 40.3 × 19.9 × 25.2cm. Price: £337.33 (plus VAT).

*Tensai T805**Toshiba PC 5460**Toshiba Andres AD-5**Toshiba Andres PC-X6AD***PC 3060**

Stereo cassette deck with Dolby. W and F: 0.09%. S/N: 50dB normal. Separate bias/equalisation switch, dB meter. Inputs: line in, mic, DIN. Bridge servo DC motor. Dimensions: 40 × 30 × 14cm. Price: £124.00 (plus VAT).

PC 5060*

Stereo cassette deck with Dolby. S/N: 56dB normal. Separate bias/equalisation switch, dB meter. Inputs: line in, mic, DIN, DC servo motor with AC generator. Dimensions: 45 × 33.3 × 15cm. Price: £150.67 (plus VAT).

PC 3110

Stereo cassette deck. W and F: 0.25%. S/N: 42dB normal. VU meter. Inputs: line in, mic, DIN. DC servo motor. Price: £66.22 (plus VAT).

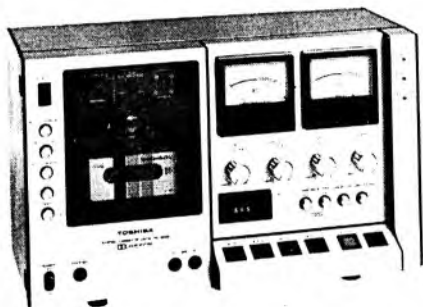
PC 4020*

Stereo cassette deck with Dolby system. W and F: 0.09%. S/N: 52dB normal. dB meter. Inputs:

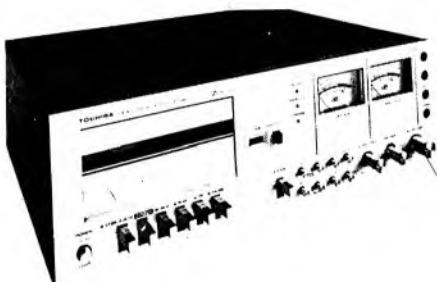
*Indicates entry is illustrated



Toshiba PC4030



Toshiba PC6030



Toshiba PC5060



Toshiba PC4020

line in, mic, DIN. DC servo motor. Dimensions: 40 × 30 × 13.5cm. Price: £106.22 (plus VAT).

PC 230

Stereo cassette deck with Dolby. W and F: 0.1%. FR: 70Hz-10kHz. Two step selector switch. 2 × dB meter. Inputs: mic, line, DIN. Outputs: Headphones, line, DIN. Bridge servo DC motor. Mains: 240V 50Hz. Dimensions: 42 × 28 × 16.6cm. Price: to be announced.

PC 335

Stereo cassette deck with Dolby. W and F: 0.065%. FR: 40Hz-14kHz. Three-step selector. 2 × dB meter. Inputs: mic, line, DIN. Outputs: headphone, line, DIN. Bridge servo DC motor. Mains: 240V 50Hz. Dimensions: 42 × 28 × 14.6cm. Price: to be announced.

PC 530

Stereo cassette deck with Dolby. W and F: 0.06%. FR: 40Hz-14kHz. Three-step bias and equalisation. dB meters with peak LED. Inputs: mic, line, DIN. Outputs: headphone, line, DIN. Bridge servo and DC motor for torque. Mains: 240V and 50Hz AC. Dimensions: 42 × 28 × 15cm. Price: to be announced.

PC 5460*

Stereo cassette deck with Dolby. W and F: 0.65%. FR: 25Hz-15kHz. Three-step bias and equalisation. dB meters with peak/peak hold/VU. Inputs: mic, line, DIN. Outputs: headphone, line DIN. Bridge servo and DC motor for torque. Mains: 240V 50Hz. Dimensions: 42 × 28 × 15cm. Price: to be announced.

AndresAD-5 and PC-X6AD*

Automatic Dynamic Range Expansion System is a new noise reduction system for cassette or open-reel tape decks. This Toshiba audio set-up can make any Hi-Fi cassette deck a better performer with up to 85dB dynamic range and a 30dB improvement in signal-to-noise ratio. Price: to be announced.

■ TRIO

B. H. Morris & Co (Radio) Ltd, Precision Centre, Heather Park Drive, Wembley, Middlesex HA0 1SU. Tel: 01-902 9422.

KX 1030*

Stereo cassette deck with Dolby. W and F: 0.06%. FR: 35Hz-18,000Hz ±3dB. Fully variable bias system. VU and peak lamp. Inputs: line, mic, DIN. Outputs: line, DIN, headphones. Electronically controlled DC motor. Mains: 240V. Dimensions: 43 × 33 × 16cm. Price: 291.11 (plus VAT).



Trio KX 550



Trio KX 650



Trio KX 1030

KX 650*

Stereo cassette deck. W and F: 0.05%. Dolby bias noise reduction system. FR: 30Hz-16kHz CrO₂. Bias switch for chrome and ferro-chrome cassettes. VU meters, Dolby indicator. Inputs: line 77.5mV 80K, DIN 0.1mV 1K, mic × 2 0.19mV 10K. Outputs: line 775mV 100K, DIN 775mV 100K headphones 48.9mV 8-16 ohms. Electronically controlled DC motor. Mains: 240V. Dimensions: 44 × 33.4 × 16.2cm. No rec. retail price.

KX 550*

Stereo cassette deck. W and F: 0.05%. Dolby bias noise reduction system. FR: 30Hz-16kHz CrO₂. Bias switch for chrome. VU meters. Inputs: line 77.5mV/100K, DIN 0.1mV 1K, mic × 2 0.15mV 10K. Outputs: line 489mV 100K, DIN 489mV 100K, headphones 48.9mV 8-16 ohms. Electronically controlled DC motor. Mains: 240V. Dimensions: 40 × 28.1 × 15.9cm. No rec. retail price.



Uher CR 240



Uher CG 330

■ UHER

Uher Ltd, 24 Market Place,
Falloden Way, London NW11.
Tel: 01-455 1771/01-458 8491.

CG 362

Stereo cassette deck with Dolby. W and F: 0.2%. FR: 20Hz-18,000Hz (CrO₂ and FeCr), 20Hz-14,000 (Fe₂O₃). Manual switching for tapes. Twin peak reading record level meters. Inputs: mic 0.2mV 100mV 3.3K. Tun/rec 2mV-600mV 22K. PU 150mV-3V 1M, dubbing 150mV-3V 1M. Outputs: Tuner/rec 0-900mV 16K, dubbing 900mV 470M, headphones 0.75V at 8 ohms. Motors: 3. Mains: 220/110V at 50, 60Hz. Dimensions: 40 × 29.5 × 10.4cm. Price: £328.00 (plus VAT).

CR 210

Stereo cassette deck. W and F: 0.2% DIN. FR: 30Hz-15kHz CrO₂ (DIN). Auto switch for tapes. Moving B or level indicator. Inputs: mic 0.2mV-200mV 500 ohms, car radio 500mV 15K, external speaker 2 × 2V 24 ohms. Outputs: battery operated 2 × 1W, mains operated 2 × 1.3W, built-in mono speaker. 1 non commutator DC motor. Dimensions: 18.5 × 18 × 5.7cm. Price: £340.00 (plus VAT).

CR 240*

Stereo portable cassette deck. W and F: 0.15%. Dolby system. FR: 30Hz-16,000Hz. Bias switch for chrome and ferrochrome. Twin peak reading meters. Inputs: mic, tuner, aux. Outputs: tuner, car radio. Dimensions: 23.5 × 18.5 × 5.9cm. Price: £364.00 (plus VAT).

CG 330*

Stereo cassette deck with Dolby. W and F: 0.13%. FR: 40Hz-18,000Hz. Bias switch. VU meter. Inputs: mic, tuner, line. Outputs: tuner,

*Indicates entry is illustrated

line. Mains: 220V/50Hz/25W. Dimensions: 40 × 10 × 25.8cm. Price: £177.00 (plus VAT).

CG 340

Stereo cassette deck with Dolby. W and F: 0.18% DIN. FR: 40Hz-16,000Hz. Bias switch. VU meter. Price: £174.00 (plus VAT).

CG 350

Stereo cassette deck with Dolby. FR: 30Hz-17,000Hz. Bias switch. VU and peak meters. Three motor - full logic. Price: £291.00 (plus VAT).

■ YAMAHA

Natural Sound Systems Ltd,
10 Byron Road, Wealdstone,
Harrow, Middlesex HA3 7TL.
Tel: 01-863 8622.

TC-320

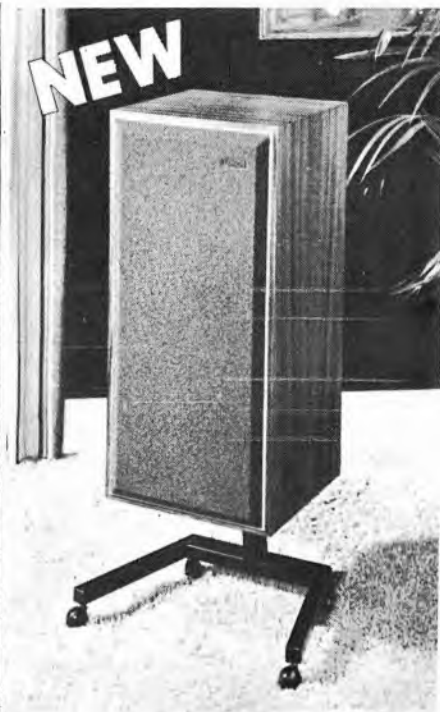
Stereo cassette deck. W and F: less than 0.07%, or 0.02% DIN. Dolby noise reduction system. FR: 40Hz-14kHz ±3dB LH tape, 40Hz-15kHz ±3dB CrO₂ tape. VU meters. Inputs: mic, line, DIN. Outputs: line, phones, DIN. Dimensions: 43.5 × 14 × 28.6cm. Price: on application.

TC 520

Stereo cassette deck. W and F: less than 0.07%. FR: 30Hz-13kHz LH position, 30Hz-15kHz FeCr and CrO₂. VU meters. Inputs: mic, line. Output: line, phones. Dimensions: 43.5 × 16 × 32.7cm. Price: £213.31 (plus VAT).

TC 1000

Stereo cassette deck. W and F: 0.05%. FR: 30Hz-16kHz LH position, 30Hz-18kHz CrO₂. Peak meters. Inputs: mic, line. Dimensions: 46 × 17 × 32.7cm. Price: £399.96 (plus VAT).



Monitor 80

Meticulously designed and manufactured, this 3 speaker unit is brand new and represents the technology of the late seventies projected into the eighties.

*Richard
Allan*

Details of our extensive range of high performance equipment from:—

RICHARD ALLAN RADIO LTD.
Bradford Road, Gomersal, Cleckheaton,
W: Yorks. BD19 4AZ. Phone: 0274-872442.
Grams: Acoustics Bradford.
Telex 51311 Relays.G

Constructional Kits

CONSTRUCTIONAL KITS

*Indicates entry is illustrated.

Abbreviations used in this section are given on page 5.

■ RICHARD ALLAN

Richard Allan Radio Ltd,
Bradford Road, Gomersal,
Cleckheaton, Yorkshire BD19 4AZ.
Tel: Cleckheaton (0274) 872442.

RA8 Assembly*

Speaker kit comprising: LP8B bass/mid unit, DT20 dome treble, CN 820 crossover, BAF wadding, choice of fret material, veneered pre-cut baffle, fixing hardware, terminals. Detailed assembly instructions. FR: 80Hz-20kHz ± 3 dB. HC: 20W RMS 30W programme. Imp: 8 ohms. Recommended enclosure 40 \times 27 \times 25cm. Based on RA8 enclosure. Price: £27.00 (plus VAT).

RA82 Assembly

Speaker kit comprising: HP8B bass/mid unit, DT20 dome treble, CN35L/H filters with control, BAF wadding, choice of fret material, veneered pre-cut baffle, fixing hardware, terminals. Detailed assembly instructions. FR: 50Hz-20kHz ± 3 dB. HC: 45W RMS, 70W pro-

gramme. Imp: 8 ohms. Recommended enclosure: 55 \times 28 \times 25cm. Based on RA82 enclosure. Price: £43.00 (plus VAT).

RA82L Assembly

Speaker kit comprising HP8B bass/mid unit, DT20 dome treble unit, CN35L/H filters with control, BAF wadding, choice of fret material, veneered pre-cut baffle, fixing hardware, terminals. Detailed assembly instructions. FR: 40Hz-20kHz ± 3 dB. HC: 45W RMS, 70W programme. Imp: 8 ohms. Recommended Labyrinth enclosure: dimensions 73 \times 35 \times 29cm. Price: £46.50 (plus VAT).

Tango Assembly

Speaker kit comprising: FB8 bass/mid unit, DT30 treble unit, CN54M crossover, BAF wadding, choice of fret material, fixing hardware, terminals. FR: 90Hz-20kHz ± 3 dB. HC: 20W RMS 30W programme. Impedance: 8 ohms. Recommended enclosure: 40 \times 27 \times 25cm. Based on Tango enclosure. Price: on application.

Maramba Assembly

Speaker kit comprising: DT30 treble unit, FB8 bass/mid unit, CN54M crossover, AB8 auxiliary bass radiator. Choice of fret material, fixing hardware, BAF wadding. FR: 80Hz-20kHz ± 3 dB. HC: 20W RMS 30W programme. Impedance: 8 ohms. Recommended enclosure: 60 \times 25 \times 22cm. Based on Maramba enclosure. Price: on application.

Charisma Assembly

Speaker kit comprising: CG12C bass unit, PB8 mid-range unit, DT30 treble unit, CN230 crossover network. BAF wadding, choice of fret material, fixing hardware, terminals. FR: 40Hz-20kHz ± 3 dB. HC: 30W WRMS 45W programme. Impedance: 8 ohms. Recommended enclosure: 69 \times 39 \times 31cm. Based on Charisma enclosure. Price: on application.

■ AUDIOKITS

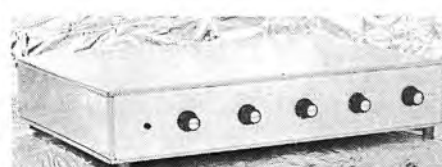
Audiokits, 6 Mill Close, Borrowash, Derby.
Tel: Derby (0332) 674929.

Audiokits 35*

A constructional kit for audio amplifier of



Richard Allen RA8 Assembly



Audiokits 35

*Indicates entry is illustrated

nominal power rating of 35W into 8 ohms designed with particular reference to loudspeaker loads of a highly reactive nature. Price: £112.50 (inc VAT, P&P).

■ BADGER

Badger Sound Services Ltd,
46 Wood Street, Lytham St. Annes,
Lancs FY8 1QG.
Tel: St. Annes (0253) 729247.

Loudspeaker Kits:

The following kits contain drive units, crossover networks, wool or wadding, felt panels as appropriate, duct tubes as appropriate, T-Nuts, grille fixing studs and input panels to make a pair. Cabinet details available on request. Woodwork not supplied.

System A

14 litre bookshelf system 17in. H × 10in. W × 8in. D. LF unit Sonaudax HD17B25-H, HF unit Sonaudax HD129D25, suitable for amplifiers 15-30 watts under domestic conditions. 8 ohms imp.

System B

21 litre bookshelf system 18½in. H × 11in. W × 9in. D. LF unit Sonaudax HD20B25-J-4, HF unit Sonaudax HD129D25, suitable for amplifiers 15-35 watts under domestic conditions. 8 ohms imp.

System C

42 litre reflex system 25in. H × 12½in. W × 12in. D. LF unit Sonaudax HD20B25-H-4, HF unit Sonaudax HD129D25, suitable for amplifiers 15-40 watts under domestic conditions. 8 ohms imp.

System D

84 litre floor standing reflex system 33in. H × 17in. W × 14in. D. LF unit Sonaudax HD24S45, MF Sonaudax HD17B25-H, HF unit Sonaudax HD129D25, suitable for amplifiers 15-50 watts under domestic conditions. 8 ohms imp.

System G

35 litre bookshelf system 23in. H × 12½in. W × 11in. D. LF unit Peerless KP825WF, HF unit Peerless K010DT, suitable for amplifiers 10-60W. 8 ohms/imp.

System H

25 litre bookshelf system 20in. H × 12in. W × 9in. D. LF unit Peerless K0825WG, HF unit Peerless MT24 HFC, suitable for amplifiers 10-40 watts. 8 ohms imp.

System 107

High efficiency high power (100 watt) 90 litre system. Uses two bass units per speaker. 29in. H × 17in. W × 14½in. D. Bass units 2 × Peerless KP100WF, MF unit Peerless K040MRF, HF unit Peerless K010DT. 4 ohms imp.

B110/T27 Monitor Quality Compact

Small monitor system comparable in all essential respects with similar commercial types. 12in. H × 7½in. W × 9in. D. LF unit KEF B110, HF unit KEF T27. Sophisticated crossover networks. Imp 8 ohms. Cabinet/crossover details not available separately.

System 104

30 litre bookshelf system 22in. H × 12in W × 10in. D. LF unit KEF B200, HF unit Isophon KK8. Imp 8 ohms.

System 108

As for system 104 but with Sonaudax HD129D25 tweeter.

System 68

As for system 104 but with Peerless K010DT tweeter.

NOTE

For improved bass response systems 104, 108 and 68 could be constructed in the system C enclosure and additional items would be included on request.

System J

Now published as the *Hi-Fi Answers Compact*. 60 litre system 28 × 13½ × 13in. LF unit modified Sonaudax HD24S45C, mid unit modified Peerless K040, HF unit Isophon KK8. Suitable for amplifiers 15-70W, Impedance: 8 ohms under domestic conditions.

System K

7 litre bookshelf system 12 × 9½ × 7¼in. LF unit, Peerless K050WG, HF unit Peerless KD10DT or MT24CT. Suitable for amplifiers 10-40W under domestic conditions.

System L

14 litre high power bookshelf system 19½ × 10 × 8½in. Twin Peerless K050WG bass unit, HF unit Peerless KD10DT or MT24CT. Suitable for amplifiers 15-80W under domestic conditions. 8 ohms impedance.

Magazine Designs

Kits available for most current loudspeaker magazine designs. Particulars on request.

Prices

On application.

■ CATRONICS

Catronics Ltd, Communications House, 20 Wallington Square, Wallington, Surrey.
Tel: 01-669 6700.

Teletext Decoder Kit

Based on design published in *Wireless World*. Decoder has all the usual features including full colour characters graphics, newflash, subtitle and time page facilities. To take advantage of latest facilities available eg double height characters, colour background, conceal/reveal etc, an additional module (Board '3') is available. The kit contains the printed circuit boards and all components necessary to build the complete decoder including power supply and video switching unit. Assembly instructions, full layout diagrams and reprint of the *Wireless World* articles are supplied. Price: £145.00 (with board extra £33.65) (plus VAT).

■ EAGLE

Eagle International, Precision Centre, ' Heather Park Drive, Wembley HA0 1SU.
Tel: 01-902 8832.

SK 210

Speaker kit (two-way) complete with crossover and terminals. No soldering required. HC: 10W RMS at 8 ohms. FR: 150Hz-14kHz ± 5 dB. Drive units: 165mm bass and high-range. Price: £9.60 (plus VAT).

SK 215

Speaker kit (two-way) complete with crossover and terminals. No soldering required. HC: 15W



Eagle SK 335

RMS at 8 ohms. FR: 120Hz-20kHz ± 4 dB. Drive units: 203mm bass and high-range. Price: £17.85 (plus VAT).

SK 320

Speaker kit (three-way) complete with crossover and terminals. No soldering required. HC: 20W RMS at 8 ohms. FR: 90Hz-20kHz ± 4 dB. Drive units: 203mm bass mid and high-range. Price: £22.95 (plus VAT).

SK 325

Speaker kit (three-way) complete with crossover and spring terminals. No soldering required. HC: 25W RMS at 8 ohms. FR: 80Hz-20kHz ± 4 dB. Drive units: 254mm bass mid and high-range. Price: £41.75 (plus VAT).

SK 335*

Speaker kit (three-way) complete with crossover and spring terminals. No soldering required. HC: 35W RMS at 8 ohms. FR: 75Hz-20kHz ± 4 dB. Drive units: 305mm bass mid and high-range. Price: £56.75 (plus VAT).

■ HAFLER

Howland-West, 3-5 Eden Grove, London N7 8EG. Tel: 01-609 0293.

DH 101 (Kit)

Pre-amplifier with output of 3W. THD: 0.001%. FR: 20Hz-20kHz +0dB -0.25dB. Inputs: phono 6mV 47K, others 300mV at 25K. Controls: power, volume, balance, bass, treble, dubbing, tone control defeat. Dimensions: 35 x 8.25 x 21.3cm. Features: two phono, tuner, aux, two tape. Price: £160.00 in kit, £240.00 assembled (plus VAT).

DH 200

Power amplifier with output of 100W. FR: 20Hz-20kHz. Inputs: 1.5V 100W 80 ohms. Damping factor: 150-1kHz 8 ohms, 50 to 10K 8 ohms. Features: complementary push-pull circuit from input to output. Separate jacks provide choice of either DC coupled or conventional capacitor input. Price: £260.00 in kit, £340.00 assembled (plus VAT).

■ JORDAN WATTS

Jordan Watts Ltd, Benlow Works, Silverdale Road, Hayes, Middlesex UB3 3BW.
Tel: 01-573 6928.

H.F. Unit Kit

Wide angle dome tweeter, moving coil. Capacity for up to 80W systems. FR: 1500-22,000Hz. Rec. cross-over frequency: 1500Hz. Supplied

*Indicates entry is illustrated

complete with 50 ohms wirewound vars resistance, capacitor and connector block. Price per kit: £9.90 (plus VAT).

■ PEERLESS

Distributor: Ross Electronics,
32 Rathbone Place, London W1P 1AD.
Tel: 01-580 7112.

Peerless loudspeaker kits comprise expertly chosen and accurately matched drive units which are arranged to operate over their optimum frequency ranges through specially designed dividing networks. All Peerless kits contain: speaker fixing clamps, sealing strip, solderless connecting cables, and comprehensive instructions on system connection and cabinet construction. All kits have an input imp of 8 ohms.



Peerless Kit 1120

Kit 1060*

8¼in. woofer with foam roll surround. 1in. dome tweeter. HC: 50W. FR: 30-22,000 Hz. Crossover: 1600Hz. Rec. cabinet vol: 20 litres. Price (per pair): £81.90 (plus VAT).

Kit 1070*

2 × 7in. woofer with foam roll surround. 4in. enclosed midrange. 1in. dome tweeter. HC: 60W. FR: 25-22,000Hz. Crossover: 500 and 4000Hz. Rec. cabinet vol: 30 litres. Price: £69.00 (plus VAT) each kit.

Kit 1120*

2 × 10in. woofer with foam roll surround. 4in. enclosed midrange. 1in. dome tweeter. HC: 100W. FR: 20-22,000Hz. Crossover: 500 and 4000Hz. Rec. cabinet vol: 60 litres. Price (each kit): £79.65 (plus VAT).

Kit 2050

8¼-in. woofer with foam roll surround and 2-1/8in. tweeter. HC: 50W. FR: 50 to 20,000Hz. Crossover: 1500Hz. Rec. cabinet volume: 20 litres. Price (per pair): £55.65 (plus VAT).

Kit 2060

8¼-in. woofer with foam roll surround, 4½-in. midrange and 2-1/8in. cone tweeter. HC: 50W. FR: 50-20,000Hz. Crossover: 700 and 4000Hz. Rec. cabinet volume: 20 litres. Price (per pair): £74.70 (plus VAT).

■ SEAS

Radio Components Ltd, Unit E2, Hunton Bridge Works, Bridge Road, Hunton Bridge, nr Watford, Herts.

Tel: Watford (92) 68399.



Peerless Kit 1060



Peerless Kit 1070

Loudspeaker Kits*

Kit 223 is a three-way system at a reasonable price, designed for use in a 20-25 litres closed cabinet. The 5cm tweeter is viscously damped by magnetic oil in the airgap. This ensures a smooth frequency response and a low distortion level at high frequencies. Price: £42.52 per pair (plus VAT).

Kit 253 is designed for bass reflex cabinets. The 1in. dome-tweeter has a vacuum formed, high loss plastic diaphragm, with a shape optimised for the high frequency range. Price: £67.66 per pair (plus VAT).

Kit 403 is a 3-way system with a 10in. woofer, a 4.5in. midrange unit and a 1in. dome tweeter. In a 40 litres, ported cabinet this system delivers smooth and effortless reproduction of the entire audible sound spectrum. Price: £83.84 per pair (plus VAT).

Kit 603 is a 3-way system, built for a 60 litres bass reflex cabinet. High efficiency and excellent reproduction of transient characterises this system. Price: £127.20 per pair (plus VAT).

Disco 47

This is a loudspeaker kit designed to reproduce high sound levels with little distortion. Disco-47 is a 4-way system, consisting of 7 units. Two 12in. woofers, two 6in. midrange units, two 4in. tweeters and a horn loaded supertweeter. The system is designed for use in a bass reflex cabinet of about 100 litres internal volume. This secures a very good transient performance, especially in the low frequency area.

The system has a power handling capacity of 160W and is equipped with an automatic protection device for the midrange and treble units. At high power levels the protection circuit will be engaged and the warning lights marked «tweeter protection» and «midrange protection» will light up.

Empty cabinets for Disco-47 are available. They are supplied in black veneer finish. Damping material, cloth, frontgrille and cabinet stands are included. Price: £192.44 per pair. (plus VAT).

Cabinet Kits

Cabinet Kits. If you prefer not to build your own boxes, SEAS Cabinet Kits are available for all loudspeaker kits. Cabinet kits for 223, 253, 403 and 603 are supplied as ready cut chipwood boards, with a brown laquered ash-veneer finish. The front baffle has a dark brown finish. Everything the home constructor will need is included in the cabinet kits, such as damping material, cloth, glue, and front grille. They are designed for ease of construction and require no

*SEAS Kit 253**Teleradio THD Analyser*

special tool for assembly. A detailed building instruction is enclosed. The SEAS cabinet kits are acoustically optimised to each loudspeaker kit. This is an easy way of building professional loudspeaker cabinets to a reasonable price. Prices: 223: £37.28. 253: £38.48. 403: £47.40. 603: £72.54. Disco cab: £145.82. Prices per pair (plus VAT).

TELERADIO

The Teleradio Co. (Edmonton) Ltd.
325 Fore Street, London N9.
Tel: 01-807 3719.

Kits

Suppliers of kits and modules for high specification amplifiers and instrumentation.

AO 113

Very low distortion signal generator for checking Hi-Fi systems. Price: from £24.00 (assembled) (plus VAT).

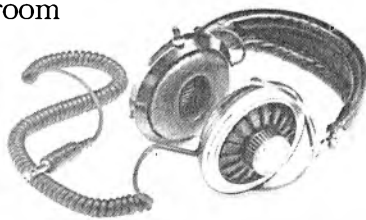
Distortion Analyser*

THD analyser. Low cost device as a kit or assembled. Price: from £32.00 (plus VAT).



Whatever you paid for your loudspeakers they can't sound as good as these headphones

Loudspeakers are at the mercy of their environment. They can't develop accurate bass in a living room and only one person can occupy the optimum listening place. These Ross Headphones provide a direct link between ear and drive unit across unobstructed space and do produce accurate bass, plus convincing midrange and realistic treble. It doesn't cost a lot to prove it to yourself and if you spent *that* much on your loudspeakers, you won't even miss it.



RE - 258 (Above) Drive units employ rare-earth supermagnets and specially curved diaphragms for frequency response that extends beyond the range of all but the finest speakers made. Imp: 4-1000 ohms. F.R. 20-20,000 Hz. Sens: 125 SPL @ 1mW. Weight 150 gm. Around £22.00

RE - 257 (Top left) High-velocity with advanced design drive units and independent volume controls. Imp: 4-32 ohms. F.R. 20-22,000 Hz. Sens: 90 db S.P.L. @ 1mW. Weight 240 gm. Around £23.00

RE - 268 (Bottom left) Superlight weight with rare-earth supermagnet drive units. Imp: 4-150 ohms. F.R. 18-22,000 Hz. Sens: 100 db S.P.L. @ 1mW. Weight 120 gm. Around £31.00

Write or phone for information on the full range of Ross Headphones.



**ROSS
ELECTRONICS**

32 Rathbone Place, London W1P1AD.
Telephone: 01-580 7112.

Headphones and Accessories

* Indicates entry is illustrated

Abbreviations used in this section are given on page 5.

■ ADASTRA

Adastra Electronics Ltd, Unit N22,
Cricklewood Trading Estate,
Claremont Road, London NW2 1TU.
Tel: 01-452 6288.

H7

Mono headphones. Imp: 16 ohms. Maximum input: 250mW. FR: 20Hz-10kHz. Weight: 15oz. 5ft. lead. Fitted with dynamic boom mic. Two-tone grey. Adjustable headband. Washable ear cushions. Price: £12.60 (plus VAT).

H6

Dual impedance mono headphones. Specially designed for monitoring, electronic musical instruments, language laboratories, etc. Instant switching from 8-16 ohms to 4K. Adjustable earpieces. Soft padded ear cushions. FR: 25Hz. Power handling capacity: 0.5W. Supplied with 10ft coiled cord lead fitted with jack plug. Price: £13.20 (plus VAT).

H22

Stereo moving coil headphone. FR: 20Hz-20kHz. Imp: 8 ohms. Weight: 0.30kg. Finish:



Adastra H25

black leather stitching. Features: open back earpieces. Price: £14.80 (plus VAT).

H25*

Stereo moving coil headphone. FR: 15Hz-20kHz. Imp: 4-300 ohms. Weight: 0.40kg. Finish: black stitched leather. Features: self-coiling lead. UVD system. 3W power handling. Price: £21.00 (plus VAT).

H61 Three-Way Junction Box

Providing headphone/loudspeaker/both listening. Two tone grey casing can be wall mounted or free standing. Features: stereo jack sockets, slide switch selection. Rating: 20W. Price: £1.65 (plus VAT).

H62 Remote Control Unit (Stereo)

With variable balance and gain controls, headphone/loudspeaker-switching, in free standing case. Price: £3.89 (plus VAT).

H65 Stereo Headphone Adaptor

Instant switching between headphone and loudspeaker listening. DIN plug connections to speaker. Jack plug entry for two headphone. Price: £4.32 (plus VAT).

■ AIWA

Aiwa Sales & Service (UK) Ltd,
30-32 Concord Road,
Westwood Park Trading Estate,
London W3 0TH.
Tel: 01-993 1672.

HP 30

Dynamic stereo headphone. FR: 20Hz-20kHz. Imp: 4-32 ohms. Weight: 350g. Price: £18.72 (plus VAT).

■ AKG

AKG Acoustics Ltd, 191 The Vale,
London W3.
Tel: 01-749 2042.

K 40*

Dynamic moving coil. FR: 50Hz-13kHz. Imp: 200 ohms. Weight: 145g. Features: large diaphragm, open dynamic stereo headphones, detachable ear pads, lightweight. Price: £15.00 (plus VAT).

K 80

Dynamic moving coil. FR: 20Hz-18kHz. Imp: 200 ohms. Weight: 180g. Features: large diaphragm, open dynamic stereo headphones, soft contact ear pads, lightweight. Price: £22.70 (plus VAT).

*Indicates entry is illustrated



AKG K40



AKG K240

K 141*

Dynamic moving coil. FR: 20Hz-20kHz. Imp: 600 ohms. Weight: 265g. Features: semi open large diaphragm stereo headphone. Self-adjusting headband and ear pieces. Price: £34.20 (plus VAT).

HP 500

Omni-dynamic stereo headphones. FR: 15Hz-25,000Hz. Imp: 4-50 ohms. Weight: 410g. Price: £44.93 (plus VAT).

■ **AKAI**

Akai (UK) Ltd, c/o The Production Village, 82-86 Cricklewood Lane, London NW22 2DP. Tel: 01-450 2011.

ASE 7

Headphone: FR: 30Hz-20kHz. Imp: 16 ohms. Weight: 22.5kg with cord. Lightweight, left and right units marked, padded earpieces. Standard controls. Price: £13.33 (plus VAT).

ASE14

High velocity headphone. FR: 30Hz-20kHz. Imp: 4-32 ohms. Weight: 210gm. Price: £17.96 (plus VAT).

ASE80C

Electret condenser headphone. FR: 20Hz-22kHz. Imp: 4-16 ohms. Weight: 58gm. Price: £67.15 (plus VAT).

■ **AMSTRAD**

Amstrad Consumer Electronics Ltd, 1-7 Garman Road, London N17 0UF. Tel: 01-801 4431.

HPS 6A*

Stereo headphones. FR: 20Hz-25kHz. Imp: 8



AKG K141

K 140

Dynamic moving coil. FR: 20Hz-20kHz. Imp: 600 ohms. Weight: 175g. Features: large diaphragms, open dynamic stereo headphone, lightweight, soft contact earpieces, self adjusting headband, 14 diaphragms. Price: £27.00 (plus VAT).

K 160

Dynamic moving coil. FR: 16Hz-20kHz. Imp: 600 ohms. Weight: 330g. Features: closed dynamic stereo headphones, flexible double headband, detachable earpieces. Price: £35.20 (plus VAT).

K 240*

Dynamic moving coil. FR: 16Hz-20kHz. Imp: 600 ohms. Weight: 295g. Features: large earcups each containing 1 transducer and 6 passive diaphragms to improve frequency responses. Open/closed stereo headphone. Price: £50.50 (plus VAT).

HEADPHONES AND ACCESSORIES



Amstrad HPS 6A



Bang and Olufsen U70

ohms. Weight: 500g. Finish: chrome metal-work. Features: Mylar cones, air cooled reinforced headband, padded earcups with press-studs for easy detachment. Controls: Independent variable volume for left and right ear-pieces, mono/stereo slide switch. Price: £12.95 (plus VAT).

■ ARNOLD ELECTRONICS

Janorhurst Ltd, Century House, Shortmead Street, Biggleswade, Beds.
Tel: Biggleswade (0767) 314252.

Six-way Headset Switch

Designed as a headset comparator with compact styling to enable its use in the home where several may wish to enjoy listening with headsets. Dimensions: 13 × 9 × 4.5cm. Easy to connect. Silver brushed aluminium case. Suitable for language laboratories. Switch to disconnect speakers. Price: £9.95 (plus VAT).

Audio Switch Units

Various switch units for selecting different combinations of speakers and headsets. With 'S' denoting speaker outputs, 'H' headphone outputs and 'C' control. Finished in silver brushed aluminium. Prices range from £6.00 to £9.75 (plus VAT).

■ AUDIO TECHNICA

Harman UK, St Johns Road, Tylers Green, High Wycombe, Bucks HP10 8HR.

Tel: Penn (049 481) 5331.

ATH-1 Planar

Wave dynamic headphones. FR: 30Hz-20kHz. Max. Input Power 1,000mW. Weight: 175g. Voice Coil: Photo-etched aluminium swirl 8 μ m. Price: £15.66 (inc VAT).

ATH-3

Velocity dynamic headphones. FR: 50Hz-20kHz. Max. Input Power 250mW. Weight: 240g. Voice Coil: 40m Wire Bobbinless/low Mass. Price: £22.42 (inc VAT).

ATH-4

Velocity dynamic headphones. FR: 25Hz-20kHz. Max. Input 250mW. Weight: 260g. Voice Coil: 40 μ m. Wire Bobbinless/Low Mass. Price: £28.67 (inc VAT).

ATH-5

Velocity dynamic headphones. FR: 25Hz-20kHz. Max. Input: 250mW. Weight: 260g. Voice Coil 40 μ m Wire Bobbinless/Low Mass. Price: £34.01 (inc VAT).

ATH-7

Monopolar electret condenser headphones. FR: 10Hz-25kHz. Max. Input power 5000mW. Weight: 275g. Harmonic distortion 0.3%. Price: £72.73 (inc VAT).

ATH-8

Bipolar electret condenser headphones. FR: 10Hz-25kHz. Max. Input power: 10W. Weight: 275g. Harmonic distortion 0.1%. Price: £127.95 (inc VAT).

*Indicates entry is illustrated

■ BANG & OLUFSEN

Bang & Olufsen UK Ltd, Eastbrook Road,
Gloucester GL4 7DE.
Tel: Gloucester (0452) 21591.

U70*

Orthodynamic semi-open headphones. FR: 16Hz-20kHz. Imp: 140 ohms. Weight: 300g. Finish: leather/aluminium. Features: adjustable headband, adjustable cups. Price: £28.00 (plus VAT).

■ BEYER

Beyer Dynamic (GB) Ltd,
1 Clair Road, Haywards Heath, Sussex.
Tel: Haywards Heath (0444) 51003.

DT96A*

Lightweight moving coil stereo headphones. FR: 30Hz-17kHz. Imp: 50 ohms or 400 ohms per earpiece. Max power: 100mW. Various cable lengths and terminations available. Also available with coiled cable. Price: £24.89 (plus VAT), without lead.

DT100*

Moving coil stereo headphones. Sensitivity: 110dB. FR: 30Hz-20kHz. Various impedances and cable terminations available. Price: £28.22 (plus VAT).

DT48

Moving coil stereo headphones. FR: 16Hz-20kHz. Imp: 8 ohms, 25 ohms, 200 ohms per earpiece. Rated input: (8 ohms) 80mV, (25 ohms) 150mV (200 ohms) 450mV. Cable: 6½ft open end. Price: £88.53 (plus VAT).

DT480

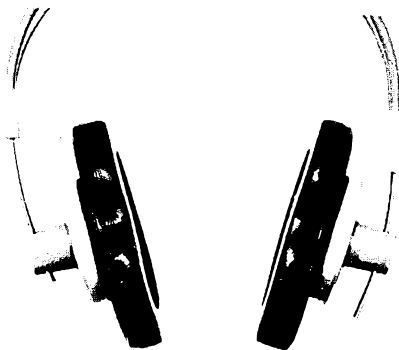
Moving coil stereo headphones. FR: 20Hz-20kHz. Various impedances available. Rated input: 350mW, max 1W. Cable: 10ft. Various terminations offered. Price: £55.33 (plus VAT), without lead.

DT49

Telephone type handset with coloured replaceable ear pads. FR: 30-13,000Hz. Imp: 15 ohms. Weight: 220g. Finish in black, red, grey. Price: £23.52 (plus VAT).

DT109

Dynamic headphones-microphones combination. FR: 30Hz-20,000Hz headphone and 40-12,000Hz microphone. Hypercardioid mic available as DT109V fitted with induction loop receiver. On-off switch and separate volume controls for phone and mic. Price: £50.49 (plus VAT), without lead.



Beyer DT96



Beyer DT100

DT202

Stereo dynamic transducer. FR: 20-2,000Hz. Imp: 400 ohms. Weight: 360g. Straight or coiled leads available with choice of terminations (extra). Price: £36.65 (plus VAT).

DT204

Quad/stereo moving coil. FR: 20-20,000Hz. Imp: quad 200 ohms, stereo 100 ohms. Weight: 435g. Quad/stereo switch and two volume controls for front to rear balance. Price: £72.62 (plus VAT).

DT302

Stereo moving coil. FR: 20-20,000Hz. Imp: 600 ohms. Weight: 66g. Price: £13.48 (plus VAT).

DT440

Open high velocity dynamic transducer. FR: 20-20,000Hz. Imp: 600 ohms. Weight: 260g. Suitable for connection to source impedances from 4-1,000 ohms. Complete with lead. Price: £28.14 (plus VAT).



Dynatron SP6 and SP6

DT441

Moving coil. FR: 20Hz-20kHz. Imp: 600 ohms. Weight: 260g. Black finish. Open type stereo-telephone. Price: £35.20 (plus VAT).

■ **DYNATRON**

Dynatron Radio Ltd, Ditton Walk, Cambridge CB5 8QD.
Tel: Teversham (022 05) 2781.

SP6*

Orthodynamic stereo headphone. FR: 16Hz-20kHz. Imp: 140 ohms. Weight: 210g. Colour: black. Lead wire supplied with standard jack plug. No rec. retail price. Approx "going" price: £30.00 (inc VAT).

SP5

Headphone with FR: 20Hz-20kHz. Imp: 100 ohms. Lead wire supplied with standard jack plug. No rec. retail price. Approx "going" price £17.00 (inc VAT).

■ **EAGLE**

Eagle International, Precision Centre, Heather Park Drive, Wembley HA0 1SU.
Tel: 01-902 8832.

SE 640

Polymer-film transducer. Black/brushed metal finish. Fully adjustable leather effect padded headband, felt covered earpads, lightweight coiled lead with moulded plug. Price: £14.25.

SE 660

Polymer-film transducer. Black/brushed metal. Fully adjustable leather effect padded



Goodmans OHP 10

headband, felt covered earpads. Lightweight. Coiled lead with moulded plug. Volume controls. Price: £19.50.

■ **GOODMANS**

Goodmans Loudspeakers Ltd, Downley Road, Havant, Hants PO9 2NL.
Tel: Havant (070 12) 486344.

OHP10*

Ortho dynamic headphones. FR: 16Hz-20kHz. Imp: 140 ohms. Weight: 21kg. Black finish. Sensitivity: >90dB for 1mV. No rec. retail price.

*Indicates entry is illustrated

■ GRUNDIG

Grundig International Ltd, Newlands Park, London SE26 5NQ. Tel: 01-659 2468.

221*

Moving coil stereo headphones. FR: 20Hz-20kHz. Imp: 220-425 ohms. Distortion Factor: 0.5% at 120 phon. Fitted with stereo plug (DIN 45 327). Weight: 550g. Finish: black. Features: volume and balance controls fitted to earpieces. No rec. retail price.

216

Moving coil headphones. FR: 20Hz-20kHz. Imp: 400 ohms. Padded. No rec. retail price.

219

Moving coil headphones. FR: 20Hz-20kHz. Imp: 400 ohms. Padded. No rec. retail price.

■ HITACHI

Hitachi Sales (UK) Ltd, Hitachi House, Station Road, Hayes, Middlesex UB3 4DR. Tel: 01-848 8787.

HD 70

Moving coil headphone. FR: 20Hz-20kHz. Imp: 25 ohms. Sensitivity: 10dB/mW. Input maximum: 300mW. Price: £21.95 (inc. VAT).

HD 80

Moving coil headphone. FR: 20Hz-20kHz. Imp: 100 ohms. Sensitivity: 103dB/mW. Input maximum: 500mW. £28.75 (inc. VAT).

■ HOWLAND-WEST

Howland West, 3-5 Eden Grove, London N7 8EQ. Tel: 01-609 0293.

CIS 1100*

Moving coil headphone. FR: 18Hz-20,000Hz. Imp: 4-150 ohms. Weight: 4.6oz. Anodised aluminium finish. Light-weight, super thin 25 micron diaphragm. Price: £23.00 (plus VAT).

CIS 1500

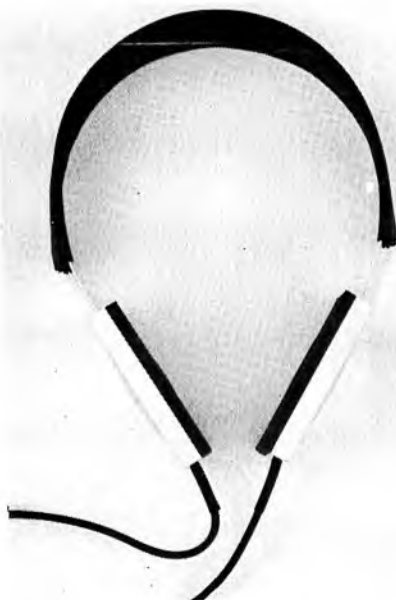
Moving coil headphone. FR: 18Hz-20,000Hz. Imp: 4-150 ohms. Weight: 5.5oz. Black and silver finish. Light-weight, stretch cord, standard jack plug. Price: £29.00 (plus VAT).

CIS 550*

Moving coil headphone. FR: 20Hz-18kHz. Imp: 8 ohms. Weight: 10.7oz. White with black headband and earpads. Stretch cord, standard jack, left and right volume controls, mono-/stereo switch. Price: £13.00 (plus VAT).



Grundig GHDS 221



Howland-West CIS 1100

CIS 660

Moving coil headphone. FR: 20Hz-20kHz. Imp: 8 ohms. Weight: 12.7oz. White with black headband and earpads. Stretch cord and standard jack-plug. Separate right and left volume and tone controls. Mono/stereo switch. Price: £19.00 (plus VAT).

CIS 250

Moving coil headphone. FR: 20Hz-18kHz. Imp: 8 ohms. Weight: 13oz. Black finish. Special stretch cord, standard jack plug. Price: £15.75 (plus VAT).



Howland West CIS 550



Howland West CIS 950



Howland West CIS 1750



Howland West CIS 850

CIS 1750*

Moving coil headphone. FR: 18Hz-22kHz. Imp: 4.15 ohms. Weight: 7oz. Finish: black/aluminium. Features: two rare-earth speakers for upper/lower frequency, standard jack. Price: £42.00 (plus VAT).

CIS 850*

Moving coil headphone. FR: 20Hz-20kHz.

Imp: 5.3 ohms. Weight: 5.3oz. Finish: black. Features: adjustable headband, standard jack. Price: £17.50 (plus VAT).

CIS 950*

Moving coil headphone. FR: 20Hz-17kHz. Imp: 6.8 ohms. Weight: 5.6oz. Finish: black. Features: adjustable headband, standard jack, v/control. Price: £18.00 (plus VAT).

*Indicates entry is illustrated

■ **JVC**

JVC (UK) Ltd, Eldonwell Trading Estate,
Staples Corner, 6-8 Priestley Way,
London NW2 7AF.
Tel: 01 450 2621.

HM 200E

Moving coil headphone. FR: 20Hz-20kHz.
Imp: 8 ohms. Weight: 600g. Finish: black/
silver. Price: £54.50 (inc VAT).

HP550

Moving coil headphone. FR: 20Hz-20kHz.
Imp: 8 ohms. Weight: 215g. Finish: black/
silver. Price: £23.00 (inc VAT).

HP660

Moving coil high velocity headphone. FR:
20Hz-20kHz. Imp: 8 ohms. Weight: 195g.
Finish: brown/gold. Price: £29.75 (inc. VAT).

■ **KOSS**

Tape Music Distributors Ltd,
114 Ashley Road, St Albans, Herts AL1 5JR.
Tel: St Albans (56) 64337.

K/125

Moving coil dynamic stereo headphone. FR:
10Hz-16,000Hz. Imp: 100 ohms at 1kHz.
Weight: 365g. THD: less than 1% at 1kHz,
100dB-SPL. Pneumalite ear cushions. Adjust-
able headband with stainless steel bands, forked
slide bars and soft vinyl cover. Price: £18.45
(plus VAT).

K/135

Moving coil stereo headphones. FR:
10Hz-18,000Hz. Imp: 100 ohms at 1kHz.
Weight: 383g. THD: less than 1% at 1kHz,
100dB-SPL. Pneumalite ear cushions. Adjust-
able headbands with stainless steel bands, self-
adjusting yokes, soft vinyl cover. Finish in
ebony teak with brown cushions. Price: £22.50
(plus VAT).

K/145*

Moving coil dynamic stereo headphone. FR:
20Hz-20,000Hz. Imp: 90 ohms at 1kHz. THD:
less than 5% at 1kHz, 100dB-SPL. Weight:
388g. Pneumalite ear cushions. Adjustable
headband with stainless steel bands, self-
adjusting yokes, soft vinyl cover. One rotary
volume balance control on each earcup. Price:
£29.95 (plus VAT).

K6 LC

Moving coil dynamic headphones. FR: 10Hz-
16kHz. Imp: 94 ohms. Weight: 507g. Bronze
finish. Washable foam-filled vinyl cushions.



Koss K145



Koss Easy Listener



Koss Phase 2 + 2

Extendable headband with pivoted, self-adjusting yokes and sponge cushioned cover. One slide-type volume balance control on each earcup. Price: £14.75 (plus VAT).

PRO 4AA

Moving coil (dynamic) headphone. FR: 10Hz-22kHz. Imp: 230 ohms. Weight: 580g. Mushroom finish with black cushions. Extendable stainless steel headband with self-adjusting pivoting yokes and sponge cushioned cover. Koss Pneumalite cushions. Boom mount. Price: £22.90 (plus VAT).

PRO 5 LC

Moving coil dynamic headphones. FR: 10Hz-20kHz. Imp: 185 ohms. Weight: 685g. Beige with black cushions. Ext. stainless steel headband with self-adjusting pivoting yokes and sponge cushioned cover. Koss Pneumalite cushions. Boom mount. One rotary volume balance control on each earcup. Price: £40.00 (plus VAT).

Phase 2

Moving coil dynamic headphones. FR: 10Hz-22kHz. Imp: 299 ohms. Weight: 680g. Bronze finish with black cushions. Ext. Stainless steel headband with self-adjusting pivoting yokes and sponge cushioned cover. Koss Pneumalite cushions. Book mount. One rotary Panoramic source control on each earcup. Slide ambience expander located on right cup, momentary slide comparator switch on left cup. Price: £48.50 (plus VAT).

Technician 2

Moving coil dynamic headphones. FR: 10Hz-22,000Hz. Imp: 245 ohms. Weight: 450g. Brown finish with brown cushions. Ext. stainless steel headband with self-adjusting yokes and extra-wide glove-soft vinyl cover. Koss Pneumalite cushions. Brown "Y" shaped coil cord. Boom mic mount on left earcup. Price: £41.55 (plus VAT).

Technician VFR

Moving coil dynamic headphones. FR: 10Hz-22kHz. Imp: 245 ohms. Weight: 475g. Black finish with black cushions. Wide extendable steel headband with self-adjusting yokes and stitched vinyl cover. Koss Pneumalite cushions. Boom Mount. One slide variable frequency response control on each earcup. Price: £46.40 (plus VAT).

HV2*

Moving coil dynamic headphones velocity operated. FR: 20Hz-20kHz. Imp: 168 ohms. Weight: 280g. Black finish with grey cushions.



Koss K6A



Koss K6ALC



Koss Pro 4 Triple A

*Indicates entry is illustrated



Koss HV-2

Flexible Acetal headband with padded sponge and self-adjusting pivoting yokes. Soft acoustical sponge ear cushions. High velocity lightweight open-back stereoheadphone. Price: £18.50 (plus VAT).

Easy Listener*

Moving coil dynamic headphones, velocity operated. FR: 20Hz-20kHz. Imp: 161 ohms. Weight: 283g. Blue denim finish with grey cushions. High velocity lightweight open-back phone supplied complete with mono adaptor. Ext. headband with self-adjusting pivoting yokes and soft denim cover. Soft acoustical sponge ear cushions. Price: £29.00 (plus VAT).

HV 1A

Moving coil dynamic headphones, velocity operated. FR: 15Hz-30kHz. Imp: 157 ohms. Weight: 260g. Finished in ebony teak with champagne gold highlights. Rosewood grained inlays. Ext. headband with self-adjusting pivoting yokes and soft padded vinyl cover. Soft acoustical sponge ear cushions. High velocity lightweight open-back phone. Price: £31.90 (plus VAT).

HV 1 LC

Moving coil dynamic headphones velocity operated. FR: 15Hz-30kHz. Imp. 132 ohms. Weight: 280g. Styled in ebony teak with champagne gold highlights. Rosewood grained inlays. Ext. headband with self-adjusting pivoting yokes and soft padded vinyl cover. Soft

acoustical sponge ear cushions. High velocity lightweight open-back phones. Price: £37.75 (plus VAT).

Phase 2 + 2*

Moving coil dynamic headphones, velocity operated quadraphone. FR: front 20Hz-20kHz, back 15Hz-15kHz. Imp: front 310 ohms, back 263 ohms. Weight: 492gms. Black finish with black cushions. Can be used with both 2 channel and 4 channel material. Incorporates 150mm dia. Decilite and 38mm high velocity element per cup. Ext. headband with pivoting self-adjusting yokes, soft acoustical sponge cushions. "V" cord 1m from headset to programmer. Coil cord 2.75m extended from programmer. 127 listening perspectives. Controls: palm size programmer. £101.50 (plus VAT).

Extension cable EC25KK

25ft coiled cable terminated with stereo jack plug and socket. Price: £5.00 (plus VAT).

PRO4 Triple A*

Moving coil dynamic headphones. FR: 10Hz-22kHz. Imp: 220 ohms. Weight: 440g. Beige finish. Exclusive direct contour Pneumalite ear cushions virtually eliminate pressure against head. Extendable Pneumalite headband, coiled cord. Controls: boom, microphone mount. Price: £45.60 (plus VAT).

K61CQ

Moving coil "quadrophone". FR: 20Hz-18,000Hz. Imp: front 94 ohms, back 99 ohms. Weight: 607g. Beige finish. Foam filled cushions, extendable headband, coiled cord. Will operate with either matrix or discrete systems. 2 to 4 channel selector switch. Level control on earcup. Price: £57.50 (plus VAT).

ESP10

Electrostatic headphone. FR: 10Hz-22kHz. Imp: 3 ohm min at 20Hz and 20kHz, 180 ohm max at 800Hz. Weight: 450g. Black finish. Special safety feature of ESP 10 is that the energizer takes its power supply from a small external 12V transformer. Energizer has two special quasi-peak-reading VU meters. Automatic overload protective circuit prevents excessive input and has LED indicator. Adjustable headband. Pneumalite ear cushions. Semi-vented earcups. Coiled cord. Price: £260.00 (plus VAT).

K6A*

Moving coil headphone. FR: 10Hz-16kHz. Imp: 100 ohms @ 1kHz. Weight: 370g. Finish: beige. Features: sponge cushioned nylon headband and contoured foam-filled vinyl cushions

HEADPHONES AND ACCESSORIES

giving comfort and exceptional acoustic seal. Price: £16.25 (plus VAT).

K6 ALC*

Moving coil headphone. FR: 10Hz-16kHz. Imp: 94 ohms @ 1 kHz. Weight: 390g. Finish: beige. Features: sponge cushioned nylon headband and contoured foam-filled vinyl cushions giving comfort and exceptional acoustic seal. Controls: one slide-type volume/balance control on each earcup. Price: £19.50 (plus VAT).

■ **LEAK**

Rank Audio Visual, PO Box 70, Great West Road, Brentford TW8 9HR. Tel: 01-568 9222.

3000

Isodynamic headphones. FR: 20Hz-20kHz ± 3 dB. Imp: 60 ohms. Weight: 340g. Black finish. Unique styling with hidden headband adjusting. Price: £34.98 (inc. VAT).

■ **MICRO SEIKI**

Harmon UK, St. John's Road, Tyler's Green, High Wycombe, Bucks HP10 8HR. Tel: Penn (049 481) 5331.

MX5

Electrostatic headset with energiser control. Price: £75.56 (plus VAT).

■ **NEAL-FERROGRAPH**

North East Audio Ltd, Simonside Works, South Shields, Tyne & Wear NE34 9NX. Tel: South Shields (0632) 566321.

MB

Electrostatic stereo headphones. FR: 20Hz-20kHz ± 3 dB. Imp: 130K at 10kHz; connects via adaptor box to 4-16 ohm outputs (5W or greater). Permanently polarised capsule (no power supply needed). Weight 355g including 3 metres of cable and plug. Adjustable headband with soft cover. Earpads—replaceable, soft foam filled, with simulated black leather cover. Price: £42.35 (plus VAT).

MBS

Electrostatic stereo headphones. As MB but with connections for loudspeakers and switch to select 'phones' or 'speakers'. For amplifiers having only one pair of speaker outputs. Price: £45.50 (plus VAT).

Dyna-X

Dyna-magnetic stereo headphones. Smooth frequency response over audio band. Imp: 120

ohms. Weight: 355g including 3 metres of cable and stereo phones jack plug. Adjustable headband with soft cover. Earpads—replaceable, soft foam filled, with simulated black leather cover. Price: £22.50 (plus VAT).

■ **PIONEER**

Shriro (UK) Ltd, Shriro House, The Ridgeway, Iver, Bucks SL0 9JL. Tel: Iver (0753) 652222.

SE-505

Dynamic stereo headphones. Imp: 4-16 ohms. Maximum power input: 500mW. FR: 20Hz-20kHz. Sensitivity: 108dB at 300mV. Weight: 690g. Cord length: approximately 60in. Jack plug. Two-way speaker volume/tone controls. Price: on application.



Pioneer SE 305



Pioneer SE 205

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The newest, simplest and really effective way to clean your treasured records.

Disk-Mask is applied to the record as a liquid film.

When dry, it is simply peeled off taking with it any foreign matter whether dust or grit.

Disk-Mask comes in a 500cc applicator and is enough for approximately 70 L.P. sides.



Zeepa[®]

15, Richmond Grove, Surbiton, Surrey, England.
Telephone: 01-399 0966/7/8. Telex: 929679.

SE-305*

Dynamic stereo headphones. Imp: 4-16 ohms. Maximum power input: 500mW. FR: 20Hz-20kHz. Sensitivity: 10dB at 300mV. Weight: 435g. Cord length: 60ins. Jack plug. Price: on application.

SE-205*

Dynamic stereo headphones. Imp: 4-16 ohms. Maximum power input: 500mW. FR: 20Hz-20kHz. Weight: 450g. Cord length: 84in. Jack plug. Price: on application.

Monitor 10

Dynamic stereo headphones; FR: DIN 20-20,000Hz, Sensitivity: 100dB/mW. Imp: 4-16 ohms. Power handling: 700mW per channel. Finish in black leather. Low sound leakage design. High efficiency drive units. Headband has click stop locking adjustment. Weight: 530g. Price: on application.

■ **PICKERING**

Sound Source, Station Approach, Rickmansworth, Herts.
Tel: 01-877 5242.

OA-3A

Stereo moving coil headphones. FR: 20Hz-20kHz. Sensitivity: 100dB SPL at 0.10V input at 1kHz each channel. Imp: 15 ohms. Power handling: 0.2W per channel. Weight: 0.25kg. Finish: brown. Price: £25.00 (plus VAT).

OA-7

Moving coil headphones. FR: 20Hz-22kHz. Imp: 100 ohms. Weight: 170g. Brown finish. Features: power handling 0.2W per channel. Price: £36.00 (plus VAT).

■ **PLUSTRON**

Plustronics Ltd, Hempstalls Lane, Newcastle, Staffs ST5 0SW.
Tel: Newcastle (0782) 615131.

2500

FR: 18Hz-24,000Hz. Imp: 4-8 ohms. Twin tone volume controls. Price: £19.03 (inc. VAT).

7700

FR: 18Hz-24,000Hz. Imp: 4-8 ohms. Compact headphone unit with rotating volume controls. Price: £19.32 (inc. VAT).

5000*

FR: 18Hz-24,000Hz. Imp: 4-8 ohms. Price: £19.55 (inc. VAT).

■ **QED**

QED Audio Products Ltd,
112 Windmill Road, Sunbury-on-Thames,
Middlesex TW16 7HD.
Tel: Sunbury (76) 87344/5.

Headphone Control 5/2*

Suitable for connecting an additional pair of



Plustron 5000



Plustron 2500

*Indicates entry is illustrated



G. E. D. headphone control 5/2

headphones to amplifiers not having that facility or to expand on present facilities. The headphones controls allow volume to be adjusted and speakers to be switched on or off. Dimensions: 6.5 x 10 x 5cm. Price: £9.40 (plus VAT).

■ REALISTIC

Tandy Corporation (Branch UK),
Bilston Road, Holyhead Road,
Wednesbury, Staffs WS10 7JN.
Tel: 021-556 6101/2.

Optimus Pro

Price: £19.95 (inc. VAT).

Pro 10

Price: £24.95 (inc. VAT).

Pro 20

Price: £24.95 (inc. VAT).

Pro 11

Price: £29.95 (inc. VAT).

■ REVOX

F. W. O. Bunch Ltd,
49 Theobald Street,
Borehamwood, Herts WD6 4RZ.
Tel: 01-953 0091

RH 310

Dynamic headphone. FR: 20Hz-20kHz. Imp.

600 ohms. Weight: 260g. Black finish with soft foam earpads. Cushioned headband. Price: £32.40 (plus VAT).

■ ROSS ELECTRONICS

Ross Electronics,
32 Rathbone Place, London W1P 1AD.
Tel: 01-580 7112.

RE-208 Stereo Headphone Junction Box

Provides 3-way switched selection of headphones only, loudspeakers only or both fitted with 2-pin DIN plug connectors and input sockets, and twin headphone sockets. Price: £3.50 (plus VAT).

RE-202 Stereo Headphone Extension Lead

Spiral lead fitted with stereo jack plug one end, jack socket at other. Lead extends to 25ft. Price: £2.00 (plus VAT).

RE-251

High velocity, professional series dynamic headphones. Fitted with advanced design drive units providing wide-range response with negligible distortion, and ported earcups for fatigue-free listening. Slim, lightweight construction with padded, adjustable headband and softly padded ear muffs. FR: 20Hz-22,000Hz. Imp: 8 ohms. 3-metre spiral cord. Price: £16.50 (plus VAT).

RE-257

Professional series, high-velocity dynamic stereo headphones, employing advanced design drive units with specially curved and tapered diaphragms, wide-range voice coils, and specially developed magnets. Features include: wide frequency response with negligible distortion, ported acoustic chambers that ensure fatigue-free listening without eardrum pressure, and centrally located volume controls that permit direct setting for perfect sound balance. FR: 20Hz to 20,000Hz. Imp: 8 ohms. With 3-metre lightweight spiral cord. Price: £19.80 (plus VAT).

RE-258*

Slim, lightweight professional series headphones employing Rare-earth metal super-magnets and specially curved diaphragms only 12.5µm. Softly padded leather grain adjustable headband with silky faced earcups on specially designed yokes that tailor to any headshape. Open back. Black and silver finish. Earcups only 13mm thick. With 2-metre ribbon cable and moulded jack plug. FR: 10Hz-25kHz. Sensitivity: 125dB. SPL at 1mW. Weight: 150g. Matching Imp: 8-1000 ohms. Price: £18.80 (plus VAT).



Ross RE 258

RE-246

Slim, high-velocity lightweight dynamic headphones employing advanced technology drive unit in ported acoustic air chambers. Fitted with leather grain padded earmuffs and adjustable headband and swivel mounted yokes. Finish: black with silver trim. Imp: 8-16 ohms. FR: 18-22,000Hz. Fitted with curly cord and stereo jack plug. Price: £15.00 (plus VAT).

RE-261

High-velocity, professional series headphones fitted with rare-earth metal super magnets and specially curved diaphragms. Superslim wire foam-filled, cloth faced ear cushions, adjustable leather grain handband and specially designed yokes. 2.5 metre ribbon cable and standard jack plug. Imp: 8-1000 ohms. FR: 9-26,000Hz. Weight (less cable): 180g. Price: £25.00 (plus VAT).

RE-272

Studio monitor series stereo headphones employing samarium cobalt super-magnets and ultra-thin diaphragms to provide distortionless, full-range response. Softly padded slimline earcups and adjustable headband with specially designed, swivel mounted yokes. Fitted with "Nexlex" no-loss cable and shielded jack plug. Imp: 8-1000 ohms. FR: 8-28,000Hz. Weight (less cable): 185g. Price: £32.00 (plus VAT).



Ross RE 268

■ **SENNHEISER ELECTRONIC**

Distributors: Hayden Laboratories Ltd, Hayden House, Churchfield Road, Chalfont St. Peter, Bucks SL9 9EW. Tel: Gerrards Cross (49) 88447.

HD414*

Stereo headphones. Lightweight robust design. Removable washable sponge ear pads. FR: 20Hz-20kHz. Imp: 2000 ohms per capsule. Weight: 5oz. Price: £23.50 (plus VAT).

HMD414

Stereo headset HD.414 with close-talking boom microphone located near corner of mouth. Especially high ratio of desired sound to background noise. Sensitivity: 0.1mV/ μ bar. Imp: 200 ohms. Price: £58.00 (plus VAT).

HD 224X*

Moving coil headphone. FR: 16Hz-20kHz. Imp: 200 ohms. Weight: 252g. Black finish. Mono/stereo, enclosed. Price: £46.00 (plus VAT).

HD424*

Stereo headphones with good low frequency

RE-268*

Superlightweight—120 grams, superslim—only 10mm thick. Fitted with advanced technology drive units that outperform bulkier, more expensive headphones. Leather grain finish, adjustable twin headband. Aluminium backed earcups with supra aural foam ear pads. Open back. With 2-metre ribbon cable and moulded jack plug. FR: 18Hz-22kHz. Sensitivity: 100dB SPL at 1mW. Weight: 120g. Matching Imp: 4-150 ohms. Price: £26.90 (plus VAT).

*Indicates entry is illustrated

response. FR: 16Hz-20kHz. Imp: 2K. Weight: 170g. Price: £33.50 (plus VAT).

HD412

Stick type headphone designed for use in record booths, etc. FR: 20Hz-20kHz. Imp: 2K. Price: £28.45 (plus VAT).

HD400

Moving coil stereo headphone. FR: 20-18,000Hz. Imp: 600 ohms. Price: £14.60.

SI406

Infra-red headphone transmission system consisting of: mono transmitter SI406, small compact mains powered unit which can be placed at any convenient point in a room and radiates infra red light. Frequency modulated by any suitable audio signal. Technical data: Powering 220V, 50/60Hz. Power consumption: 3W. Carrier frequency: 95kHz. Wavelength of infra red light: 930nm. Modulation: FM. Deviation: ± 50 kHz. Pre-emphasis: 50 μ s. Audio frequency response: 40 to 15,000Hz. Distortion: <2%. Dynamic range: as source material. Dimensions: 200 x 80 x 17mm. Finish: flat black, plastic housing. Price £49.00.

HDI 406

Lightweight mono stethoset receiver for use with the SI406, consisting of an infra-red receiver, volume control and stethoset headphones. The power for this comes from a small plug-in unit containing rechargeable battery and charger. In order to re-charge the battery it

is necessary to plug it in to a 240V shaver socket. (19hrs for complete re-charge). A full charge will power the HDI 406 for 5hrs. Extra battery plugs are available. Technical data: Battery voltage: 2.3 to 2.6V. Wavelength of light carrier: 930nm. Modulation: FM. Carrier frequency: 95kHz. Deviation: ± 50 kHz. De-emphasis: 50 μ s. Acoustical system: dynamic driver, sound tubes to ears. Distortion at max. deviation: less than 3%. Audio frequency response: 100Hz-10kHz. Max. loudness: 104dB SPL. S/N ratio at 4m distance in normally lit room, facing transmitter 60dB: Facing opposite wall: 52dB. Weight: 65g. Price: £49.00.



Sennheiser HD224X



Sennheiser HD414



Sennheiser Unipolar

SI 434

SI434 compact two-channel infra-red transmitter mains powered, designed to operate with domestic Hi-Fi systems. The modulation level is indicated by an LED. The area covered by the transmitter can be increased by connecting an additional power radiator. Short technical data: Colour: dull black. Dimensions: approx 200 x 80 x 17mm. Power supply: 220V, 50-60Hz, approx. 10W. Modulation: FM. Carrier frequencies: left channel I = 95kHz, right channel II = 250kHz. Pre-emphasis: 50µs. Nominal deviation at 1V input: ±35kHz. Peak deviation at 1.5V input: ±50kHz. Audio connector: 5-pin DIN-headphone connector. Sync-output socket: 3.5mm jack socket. Audio frequency response: 20Hz-20,000Hz. Price: £79.00.

HD 1434

Lightweight open-ear headphones with built-in infra-red stereo receivers. Individual volume controls. Provision for stereo, and left or right signal to be fed to both headphones. The receiver is powered by a 9V dry cell. Short technical data: Modulation: FM. Deviation: max. ±50kHz. Receiving frequencies: left channel 95kHz, right channel 250kHz. Frequency response: 20Hz-20,000Hz. Max. SPL: approx. 108dB. THD at 1000Hz: <1%. Weighted signal to noise ratio: approx. 60dB. Powering: 9V, approx. 4mA, level dependent. Operating time: approx. 100h, level dependent. Colour: black-silver. Weight: approx. 380g. Price: £94.00.



Sennheiser HD 424

Unipolar*

Electrostatic headphone. FR: 16Hz-22kHz. Imp: 4-8 ohms. Black finish. Electret. Fitted control unit. Price: £122.00 (plus VAT).

Unipolar 2000

Electret headphone. FR: 16Hz-22kHz. Imp: 4-3 ohms via transformer. Weight: headphones 345g, transformer extra. Finish: black and silver. Features: two headphones can be driven by one transformer. Controls: phone or loud-speaker switch, attenuation on one phone set. Price: Phones £70.00, transformer £52.00 (plus VAT).

HD 420

Moving coil headphones. FR: 13Hz-20kHz. Imp: 600 ohms. Weight: 127g. Finish: black and gold. Features: open air. Price: £29.00 (plus VAT).

HD 430

Moving coil headphones. FR: 16Hz-20kHz. Imp: 600 ohms. Weight: 190g. Finish: black and gold. Features: open air. Price: £39.00 (plus VAT).

■ **SHARP**

Sharp Electronics (UK) Ltd,
107 Hulme Hall Lane, Manchester M10 3HL.
Tel: 061-205 7321.

HP400*

Stereo headphones. Fully adjustable slide



Sharp HP400

*Indicates entry is illustrated

fittings. Extra thick padding for comfort. Twin units in each earpiece. Independent volume controls. FR: 30Hz-20kHz. Complete with lead and jack-plug. Price: £20.00 (plus VAT).

■ SONY

Sony (UK) Ltd, London Showroom,
Consumer Information,
134 Regent Street, London W1R 6DJ.
Tel: 01-439 3874.

■ ECR 500*

Electret condenser stereo headphone. FR: 20Hz-20kHz. Imp: 30 ohms at 1kHz. Power handling: max. input 12V 1kHz. Weight: 350g, adaptor 1kg. Adaptor includes switch for headphone or speakers. Price: on application.

■ DR 6 M*

Moving coil headphone. FR: 20Hz-20kHz. Imp: 1kHz, 20 ohms. Weight: 350g. Black finish. Collapsible, polyester diaphragm, sealed unit. Price: on application.

■ DR 35*

Moving coil open air headphone. FR: 28Hz-18,000Hz. Imp: 25 ohms. Weight: 370g. Black finish. Price: on application.

■ DR 45*

Moving coil open air microphone. FR: 20Hz-20kHz. Imp: 25 ohms. Weight: 370g. Black finish. Price: on application.



Sony ECR 500

■ DR 25*

Moving coil headphone. FR: 50Hz-18,000Hz. Low impedance. Weight: 220g. Black finish. Lightweight. Price: on application.

■ STAX

Wilmex Ltd, Import Division
Compton House, New Malden,
Surrey KT3 4DE.
Tel: 01-949 2545.

■ SR5/SRD 6SB

Stereo electrostatic headphones. FR: 30Hz-25kHz. Sensitivity: 96dB at 100V RMS input.



Sony DR-45



Sony DR-35

HEADPHONES AND ACCESSORIES

Imp: 130K at 10kHz Power handling: 8W continuous. Weight: 390g. Finish: white, black leather, stainless steel. Supplied with SRD 6SB self energiser. Controls: switch on SRD6 headset or loudspeakers. Price: £99.50 (plus VAT).

SR44*

Stereo electret headphones FR: 25Hz-25kHz. Sensitivity: 95dB at 100V RMS. Impedance: 150K at 10kHz Power handling: 5W con-



Sony DR-6M



Sony DR 25

tinuous, 30W momentary. Weight: 250g. Finish: black. Supplied complete with SRD4 adaptor box for connection to loudspeaker output on amplifier. Controls: switch on SRD4 to select between headset and loudspeaker. Price: £68.50 (plus VAT).

SRX3

Stereo electrostatic headphones with SRD 6SB self energiser. FR: 30Hz-27kHz. Sensitivity: 97dB at 100V RMS. Imp: 130K at 10kHz. Power handling: 8W continuous. Weight: 380g. Finish: black/stainless steel. Supplied with SRD 6SB self energiser. Controls: switch on SRD 6SB for speakers or headset. Price: £155.00 (plus VAT).

Sigma with SRD6SB*

Electrostatic headphone. FR: 30Hz-35kHz. Imp: 122,000 ohms/10kHz. Weight: 460g. Finish: grey. Features: Panoramic type sound. Controls: loudspeaker/earspeaker switching on energiser. Price: £230.00 (plus VAT).



Stax Sigma with SRD6SB



Stax SR44

*Indicates entry is illustrated

■ SUPEREX

Goldring Products Ltd, Anglian Lane,
Bury St. Edmunds, Suffolk IP32 6SS.
Tel: Bury St. Edmunds (0284) 64011.

SM 700

Dynamic headphones. FR: 10Hz-20kHz. Imp: 35 ohms. Weight: 10oz. Finish: foam filled vinyl cushions, padded steel and aluminium headband. Features: Advanced magnetic circuit, Mylar diaphragm, 15in. retractable cable with lapel clip. Price: £44.00 (plus VAT).

TRL-99

Dynamic headphone. FR: 15Hz-20kHz. Imp: 35 ohms. Weight: 10oz. Finish: fabric faced cushions, padded headband. Features: Advanced Mylar driver, retractable 15in. cable with lapel clip. Price: £35.00 (plus VAT).

TRL 77

Dynamic headphone. FR: 45Hz-20kHz. Imp: 80 ohms. Weight: 11½oz. Finish: stainless steel headband, replaceable foam cushions. Features: high efficiency Mylar driver. Price: £22.00 (plus VAT).

CL 1

Dynamic headphones. FR: 10Hz-20kHz. Imp: 35 ohms. Weight: 10.6oz. Finish: foam filled vinyl cushions; padded steel and aluminium headband. Features: wide range Mylar driver, 15in. retractable cable. Price: £40.00 (plus VAT).

■ TECHNICS

National Panasonic (UK) Ltd, 107-109
Whitby Road, Slough, Berks. SL1 3DR.
Tel: Slough (75) 27516.

EAH 300

Ergonomically designed for comfortable, fatigue-free fit. FR: 20Hz-20,000Hz. Sensitivity: 95dB/mW. Imp: 125 ohms. Weight: 260g. Price: £43.95 (inc. VAT).

EAH 510

Moving coil headphone. FR: 15Hz-25kHz. Imp: 125 ohms. Weight: 260g. Finish: brown/silver. Duo cone. Price: £23.36 (plus VAT).

EAH 520

Moving coil headphone. FR: 15Hz-30kHz. Imp: 125 ohms. Weight: 260g. Finish: black/silver. Duo cone. Price: £29.66 (plus VAT).

■ TENSAI

Wren Electronics Ltd, Dawson Road,
Mount Farm Estate, Milton Keynes, Bucks.
Tel: Milton Keynes 71611.

THP 201

Headphones with inbuilt volume control. FR: 20Hz-20kHz. Imp: 100 ohms. Weight: 230g. Finish: chrome/black. Features: 3m cable length. Controls: volume. No rec. retail price.

THP 202*

Headphones with inbuilt volume control. FR: 20Hz-25kHz. Imp: 60-120 ohms. Weight: 320g. Finish: chrome/black. Features: inbuilt volume control. Controls: volume. No rec. retail price.

THP 205

Headphones with inbuilt volume control. FR: 20Hz-20kHz. Imp: 8-16 ohms. Weight: 370g. Finish: chrome/black. Controls: volume. No rec. retail price.

THP 206

Headphones with inbuilt volume control. FR: 20Hz-25kHz. Imp: 8-16 ohms. Weight: 420g. Finish: black. Features: switchable from mono to stereo. Controls: volume, mono/stereo. No rec. retail price.

THP 208

Headphones. FR: 20Hz-30kHz. Imp: 8-16 ohms. Weight: 510g. Finish: black/chrome. Features: slide switch for balance, stereo/mono selection. Controls: balance, stereo/mono. No rec. retail price.

■ TOSHIBA

Toshiba (UK) Ltd, Toshiba House,
Great South West Road, Feltham,
Greater London.
Tel: 01-751 1281.

HR710

Back Electret condenser stereo headphones. FR: 20-20kHz. Sensitivity: 95dB/3V. Power handling: 100V RMS. Weight: 160g. Imp: 8 ohms. Extra lightweight headset, electrostatic without need for power supply. Price: £22.22 (plus VAT).

HR811

Complementary back electret headphones. FR: 20Hz-20kHz. Imp: 8-600 ohms. Weight: 240g. Black/silver finish. Adjustable impedance control for deck or amplifier. Price: £35.11 (plus VAT).

HR-X1

Complementary Back Electret condenser, type. FR: 20Hz-20kHz. Imp: 8-600 ohms. Weight: 160g. Imp: 8 ohms. Black/silver finish. Adjustable impedance control for deck or amplifier. Price: £28.89 (plus VAT).

HR-D3

Dynamic moving coil headphones. FR: 20Hz-20kHz. Imp. 8 ohms. Weight: 235g. Black/silver finish. Price: £15.56 (plus VAT).

HR-D2

Dynamic moving-coil headphones. FR: 20Hz-18kHz. Imp: 8 ohms. Weight: 240g. Price: £12.89 (plus VAT).

HR-FI*

Back-electret condenser headphones. FR: 20Hz-20kHz. Imp: 8 ohms, 600 ohms switchable. Weight: 170g. Price: £23.56 (plus VAT).

■ **TRIO**

B. H. Morris & Co. (Radio) Ltd, Precision Centre, Heather Park Drive, Wembley. Middx. HA0 1SU.
Tel: 01-902 9422.

KH 33

Moving coil polyester transducer. FR: 20Hz-20kHz. Imp: 30 ohms. Weight: 320g. Black ABS finish. Slide-lock band adjusters. Price: £18.66 (plus VAT).

KH 53

Moving coil polyester transducer. FR: 20Hz-20kHz. Imp: 30 ohms. Weight: 320g. Black ABS finish. Individual compress controls for each earpiece. Price: £29.77 (plus VAT).

KH 83

Moving coil headphones. Polyester transducer. FR: 20Hz-20kHz. Imp: 53 ohms. Weight: 395g. Finish: black. Features: individual compression controls for each earpiece. Price: £44.44 (plus VAT).

■ **UHER**

Uher Ltd, 24 Market Place, Falloden Way, London NW11.
Tel: 01-455 1771/01-458 8491.
St. Albans, Herts.
Tel: St. Albans 30236/7.

W675

Stereo moving coil headphones. FR: 20Hz-20kHz. Fitted with DIN 5-pin headphone plug. Price: £21.06 (plus VAT).

W676

Moving coil headphones. FR: 20Hz-20kHz. Fitted with standard 1/4in. stereo jack plug. Price: £21.06 (plus VAT).

W775

Multi-membrane. FR: 16Hz-20kHz. Imp: 600 ohms. Weight: 330g. Black finish. Half open, 1 active 6 aux. membranes per system. Price: £44.19 (plus VAT).



Tensai THP 202



Toshiba HR-FI

*Indicates entry is illustrated

■ VIDEOTONE

Videotone, 98 Crofton Park Road,
London SE4.
Tel: 01-690 1914.

HP 90*

Moving coil with open earpieces. FR: 15Hz-25kHz ± 5 dB. Imp: 120 ohms ± 10 ohms. Weight: 250g. Black finish. Price: £21.00 (plus VAT).

■ YAMAHA

Natural Sound Systems Ltd, 10 Bryon Road,
Wealdstone, Harrow, Middlesex HA3 7TL.
Tel: 01-863 8622.

YH 1000

Orthodynamic headphones. Imp: 100 ohms.
FR: 20Hz-20kHz. Sensitivity: 103dB Weight:
550g. Price: £106.56 (plus VAT).

HP1

Orthodynamic headphones. Imp: 150 ohms.
Weight: 290g. FR: 20Hz-20kHz. Price: £38.18
(plus VAT).

HP2

Orthodynamic headphones. Imp: 150 ohms.



Videotone HP 90

Weight: 230g. FR: 20Hz-20kHz. Price: £28.42
(plus VAT).

HP3

Orthodynamic headphones. Imp: 150 ohms.
FR: 20Hz-20kHz. Weight: 210g. Price: £21.31
(plus VAT).

Hi-Fi Cabinets

*Indicates entry is illustrated.

Abbreviations used in this section are given on page 5.

■ ADASTRA

Adastra Electronics Ltd,
Unit N22, Cricklewood Trading Estate,
Claremont Road, London NW2 1TU.
Tel: 01-452 6288/9.

R11 Plinth and Cover

General purpose plinth with special cut out to receive most Garrard and BSR McDonald player decks. Plinth is moulded with textured black base and simulated wood top. Lift-off styrene lid in smoke-tinted finish. Overall size: 14 $\frac{1}{4}$ x 13 $\frac{1}{4}$ x 7in. Clearance above board: 4 $\frac{1}{2}$ in. Clearance below board: 2in. Price: £7.20 (plus VAT).

R120/R121 Wood storage cabinet

To take 32 compact cassettes or 24 8-track cartridges (R121). Lift off/hinged smoked cover, moulded compartment tray and rubber protective feet. Finish: rosewood, teak or white. Price: R120 £7.50 (plus VAT). R121 teak only. Price: £10.08.

R104 Cabinet

Holding a total of 69 compact cassettes in slide drawer and top compartment with removable cover. Teak finish with silver trim. Price: £17.25 (plus VAT).

R108 Storage Cabinet

Combined record and cassette storage cabinet offered in kit form. Will hold 69 cassettes in upper compartment and up to 150 LP's plus additional storage for audio accessories. Teak finish. Lift-off hinged lid. Price: £33.00 (plus VAT).

■ AUDIO PRO

Audio Pro (Hi Fi) Ltd, Brook House,
Crewe Road, Wheelock, Sandbach,
Cheshire SW11 9HT.
Tel: Sandbach (09367) 7520.

U-109*

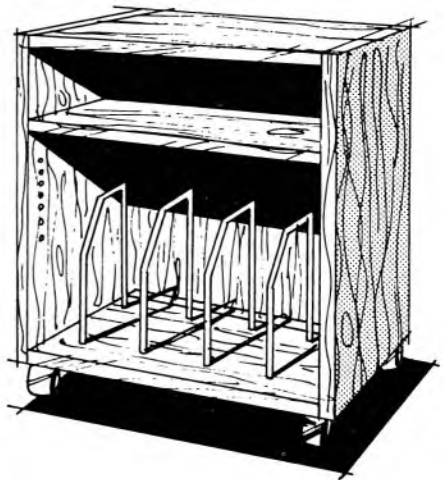
Cabinet in kit form. Holds turntable on top, receiver on shelf, and 140 LP records below. With two shelves in place it will hold record deck, tuner, amplifier and tape deck. Shelves are adjustable in 5/8in. steps. Two cabinets can be stacked to hold extensive stereo system. Openings in back wall provide ventilation and access for cables. Comes complete with mounting hardware, assembly tool, casters, stacking pads, shelves and brackets. Dimensions: 21-5/8 x 15 $\frac{3}{4}$ x 23-5/8in. Finish in oiled walnut veneer or black ash veneer. Price: Black £35.00 Walnut £40.00.

■ BIB

Rib Hi-Fi Accessories Ltd,
Kelsey House, Wood Lane End,
Hemel Hempstead, Herts HP2 4RQ.
Tel: Hemel Hempstead (0442) 61291.

Ref 86: Cassette Cabinet

Holds 30 cassettes in their containers. Fitted with a smoke coloured hinged acrylic lid.



Audio Pro U-109



Bib Cassette Cabinet 87

*Indicates entry is illustrated

Finish: simulated teak. Fitted with protective rubber feet. Price: £8.49 (inc. VAT).

Ref 87: Cassette Cabinet*

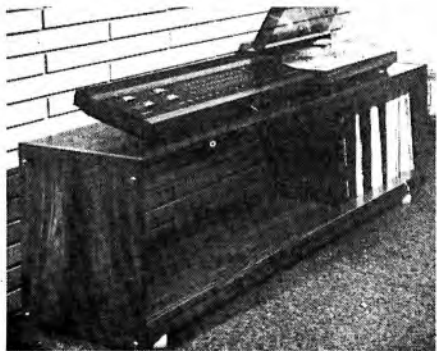
Holds 40 cassettes in their containers. Can be used free standing or wall mounted, finished in simulated teak with smoked acrylic sliding doors. Size: 51.5 x 23 x 10.3cm. Price: £11.59 (inc. VAT).



Cambra 84



Cambra 92



Curb Hi-Fi Equipment Desk

■ **CAMBRA**

Cambra International Ltd,
260 Church Road,
Leyton, London E10 7JQ.
Tel: 01-556 1916.

Model 84*

Record and cassette storage unit taking up to 84 tapes and 100 LP records. In self-assembly form. Further details on request.

Model 88

Record and cassette storage unit taking up to 69 tapes and 100 LP records. In self-assembly form. Further details on request.

Model 92*

Record and cassette storage unit taking up to 84 cassettes and 185 LP records. In self-assembly form. Further details on request.

Model 25

Revolving cassette home storage unit holding 40 tapes in individual compartments. Available in choice of finishes: teak, white, rosewood and walnut. Further details on application.

No. 13

Domestic cassette storage cabinet taking 32 tapes. In teak, white, rosewood or walnut. Translucent hinged lift-off lid. Further details on application.

No. 69

Deluxe cassette cabinet holding 69 tapes firmly in separate divisions. Top section takes 36 and a further 33 are held in the drawer. Teak-effect with translucent hinged lift-off lid. Also available in walnut-effect. Further details on application.

Model 37

Music Mobile. Stores up to 179 LP's. Holds 59 cassettes in drop down drawer. Flat pack for easy home assembly. Finished in black ash, walnut or teak effect.

■ **CURB HI-FI**

Janorhurst Ltd, Century House,
Shortmead Street, Biggleswade, Beds.
Tel: Biggleswade (0767) 314252.

Hi-Fi Equipment Desk*

Swedish design available in five wood veneers —teak, dark oak, walnut, rosewood, jacaranda and black and white. Dimensions: 40 x 48.5 x 99cm. Price: £98.67, rosewood, £70.78 other finishes (plus VAT). As above but in 140cm length. Price: £107.25 rosewood, £77.42 other finishes (plus VAT).

RT/03 Record storage trolley

A stove enamelled strong welded steel frame, having real wood veneers inlaid each end and on the base. A wood veneer top, two divider panels and castors complete the unit. Various finishes. Size 19 x 13 x 17 1/4 in. Price: £34.50 (plus VAT).

MS/1 Music Centre Stand

Strong welded steel section stand. Universal fitting, adjustable for various sizes. Padded support brackets and finished in black. Castors included. Price: £16.45 (plus VAT).

■ **DYNATRON**

Dynatron Radio Ltd, Ditton Walk, Cambridge CB5 8QD.
Tel: Teversham (022 05) 2781.

RSU 13 Cabinet*

Capacity 150 (approx) LP records plus shelf for accessories. Castors. Curled mahogany veneered with green leather top. Ring handles. Regency. Dimensions: 59.7 x 54 x 37.5cm. No rec. retail price.

SU 1600PW Cabinet*

Capacity approximately 150 LP records plus shelf for accessories. Castors. Queen Anne style, finished in walnut burr veneer. Green leather top. Dimensions: 59.7 x 54 x 37.5. No rec. retail price.

ST1000CR storage table*

Finished in rosewood. Also available in teak. No rec. retail price.

SU13000CR storage cabinet*

Finished in rosewood and fitted with casters. Storage for over 150 LP's, plus cassettes and headphones. Also available in teak. No rec. retail price.

SU1500PK with LS5528PK*

Capacity approximately 150 LP records plus tapes and accessories. Castors. Jacobean style, finished in oak veneers. No rec. retail price.

■ **E.C.C.**

Edwards Construction Company,
4 Brunswick Drive, Harrogate.
Tel: Harrogate (0423) 60921.

Window Seat Record Cabinet

Will also take cassettes. Measures 19-1/8 high by 17in. deep. Prices from £163.00 upwards (inc. VAT)



Dynatron RSU 13 and SU1600 PW



Dynatron SU13000CR and ST1000CR



Dynatron SU1500PK with LS 5528 PK

DN Record Cabinet

With open shelf. Measures 26-7/8in. high by 17in. deep. Prices from £298.00 upwards (inc. VAT).

22 IM

Cabinet to take record player, receiver and provide storage space for records. Measures: 32 x 22 x 20 1/4 in. deep. Price: £272.00 (inc. VAT).

*Indicates entry is illustrated

Brunswick Cassette Cabinet

Will hold 450 or 900 cassettes. Measures 34½ in. high × 17 in. deep. Price: £399.00 for 24 in. wide, £483.00 for 48 in. wide.

Multi-Unit

Measures 72 in. wide by 26 in. high in white Melamine. All partitions movable and the right hand portion can house a television set. Price: £90.20 (inc. VAT).

HTV 28

Measures 23¾ high × 15 deep and 28 in. wide. Record cabinet can stand on top and shelves beneath can be moved to taste. Price: £40.25 (inc. VAT).

Varispace System

A matching series of record housing and bookshelves capable of filling a complete wall. Prices from £12.75 to £95.75 per piece (inc. VAT).

Other units

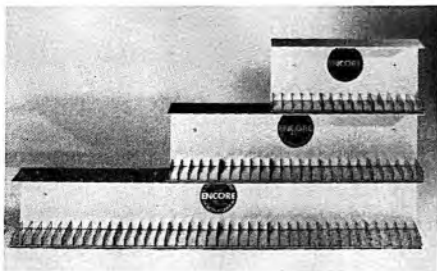
Details and prices on request.

■ ENCORE

Artifact Designs Ltd,
35 Queen Street, Henley-on-Thames,
Oxfordshire RG9 1AR.
Tel: Henley (049 12) 6037/8.

Record Storage*

Encore keeps records vertical and easy to classify. Made of injection moulded 4mm poly-



Encore cassette holders



Encore record storage

styrene in smoke grey with white toughened polystyrene spacers. Each bay holds up to 20 LP's and if you start with the 5 bay set additional pairs of extensions can be added as needed. Encore can be stacked up to three tiers high or converted into an audio trolley by means of optional castors. Comes in easy-carry carton for self-assembly. Dimensions: 36.5 × 33 × 40 cm. Price: £17.40 (plus VAT).

Cassette Holders*

Sleek, durable aluminium holder for cassettes in their library cases. Finish is brushed and anodised with smoke grey plastic fins holding 15, 25 and 40 cassettes. A no. 8 c/sunk screw will fit the two drilled holes provided for wall-mounting. If used free standing, rubber feet prevent surface scratching. Dimensions: 13.5 × 7 × width (31, 52 or 82) cm. Prices: £6.16, £8.80, £12.40 (plus VAT).

■ FERGUSON

Thorn Consumer Electronics,
284 Southbury Road, Enfield, Middlesex.
Tel: 01-363 5353.

9409

Music Centre and Casseiver Cabinet with tape and record storage. Dimensions: 52 × 64 × 39 cm. Finish: teak effect. Price: on application.

■ HOLDER PEARCE LTD

66 Grove Road, Eastbourne,
Sussex BN21 4UH.
Tel: Eastbourne (0323) 26565.

Built-in or free-standing equipment cabinets designed and built to meet customers' exact requirements. Lift-up or drop-down lids, accommodation to suit any equipment, all standard finishes to blend with furnishing. Details and prices on application.

Wilmington

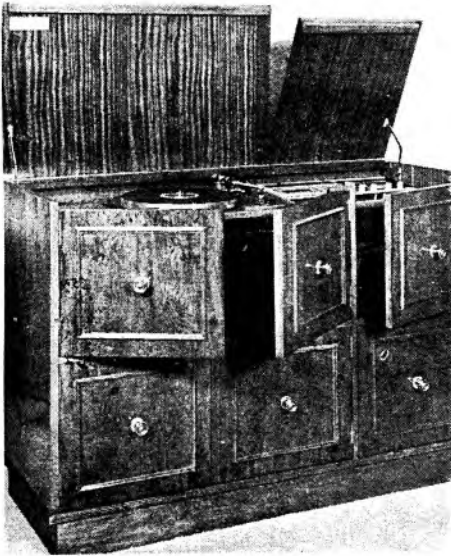
Two-door top section has a lift-up lid for easy access to player deck housed on adjustable shelf, with receiver below. Two-door lower section has capacious storage for 12 in. records. Weight: 33 kg.

Alfriston

Special features are the lift-up lid and pull-down flap to top section, and the two-door record compartment below. Weight: 31 kg.

Berwick*

In rich yew tree veneers. Berwick has full width continuous top shelf to house record-player and tape recorder side by side, space below for amplifier and tuner units and two lift-up lids above



Holder Pearce — The Berwick

shelf for easy access to both units. Bottom section has record divisions in right hand cupboard and one removable adjustable shelf at left, although this space may be used alternatively for record storage if required.

Mayfield*

For comprehensive hi-fi equipment. Mayfield is an extended version of Alfriston model, but in this case allows record player and tape recorder to be placed side by side on one level. Finished in yew tree veneers, special features include two lift-up lids and double pull-down flaps below which provide access to front controls. The lower section has two adjustable, removable shelves for housing amplifiers and tuner units, or record storage. Right hand lower cupboard is fitted with three record divisions with useful accessory storage shelf above. Price: on request.

Queen Anne I*

Compact cabinet suitable for housing music centre in selected Burr walnut veneers. Hand carving to top and bottom rail and to legs. Lift-up lid and fall flap. Made to special order and required sizes.

Queen Anne II*

Larger version of Queen Anne I with two lift-up lids, two fall flaps and record storage in lower cupboard. Made in selected burr walnut or curl mahogany veneers, hand carving to top and bottom rail and to legs. Made to special order and individual sizes.



Holder Pearce — The Mayfield

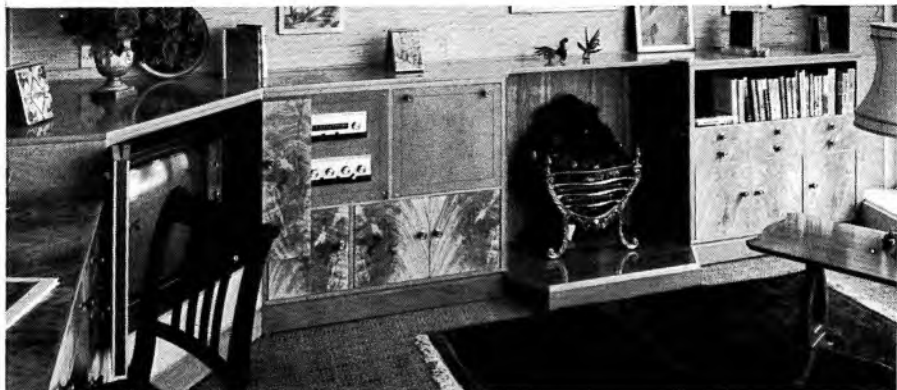


Holder Pearce — Queen Anne I



Holder Pearce — Queen Anne II

*Indicates entry is illustrated



Holder Pearce Housing Fitment



Holder Pearce Living Room Scheme for Hi-Fi

Housing Fitments*

Custom made built-in furniture. Hi-Fi equipment can be housed in living room scheme designed exclusively to individual customer requirements, and which can also incorporate if required built-in TV housing, cocktail cabinet, fire surround and bookshelves, all in selected veneers or lacquered finish. Brochure supplied on request.

TV Housing Cabinets*

Made to special order and to individual design if required. Standard model, as illustrated, is backless, with two double folding doors and interior shelf. Further details supplied on request.

■ ITT

ITT Consumer Products (UK) Ltd,
Chester Hall Lane, Basildon,
Essex SS14 3BW.
Tel: Basildon (0268) 3040.

Rack

Teak or walnut veneered rack suitable for housing 2 or 3 units of the ITT 80 range. Glass door to record storage compartment which has capacity for 100 records and 30 cassettes. Price: £58.00 (inc. VAT)

■ JENSEN

Jensen Brothers (Furniture) Ltd,
Hillside Works, Livesey Fold,
Darwen, Lancs BB3 1QG.
Tel: Darwen (0254) 772837.

ATS7 — Queen Anne Commode*

Walnut cabinet with high quality burrs on both top and doors. Outer edges inlaid with white-black white boxwood lines and crossbanded in walnut. Made to house 18-22ins. Television sets. External dimensions: 30½ × 33 × 15½in. Price: on application.

AAS7 — Queen Anne Commode*

Same in appearance as ATS7, the difference being the internal design which is made to accommodate hi-fi and audio equipment. Dimensions: 30½ × 33 × 20in. Price: on application.

RTA1 — Regency Commode*

In antiqued mahogany. Top is quarter-veneered and outer edges cross-banded. Doors fold flush with sides and are panelled with matching curls. High quality brass knobs. Hand waxed. Designed to house 18-22ins. TV. Dimensions: 30½ × 34 × 18¾in. Price: on application.



Jensen RTA1 Regency Commode



Jensen SAA1 Chippendale



Jensen Queen Anne Cabinet AT57



Jensen RAA1 Regency Commode



Knowin Profile 100 for cassettes



Jensen AAS7

RAA1 — Regency Commode*

Designed to accommodate hi-fi and audio equipment. Divisions in the lower compartment can be removed and replaced with half-shelf to accommodate separate units. Dimensions: 30½ × 31 × 20in. Price: on application.

SAA1 — Chippendale Chest*

Simulated four drawer front finished in figured mahogany, crossbanded in yew. All handles and fittings of cast brass. Designed to house hi-fi separates and comes with two adjustable shelves. Also available are matching speaker sleeves to take a good cross section of quality speakers. External dimensions: 22 × 32¼ × 18in. Price: on application.

■ **KNOWIN**

Knowin (UK) Ltd,
Knowin House, 37 Churchill Way,
Fleckney, Leicestershire LE8 0UD.
Tel: Leicester (0533) 403331

Furniture-Look*

Knowin offer a number of record and cassette storage cabinets in wood grain Polystyrol. Details on request.

■ **MAJA**

Hamilton Jones Ltd,
129 Marlowes, Hemel Hempstead,
Herts HP1 1BB.
Tel: Hemel Hempstead (0442) 51718/65435

Maja

Large assortment of racking systems, record holders, and stands. Some 250 models available in a variety of finishes. Details on request.

■ **MARANTZ**

Audio UK Ltd, Debarc House,
203 London Road, Staines, Middlesex.
Tel: Staines (81) 50132.

This new series of walnut cabinets has been developed for use with new Marantz components and are designed to give Marantz units a

*Indicates entry is illustrated

fresh modern look complementing their dramatic new styling. The cabinet is composed of 3 basic parts. One top panel and 2 side panels — all mounting hardware is included. The unit can be easily assembled and is finished in genuine hand-rubbed oiled walnut veneer. The new cabinets and the models they are designed for are as follows:

WC-110

1090, 1122DC, 1152DC, 1180DC, 1300DC, 170DC and 300DC.

WC-116

2216, 2216B, this unit will also fit Model 2215B.

WC-121

2140

WC-122

2226, 2226B, 2238, 2238B, 2252, 2252B, 2265, 2265B, 2285, 2285B. This unit will also fit older stereo receivers 2220B-2275 and Quadradial receivers 4230-4270.

WC-123

2330, 2330B. This unit will also fit Models 2325, 4300 and 4400.

WC-124

2385 and 2500.

WC-136

3250, 2100 and 2120.

WC-153

5010, 5020 and 5030.

■ **NOVA**

Tape City Ltd,
13 The Market, Wrythe Lane,
Carshalton, Surrey SM5 1AG.
Tel: 01-644 4455

Nova Chair

A complete listening environment designed to reproduce the full range of sound without the acoustic problems encountered in conventional room surroundings. Speakers are full range, high compliance units with power capacity of 60W. Chair shell is of glass reinforced plastic with high impact resistant gel coat finish, fully upholstered with removable cushions. Standard finish is soft white shell with choice of colours for interior fabrics.

■ **PAGEANTRY RADIO & TV CO LTD**

104 Felsham Road, London SW15 1DQ.
Tel: 01-788 5588.



Pageantry Cabinet

Custom-built cabinets*

Hand-made cabinets to house hi-fi systems. Two standard designs. Typical is antique reproduction model in selected walnut veneers hand-finished with traditional French polish. Features include intricate hand-carved mouldings on front side panels. Size: 54in wide, 21in deep, 32in high. Lower centre front houses record storage drawer running on precision runners. Size of drawer: 17in wide, 15½in deep, 13in high. Full details of hi-fi cabinets including prices and delivery available on request.

■ **PANASONIC**

National Panasonic (UK) Ltd,
107-109 Whitby Road,
Slough, Berks SL1 3DR.
Tel: Slough (75) 27516.

HFS 24

Upright rack-type stand with record rack. Finished in black and simulated rosewood and mounted on castors. Height: 99.7cm, width 45.7cm, depth 39.4cm. Price: £44.40 (plus VAT).

MS50

Trolley type music centre stand with record rack. Finished in black and simulated rosewood, castor mounted. Price: £20.40 (plus VAT).

HFS 20

Upright rack type stand with record storage. Finished in black and simulated rosewood. Mounted on castors. Price: £39.95 (plus VAT).

■ **PORTWOOD FURNITURE**

Portwood Furniture Ltd,
Portwood, Stockport SK1 12JA.
Tel: 061-480 2428/6923

Connection 80

High and low connecting display and storage pieces. Top section has been designed to accom-



Portwood Connection 80 retailing at £188.50



Portwood Connection 80 costing about £500.00

moderate amplifier and tuner while low tables provide solid base for players and speakers. Many variations are possible and finish is in teak.

■ **PYE**

Pye Ltd,
137 Ditton Walk, Cambridge CB5 8QD.
Tel: Teversham (022 05) 2781

HU1

Real teak veneered horizontal housing unit with space for amplifier, tuner, cassette and turntable. Closed back with apertures for leads and air flow.

HU2

Metal and glass vertical housing unit. Metal-work finished in black with smoked glass shelves. Storage space for records and cassettes with space for three hi-fi units.

HU3

As HU1 but in teak effect finish.

HU4

Vertical housing unit with room for a receiver, cassette deck and turntable, records, cassettes in wood teak effect finish.

■ **REVOX**

F.W.O. Bauch Ltd,
49 Theobald Street, Boreham Wood,
Herts WD6 4RZ.
Tel: 01-953 0091

Audio Rack

Designed to accept individual system components of the A and B series. Rigid Nextel coated steel construction, oak veneered cabinet with smoke-tinted glass doors and separating panels for storing tapes and discs. Adjustable shelf spacing, interconnecting cables concealed in the upright struts. Each component connects directly to the rack with only one power cord. Price: £144.00 (plus VAT).

■ **ROTAREM**

Rotarem Ltd,
19 Broomhall Road, Woking, Surrey.
Tel: Woking 72064

M280

Hi-Fi Cabinet for separates or music centres. Dimensions: 33 × 21 × 17in. Finish: quality wood veneers.

M300

Music Centre cabinet. Dimensions: 33 × 8 × 19¼in. Finish: quality wood veneers.

*Indicates entry is illustrated

THF

Hi-Fi table. Dimensions: 52 × 24 × 15in.
Finish: teak veneer.

■ SELMOR

Selmore Engineering Industries Ltd,
24 Mulberry Street, Tower Hamlets,
London E1 1EH.
Tel: 01-247 3344.

Merlin Adjustable Stand*

For tv or hi-fi equipment. Steel with silver finish to simulate brushed aluminium. Stand consists of three parts, two uprights and adjustable crossbar. Height: 40cm. Prices: "L" (21-30in) £7.10 (plus VAT) or £6.10 without castors. "S" (14-24in) £6.80 (plus VAT) or £5.80 without castors.

SU 100

Attractive audio stand and storage unit for records and cassettes. Slanted cassette rack for easy identification. Will hold up to 36 cassettes. Adjustable record dividers hold up to 100 LP records and dividers are also supplied for 45 rpm records. Finish: silver coloured record and cassette dividers. Black support arms and legs fitted with easy glide castors. Table surface finished in teak effect woodgrain. Dimensions: 52 × 86 × 41cm. Price: £14.00 (plus VAT).

■ CHARLES SHERATON

Charles Sheraton Cabinets Ltd,
Sheraton House, Wortley Moor Lane,
Leeds LS12 4HX.
Tel: Leeds (0532) 793388

CS 2*

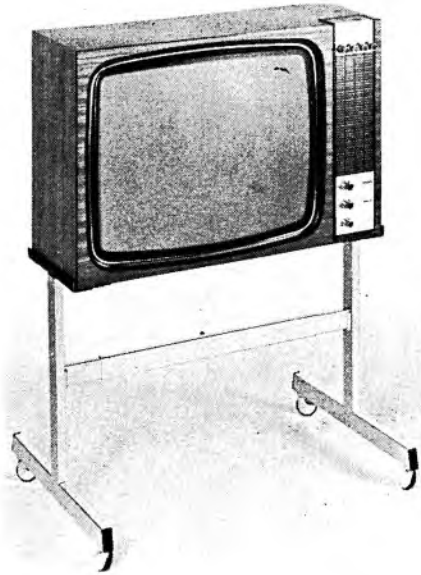
Period style cabinet in mahogany and walnut made by hand to high standard. Features include hand carved cabriole legs, inlaid veneers, exceptional polished finish. Provided with record storage and drinks compartment. Will accept most music centres. Speaker shells (CS 10) also available. Price: £283.00 mahogany, £291.00 walnut (inc VAT).

CS 11

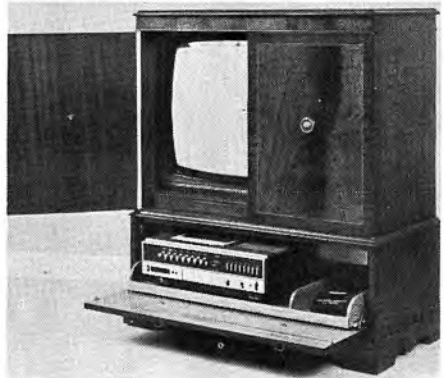
Period styled cabinet to take stacked hi-fi units, available in mahogany and walnut. Designed to accept most hi-fi units and record decks. Speaker shells (CS 10) also available.

CS 1*

Universal period cabinet made in mahogany, walnut or yew. Will accommodate 22in. colour TV. Masking frames to fill gaps around set are



Merlin Stand from Selmor



Charles Sheraton CS8 Cabinet to take 26in TV and Video Recorder



Charles Sheraton CS2 Hi-Fi Cabinet and CS1 22in TV Cabinet

provided. Hand carved legs on mahogany and walnut models. Price: £243.00 mahogany, £251.00 walnut (inc. VAT).

CS6/CS 9

Universal cabinet to accommodate 26in TV size. As above but two sizes available to suit range of 26in sets. Available in mahogany and walnut. Internal sizes: CS6 — 20 × 30% × 15in. CS9 — 21¼ × 31½ × 15in. Prices: £259.00 mahogany, £267.00 walnut (inc. VAT).

CS 8*

Universal cabinet for 26in TV and video recorder. Recorder is placed on a free running tray which is concealed under the TV. Cabinet is mounted on castors and available in mahogany and walnut. Price: £360.00.

CS 12

Universal Cabinet for 22in TV and video recorder. As above but more compact and suitable for 22in TV. Price: £330.00.

■ **SOLUS**

Solus Products,
37 Churchill Way, Fleckney,
Leics LE8 0UD.
Tel: Leicester (0533) 403332

Profile*

Cassette cabinet holds 36 cassettes.

Profile 90 Plus*

Wood veneered cabinet for storing approx. 90 LP's. Hinged doors. Packed flat for home assembly without need of tools. Designed to stack vertically up to five units high. Convertible to cassette storage with three-drawer kit. Stores 108 cassettes. Price: £24.90 (plus VAT)

Profile 100 Plus*

Wood veneered cabinet for storing 108 cassettes with library boxes in three drawers. Packed flat for home assembly without need for tools. Designed to stack vertically up to four units high. Price: £29.85 (plus VAT).

■ **SONY (UK) LTD.**

Sony Showroom Consumer Information,
134 Regent Street, London W1R 6DJ.
Tel: 01-439 3874.

TAC 16*

Set of wooden side panels designed for use with TC209, 229, EL5, 7. Dimensions: 17 × 31cm. Price: on application.



Solus Profile Cassette Cabinet



Solus Profile 100 and 90 plus stacked

*Indicates entry is illustrated



Sony TAC 16 side panels



Sony SU 775

SU 2700

Teak finished cabinet suitable for mounting a range of Sony Hi-Fi equipment. Dimensions: 94 × 75 × 49cm. Price: on application.

SU358

Glass and chrome trolley unit suitable for mounting Sony Hi-Fi separates. Price: on application.

SU 775*

An audio stand specially designed for the HMK55 and HMK77, HMK11, 33, 80 music centres. Teak finish. Price: on application.

SU 42

Vertical Hi-Fi rack in black. Price: on application.

SU 2500

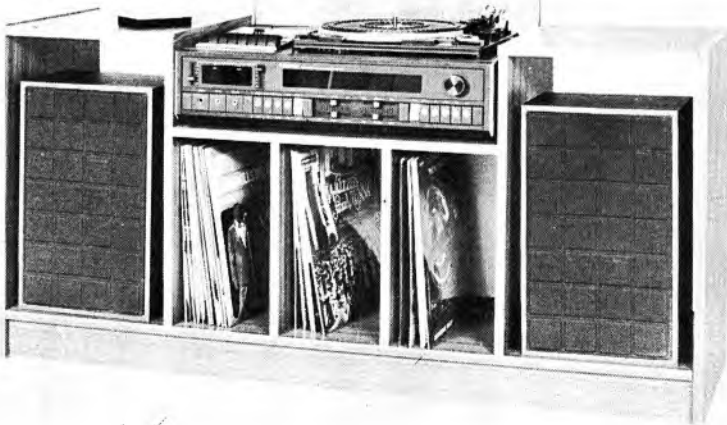
Horizontal Hi-Fi rack in teak effect. Price: on application.

■ STEEPLETONE

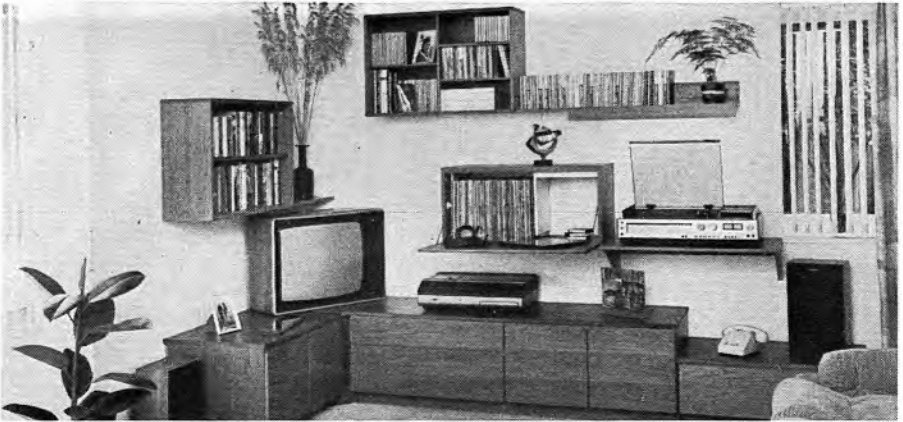
Steepletone Products Ltd,
Cinema House, Middle Barton,
Oxford OX5 4DA.
Tel: Steeple Aston (0869) 47116.

MC 3 Music Centre Unit*

Designed to accommodate a music centre and two speakers and also to give adequate storage space. MC3 comes in an easy-to-assemble knockdown pack and is finished in teak effect. Dimensions: 122 × 38.5 × 59.5cm. Price: £33.64 (inc. VAT).



Steepletone MC3



Tapley 33 LA record cabinet in room setting

■ **TAPLEY 33**

Beaver and Tapley Ltd,
Scotts Road, Southall,
Middlesex UB2 5DJ.
Tel: 01-574 4311.

Comprehensive range of wall fixing cabinets and shelves.

LA Record Cabinet*

Fall-front and sliding compressor plate provide dust and warp free storage for 200 records.
Price: £74.95 for teak, £66.65 other finishes.

Shelves*

Exceptionally deep shelves which enable high-lidded turntables and other pieces of audio equipment to be wall mounted, giving freedom from floor vibration. Finished in teak veneers or white lacquer. DS33 measures 33 x 19 x 9in. Price: £32.30 in teak or £27.15 in white. DS44 measures 44 x 19 x 9in. Price: £39.75 in teak or £33.60 white.

■ **VERO**

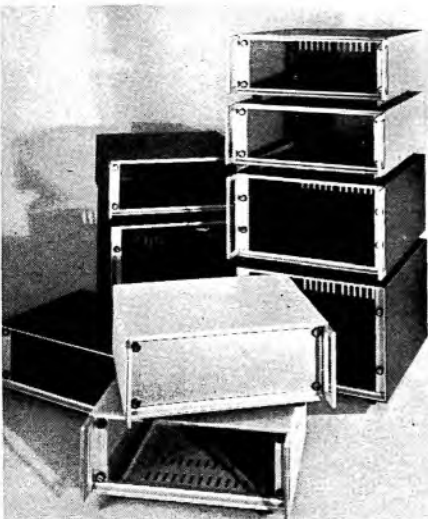
Vero Electronics Ltd,
Industrial Estate, Chandler's Ford,
Eastleigh, Hants SO5 3ZR.
Tel: Chandler's Ford (042 15) 2956

Equipment Cases*

Wide range of equipment cases suitable for hi-fi units, tuners, power supplies and test gear. Available in various panel heights and with or without anodised aluminium front handles. Made in light gauge steel. Integral aluminium trim. Neat slim-line appearance. Ventilation slots incorporated. Full list of sizes, accessories and prices available on request. Ask for catalogue of Vero 'D' series cases



Tapley 33 Shelf Units



Vero Equipment Cases



Without Compromise.

Choosing stereo headphones to suit the audio enthusiast's individual requirements has now become much easier, thanks to three models recently introduced by AKG.

They are „made in Vienna“, the city of music, for people who judge the quality of headphones, not only by outward appearance, but who also appreciate comfort and the wide and smooth

frequency response provided by the unique AKG large diaphragm systems.

The K 240, with 14 diaphragms, offers an extremely wide stereo image: the K 140, through functional design, adapts itself automatically to the shape of

any head, and finally the K 40, a sweet sounding but robust and economically priced model with soft foam earpads, for maximum comfort.

Available from your local AKG hi-fi dealer in 104 countries throughout the world.

AKG acoustics



Magnetic Tape

* Indicates entry is illustrated.

Abbreviations used in this section are given on page 5.

■ AGFA-GEVAERT LTD

Great West Road, Brentford,
Greater London.
Tel: 01-560 2131.

PE36

Low-noise, long play tape supplied in plastic library case, 13cm 270m £3.43; 15cm 360m £3.94; 18cm 540m £5.67; 26cm 1280m £14.76; 26cm 1280m £16.98. All prices plus VAT.

PE46

Low-noise, triple-play tape supplied in plastic library case. 13cm 360m £4.06½; 15cm 540m £5.67; 18cm 720m £7.03. All prices plus VAT.

PE66

Low-noise, triple-play tape supplied in plastic library case. 13cm 540m £5.89; 15cm 720m £7.90½; 18cm 1080m £8.83. All prices plus VAT.

PEM368*

Low-noise, long-play, matt-backed tape supplied in plastic library case. Metal spools: 18cm 540m £7.95; 26cm 1100m £18.58½; Plastic spools: 13cm 270m £4.10½; 18cm 540m £6.81; 26cm 1100m £15.37½. All prices plus VAT.



Agfa 368/268

PEM268*

Low-noise, double-play, matt-backed tape supplied in plastic library case. Metal spools: 13cm 320m £5.84½; 18cm 640m £9.82; 26.5cm 1280m £21.24. Plastic spools: 13cm 320m £4.87½; 18cm 640m £8.41; 26.5cm 1280m £17.71. All prices plus VAT.

Compact Cassettes

Ferro colour. C60 (2 × 30min) £1.09; C90 (2 × 45min) £1.48½; C120 (2 × 60min) £2.23. All prices plus VAT.

Cassette Album

Three C60 plus three C90 cassettes £8.25. 10-pack (10 × C60) in case £9.38. 10 pack (10 × C90) in case £13.36½. All prices plus VAT.

Stereochrom*

Chromium dioxide tape cassette. C60 £1.26½; C90 £1.44; C120 £1.97½. All prices plus VAT.

Carat

C60 £2.07; C90 £2.82.



Agfa Stereo Chrom



Agfa Super Ferro

*Indicates entry is illustrated

Super Ferro*

C60 + 6 £1.60½; C90 + 6 £2.14½; C120 £2.84.
All plus VAT.

Super Chrom

C60 + 6 £1.49; C90 + 6 £2.02.

■ AMPEX GREAT BRITAIN LTD

Acre Road, Reading, Berks RG2 0QR.
Tel: Reading (0734) 85200

Magnetic recording tape for every domestic and professional application, in various cassette, open-reel and cartridge configurations. Prices and details of specifications on request.

Consumer Audio Tape

- Grand Master Series cassettes & open reel
- Full range of ancillary products

Consumer Video Tape

- U-Matic Cassettes
- Betamax
- VHS

Professional Audio Tape*

- 456 Grand Master Studio Mastering tape
- 406/407 low noise/high output tape

■ AUDIO MAGNETICS

AMSA Magnetics Ltd, Loverock Road,
Reading, Berks RG3 1JZ.
Tel: Reading (0734) 598036

Low Noise Cassettes

Plus*

Low noise ferric oxide tape, 5 screw housing, built-in head cleaner. C60 75p; C90 £1.00.

Extra

Low noise ferric oxide tape, 5 screw housing, built-in head cleaner, exclusive jam proof mechanics 10% extra playing time. C66 90p; C99 £1.25.

Super*

High density ferric oxide tape, 5 screw housing, built-in head cleaner, exclusive jam proof mechanics low/medium bias tape, suitable for use on all popular cassette decks including music centres. C60 £1.20; C90 £1.55.

XHE*

Extra high energy ferric oxide tape, 5 screw high impact clear housing, exclusive jam proof mechanics medium/high bias tape. C60 £1.55; C90 £1.95.



AmpeX Grand Master series



Audio Magnetics Plus



Audio Magnetics Super



Audio Magnetics XHE

Cartridges

Audio 40 minute £1.25; Audio 80 minute £1.65;
XHE 45 minute £1.95; XHE 90 minute £2.55.

Reel to Reel

XHE SP 1200ft £5.25; XHE LP 1800ft £5.95;
XHE DP 2400ft £6.95.

Audio Head Cleaner

Cassette 65p; Cartridge 95p.

■ BASF UNITED KINGDOM LTD

Audio/Video Tapes Division,
2-4 Fitzroy Street, London W1P 5AD.
Tel: 01-637 8971.

LP35 LH Long Play Tape

Long play, low noise, high output. In plastic swivel box: 5in. 900ft £4.32; 5¼in. 1200ft £4.92; 7in. 1800ft £6.72. All prices plus VAT.

DP26 LH Double Play Tape

Double play, low noise, high output. In plastic swivel box: 5in. 1200ft £4.92; 5¼in. 1800ft £6.72; 7in. 2400ft £8.80. All prices plus VAT.

FP18 LH Triple Play Tape

Triple play, low noise, high output. In plastic swivel box: 5in. 1800ft £6.72; 5¼in. 2400ft £8.80; 7in. 3600ft £13.22. All prices plus VAT.

LP35 LH Super Long Play Tape

Super low noise, high output, long play. In plastic swivel box: 5in. 900ft £4.48; 5¼in. 1200ft £5.08; 7in. 1800ft £6.88. All prices exclude VAT.

DP26LH Super Double Play Tape*

Super low noise, high output, double play. In plastic swivel box: 5in. 1200ft £5.28; 5¼in. 1800ft £7.68; 7½in. 2400ft £9.48. All prices exclude VAT.

LPR35 LH Matt Back Long Play Tape

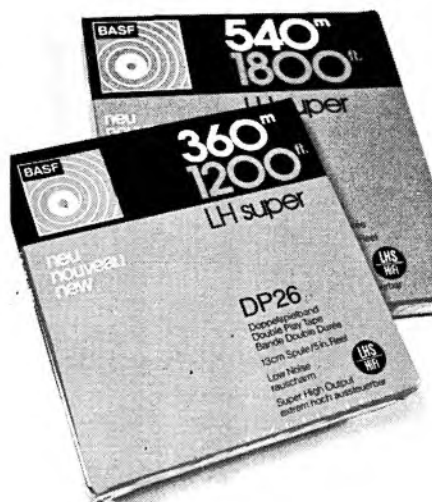
Long play, low noise, high output tape with conductive matt back for professional or semi-professional use with fast winding machines. In cardboard box, plastic spool 5in. 900ft £6.66. In soft plastic box, metal spool 7in. 1770ft £9.56; 10½in. 3610ft £18.48. All prices plus VAT.

DP26 LH Matt Back Double Play Tape

As LPR35 LH Matt Back, but double play tape. In soft plastic box, metal spool 10½in. 4200ft £21.80. All prices plus VAT.

Ferro Super LH Professional

18cm spool, 2100ft. Price: £11.24 (plus VAT).



BASF DP26 LH Super



BASF range of cassettes

LH SM Compact Cassettes

BASF LH tape with special mechanics in snap pack box: C60 £1.66; C90 £2.10; C120 £2.64. All prices-plus VAT.

LH Super SM Cassettes

Incorporates BASF special mechanics for smooth winding and avoidance of jamming, in snap pack box: C60 £1.15; C90 £1.50; C120 £2.14. All prices exclude VAT.

ChromDioxide Cassettes

Incorporated BASF special mechanics, CrO₂ tape, better dynamic range, lower background noise, when used with suitable machines. C60 £2.80; C90 £3.20. All prices exclude VAT. 2 snap pack: C60 £1.94; C90 £2.42; C120 £3.60.

8-track Cartridges (unrecorded)

45min £1.98; 64min £2.18; 90min £2.48. All prices exclude VAT.

*Indicates entry is illustrated

Ferrochrom Cassettes*

Dual oxide cassette in snap pack. C60 £2.40; C90 £3.20.

Ferro Super LH1 Cassettes*

High bias cassette for widest possible range of Japanese recorders. Very low noise level and improved HF response. With BASF special mechanics in snap pack. C60 £1.66; C90 £2.22; C120 £2.90. All prices plus VAT.

Ferro Super LH Cassettes*

In snap pack. C60 £1.46; C90 £1.98; C120 £2.56

■ **EMI**

EMI Tape Ltd.
Tape House, Dawley Road,
Hayes, Middlesex.
Tel. 01-573 3888.

Standard

High output, low noise cassette in C60, C90 and C120.

Super

Super-Ferric tape provides quality comparable to chrome with need for special switches. In C60, C90, C120.

Hi-Fidelity

Uses advanced oxides to give better results at normal bias settings, provide exceptional high frequency response without significant distortion or loss of presence. In C60, C90, C120.

Open Reel Tape

Standard tapes stand up to repetitive playback situations. Double-play provides longest playing time on standard 5.7in spools, but requires care in handling and periodic rewinding if long storage periods are planned. Long play tapes offer a sound compromise: extended playing time combined with good archival characteristics making a practical range for the average domestic user.

■ **FUJI**

Pyser Ltd, Fircroft Way,
Edenbridge, Kent TN8 6HA.
Tel: Edenbridge (0732) 864111.

FL Super Low Noise

FL C46 71p; FL C60 79p; FL C90 £1.13; FL C120 £1.52.

FX-1*

High output, low noise, ferric tape for 'normal'



Fuji FX-1

bias and 120ms equalisation. High maximum output level of +4.0dB, S/N ratio of 57dB, increased sensitivity, high-end frequency characteristics, flat frequency response, reduced noise, extended head room, and new precision cassette shell for smooth and stabilised tape running. Prices: C46 £1.03, C60 £1.15, C90 £1.60 (inc. VAT).

FX-11

High output, low noise, Berridox tape for 'chrome' position bias setting with 70ms equalisation. Can be used with any cassette decks featuring switching facilities for chromium dioxide tapes. Offers better performance than chromium dioxide tape with high saturation level, reduced noise level, S/N ratio 61dB, high maximum output level of +4.0dB, increased sensitivity flat frequency response, increased head room and a new precision cassette shell to ensure optimum tape-to-head pressure and stable tape motion. Prices: C46 £1.07, C60 £1.22, C90 £1.68 (inc. VAT).

■ **GRUNDIG INTERNATIONAL LTD**

Newlands Park, London SE26 5NQ.
Tel. 01-659 2468

GDR 18 Hi-Fi

640m on 18cm metal spool.

GDR 22 Hi-Fi Studio

900m on 22cm metal spool.

C60 LHS

Compact cassette, 60 minutes playing time.

C90 LHS

Compact cassette, 90 minutes playing time.

C60CR

Compact chromium dioxide cassette, 60 minutes playing time.

C90CR

Compact chromium dioxide cassette, 90 minutes playing time.

Price list on request.

■ **HITACHI**

Hitachi (UK) Ltd,
Hitachi House, Station Road,
Hayes, Middlesex UB3 4DR.
Tel: 01-848 8787.

Low Noise

C60 92p; C90 £1.30; C120 £1.90.

Ultra Dynamic

UDC 60 £1.50; UDC 90 £1.85; UDC 120 £2.50;
UDER/EX 60 £1.94; UDER/EX 90 £2.42.

■ **MAXWELL**

Natural Sound Systems, 10 Byron Road,
Wealdstone, Harrow, Middx. HA3 7TL.

Super Low Noise

SLN C60 0.95p; SLN C90 £1.25; SLN C120
£1.70.

Ultra Dynamic Cassettes

UDC 46 £1.27; UDC 60 £1.43; UDC 90 £1.87;
UDC 120 £2.42; UDXL C60 £1.87; UDXL C90
£2.34.

Ultra Dynamic Open Reel Tape Matt-Black

UD 35-90B £5.08; UD 50-120B £10.80; UD
35-180B £11.60.

Ultra Dynamic Open Reel Tape

UD 35-90 £4.60; UD 50-120 £8.95; UD 35-180
£9.90. All prices plus VAT.

■ **MEMOREX**

Memorex (UK) Ltd,
Hounslow House, 730 London Road,
Hounslow, Middlesex.
Tel: 01-570 7716.

MRX3*

New high-quality cassette tape, ferric oxide for use on all types of cassette decks. Low distortion 0.8% —42dB DIN, low noise, increased maximum output, S/N ratio +55.2dB. Overall it provides a 2.5dB improvement in dynamic range over MRX2. Cassette halves are welded together, shells are made from high-impact polystyrene, are heat-resistant and able to withstand temperatures up to 56 deg C without warping. Should one of these cassettes cause trouble the company will exchange it and, if necessary, duplicate recorded material lost because of the failure. Price: 60 £1.85; 90 £2.46; 120 £3.22.

MRX, Cassettes*

C45 £1.38; C60 £1.46; C90 £2.02; C120 £2.76.
All prices plus VAT.



Memorex MRX2 cassettes



Memorex Chromium Dioxide Cassettes



Memorex Open Reel



Memorex MRX-3 range

*Indicates entry is illustrated



Musonic range

CrO, Cassettes*

CC45 £1.88; CC60 £2.00; CC90 £2.86. All prices plus VAT.

Open Reels*

7in × 1200ft £5.44; 7in × 1800ft £6.36; 7in × 2400ft £8.58. All plus VAT.

Quantum Open Reels

90-7in × 1800ft £8.28; 120-7in × 2400ft £11.14; 180-10 $\frac{1}{2}$ in × 3600ft £19.86.

Blank 8-Track

45 min £2.44; 60 min £2.64; 90 min £2.80. All prices plus VAT.

■ MUSONIC

S. & B. Trading, Stylus House,
34-38 Verulam Road, St. Albans,
Herts AL3 4DF.
Tel: St. Albans (56) 50611.

M11*

C60 Professional low noise cassette. Price: 87p (plus VAT).

M12*

C90 Professional low noise cassette. Price: £1.20 (plus VAT).

M13*

C120 Professional low noise cassette. Price: £1.59 (plus VAT).

MT4

8-track cartridge. 80 minutes. Price: £1.94 (plus VAT).

■ PHILIPS

Philips Electrical Ltd, Video Division,
19 Commerce Way, Purley Way,
Croydon, Surrey.
Tel: 01-688 7766.

Cassettes

Ferro: low noise tape, balanced output and response. Super Ferro: high output, low noise, suitable for machines with low bias settings. Super Ferro: high output, low noise, suitable for machines with higher bias settings. Chromium: chromium dioxide coating, improved high frequency reproduction. Ferro chromium: combines best characteristics of Ferric and Chromium dioxide tape coating.

■ PROFESSIONAL TAPES LTD

329 Hunslett Road, Leeds LS10 1NJ.
Tel: Leeds (0532) 706066.

Professional Cassettes

In C60 and C90 lengths complete with side labels, cards and library cases. The same cassettes can also be supplied separately with the customer's own brand. The minimum quantity for private brand cassettes is only 250.

■ REVOX

F. W. O. Bauch Ltd, 49 Theobald Street,
Borehamwood, Herts WD6 4RZ.
Tel: 01-953 0091.

Low-Noise 621

Professional sound recording tapes featuring low-noise oxide with high signal output. Wide dynamic range. Antistatic backing. 42074 £16.72, 42093 £19.76, 42095 £19.76.

■ ROSS ELECTRONICS

32 Rathbone Place, London W1P 1AD.
Tel: 01-580 7112.

RX1

High output, low noise. Super calendared for consistent performance with minimum wear. C60 42p, C90 60p and C120 82p, supplied in library case with index card. C30 38p letter tape supplied in mailing box.

RX2

Extra-high energy series utilising ultra high density tape formulation. Supplied in library cases with index cards. C60 64p; C90 88p; C120 £1.16; MC 40 (Microcassette) £1.20.

RX3

New state of the art technology series employing

cobalt ion absorption into a fine particle ferric oxide formulation. Biased for use in place of CrO₂ cassettes. C6090p; C90 £1.30.

■ SCOTCH

PO Box 1, Bracknell, Berks.
Tel: Bracknell (0344) 58357.

Cassette:

Low Noise Dynarange

C60; C90; C120. No rec. retail price.

High Energy 'Super Ferric'*

C45; C60; C90; C120. No rec. retail price.

Chrome

C45; C60; C90; C120. No rec. retail price.

Reel to Reel:

207 Professional Backcoated

10½ in. 3600ft for £15.44 (plus Vat).

Superlife 212

Long Play. 4in. 450ft; 5in. 900ft; 5¾ in. 1200ft; 7in. 1800ft. No rec. retail price.

Hi-Fi Range in Library Box:

SP222

Standard Play. 5in. 600ft; 5¾ in. 900ft; 7in. 1200ft. No rec. retail price.

LP223

Long Play. 5in. 500ft; 5¾ in. 1200ft; 7in. 1800ft. No rec. retail price.

DP224

Double Play. 5in. 1200ft; 5¾ in. 1800ft; 7in. 2400ft. No rec. retail price.

Cartridge:

High Output—low noise

8 Track. 45 mins; 90 mins. No rec. retail price.

Video/cassette (compatible with Philips System)

VC30; VC45; VC60. No rec. retail price.

Start Pack

5 × C90 High Energy plus free head cleaner and cassette recording guide booklet. No rec. retail price.

Scotch Master III

For FeCr switch position. Unique patented dual-layer construction which increases both



Scotch High Energy

low and high frequency sensitivity over chromium dioxide and ferric oxide tapes. 3dB increase in maximum output at low frequencies and 2dB at high frequencies over chrome cassettes.

Scotch Master I

For use on normal bias switch position or on decks with pre-set bias. Premium grade low-noise ferric oxide in new formulation giving good low and middle frequency performance coupled with excellent high frequency performance and 4dB better maximum output than most other low-noise cassettes.

Scotch Master II

Chrome bias, 70µs, Eq switch position, formulated from modified ferric oxide encapsulated with cobalt and giving 3dB better signal-to-noise ratio and 3dB better sensitivity at low and high frequencies than normal chromium dioxide tape. Low abrasion characteristics equal to the finest ferric oxide tapes.

■ SONY (U.K.) LTD.

Sony Showroom, Consumer Information,
134 Regent Street, London W1R 6DJ.
Tel: 01-439 3874.

Open Reel Tapes*

SLH5-275BL Super low-noise high output tape — 275 min spool. FeCr5-275 — ferrichrome tape — 275 min 5in. spool. FeCr11 — 1100 ferrichrome tape — 1100 min 10½ in. spool. LC 60 SLH — super low noise — 60 min. LC 90 FeCr

*Indicates entry is illustrated



Sony Cassette tapes



Sychrotapes



Sony tape range

— ferrichrome — 60 min. LC 90 SLH — super low noise — 90 min. LC 90 FeCr — ferrichrome 90 min.

Cassettes*

Normal position/mid bias: AHF-60, AHF-90, BHF-60, BHF-90, BHF-120. CHF-60, CHF-90. Chrome position/high bias: CDA-60, CDA-90. FeCr position/medium bias: FeCr-46, FeCr-60, FeCr-90.

■ SYNCROTAPE

Adastra Electronics Ltd, Unit N22, Cricklewood Trading Estate, Claremont Road, London NW2 1TU. Tel: 01-452 6288.

Specification of Sychrotape include the following: Coercivity 270 oersteds, remanent induction 0.75 maxwell per 6.25mm width. At $7\frac{1}{2}$ i/s $\frac{1}{2}$ -track biased to give max output at 1kHz, with DIN 70 μ Sec playback equalisation, main characteristics are: recorded flux for 2% third harmonic distortion 0.2 maxwell, un-

weighted RMS noise referred to 0.2 maxwell —65dB, print-through after 72 hours at 20°C —58dB.

Standard Play*

PVC base. 5in. 600ft £1.68; 5 $\frac{1}{4}$ in. 900ft £2.60; 7in. 1200ft £2.82. All prices exclude VAT.

Long Play

PVC base. 5in. 900ft £2.50; 5 $\frac{1}{4}$ in. 1200ft £3.00; 7in. 1800ft £3.75. All prices exclude VAT.

Syncassettes

Compact cassettes. C60 72p; C90 £1.02; C120 £1.20. All prices exclude VAT.

■ TDK

TDK Tape Distributor (UK) Ltd, 11th Floor, Pembroke House, Wellesley Road, Croydon, Surrey. Tel: 01-688 7372.

Cassettes

Acoustic Dynamic range — C45, C60, C90, C120. Dynamic cassettes available in C45, C60, C90, C120, C180. Super Avilyn cassettes — C60, C90.

Open Reel

AUDUA L1800, L3600 and the newly introduced matt back AUDUA LB1800, LB3600. Accessories 7in. metal spool, 10 $\frac{1}{2}$ in. metal spool.

■ TECHNICS

National Panasonic (UK) Ltd, 107-109 Whitby Road, Slough, Berks. SL1 3DR. Tel: Slough (75) 27516.

Elcaset Tape

RT 60 XDLC Low Noise £4.95. RT 60 EXLC ferrichrome £7.95. RT 60 XALC chrome bias/EG £7.95.

Microphones

*Indicates entry is illustrated

Abbreviations used in this section are given on page 5.

■ ADASTRA

Adastra Electronics Ltd, Unit N22,
Cricklewood Trading Estate,
Claremont Road, London NW2 1TU.
Tel: 01-452 6288.

M.26

Electret microphone, cardioid pattern. FR: 10Hz-18kHz. Imp: 50K. With 'U' bracket for stand/boom mounting. Features: 20ft. lead, windshield, internal battery. Price: £27.90 (plus VAT).

M.30

Moving Coil microphone, cardioid pattern. FR: 50Hz-15kHz. Imp: 50K. With 'U' bracket for stand/boom mounting. On/off switch. Price: £24.30 (plus VAT).

M.130 Floor Stand/Curved Boom Arm

British made low-level stand base with stem/boom arm adjustable through 360 deg. Spring-loaded locking. Screw-in solid tripod legs with ferruled ends. Height: 5ft. Price: £18.00 (plus VAT).

M.131 Portable Floor Stand

Two section stem with unique polypropylene base to receive tubular legs—horizontal for use, vertical for transportation/storage. Height: 5ft. Price: £13.20 (plus VAT).

M.150 Mic Cradle Suspension

Studio type anti-shock suspension unit accepting most stick mics. With van-angled bracket able to fit most stands and booms. Price: £11.40 (plus VAT).

M.132 Floor Stand with Boom Arm

Similar to M.131 with unique portability, but additional 31in. boom arm adjustable through 360 deg. High quality tubing chrome plated.

Two-section stem provides normal height to 5ft, extending to 7ft 2in. with boom upright. Price: £22.00 (plus VAT).

Gooseneck Stems

Range of fully-flexible gooseneck stems from hollow tubing with 5/8in. 26 turn in male and female termination and cable lead-out hole. Chrome finish. Length 12in. £2.75 (plus VAT), 20in. £4.00 (plus VAT). Also M170 flange adaptor for wall or desk fitting £1.60 (plus VAT).

■ AIWA

Aiwa Sales and Service (UK) Ltd,
30-32 Concord Road,
Westwood Park Trading Estate,
London W3 0TH. Tel: 01-993 1672.

CM-2000A

One-point stereo electret condenser microphone. Directivity: Uni-directional. Semi-conductors: 1FET. Output imp: 250 ohms. Sensitivity: $-74\text{dB} \pm 3\text{dB}$ (0dB 1V/ μbar). Frequency response: 50-17,000Hz. Channel balance 2dB. Dimensions: 50 × 215mm. Price: £26.92 (plus VAT).

DM-68N

Dynamic microphone. Directivity: Uni-directional. Imp: 250 ohms or 10K. Sensitivity: -73dB (250 ohms), -59dB (10K). Frequency response: 50-15,000Hz. Switch: Built-in bass roll-off switch. Price: £47.21 (plus VAT).

CM-1016

Electret microphone. Uni-directional. FR: 50Hz-15kHz. Imp: 600 ohms. Stand. Sensitivity 73dB, cord length 5m. Tone selector, windscreen. Price: £38.37 (plus VAT).

DM S11P

Moving coil microphone. Directivity: Uni-directional, cardioid. FR: 100Hz-12kHz. Impedance: 600 ohms. Stand mounted. Supplied as pair with DIN plus on each. Stand mounting included. Price: £27.94 (plus VAT).

■ AKAI

Akai (UK) Ltd,
c/o The Production Village,
82-106 Cricklewood Lane,
London NW22 20P.
Tel: 01-450 2011.

ACM 100

Electret. FR: 40Hz-16,000Hz. Supplied with two different coloured mufflers. FR: 30Hz-17kHz. Impedance: 600 ohms. Price: £31.82 (plus VAT).

*Indicates entry is illustrated

ADM 20P

Lightweight portable. Impedance: 600 ohms. Price: on application.

ACM 50P

Portable electret condenser microphone. FR: 30Hz-17kHz. Output impedance: 600 ohms. Price: on application.

ACM 300

Professional quality electret condenser microphone. Tone selector switch (music/voice), impedance switch and 0-10 dB switch. FR: 30Hz-17kHz. S/N better than 50dB. 5 meter cord with single head plug. Price: on application.

■ **AGK**

AKG Acoustics Ltd,
191 The Vale, Acton, London W3.
Tel: 01-229 3695.

D 120E

Moving coil microphone, cardioid pattern. FR: 100Hz-17kHz. Imp: 200 ohms. Hand held or stand mounting—stand adaptor included. Comes with cannon connector complete with cable. Price: £38.50 (plus VAT).

D 120HL

Moving coil microphone, cardioid pattern. FR: 100Hz-17kHz. Imp: adjustable 40K and 600 ohms. Hand held or stand mounting—stand adaptor included, cable attached. Price: £42.00 (plus VAT).

D 140E

Moving coil microphone, cardioid pattern. FR: 100Hz-17kHz. Imp: 200 ohms. Hand held or stand mounting—stand adaptor included. Features: built-in bass cut switch serves to reduce rumble and handling noise. Built-in wind/pop screen with cannon connector. Price: £63.00 (plus VAT).

D170E

Moving coil microphone, cardioid pattern. FR: 30Hz-15kHz. Imp: 200 ohms. Hand held or stand mounting, stand adaptor included. Built-in wind/pop screen suitable for close mouth vocals, with cannon connector. Price: £72.00 (plus VAT).

D 160E1

Moving coil microphone, omni-directional. FR: 50Hz-15kHz. Imp: 200 ohms. Hand held or stand mounting, stand adaptor included. Features: specially insensitive to vibration and handling noise, with cannon connector. Price: £63.00 (plus VAT).



AKG D 190E

D 190E*

Moving coil microphone, cardioid pattern. FR: 30Hz-16kHz. Imp: 200 ohms. Hand held or stand mounting, stand adaptor included. Features: Sintered bronze cap, with cannon connector. Price: £51.00 (plus VAT).

D 190C

Moving coil, cardioid pattern. FR: 30Hz-16kHz. Imp: 200 ohms. Hand held or stand mounting. Stand adaptor included. Features: Sintered bronze cap with cannon connector. Price: £51.50 (plus VAT).

D 190ES

Same as D 190E plus on/off switch. Price: £55.80 (plus VAT).

D 190CS

Same as D 190C with on/off switch. Price: £55.80 (plus VAT).

D 190ES/Hi

Moving coil microphone, cardioid pattern. FR: 30Hz-16kHz. Imp: 50K. Features as D 190E. Price: £60.00 (plus VAT).

D 190 CS/Hi

Moving coil microphone, cardioid pattern. FR: 30Hz-16kHz. Imp: 50K. Features: as D 190C. Price: £60.00 (plus VAT).

D 190E/Hi

Moving coil microphone, cardioid pattern. FR: 30Hz-16kHz. Imp: 50K. Features: as D 190E. Price: £55.80 (plus VAT).

D 190C/Hi

Moving coil microphone, cardioid pattern. FR: 30Hz-16kHz. Imp: 50K. Features: as D 190C. Price: £55.80 (plus VAT).

D 200E1

Moving coil microphone, cardioid pattern. FR: 30Hz-17kHz. Imp: 200 ohms. Hand held or stand mounting, stand adaptor included. Uses two way technique, with cannon connector. Price: £75.60 (plus VAT).

D 202ES

Moving coil microphone, cardioid pattern. FR: 20Hz-18kHz. Imp: 200 ohms. Hand held or stand mounting, stand adaptor included. Uses two way technique continuously variable. Bass cut switch (0.20dB at 50Hz) and on/off switch with cannon connector. Price: £95.50 (plus VAT).

D 202E1

Moving coil microphone, cardioid pattern. FR: 20Hz-20kHz. Imp: 200 ohms. Mounting as D 202ES. Features: uses two way technique. Two position bass cut switch (-7, -20dB at 50Hz) and on/off switch. Individual frequency response plot with cannon connector. Price: £97.70 (plus VAT).

D 222E*

Moving coil microphone, cardioid pattern. FR: 20Hz-18kHz. Imp: 200 ohms. Hand held or stand mounting. Stand adaptor included. Features: two way technique two position bass cut switch (-6, -12dB at 50Hz). With cannon connector. Price: £90.00 (plus VAT).

D 224E

Moving coil microphone, cardioid pattern. FR: 20Hz-20kHz. Imp: 200 ohms. Hand held or stand mounting, stand adaptor included. Features: uses two way technique built-in two position bass cut switch (-7, -12dB at 50Hz). Individual frequency response plot with cannon connector. Price: £145.00 (plus VAT).

D 510B

Moving coil microphone, omni-directional. FR: 100Hz-15kHz. Imp: 200 ohms. Goose neck mic. Price: £44.00 (plus VAT).

D 590

Moving coil microphone, cardioid pattern. FR: 150Hz-17kHz. Imp: 200 ohms. Gooseneck mic. Price: £44.00 (plus VAT).

D 591

Moving coil microphone, cardioid type. FR: 250Hz-17kHz. Imp: 200 ohms. Hand held or

stand mounting. Stand adaptor included. Features: lockable push button switch (start/stop function for remote control of tape recorder or radio set). Price: £44.00 (plus VAT).

D 900E

Moving coil microphone, lobar pattern. FR: 60Hz-12kHz. Imp: 200 ohms. Hand held or stand mounting, stand adaptor included. 'shotgun' microphone, narrow angle pickup even at great distance from sound source. Built-in bass cut switch (-7, -20dB at 50Hz), with cannon connector. Price: £96.90 (plus VAT).

D 1200E

Moving coil microphone, cardioid type. FR: 25Hz-17kHz. Imp: 200 ohms. Stand or hand held, stand adaptor included. Features: Built-in pop screen, selectable sound pattern by adjustable frequency response characteristic (bass-medium-sharp) with cannon connector. Price: £66.00 (plus VAT).

D 1200E/HL

As D 1200E except Imp: Dual 45K/60 ohms. Price: £66.00 (plus VAT).

7D 2000E

Moving coil microphone, cardioid pattern. FR: 25Hz-15kHz. Imp: 200 ohms. Stand or hand held, stand adaptor included. Built-in wind/pop screen, adjustable frequency response characteristic (bass-medium switch), also built-in on/off switch with cannon connector. Price: £78.00 (plus VAT).



AKG D 222E

*Indicates entry is illustrated

SE 5E/10

Supply unit for CE1, 2, 5, 8, 10 capsules. Battery container for 5.6V battery. On/off switch, integral circuitry for universal phantom power (9-52V). FR: 20Hz-20kHz. Imp: 200 ohms. Features: cannon connector. Price: £33.60 (plus VAT).

CE1

Electret capsule, cardioid pattern. FR: 30Hz-20kHz. Imp: 200 ohms. For use with SE5 power supply unit. Price: £29.40 (plus VAT).

CE2

As CE1 but omni-directional. Price: £29.40 (plus VAT).

CE5

Electret capsule, cardioid type. FR: 30Hz-20kHz. Imp: 200 ohms. Integral shock mount and windscreen for use with SE5 power supply unit. Price: £37.80 (plus VAT).

CE8

Electret capsule, Hypercardioid 'shotgun'. FR: 70Hz-20kHz. Imp: 200 ohms. Designed to minimise ambient noise and room reverberation. For use with SE5 power supply unit. Price: £56.70 (plus VAT).

CE 10/1

Electret capsule, omni-directional. FR: 20Hz-18kHz. Imp: 200 ohms. Features: Tie clip Lavalier microphone for use with SE5 power supply unit. Price: £69.30 (plus VAT).

C 501E/10

Electret microphone, cardioid type. FR: 30Hz-20kHz. Imp: 200 ohms. Hand held or stand mounting, adaptor included. Features: microphone consists of CE1 capsule and SE5 supply unit, with cannon connector. Price: £60.90 (plus VAT).

C 501C /10

As C 501E with DIN connector. Price: £60.90 (plus VAT).

C 505E/10

Electret microphone, cardioid pattern. FR: 30Hz-20kHz. Imp: 200 ohms. Stand or hand held, stand adaptor included. Features: microphone consists of CE5 capsule and SE5 supply unit, with cannon connector. Price: £75.60 (plus VAT).

C 510E/11

Electret microphone, omni-directional. FR: 20Hz-18kHz. Imp: 200 ohms. Lavalier tie clip. Microphone consists of CE10-1 capsule and

CE5 supply unit with H16 belt mounting clip and two W6-windscreens, cannon connector. Price: £102.90 (plus VAT).

C 451E

Fet-pre amplifier, for universal phantom powering (9-51) power consumption (dependent on source resistance and operating voltage = 5.5mA. FR: 5Hz-30kHz. Imp: 200 ohms. Features: for use with CK range of capsules, cannon connector. C 451C has DIN. Price: £63.70 (plus VAT).

C 451EB

Same as C 451E but with built-in two-position bass-cut switch (-7, -20dB) at 50Hz at cut off frequencies of 75 and 150Hz. C 451CB as DIN connector. Price: £78.30 (plus VAT).

C 452EB

Same as C451EB but adapted for 48V phantom power supply, with cannon connector. Price: £78.30 (plus VAT).

CK1

Condenser Capsule, cardioid pattern. FR: 20Hz-20kHz. Imp: 200 ohms. For use with C451/452 FET pre-amps. Price: £41.40 (plus VAT).

CK1S

Condenser capsule, cardioid pattern. FR: 20Hz-20kHz. Imp: 20 ohms. Presence boost at approx. 100,000Hz of about 6dB for use with C451/452 FET pre-amps. Price: £41.40 (plus VAT).

CK2

Condenser capsule, omni-directional. FR: 20Hz-20kHz. Imp: 200 ohms. For use with C451/452 FET pre-amps. Price: £41.40 (plus VAT).

CK5

Condenser capsule, cardioid pattern. FR: 20Hz-20kHz. Imp: 200 ohms. Elastically suspended system with built-in windscreen. For use with C451/452 FET pre-amps. Price: £78.40 (plus VAT).

CK8

Condenser capsule, Hypercardioid 'Shotgun' pattern. FR: 30Hz-20kHz. Imp: 200 ohms. Short shotgun for use with C451/452 FET pre-amps. Price: £78.40 (plus VAT).

CK9

Condenser capsule, Hypercardioid 'shotgun' type. FR: 30Hz-18kHz. Imp: 200 ohms. Long shotgun for use with C451/452 FET pre-amps. Price: £95.00 (plus VAT).

C 414EB

Studio condenser microphone. Switchable 4 patterns cardioid omni-directional figure of eight. Hypercardioid. FR: 20Hz-20kHz. Imp: 150 ohms. Stand, stand adaptor included. Features: two position bass cut switch (-7, -20dB at 50Hz). Two position sensitivity pre-attenuator (-10, -20dB) individual response curve. Price: £284.00 (plus VAT).

B 46E

Battery power supply unit for C 451E or C 414EB. Price: £44.00 (plus VAT).

N 66E

Power supply unit for feeding up to six C451 series microphones or C414EB. 110 or 220V. Price: £116.00 (plus VAT).

■ AMSTRAD

Amstrad Consumer Electronics Ltd,
1-7 Garman Road, London N17 0UF.
Tel: 01-801 4431.

DM 701*

Dynamic. FR: 80Hz-13,000Hz. Imp: 300 ohms. Finish: aluminium handle with spherical mesh windshield. Features: complete with stand and 3.5mm to 11B 4in. adaptor. Price: £14.83 per pair (plus VAT).

■ AUDIO TECHNICA

Harman UK, St John's Road, Tylers Green,
High Wycombe, Bucks.
Tel: Penn (049 481) 5331.

AT 801

Electret condenser omni-directional microphone. FR: 40Hz-18kHz. Imp: 600 ohms. Weight: 5.6oz. Price: £37.56 (inc. VAT).

AT 802*

Dynamic moving coil omni-direction microphone. FR: 50Hz-16kHz. Imp: 600 ohms. Weight: 5oz. Price: £37.56 (inc. VAT).

AT 811

Electret condenser cardioid microphone. FR: 20Hz-20kHz. Imp: 600 ohms. Weight: 6oz. Price: £41.61 (inc. VAT).

AT 812*

Dynamic moving coil cardioid microphone. FR: 20Hz-20kHz. Imp: 600 ohms. Weight: 7.6oz. Price: £45.47 (inc. VAT).

AT 813*

Electret condenser cardioid microphone. FR: 70Hz-15kHz. Imp: 600 ohms. Weight: 6oz. Price: £49.43 (inc. VAT).

*Amstrad DM701**Audio Technica AT802**Audio Technica AT812**Audio Technica AT813*

*Indicates entry is illustrated

AT 815

Electret condenser line cardioid microphone. FR: 20Hz-20kHz. Imp: 600 ohms. Price: £98.83 (inc. VAT).

AT 803S

Tie-clip/lapel type omni-directional electret mic. Mainly for stage/TV use with speech. Price: £30.08 (inc. VAT).

AT 805S

As above. Price: £33.77 (inc. VAT).



Beyer M88N (C)



Beyer M 810 N

AT 814

For studio use especially for highly accurate vocal reproduction. Price: £79.07 (inc. VAT).

■ **BEYER**

Beyer Dynamic (GB) Ltd,
1 Clair Road, Haywards Heath, Sussex.
Tel: Haywards Heath (0444) 51003.

M69 N (C)

Mono moving coil uni-directional cardioid. FR: 50Hz-15kHz ± 3 dB. Sensitivity: 144dBm. Imp: 200 ohms. Rec. load: 1K. Hand mic with optional speech-off-music switch. Steel case finished blue stove enamel. Price: £62.65 (plus VAT).

M81 LM

Mono moving coil cardioid. FR: 15Hz-16kHz. Imp: 500 ohms. Supplied complete with plated table stand and clamp. Price: £32.31 (plus VAT).

M88 N (C)*

Mono moving coil hypercardioid. FR: 30Hz-20kHz. Sensitivity: 144dBm. Imp: 200 ohms. Hand mic available with Cannon plug. Price: £129.48 (plus VAT).

M101N (C)

Mono moving coil omni-directional. FR: 40Hz-20kHz ± 2.5 dB. Sensitivity: 150dBm. Imp: 200 ohms. Rec. load: 1K. Hand mic with wind-shield. Anodised aluminium case. Price: £85.07 (plus VAT).

M111N

Mono moving coil omni-directional. FR: 60Hz-15kHz. Sensitivity: —155dBm. Imp: 200 ohms. Lavalier mic. Anodised aluminium case. Price: £93.36 (plus VAT).

M160N (C)

Mono double-ribbon super cardioid. FR: 40Hz-18kHz ± 2.5 dB. Sensitivity: 152dBm. Imp: 200 ohms. Price: £170.48 (plus VAT).

M411N (C) S

Mono moving coil uni-directional cardioid. FR: 200Hz-12kHz. Sensitivity: —149dBm. Imp: 200 ohms. Rec. load: 1K. Hand Gooseneck mic. Designed for close-talking applications. Price: £50.49 (plus VAT).

M500N (C)

Mono ribbon hypercardioid. FR: 40Hz-18kHz. Sensitivity: —153dBm. Imp: 200 ohms. Price: DIN £87.96; Cannon £93.52 (plus VAT).

OPEN YOUR EARS TO BEYER DYNAMIC

If you demand the best from your hi-fi equipment, Beyer Dynamic have made the DT 440 headphones just for you. This elegantly designed, open high velocity stereophone is a marvel of superb technology and craftsmanship.

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DT 440 headphones

Beyer Dynamic

BeyerDynamic (GB) Ltd, 1 Clair Rd., Haywards Heath, Sussex RH16 3DP. Tel: (0444) 51003

*Indicates entry is illustrated

M201NC

Hypercardioid moving coil. FR: 40Hz-18kHz. Sensitivity: —149dBm. Imp: 200 ohms. Hand-held or stand-mounted type. Price: DIN £75.53; Cannon £78.01 (plus VAT).

M412NT (T) S

Moving coil cardioid. FR: 200Hz-12,000Hz. Imp: 200 ohms. Sensitivity: —149dBm. Hand or gooseneck mounting. PA mike with flexible rubber housing. Price: £53.25 (plus VAT).

M260 NCS

New version Mono ribbon hypercardioid. FR: 50Hz-18kHz. Sensitivity: —153dBm. Imp. 200 ohms. Price: £76.59 (plus VAT).

M 680N

Moving coil microphone, cardioid type. FR: 100Hz-12kHz. Mounted on gooseneck. Ready wired with on/off switch. Price: £58.78 (plus VAT).

Condenser Microphones

Details on request.

■ **CALREC**

Calrec Audio Ltd, Hangingroyd Lane, Hebden Bridge, West Yorks HX7 7DD. Tel: Hebden Bridge (042 284) 2159.

CM 602D

Omni-directional for all applications where feedback or separation are not important. Price: £39.12 (plus VAT).

CM 652D*

Full range cardioid ideal for high quality home recording. Price: £39.12 (plus VAT).

CM 654D

Acoustically compensated vocal cardioid designed to give ultimate in vocal quality commensurate with good anit-feedback properties, complete with reticulated foam windshield. Price: £45.10 (plus VAT).

CM 656D

As CM 654D but with chromium plated spherical mesh head containing reticulated foam windshield. Price: £53.68 (plus VAT).

■ **EAGLE INTERNATIONAL**

Heather Park Drive, Wembley HA0 1SU. Tel: 01-902 8832.

PRO-M20*

Mono uni-directional capacitor microphone. FR: 30Hz-17kHz. Sensitivity: —60dB. Sub-



Calrec CM 652 with power supply and accessories



Eagle PRO-M20

miniature FET circuit built into mic capsule. Price: £43.85 (plus VAT).

PRO M90

Moving coil mic, cardioid 10dB front to back. FR: 40Hz-16kHz. Imp: 600 ohms. Hand mic supplied with hold for stands. Studio quality, heavy diecast body. Three-layer windshield. Price: £49.95 (plus VAT).

PRO M80

Moving coil mic, cardioid 10dB front to back. As M90 but finished in all gold. Price: £42.50 (plus VAT).

PRO M40

Capacitor super-directional 'gun' type, super cardioid pattern. FR: 20Hz-18kHz. Imp: 600 ohms. Hand held, or adaptor for stand use. 'Riffle' barrel, on/off switch, detachable windshields, high sensitivity, high directionality. Price: £36.50 (plus VAT).



Ferguson Accuracy Range Melodium range

PRO M60

Capacitor, miniature tie-clip type, omnidirectional. FR: 35Hz-18kHz. Imp: 600 ohms. Supplied with tie-clip and tie-pin. Features: 7 x 7 miniature capsule, remote power supply, spring-reinforced signal lead. Price: £39.85 (plus VAT).

PRO M50

Electret super-directional 'gun' type, super cardioid pattern. FR: 30Hz-16kHz. Imp: 600 ohms. Hand held, pistol-grip (supplied), screws into integral shock-mount. Features: 'Rifle' barrel, detachable windshield. Extremely directional. Price: £31.90 (plus VAT).

SME 900

Capacitor stereo microphone, omni directional. FR: 40Hz-20kHz. Impedance: 600 ohms. Hand mic with holder supplied. Features: capacitor elements set at 120 deg. for smooth polar response. Built-in on/off switch and power supply (HP7 battery). Metal body and mesh windshield. Jack plugs, detachable cable. Price: £27.50 (plus VAT).

■ FERGUSON

Thorn Consumer Electronics, 284 Southbury Road, Enfield, Middlesex.
Tel: 01-363 5353.

TA66*

Condenser microphone (electret). Uni-directional 120 deg. FR: 40Hz-18kHz. Imp: 600 ohms. Stand adaptor. Switching for vocal, channel balance within 1.5dB. Double window screen reducing outdoor wind and breathing noise. Price: approx £28.00.

■ GARDNERS

Gardners Transformers Ltd,
Christchurch, Dorset BH23 3NP.
Tel: Christchurch (020 15) 2284.

Audio Transformers*

Wide range of miniature microphone transformers, standard microphone and A.F. line matching transformers, wide band microphone and A.F. line matching transformers, extra



Gardners Mic transformers

*Indicates entry is illustrated

wide band microphone and A.F. line matching transformers, super fidelity wide band microphone and line matching transformers, high-voltage proof A.F. line matching transformers, high-level A.F. line matching transformers, sub-miniature A.F. matching transformers, miniature open-type microphone transformers and miniature open A.F. line matching transformers. Specifications and prices on request.

■ **GRUNDIG**

Grundig International Ltd,
Newlands Park, London SE26 5NQ.
Tel: 01-659 2468.

GDM 308 Report*

Moving coil microphone. Omni-directional. FR: 80Hz-15kHz. Imp: 700 ohms. Hand held. Motor stop/start switch. No rec. retail price.



Grundig GMD 308 Report

GCM 319*

Capacitor mic. 60Hz-18kHz Imp: 100 ohms. Hand/desk stand. Built-in FET amplifier. No rec. retail price.



Grundig GCM 319

GCSM 332*

Capacitor mic. FR: 60Hz-18kHz. Imp: 100 ohms. Desk/stand. Built-in FET amplifiers. No rec. retail price.

GDM 314

Omni directional microphone. FR: 80Hz-15,000Hz. Imp: 200 ohms/10K ohms. Sensitivity: 0.13mV/ μ bar—0.9mV/ μ bar.



Melodium range

■ JVC

JVC (UK) Ltd, Eldonwall Trading Estate,
Staples Corner, 6-8 Priestley Way,
London NW2 7AF.
Tel: 01-450 2621.

M510

Super-directional, uni-directional electret condenser microphone. Price: £120.20 (inc. VAT).

M201

Electret condenser stereo microphone. Price: £31.50 (inc. VAT).

■ MELODIUM

Amdio Ltd, 26-18 Reading Road South, Fleet,
nr. Aldershot, Hants.
Tel: Fleet (025 14) 20567.

C133*

Cardioid dynamic general purpose microphone. FR: 50-15kHz. Imp: 10 or 200 ohms. DIN or XLR connectors with/without switches. Price: £49.84 (plus VAT).

M121*

Cardioid electret general purpose microphone with on/off switch. FR: 80Hz-14kHz. Imp: 600 ohms. Complete with 5m cable. Price: £49.28 (plus VAT).

M097D*

Cardioid dynamic high quality microphone recommended for speech and music. Fitted with on/off switch and supplied with 5m cable and XLR connecting plug. FR: 60Hz-18kHz. Imp: 200 ohms. Price: £64.30 (plus VAT).

79A*

Omni-directional dynamic lavalier microphone. Wide FR: 60Hz-16kHz. Imp: 200 ohms, 50K. Price: £35.50 (plus VAT).

Accessories •

Full range of plugs, stands, etc. Details on request.

■ KEITH MONKS

Keith Monks (Audio) Ltd,
26-28 Reading Road South, Fleet, nr.
Aldershot, Hants.
Tel: Fleet (025 14) 20568/9.

MS/M

Heavy duty microphone floor stand with solid screw-in legs. Height: 38-69in. Finish: chrome, red, black, light blue, white, yellow or grey. Price: £22.40 (plus VAT).



Keith Monks MS/W Mic stand

BA/M

Heavy duty book arm, suitable for MS/M, maximum reach 31½in. Finish: as above. Price: £12.50 (plus VAT).

MS/L*

Heavy duty studio microphone stand. Height: 45-78in. Four legs of 14in. Price: £39.70 (plus VAT). Alternative version with four legs of 22in. Price: £44.40 (plus VAT).

BA/L

Heavy duty studio boom arm suitable for MS/L. 42in. long versions £16.90 (plus VAT). 72in. long version £25.20 (plus VAT). Counterweights extra.

EXT/1

Rod to extend BA/L or MS/M by up to 36in. Price: £7.85 (plus VAT).

MS/CT/2

Heavy duty chrome microphone stand with 11lb. cast base. Height: 38-69in. Price: £23.20 (plus VAT).

MS/W

Studio microphone floor stand on wheels. Height: 45-78in. Will take BA/L boom arm. Price: £60.90 (plus VAT).

MS/F

Portable microphone floor stand with folding legs. Height: 28-72in. Price: £23.90 (plus VAT).

*Indicates entry is illustrated



Keith Monks MS/L14 mic stand

TS/1

Microphone table stand with three heights 1-5-3/8in. Price: £8.20 (plus VAT).

TS/2

Microphone table stand with three legs. Height: 1 1/4in. Price: £4.50 (plus VAT).

Accessories

Full range of accessories available including microphone clips, clamps, side clamps for mounting an extra microphone to floorstands, stereo bars for mounting two microphones on one stand, cable clips, large range of thread adaptors, etc., etc.

■ NAKAMICHI

Natural Sound Systems Ltd,
10 Byron Road, Wealdstone, Harrow,
Middlesex. Tel: 01-863 8622.

CM-1000

Condenser microphone-cardioid. FR: 20Hz-20kHz. Imp: 600 ohms. Weight: 140g. Price: £204.24 (inc. VAT).

CM-700

Electret condenser microphone. Cardioid. FR: 20Hz-20kHz. Imp: 600 ohms. Weight: 140g. Price: £124.32 (inc. VAT).

CM-100

Electret condenser—Cardioid. FR: 30Hz-

18kHz. Imp: 200 ohms. Weight: 160g. Price: £177.60 (inc. VAT).

CM-50

Electret condenser microphone—Super-omni. FR: 20Hz-18kHz. Imp: 250 ohms. Weight: 80g. Price: £97.68 (inc. VAT).

DM-1000

Moving coil dynamic microphone—Cardioid. FR: 30Hz-18kHz. Imp: 250 ohms. Weight: 350g. Price: £204.24 (inc. VAT).

DM-500

Moving coil dynamic microphone—Cardioid. FR: 50Hz-15kHz. Imp: 250 ohms. Weight: 160g. Price: £62.16 (inc. VAT).

■ NEUMANN GMBH

Sole UK Agents: F.W.O. Bauch Ltd,
49 Theobald Street, Borehamwood,
Herts WD6 4RZ. Tel: 01-953 0091.

KM83

FET condenser. Omni-directional. FR: 40Hz-16kHz. Sensitivity: 0.5mV/microbar. Imp: 50 or 200 ohms. Built-in transformer. Sensitivity switch: —10dB. Price: on application.

KM84

FET condenser. Cardioid. FR: 40Hz-16kHz. Sensitivity: 0.5mV/microbar. Imp: 50 or 200 ohms. Built-in transformer. Sensitivity switch: —10dB. Price: on application.

KM86

FET condenser. Cardioid. FR: 40Hz-16kHz. Sensitivity: 0.5mV/microbar. Imp: 50 or 200 ohms. Built-in transformer. Sensitivity switch: —10dB. Price: on application.

U87

FET condenser. Switchable to omni-directional, cardioid or figure-of-eight. FR: 40Hz-16kHz. Imp: 50 or 200 ohms. Built-in transformer. Bass cut and sensitivity switch of —10dB. Price: on application.

KM88

FET condenser. Switchable to omni-directional or cardioid. FR: 40Hz-16kHz. Imp: 50 or 200 ohms. Sensitivity across 1K: approx. 0.7mV/microbar. Built-in transformer. Sensitivity switch —10dB. Price: on application.

SM69 FET

Stereo transistor condenser. Both systems separately remote controlled: omni-directional, cardioid or figure-of-eight. FR: 40Hz-16kHz. Sensitivity across 1K: 2mV/microbar. Imp: 50

or 200 ohms. Built-in transformers. Pressure-gradients. Price: on application.

U47 FET

Mono condenser. Cardioid. FR: 40Hz-16kHz. Sensitivity: 0.8mV/ μ bar. Imp: 150 ohms balanced. Recommended load: \geq 750 ohms. Standswivel with thread adaptor. Continues the tradition of the U47 produced from 1947-1960. Elastically mounted capsule and various switches. Finish: matt nickel plated. Price: on application.

KMA

Mono condenser. Cardioid. FR: 40Hz-16kHz. Sensitivity: 0.5mV open circuit. Imp: 800 ohms balanced. Recommended load: \geq 2.7K. Lavalier type. Tie-clip fitting. Low sensitivity to noise of clothing, etc. Finish: dark satin nickel plate. Price: on application.

KMS 84

Capacitor microphone, cardioid pattern. FR: 40Hz-18kHz. Imp: 150 ohms. Hand or stand-clip. Features: soloist condenser microphone for vocal or instrumental requirements. Price: on application.

■ PASO

Amdio Ltd, 26-28 Reading Road South, Fleet, nr. Aldershot, Hants.
Tel: Fleet (025 14) 20567.

M8

Cardioid dynamic high quality public address microphone with music/speech switch. Complete with clamp. FR: 30Hz-20kHz. Dimensions: 3.6 \times 16.5cm. Imp: 200 ohms. Price: £37.15 (plus VAT).

M300

Cardioid dynamic microphone for public address, broadcast and studio use. Built-in pop shield. Complete with plug, cable, anti-shock clamp. FR: 20Hz-20kHz. Dimensions: 5 \times 16.7cm. Imp: 200 ohms. Price: £78.53 (plus VAT).

Accessories

Full range of plugs, stands, etc. Details on request.

■ PHILIPS

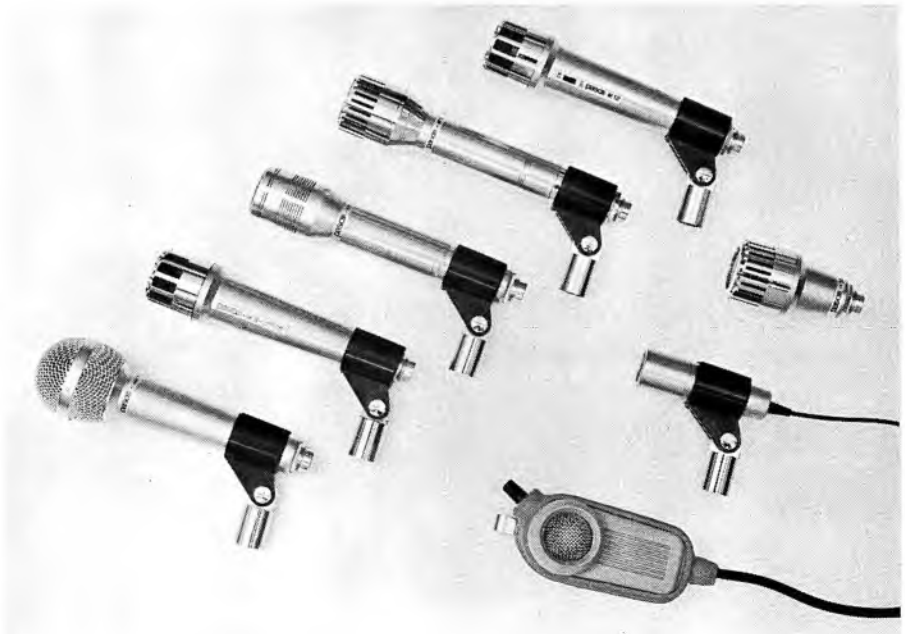
Pye Business Communications Ltd,
Cromwell Road, Cambridge CB1 3HE.
Tel: Cambridge (0223) 45191.

LBB 9018/0

Moving coil microphone. FR: 100Hz-16kHz. Imp: 200 ohms. Front-to-back ratio. 20dB. 3m. cable. Wall mounting or hand-held. Complete with bracket. Price: £48.00 (plus VAT).

LBB 9100*

Moving coil microphone, cardioid pattern. FR:



Paso range

*Indicates entry is illustrated

80Hz-17kHz. Imp: 200 ohms. Hand/stand. Complete with lift-off adaptor speech/music switch. Low hand sensitivity. Price: £77.50 (plus VAT).

LBB 9023/05

Moving coil microphone, cardioid. FR: 150Hz-15kHz ± 3 dB. Imp: 200 ohms. Stand or panel mounting. Features: on/off slide switch. Price: £49.50 (plus VAT).

LBB 9033/05

Moving coil microphone, cardioid. FR: 150Hz-15kHz ± 3 dB. Imp: 200 ohms. Stand or panel mounting. Price: £45.00 (plus VAT).

LBB 9020/45

Moving coil microphone, cardioid. FR: 60Hz-18kHz. Imp: 200 ohms. Hand or stand use. Complete with locking DIN plug, on/off slide switch. Speech/music filter switch and lift off adaptor. Price: £75.00 (plus VAT).

LBB 9031/05

Moving coil microphone, cardioid. FR: 150Hz-15kHz ± 3 dB. Imp: 200 ohms. Complete with lift-off adaptor. Price: £47.50 (plus VAT).

LBB 9003/05

Moving coil lavalier microphone, omnidirectional. FR: 50Hz-15kHz. Imp: 200 ohms. Halter cord and clip. Price: £39.50 (plus VAT).

LBB 9030/35

Moving coil microphone, cardioid. FR: 60Hz-18kHz. Imp: 200 ohms. Hand or stand use. Comes complete with locking DIN plug lift off adaptor. Price: £68.00 (plus VAT).

■ ROSS ELECTRONICS

32 Rathbone Place, London W1P 1AD.
Tel: 01-580 7112.

RE-315*

Single draw telescope microphone floor stand with heavy collapsible legs providing an extremely rigid base. With friction lock and universal microphone holder. Height extended: 1.7 metres. All chrome finish. Price: £22.00 (plus VAT).

RE-363*

Electret condenser, cardioid microphone finished in matt anodised silver with wiremesh grille and chrome bezel. Generating element operates in conjunction with an integral battery operated FET amplifier. Imp: 600 ohms. FR: 30Hz-16kHz. Sensitivity: -66 dB at 1kHz. Signal/noise ratio: greater than 44dB. Price: £20.00 (plus VAT).

RE-364*

Slimline, dual-impedance electret condenser cardioid microphone suitable for studio or stage work. Elegantly styled and finished in matt black. Electret element with FET amplifier housed in microphone barrel with battery and dual impedance transformer. Imp: 600 ohms and 50K. FR: 30Hz-18kHz. Sensitivity (1000Hz): -65 dB at 600 ohms; -48 dB at 50K. Fitted with built-in on/off switch and supplied with stand holder, foam windshield, and detachable 6-metre cable fitted with standard jack plug. Price: £21.00 (plus VAT).

RE-365

Cardioid, dual impedance electret condenser microphone. Superslim, matt finish stainless



Philips LBB 9100



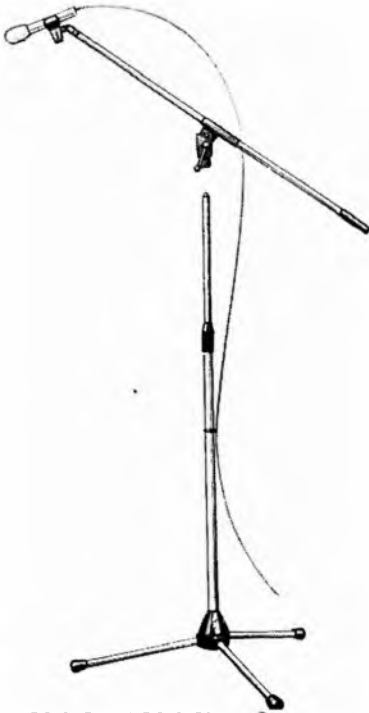
Ross RE-363 Electret condenser



Ross RE-364 Electret condenser



Ross Electronics RE-366 Electret condenser



Ross RE-315 and RE-315B

steel construction. Electret condenser elements with FET pre-amplifier operates from battery housed in microphone body. With built-in on/off switch and dual imp transformer. FR: 20Hz-18kHz. Sensitivity: —68dB at 600 ohms (1kHz), —52dB at 50K (1kHz). SPL —130dB Max. Price: £25.40 (plus VAT).

RE-366*

Professional quality electret condenser cardioid microphone, employing a specially developed generating element combined with an IC imp convertor. Machined, light alloy case finished matt black with stainless wire-mesh grill. Imp: 600-750 ohms. FR: 30Hz-16kHz. Sensitivity: —68dB at 1kHz. S/N ratio: greater than 44dB. Output imp: Low Z. In fitted, hinged vinyl case. Supplied with 6-metre lead with self lock Cannon plug and moulded jack plug, stand holder and foam windshield. Price: £26.20 (plus VAT).

RE-211A

115mm diameter diecast, anodized base with solid metal centre pillar threaded externally to accept all Ross Electronics microphone holders and most other types. Height: 85mm. Price: £2.40 (plus VAT).

RE-312A

Microphone desk stand. Heavy cast horseshoe base finished black crackle with angled chrome steel centre pillar. Threaded to fit all Ross Electronics microphone holders and most others. 100mm high. Price: £4.12 (plus VAT).

RE-351B*

Counterbalanced boom with swivel mount fitted with friction clamp. Boom end threaded to fit standard microphone holder; mount threaded to fit Ross Electronics RE-315 floor stand and most others. Chrome finish. 850mm long. Price: £7.20 (plus VAT).

RE-316

Detachable microphone windshields in controlled density foam that suppresses explosive breath sounds, squeals and booming effects. Nominal internal diameter of 20mm fits most Electret condenser and slimline dynamic microphones. In red and black. Price (per pair): £1.30 (plus VAT).

RE-318

Universal microphone holder. Rigid black plastic construction with powerful spring-loaded microphone clamp. Accepts microphone diameters from 13mm to 28mm. Fits all Ross Electronics microphone stands and most others. Price: £2.70 (plus VAT).

RE-391

Sheathed, low-loss shielded microphone extension cable fitted with standard jack plug at one end and standard, inline jack socket at other. 6 metres long. Price: £2.04 (plus VAT).

RE-393

Microphone connecting lead. 6 metre sheathed, low-loss shielded cable terminates in 4-pin, dual-impedance type socket and standard, jack plug. Price: £3.04 (plus VAT).

RE-394

Microphone connecting lead. 6-metre sheathed, low-loss shielded cable terminates in a universal microphone connector at one end and a standard jack plug at the other. Price: £1.76 (plus VAT).

RRE-396

Universal microphone connecting lead. 7.5 metre sheathed, low-loss shielded cable has a universal microphone connector at each end and is supplied with additional screw-on adaptors to connect either end to a standard ¼ in. plug or standard inline jack socket. Price: £3.50 (plus VAT).

*Indicates entry is illustrated



Sennheiser MD214

AE-372

Single-point, Electret condenser stereo microphone. Additional internal screens fitted to obviate extraneous wind noise, making the microphone suitable for both outdoor and indoor use. Anodised aluminium body with built-in On/Off switch. Supplied with 20ft. lead, standard jack plugs for right and left channels, table stand and battery in black vinyl case. Imp: 600 ohms. FR: 50-16,000Hz. Price: £26.00 (plus VAT).

RE-380

Super cardioid Electret condenser microphone. Highly directional, superslim and mounted in an anti-vibration cradle to ensure isolation from shock, especially when hand held. Integral microphone stand holder provided with detachable hand grip. Fitted with 1.5 metre lead with standard jack plug and supplied with foam windshield and battery in a black vinyl case. Imp: 600 ohms. FR: 30-14,000Hz. Price: £28.30 (plus VAT).

SABA

Saba Radio and Television Ltd,
10-12 Cornbrook Park Road,
Manchester M15 4EE.
Tel: 061-872 7661.

12M

Infra-red headset and infra-red audio module. This enables listener to move about the room completely free and unfettered. No cable to tie you down to one place.

H30

Stereo headset. Orthodynamic headphones. FR: 16Hz-20kHz. Imp: 140 ohms. Lightweight.

7L

No-cable infra-red headphones and audio transmitter enabling listener to move freely about the room. Details and prices: on application.

■ SENNHEISER ELECTRONIC

Distributors: Hayden Laboratories Ltd,
Hayden House, Churchfield Road,
Chalfont St. Peter, SL9 9EW.
Tel: Gerrards Cross (49) 88447.

Audio equipment showroom, service department and despatch department:
6 Bendall Mews, Bell Street, London NW1.

MD211N*

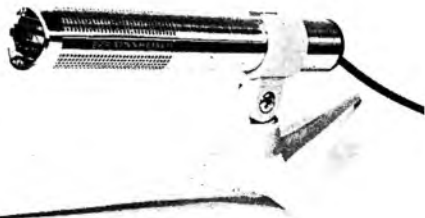
Omni-directional moving coil miniature studio microphone. Hand or stand use. FR: 30Hz-20kHz ± 2.5 dB. Sensitivity: 0.13mV/ μ bar ± 2.5 dB. Imp: 200 ohms. Rec. load: 1K. Metal case with satin chrome finish. Windshield MZW201 optional extra. Price: on application.

MD214*

Omni-directional moving coil lavalier microphone. Built-in 'natural voice' equaliser to studio standards. FR: specially designed for lavalier operation. Sensitivity: 0.10mV/ μ bar ± 2.5 dB. Imp: 200 ohms. Rec. load: 1K. Metal case finished special 'non-glare' enamel. Price: on application.

MD408N

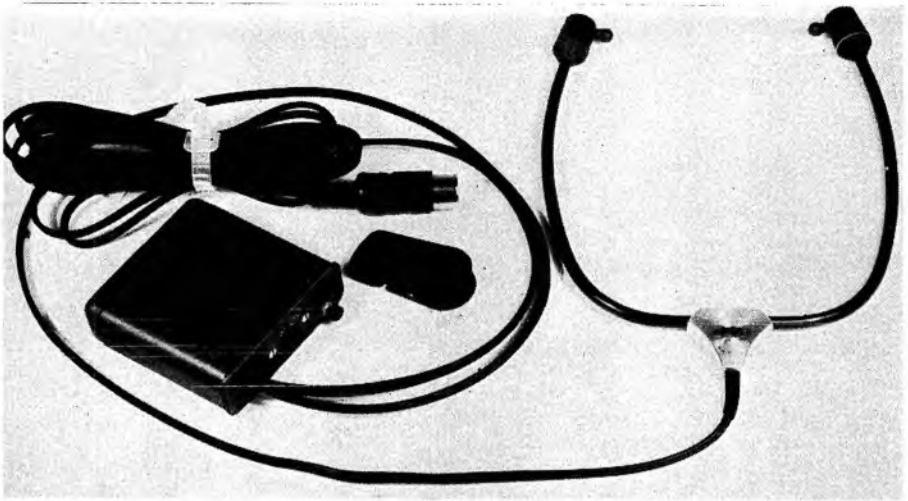
Super cardioid moving coil microphone with flexible shaft. Specially suitable for PA applications. FR: 50Hz-15kHz ± 3 dB. Imp: 200 ohms.



Sennheiser MD402LM



Sennheiser range, L R: MD441, MKE402, MKH406, MKH110, MD416, MD211, MKH416, MKE802, MD421



Sennheiser MKE2002

Sensitivity: $0.13\text{mV}/\mu\text{bar} \pm 3\text{dB}$. Case of light gauze woven wire cloth. Price: on application.

MD402LM*

Mono moving coil super cardioid microphone. FR: 80Hz-12.5kHz. Sensitivity: $2.3\text{mV}/\mu\text{bar}$. Imp: 750 ohms. Rec. load: 4K. Hand mic with stand and clip. Rugged construction. Frequency response tailored for domestic applications. Finish: satin chrome. Price: on application.

MD412LM*

Moving coil super cardioid mono microphone. FR: 50Hz-12.5kHz. Imp: 800 ohms. Sensitivity: $0.2\text{mV}/\mu\text{bar} \pm 3\text{dB}$. Built-in roll-off filter. With desk stand. Price: on application.

MD416NU*

Moving coil mono microphone. Cardioid polar diagram. Insensitive to handling or mechanical vibration. Designed for vocal or instrumental soloists. FR: 50Hz-15kHz. Sensitivity: $0.13\text{mV}/\mu\text{bar} \pm 3\text{dB}$. Imp: 200 ohms. Hand or stand microphone. Low sensitivity to pop and wind noises. Price: on application.

MD418

Moving coil microphone, super cardioid. FR: 200Hz-10kHz. Imp: 50 ohms. Stand/desk mount. Designed for conference and talkback use and can be used both as loudspeaker and microphone, complete with integral gooseneck. Price: on application.

MD430-2

Moving coil microphone, super cardioid. FR:

200Hz-10kHz. Imp: 200 ohms. Hand/stand. Designed for close speaking in noisy surroundings. Range consists of MD430-2-T with integral switch and separate connections to switch, and ND 430-9 which is the shortened version. Price: on application.

MD421

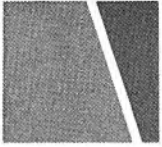
Mono moving coil cardioid microphone. FR: 30Hz-17kHz. Sensitivity: $0.2\text{mV}/\mu\text{bar}$ at 1kHz. Imp: (HL series) 200 ohms and 24K; (N, U and 2 series) 200 ohms. Rec. load: (high Z version of HL series) 50K (all others) 1K. Hand/stand microphone 3/8in. thread fitting. Built-in bass cut switch. Low handling noise. Finish: (standard versions) grey plastic body with chrome grille. Price: on application.

MD441*

Mono moving coil super cardioid microphone. FR: 30Hz-20kHz. Sensitivity: $0.2\text{mV}/\mu\text{bar} \pm 3\text{dB}$. Imp: 200 ohms. Rec. load: 1K. Hand microphone, with optional mounting clip available. Choice of ten switchable frequency responses. Low handling noise. Polar diagram constant over frequency range. Finish: shock resistant metal case. Silver-plated metal grille on matt black body. Price: on application.

Profipower

Moving coil microphone, super cardioid pattern. FR: 40Hz-16kHz. Imp: 200 ohms. Hand/stand. Designed for the musician and includes built-in pop filter and on/off switch which is silent in operation. Microphone element is suspended within the housing to eliminate handling noise. Price: on application.



fact:
**you can choose your
 microphone to enhance
 your sound system.**

Shure makes microphones for every imaginable use. Like musical instruments, each different type of Shure microphone has a distinctive "sound," or physical characteristic that optimizes it for particular applications, voices, or effects. Take, for example, the Shure SM58 and SM59 microphones.

SM59 SM58

**Mellow, smooth,
 silent...**

**Crisp, bright "abuse
 proof"**



The SM59 is a relatively new, dynamic cardioid microphone. Yet it is already widely accepted for critical studio productions. In fact, you'll see it most often where accurate, natural sound quality is a major consideration.

This revolutionary cardioid microphone has an exceptionally flat frequency response and neutral sound that reproduces exactly what it hears. It's designed to give good bass response when miking at a distance. Remarkably rugged—it's built to shrug off rough handling.

And, it is superb in rejecting mechanical stand noise such as floor and desk vibrations because of a unique, patented built-in shock mount. It also features a special hum-bucking coil for superior noise reduction!

Probably the most widely used on-stage, hand-held cardioid dynamic microphone. The SM58 dynamic microphone is preferred for its punch in live vocal applications... especially where close-up miking is important. It is THE world-standard professional stage microphone with the distinctive Shure upper mid-range presence peak for an intelligible, lively sound.

World-renowned for its ability to withstand the kind of abuse that would destroy many other microphones. Designed to minimize the boominess you'd expect from close miking. Rugged, efficient spherical windscreen eliminates pops. The first choice among rock, pop, R & B, country, gospel and jazz vocalists.

Some like it essentially flat... some like a "presence" peak.

professional microphones...by



Shure Electronics Limited, Eccleston Road, Maidstone ME15 6AU
 Telephone: Maidstone (0622) 59881

MKH106T/TU

Mono capacitor omni-directional microphone. FR: 20Hz-20kHz. Sensitivity: 2mV/ μ bar. Imp: 20 ohms. Rec. load: 200 ohms or greater. Hand/stand microphone. Table stands MZT104 and 105 available. Low self noise. Windshield (MZW201) optional extra. Finish: satin chrome on brass. Price: on application.

MKH124

Mono capacitor omni-directional. FR: 40Hz-20kHz. Sensitivity: 0.32mV/ μ bar. Imp: 150 ohms. Rec. load: 200 ohms or greater. Lapel of lavalier microphone with clip or lanyard. Small size: flat frequency response. Presence lift. Finish: matt grey enamel. Price: on application.

MKH126

Mono capacitor omni-directional microphone. FR: 40Hz-20kHz. Sensitivity: 2mV/ μ bar. Imp: 10 ohms. Rec. load: 200 ohms. Lapel/lavalier microphone with lanyard or clip. Small size. Flat frequency response. Presence lift. Finish: matt grey enamel. Price: on application.

MKH816P/48

Capacitor microphone super directional. FR: 50-20,000Hz. Phantom powered 48V cannon or tuchel versions available. Price: on application.

MKH416T/TU

Mono capacitor super cardioid microphone. FR: 40Hz-20kHz. Sensitivity: 2mV/ μ bar. Imp: 20 ohms. Rec. load: 200 ohms. Hand or stand microphone. Table stand MZT415 available. Low self noise. Good wind noise rejection. Windshield MZW415. Finish: satin chrome on brass. Price: on application.

MKH816T/TU

Mono capacitor uni-directional (narrow beam) microphone. FR: 50Hz-20kHz. Sensitivity: 4mV/ μ bar. Imp: 20 ohms. Rec. load: 200 ohms. Gun microphone. Fittings: boom MZS-805 or pistol grip MZP805. Low self noise. Very narrow beam. Windshield: MZW804 and MZW815. Finish: satin chrome on brass. Price: on application.

MKH406P/48

Capacitor microphone. FR: 40-20,000Hz. Cannon or tuchel plug versions available. Price: on application.

MKH416P/48

Capacitor microphone super cardioid. FR: 40-20,000Hz. Phantom powered 48V cannon or tuchel versions available. Price: on application.

MKE802*

Electret microphone super cardioid. FR:

50-15,000Hz. Imp: 200 ohms. Cannon or tuchel plug versions available. Price: on application.

MKE402*

Electret cardioid microphone. FR: 50-15,000Hz. Imp: 200 ohms. Cannon or tuchel plug versions available. Price: on application.

MKE2002*

Electret mic. FR: 40Hz-20kHz. Imp: 4.7K ohms. SM connection, 1K ohm. SL connection. Dummy head mic for binaural recordings using your own head or with artificial head supplied. Complete with battery supply. Price: on application.

MKE10

Electret microphone, omni-directional. FR: 50Hz-20kHz. Imp: 4.7K unbalanced or 200K balanced depending on battery adaptor. Lavalier type mounting with clothing clip. Miniature electret lavalier mic which operates in conjunction with battery adaptor. Three types available: MZA 10 giving unbalanced output to work into load >4.7K. MZA 10N giving balanced 200 ohms output and has facilities for battery check, and MZA 10U which is same as MZA 10N but with XLR output connector. Price: on application.

MD-408

Moving coil microphone, super cardioid. FR: 50Hz-15kHz. Imp: 200 ohms balanced. Stand/desk mount. Designed for talkback use, complete with integral gooseneck and on/off switch. Price: on application.

MKH406*

RF capacitor, cardioid pattern. FR: 40Hz-20kHz. Imp: 200 ohms balanced. Hand/stand mount. Studio quality capacitor microphone with cardioid directional pattern. Requires 12V B-B powering. Price: on application.

HD 430

Moving coil microphone, super-cardioid. FR: 200Hz-10kHz. Imp: 200 ohms. Stand or gooseneck. Features: close speaking for PA applications. Price: £50.00 (plus VAT).

■ SHURE ELECTRONICS LTD

Eccleston Road, Maidstone,
Kent ME15 6AU. Tel: Maidstone (0622) 59881.

SM11

Moving coil microphone, omni-directional. FR: 50Hz-15kHz. Imp: 150 ohms. Lavalier or special applications. Miniature dynamic. Price: £43.80 (plus VAT).

*Indicates entry is illustrated

SM17*

Moving coil microphone, omni-directional. FR: 50Hz-15kHz. Imp: 150 ohms. Mounting by special clips. Features: acoustic stringed instrument pick-up. Price: £45.60 (plus VAT).

SM54*

Cardioid microphone. FR: 70-16,000Hz. Imp: 150 ohms. Sensitivity: -81dB. Hand, stand or boom. Versatile with switchable low end roll-off. Price: £154.20 (plus VAT).

SM57

Cardioid microphone. FR: 40-15,000Hz. Imp: 50 and 150 ohms. Sensitivity: -82 and -76dB. Good feedback suppression. Price: £70.80 (plus VAT).

SM58

Cardioid microphone. FR: 50-15,000Hz. Imp: 50 and 150 ohms. Sensitivity: -84 and -77dB. Rugged construction with built-in windshield. Price: £90.60 (plus VAT).

SM 59*

Moving coil microphone, cardioid. FR: 50Hz-15kHz. Imp: 160 ohms. Hand/stand mounting. Features: very low handling noise, smooth wide frequency response. Price: £94.20 (plus VAT).

SM62

Cardioid microphone. FR: 100-10,000Hz. Imp: 150 ohms. Sensitivity: -82dB. Price: £72.00 (plus VAT).

SM 81

Condenser microphone, cardioid. FR: 20Hz-20kHz. Imp: 85 ohms. Hand/stand mounting. Features: three-position bass response switchable. 10dB attenuator switchable. Price: £146.40 (plus VAT).

515SA*

Cardioid microphone. FR: 80-13,000Hz. Imp: High, but low version available. Price: £25.80 (plus VAT).

588SA

Cardioid microphone. FR: 80-13,000Hz. Imp: High, but low version available. Built-in windshield. Price: £37.80.

545D*

Cardioid microphone. FR: 50-15,000Hz. Imp: low/high. Slim style, true cardioid. Price: £56.40 (plus VAT).

548

Cardioid microphone. FR: 40-15,000Hz. Imp: low/high. Price: £65.40 (plus VAT).



Shure SM 17



Shure SM 54



Shure SM 59

565D

Cardioid microphone. FR: 50-15,000Hz. Imp: low/high. Built-in windshield. Price: £62.40 (plus VAT).

589S

Cardioid microphone. FR: 90-13,000Hz. Imp: low/high. Price: £43.80 (plus VAT).

516 EQ*

Moving coil mic Cardioid FR:50Hz-15kHz. Imp: 150 ohms. Hand or stand, adaptor



Shure 515 SA



Shure 516 EQ



Shure 545D

supplied. Four built-in filters to 'tailor' your recordings. Price: £60.00 (plus VAT).

579SB

Omni-microphone. FR: 50-15,000Hz. Imp: low. Price: £43.80 (plus VAT).

A95U

High quality series line transformer making it possible to connect low imp (25-50 ohms and 150-250 ohms) lines to a high impedance amplifier input. Comes complete with all connectors. Size: 2½in. × ¾in. Price: £12.60 (plus VAT).

A97A

As above but designed to match 150-600 ohm microphone outputs to medium imp (1-10K

ohm) devices, such as those frequently used in cassette recorders. Price: £12.00 (plus VAT).

A15 Series

Attenuators, equalizers and adaptors. In-line plug-in components to solve sound problems without rewiring. Connections are made via professional three-pin audio connectors. Nine models available. Price: £13.80 (plus VAT).

S33 Series Stands

Low silhouette heavy duty desk stand for any Shure microphone. Satin black or dark grey to match Shure 'SM' series microphones. Size: 1 5/16in. × 5 3/8in. × 6in. Price: £10.20 (plus VAT).

S55P

Low profile microphone stand for distant microphone pick-up. Holds the microphone a fraction of an inch above the floor for better sound quality by minimizing reflections. Ideal for 'footlight' recordings of choral, orchestral or ensemble musical events and dramatic presentations. Effectively isolates mechanical noise from floor vibrations. Height: 4¾in. Price: £15.60 (plus VAT).

■ SONY (UK) LTD

Consumer Information, 134 Regent Street, London W1R 6DJ.
Tel: 01-439 3874

FCM270F*

Electret uni-directional. FR: 40-16,000Hz. Imp:

*Indicates entry is illustrated

200 ohms. Removable wind screen. Price: on application.

ECM 250

Electret, uni-directional. FR: 50Hz-12,000Hz. 14,000Hz. Imp: 200 ohms unbalanced. Hard mounting. A16 stand available. Price: on application.

ECM 16

Electret, omni-directional. FR: 40Hz-13,000Hz. Imp: 250 ohms unbalanced. Lavalier microphone tie clip supplied. Price: on application.

ECM 99/A*

Electret, unidirectional. FR: 50Hz-12,000Hz. Imp: 250 ohms unbalanced. Hard mounting — A15 stand available. Price: on application.

A16

Stand suitable for use with ECM99A, ECM170, ECM220, ECM250, ECM270 and ECM280. Price: on application.

SAD101

Stereo arm suitable for coincident microphone recording — microphone stand mounting PF 1/2in. 14 thread and U 5/16in. 18 thread. Microphone mounting using PF 1/2in. 14 thread. Price: on application.

SAD 24

Stand screw adaptor. To adapt camera stand (1 1/8in.) to PF 1/2in. 14 thread. Price: on application.

AS25

Stand screw adaptor. PF 1/2in. 14 thread. U 5/16in. 18 thread. Price: on application.

SAD26*

Microphone stand pole. Microphone stand mounting PF 1/2in. 14 thread. Height: 120mm. Price: on application.

SAD27

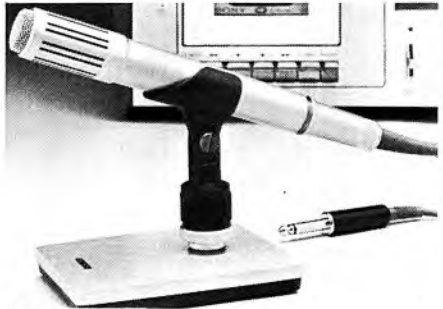
Microphone holder — grip 22-24mm. Microphone stand mounting PF 1/2in. 14 thread. Price: on application.

SAD 28*

Microphone shock mount adaptor to prevent vibrations being transmitted to microphone. Microphone stand mounting PF 1/2in. 14 thread. Microphone connection PF 1/2in. thread, or U 5/16in. 18 thread. Price: on application.



Sony ECM 99A



Sony ECM 270



Sony B401

B401*

A portable matt black boom stand supplied with its own carrying case. Boom: 690mm. Stand: (2 stage) 593mm. Weight: 3.9kg. Microphone connection: U 5/16in. PF 1/2in. 14 thread. Price: on application.

PBR330*

A parabolic microphone reflector — diameter 330mm — can be hand held or stand mounted.

Any 15-30mm diameter microphone can be accepted. Price: on application.

F99A*

Moving coil microphone, cardioid stereo. Low impedance. Hand or stand mounting. Price: on application.

ECM-B1A

Electret condenser microphone, cardioid. Hand held. Features: echo. Price: on application.

■ SUPERSCOPE

Marantz Audio UK Ltd,
193 London Road, Staines, Middlesex.
Tel: Staines (81) 50132

EC7*

Condenser microphone, cardioid. FR: 40Hz-16kHz ± 3 dB music, 100Hz-16kHz ± 3 dB voice. Imp: 250 ohms. Hand or stand. Features: switchable roll-off to cater for music or voice recording. Price: £29.30 (plus VAT).

EC9P*

Condenser microphone, cardioid. FR: 30Hz-17kHz ± 3 dB. Imp: 250 ohms. Hand or stand. Features: 10dB pad switchable optional phantom power operation. 12-49V in-built battery if required. Price: £54.22 (plus VAT).

EC12B*

Condenser Microphone, omni-directional. FR: 100Hz-15kHz ± 3 dB. Imp: 250 ohms. Tie clip or stand. Features: telescoping tie clasp. Price: £25.00 (plus VAT).

EC15P*

Condenser microphone, omni-directional. FR: 70Hz-16kHz ± 3 dB. Imp: 250 ohms. Tie clip. Features: powered by internal 1.5V battery or external. Price: £31.50 (plus VAT).

■ TANDBERG

Tandberg (UK) Ltd, Farnell House,
81 Kirkstall Road, Leeds LS3 1HR.
Tel: Leeds (0532) 35111.

TM 6

Spherical omni-directional moving coil microphone. FR: 50Hz-15,000Hz +3 -6dB. Imp: 250 ohms. Comes complete with table stand and fixture for mounting on floor stand. Bigger table stand available as optional extra. Price: £22.50 or with table stand £32.50 (inc. VAT).



Sony PBR 300



Sony F99A



Superscope range

*Indicates entry is illustrated

■ TECHNICS

National Panasonic (UK) Ltd,
107-109 Whitby Road, Slough,
Berks. SL1 3DR.
Tel: Slough (75) 27516.

RP 3210E

Electret microphone — Cardioid type. FR: 50Hz-12kHz. Imp: 600 ohms. Desk tripod, single point stereo mic. Price: £34.62 (plus VAT).

RP 3540E

Electret microphone — cardioid type. FR: 40Hz-14kHz. Imp: 600 ohms. Desk tripod, LED battery check; Price: £40.84 (plus VAT).

RP 3500E

Electret microphone — cardioid type. FR: 50Hz-12kHz. Imp: 600 ohms. Desk tripod. Price: £28.40 (plus VAT).

■ TOSHIBA

Toshiba (UK) Ltd, Toshiba House,
Frimley Road, Frimley, Camberley,
Surrey GU16 5JJ.
Tel: Camberley (0276) 62222.

EM-420*

Back-electret condenser microphone, uni-directional. FR: 50Hz-20kHz. Imp: 600 ohms. Weight: 270g. with battery. Price: £33.33 (plus VAT).

■ UHER LTD

24 Market Place, Falloden Way,
London NW11.
Tel: 01-455 1771/01-458 8491.

M517

Dynamic cardioid microphone for use with Uher battery portable. Remote stop/start switch. Speech/music switch. FR: 70Hz-14kHz. Price: £28.08 (plus VAT).



Uher M634

M634 (stereo)*

Dynamic cardioid stereo microphone system. Sensitivity: 0.23mV/ μ bar. FR: 50Hz-16kHz. Imp: 500 ohms. Comprises two M534 microphones, one M925 stereo bar and one M923 table stand. Speech/music switch. Price: £46.67 (plus VAT).

M640

Dynamic stereo microphone. Omni-directional characteristic, also suitable for mono recordings. Sensitivity: 0.25mV/ μ bar. FR: 70Hz-15kHz. With stop/start switch for Uher cassette recorders. Price: £34.70 (plus VAT).

M645

Electret microphone, cardioid pattern. FR: 30Hz-20kHz. Imp: 280 ohms. Supplied with table stand and wind shield. Powered by internal primary battery from tape recorder via microphone cable, with 8 pole plug. Price: £48.73 (plus VAT).

■ UNISOUND

Condor Electronic Ltd,
100 Coombe Lane, London SW20 0AY.
Tel: 01-946 0033.

DM 1500

Dynamic microphone, cardioid. FR: 50Hz-17kHz. Imp: 200 ohms-20K. Hand or stand mounting. Features: dual impedance, windshield, mic holder. Price: £32.00 (plus VAT).

EM 88D

Electret microphone, uni-directional. FR: 40Hz-18kHz. Imp: 1K-10K. Hand or stand mounting. Features: dual impedance, windshield, battery, mic holder. Price: £25.00 (plus VAT).

EM 85D

Electret microphone, uni-directional. FR: 30Hz-20kHz. Imp: 1K. Hand/stand mounting. Features: dual impedance, windshield, battery, mic holder. Price: £25.00 (plus VAT).

EM 86D

Electret microphone, uni-directional. FR: 40Hz-18kHz. Imp: 1K. Hand/stand mounting. Features: dual impedance, windshield, mic holder. Price: £25.00 (plus VAT).

Music Centres

(see also Unit Audio sections)

*Indicates entry is illustrated

Abbreviations used in this section are given on page 5.

■ AIWA

Aiwa Sales and Service (UK) Ltd,
30 and 32 Concord Road,
Westwood Park Trading Estate,
London W3 0TH.
Tel: 01-993 6172.

AF 5300*

Music Centre using Aiwa record deck. Amplifier output: 20W into 8ohms. THD: less than 1%. Radio tuner covers FM, L, M, S. Dolby noise reduction system on tape deck. W and F: 0.07%. Two speakers with crossover frequency: 3kHz, two drive units and measuring 21 x 22 x 23cm. Main unit measures 59.1 x Amplifier output: 20W into 8 ohms. THD: less



Aiwa AF 5300



Aiwa AF 5600

46.9 x 16.8cm. Finish: grey brushed aluminium body and front panel. Features: 6FM presets, synchronisation between record and cassette decks, cue/review facility on cassette deck. Price: £425.69 (plus VAT).

AF 5600*

Music Centre using Aiwa record deck. Amplifier output: 30W into 8 ohms. THD: less than 1%. Radio tuner covers FM, D, M, S. Dolby noise reduction system on tape deck. W and F: 0.07%. Dimensions of main unit: 60.6 x 46 x 21.1cm. Finish grey brushed aluminium body and front panel. Features: 6FM presets, synchronisation between record and cassette decks, auto-repeat facility on record deck. Cue/review facility on cassette deck. Price: £528.89 (plus VAT).

■ AKAI

Rank Audio Visual, PO Box 70,
Great West Road, Brentford,
Middlesex TW8 9HR.
Tel: 01-568 9222.

AC 3400

No details available.

AC 3750

No details available. Price: £322.50 (inc. VAT).

■ ALBA (RADIO AND TELEVISION) LTD

Bull Lane, London N18 1SD
Tel: 01-803 4451.

9075*

Music centre with BSR P200 record deck and ADC QLM 30 cartridge. Amplifier output: 25W. FR: 60Hz-10kHz. THD: less than 1%. Radio tuner covers FM, L, M. Dolby noise reduction system on tape deck. W and F: 0.15%. Speaker dimensions: 31.5 x 22 x 51cm. Main unit measures 61 x 40 x 24. Finish: teak with black front. No rec. retail price.



Alba 9075

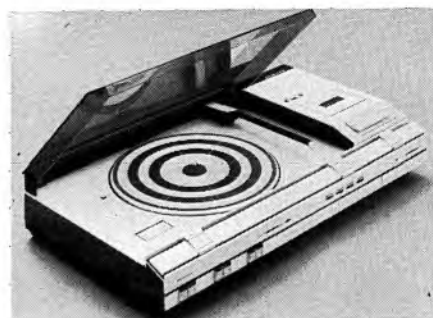
*Indicates entry is illustrated

■ BANG AND OLUFSEN

Bang and Olufsen (UK) Ltd,
Eastbrook Road, Gloucester GL4 7DE.
Tel: Gloucester (0452) 21591

4600*

Integrated AM/FM tuner/amplifier, stereo record player and cassette recorder. Output: $2 \times 25W$, 3 wavebands with 4 presets on FM. Electronic servo drive motor. Cassette system C60-C90. W and F: $<0.2\%$. S/N with Dolby: 64dB. FR: 30Hz-14kHz. Dimensions: $66 \times 12 \times 37cm$. Finish in teak or rosewood. Price: £440.00 (plus VAT).



Beocentre 4000

■ CROWN

York Electronics Ltd,
73 Grosvenor Street, London W1.
Tel: 01-629 8368.

SHC 5100*

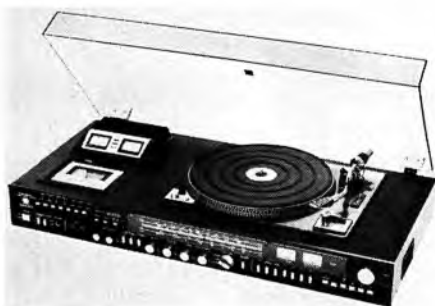
Music centre with record deck incorporating auto return and stop, cue lever. Amplifier: $2 \times 9W$. Radio tuner covers FM, L, M. Tape deck with auto stop, tape selector. Main unit measures $58.4 \times 37 \times 10cm$. Features: Three-way recording, rotary controls, osc switch, stereo indicator lamp. No rec retail price.



Crown SHC 5100

SHC 5500*

Music centre with auto-return player. Amplifier: $2 \times 35W$. THD: 1%. Radio tuner covers FM, L, M, S. Push button advance tuning and twin VU meters. Tape deck with Dolby noise reduction system. W and F: less than 0.3%. Main unit measures $82 \times 16 \times 40cm$. Features: 4-speaker stereo facility, stereo lamp. No rec. retail price.



Crown SHC 5500

■ DECCA RADIO & TELEVISION LTD

Neachells Lane, Willenhall,
West Midlands WV13 3RW.
Tel: Willenhall (0902) 67367.

DS 5365

Music centre with Garrard SP25 Mk V record deck, Shure M75/6S cartridge. Amplifier: 25W into 8 ohms. FR: 20Hz-25kHz $\pm 3dB$. THD: 0.25%. Radio Tuner: FM, L, M. Tape Deck with Dolby, W and F: $<0.3\%$. Speakers: ALO 450 floor standing: 8in. bass, 2 $\frac{1}{2}$ in. tweeter. Dimensions: $30 \times 25 \times 60cm$. Main Unit in black measures: $65.5 \times 39.5 \times 19cm$. Features: two room stereo, FeCr tape selector, Mute/AFC switch, osc shift switch, electronic autostop on all functions. Price: on application.

■ DUAL

Hayden Laboratories Ltd,
Hayden House, Churchfield Road,
Chalfont St. Peter, Bucks SL9 9EW.
Tel: Gerrards Cross (49) 88447.

KA 330/KA 380

Both feature high performance turntables, cassette decks and multi waveband tuners. Details available on request.

■ DYNATRON

Dynatron Radio Ltd,
Ditton Walk, Cambridge CB5 8QD.
Tel: Teversham 2781.

Norfolk MC1010CR*

Deck: Garrard belt driven 35SB single record playing with a Vernitron V100 magnetic cartridge and diamond stylus. Repeat record playing control. Tuner/Amplifier: FM, L, M. Cassette deck: Includes Dolby noise reduction circuit and CrO₂ tape facility. Twin recording lever slider controls and VU meters. Power output: 20W. THD: 1% into 8 ohms. Cabinet: Scandinavian style finished in San Domingo rosewood. Smoked acrylic lid is counter-balanced and removable. Dimensions: 17.8 × 82.2 × 38.7cm. No rec retail price. Approx "going" price: £325.00 (inc. VAT).



Dynatron Norfolk

Burlington GC1010PW*

Deck: Garrard 35SB single record playing, belt driven with a Vernitron V100 magnetic cartridge and diamond stylus. Tuner/Amplifier: FM, L, M. Cassette deck: Dolby noise reduction circuit and CrO₂ tape facility. Twin illuminated VU meters and recording level sliders. Power output: 20W. THD: 1% into 8 ohms. Cabinet: Queen Anne style, finished in walnut burr veneers. Cabriole legs, brass drop handles. Optional speaker model LS1225AC, one unit containing two 8 × 5in speakers to fit underneath the cabinet. Dimensions: 62.9 × 97.8 × 41.8in. No rec retail price. Approx "going" price: £520.00 (inc. VAT).



Dynatron Burlington

Kensington GC1110PM*

Deck: Garrard 35SB single record playing, belt driven, fitted with a Vernitron V100 magnetic cartridge and diamond stylus. Tuner/amplifier: FM, LW, MW. Cassette deck: Dolby noise reduction circuit and CrO₂ tape facility. Twin illuminated VU meters and recording level sliders. Power output: 20W. THD: 1% into 8 ohms. Cabinet: Regency style, finished in curled mahogany veneers. Ring handles, fluted legs. Optional speaker Model LS1225AC. One unit containing two 8 × 5in speakers to fit underneath the cabinet. Dimensions: 62.9 × 97.8 × 41.8cm. No rec retail price. Approx "going" price: £510.00 (inc. VAT).



Dynatron Kensington

Cabinet: Queen Anne style, finished in walnut burr veneers. Speakers: Houses two specially matched loudspeaker systems. Dimensions: 73.3 × 148.3 × 52.3cm. No rec retail price. Approx "going" price: £675.00 (inc. VAT).

Buckingham GC1410PW*

Beaufort GC1310PW*

Deck: Garrard 35SB single record playing, belt-driven, with Vernitron V100 magnetic cartridge and diamond stylus. Tuner/amplifier: FM, LW, MW. Cassette deck: Dolby noise reduction circuit and CrO₂ tape facility. Twin illuminated VU meters and recording level sliders. Power output: 20W. THD: less than 1% into 8 ohms.

Deck: Garrard SP25 MkV, belt-driven, with Vernitron V100 cartridge and diamond stylus. Tuner/amplifier: FM, LW, MW. Slider controls for volume, bass, treble and balance. Toggle switches for contour and stereo/mono mode. Cassette deck: Dolby noise reduction circuit and CrO₂ facility. Twin recording lever sliders and VU meters. Power output: 16W. THD: ≥1%. Cabinet: Queen Anne style low-boy, finished with walnut burr veneers.

*Indicates entry is illustrated

Speakers incorporated into pedestals of desk. Dimensions: 72.1 × 97.4 × 41.9cm. No rec retail price. Approx "going" price: £650.00 (inc. VAT).

Carlton GC1510PM*

Deck: Garrard SP25 MkV, belt-driven, with Vernitron V100 cartridge and diamond stylus. Tuner/amplifier: FM, LW, MW. Slider controls for volume, treble, bass and balance. Toggle switches for contour and stereo/mono mode. Cassette deck: Dolby noise reduction circuit and CrO₂ facility. Twin recording slider levers and VU meters. Power output: 16W. THD ≥1%. Cabinet: Regency style, based on knee-hole desk. Finished in curled mahogany veneers. Speakers are incorporated into pedestals of desk. Dimensions: 97.5 × 42 × 71.5cm. No rec retail price. Approx "going" price: £675.00 (inc. VAT).



Dynatron Beaufort

MC1710CT*

Deck: Belt-driven, with Vernitron V100 magnetic cartridge and diamond stylus. Tuner/amplifier: FM, LW, MW. Cassette deck: Dolby B noise reduction circuit and CrO₂ facility. Twin illuminated VU meters, and recording level slider controls. Total power: 20W. THD: 1% into 8 ohms. Cabinet: Contemporary, incorporating record, tape and accessory storage behind front opening doors. Mitred mouldings, counterbalanced lid. Finished in teak veneers. Castors. Supplied with loudspeakers LS1428CT. Dimensions: 64.4 × 88.8 × 44cm. No rec. retail price.



Dynatron Buckingham

MC1420CR

Deck: Philips GC037 two-speed Hi-Fi belt-driven turntable, fitted with GP401 Super "M" Mk2 cartridge and elliptical diamond stylus. Features: Simple and accurate setting of stylus pressure aided by direct read-out of weight on true spring balance. Simple and accurate setting of side thrust compensation by large clearly marked rotatable disc at base of tone arm mounting. Tuner/amplifier: FM, LW, MW. Manual tuning plus five preset buttons for VHF. Mute switch. Signal strength meter doubles as tuning scale for tuning preset VHF buttons. Switchable AFC. Slider controls for volume, bass, treble and balance. Pushbuttons for ambio, volume for extra speakers, contour and scratch filter. Cassette deck: Dolby noise reduction circuit, CrO₂ facility. Twin recording slider levers and VU meters. Power output: 30W per channel, at THD of better than 0.1% into 8 ohms, over power bandwidth 20Hz to 30kHz. 40W per channel at 1% THD. 4-speaker sound simulation facility with 2-position volume control for second pair of speakers. Cabinet:



Dynatron Carlton

San Domingo rosewood, with counterbalanced wooden lid. No rec retail price. Approx "going" price: £525.00 (inc. VAT).

Windsor MC1120PW*

Deck: Philips GC037 two speed Hi-Fi belt-driven turntable, fitted with GP401 super "M" Mk2 cartridge and elliptical diamond stylus. Features: Simple and accurate setting of stylus pressure aided by direct read-out of weight on true-spring balance. Simple and accurate setting of side-thrust compensation by large clearly-marked rotatable disc at base of tone arm mounting. Tuner/amplifier: FM, LW, MW. Manual tuning plus five preset buttons for VHF. Mute switch. Signal strength meter doubles as tuning scale for tuning preset VHF buttons. Switchable AFC. Slider controls for treble, bass, volume and balance. Pushbuttons for ambio, volume for extra speakers, contour and scratch filter. Cassette deck: Dolby noise reduction circuit, CrO₂ facility. Twin recording slider levers and VU meters. Power output: 30W at THD of better than 0.1% into 8 ohms, over power bandwidth 20Hz-30kHz. 40W per channel at 1% THD. Four-channel sound simulation facility with two-position volume control for second pair of speakers. Cabinet: Walnut burr finish, on bracket feet. Front opening double doors to tuner/amplifier and record storage, lid to record and tape deck. Queen Anne style. No rec retail price. Approx "going" price: £700.00 (inc. VAT).

Balmoral MC1220PY*

Deck: Philips GC037 two speed Hi-Fi belt-driven turntable, fitted with GP401 super "M" Mk2 cartridge and elliptical diamond stylus. Features: Simple and accurate setting of stylus pressure aided by direct read-out of weight on true-spring balance. Simple and accurate setting of side-thrust compensation by large clearly-marked rotatable disc at base of tone arm mounting. Tuner/amplifier: FM, LW, MW. Manual tuning plus five preset buttons for VHF. Mute switch. Signal strength meter doubles as tuning scale for tuning preset VHF buttons. Switchable AFC. Slider controls for treble, bass, volume and balance. Push-buttons for ambio, volume for extra speakers, contour and scratch filter. Cassette deck: Dolby noise reduction circuit, CrO₂ facility. Twin recording slider levers and VU meters. Power output: 30W. RMS at THD of better than 0.1% into 8 ohms, over power bandwidth 20Hz-30kHz. 40W at 1% THD. Four-channel sound simulation facility with two-position volume control for second pair of speakers. Cabinet: Regency style, finished in yew. Bracket feet.



Dynatron MC 1710 CT



Dynatron MC 1120 PW



Dynatron Balmoral

*Indicates entry is illustrated

Front opening double doors to tuner/amplifier and record storage. Lid to record and tape deck. No rec retail price. Approx "going" price: £700.00 (inc. VAT).

Albany MVC1320PM*

Deck: Philips GC037 two speed Hi-Fi belt-driven turntable, fitted with GP401 super "M2" Mk2 cartridge and elliptical diamond stylus. Features: Simple and accurate setting of stylus pressure aided by direct read-out of weight on true-spring balance. Simple and accurate setting of side-thrust compensation by large clearly-marked rotatable disc at base of tone arm mounting. Tuner/amplifier: FM, LW, MW. Manual tuning plus five preset buttons for VHF. Mute switch, Signal strength meter doubles as tuning scale for tuning preset VHF buttons. Switchable AFC. Slider controls for treble, bass, volume and balance. Push-buttons for ambio, volume for extra speakers, contour and scratch filter. Cassette deck: Dolby noise reduction circuit, CrO₂ facility. Twin recording slider levers and VU meters. Power output: 30W per channel at THD of better than 0.1% into 8 ohms, over power bandwidth 20Hz-30kHz. 40W per channel at 1% THD. Four-channel sound simulation facility with two-position volume control for second pair of speakers. Cabinet: Regency style, finished in curled mahogany. Bracket feet. Front opening double doors to tuner-amplifier and record storage. Lid to record and tape deck. No rec retail price. Approx "going" price: £700.00 (inc. VAT).



Dynatron Albany



Ferguson 3928

■ FERGUSON

Thorn Consumer Electronics,
284 Southbury Road, Enfield,
Middlesex.
Tel: 01-363 5353

3928*

Music centre with Garrard 126SB deck and Shure M75-65 cartridge. Amplifier output: 25W per channel. THD: less than 1%. Radio tuner covers FM, L, M, S. Tape deck with Dolby "B" noise reduction unit. W and F: 0.3% DIN. Speakers with drive units: 8in, 3 3/8in. Crossover frequency: 2,500kHz. Dimensions: 24 x 20 x 46cm. Main unit measures 63.2 x 40.8 x 19.3cm. Finish: black. Features: LED, FM preset indicators, three position tape switching, memory rewind, auto release, Twin record level meters, meter for VHF tuning, inter-station muting on VHF, provision for 4 surround speakers, provision for dubbing to external tape recorder. Price: approx £325.00 (plus VAT).



Ferguson 3921

3922*

Music centre with BSRP163 deck and Shure M75-65 cartridge. Amplifier output: 25W. THD: less than 1%. Radio tuner covers FM, L, M, S with 7 touch sensors for VHF pre-set. 6 stations plus manual tuning. Tape deck with Dolby B, W and F: 0.3% DIN. Three-way speakers with drive units: two \times 12.5cm and one 8.5cm. Dimensions: 24 \times 20 \times 46cm. Main Unit measures 63.2 \times 40.8 \times 19.3cm. Finish: teak/silver. Features: as 3928. Price: approx £325.00 (plus VAT).

*Ferguson 3922***3921***

Music centre with Thorn SP203 record deck and Audio Technica AT10 or Vernitron V300 cartridge. Amplifier output: 15W per channel. FR: 60Hz-15kHz — 3dB. THD: less than 1%. Radio tuner covers FM, L, M. Tape deck with Dolby B, W and F: 0.3%. Two-way speakers with drive units: 16.5cm and 8cm. Dimensions: 23 \times 18 \times 41cm. Main unit measures: 56 \times 18.5 \times 41cm. Finish: teak/silver. Features: belt drive, diecast turntable with strobe and fine speed control. Twin record level meters and damped eject. LED tuning cursor. Price: approx £245.00 (plus VAT).

*Fidelity 4-40 Unit***■ FIDELITY**

Fidelity Radio Ltd, Victoria Road,
London NW10 6ND.
Tel: 01-965 8771.

System 4-40*

Music centre with BSR P182 deck. ADC magnetic cartridge with diamond stylus. Amplifier: 20W per channel into 8 ohms. FR: 50Hz-13kHz \pm 3dB. THD: 1%. Radio tuner with band coverage: VHF/FM, L, M, S. Tape deck with W and F: less than 0.4%. Speakers with drive units 8in woofer and 3 3/8in tweeter and dimensions: 27.8 \times 21 \times 47.5cm. Main unit measures 80.8 \times 37.7 \times 15.9cm, and is finished in teak veneer. Features: auto CrO₂ switching, auto or manual recording. AFC, stereo indicator light, Meters for tuning and record level, four speaker sockets for remote or ambiophony, S-shaped pick-up arm for superior tracking. Price: £241.33 (plus VAT).

MC6*

Music centre with amplifier of 30W output. S/N: 55dB. Internal ferrite rod for L, M. Stereo FM indicator light, automatic selection for chrome tape. Meters for tuning and record level. Record player with BSR P182. Cueing device. ADC magnetic cartridge. 4-track, 2 channel stereo cassette recorder with Dolby noise reduction system and LED indicator.

*Fidelity 4-40 Speaker*

*Indicates entry is illustrated

Piano keys. W and F: less than 0.3%. FR: 40Hz-14kHz ± 2 dB for CrO₂, 40Hz-12.5kHz ± 2 dB. Speakers each with 165mm and 90mm drive units. Dimensions of speaker 35.5 \times 25.4 \times 16cm. Size of complete unit: 17 \times 58.2 \times 38.5cm. Price: on application.

System 5-50D*

Music centre. Output: 20W S/N 55dB. Speaker output imp: 8 ohms. Radio: FM, L, M, S. Record player with BSR P200 with viscous cueing, four pole synchronous motor and Shure magnetic cartridge. Four-track two-channel stereo cassette recorder with Dolby noise reduction and LED indicator. Two speakers each with 207mm and 90mm drive units. Speaker dimensions: 47.5 \times 27.8 \times 21cm. Size of complete unit: 15.9 \times 80.8 \times 37.7cm. Price: on application.



Fidelity MC6 Unit



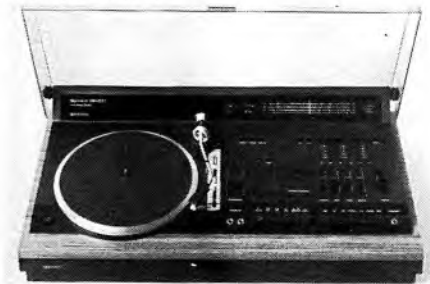
Fidelity 5-50 Unit

■ GARRARD

Garrard Engineering Ltd, Newcastle Street, Swindon, Wilts SN1 2LH.
Tel: Swindon (0793) 35381.

GA200*

British designed and built Hi-Fi music centre. Output: 2 \times 25W. FR: 20Hz-25kHz. THD: 0.06%. Controls range: Bass 50Hz ± 14 dB, Treble 15kHz ± 14 dB. Inputs: Aux, mic. Stereo separation: 55dB. Radio: FM, L, M. Sensitivity FM: 2 μ V, Distortion: 0.25%. FR: 20Hz-16kHz. Stereo separation 40dB. Record deck: Belt drive with speeds 33 $\frac{1}{3}$, 45 ± 1 %. W and F: 0.12%. Stereo magnetic cartridge. FR: 20Hz-20kHz. Cassette recorder: FR Chrome: 20Hz-16kHz. FR: Low noise: 20Hz-14kHz. S/N: 55dB or 64dB Dolby. Stereo separation: 45dB. Loudspeakers: FR: 40Hz-20kHz. Drive Units 155mm Bass, 65mm Mid, 65mm Treble. Imp: 8 Ohms. Price: (inc. speakers) £373.28 (plus VAT).



Garrard GA 200

■ GEC (RADIO AND TELEVISION) LTD

Langley Park, Slough SL3 6DP.
Tel: Slough (75) 22201.

A5019H

Combined AM/FM radio, cassette recorder and record-player. Record deck: BSR C129R2 three-speed auto/manual record changer with ceramic cartridge. Jack socket for headphones. Amplifier: 10W speech and music power per channel. Radio: 4-band AM/FM with stereo decoder and AFC. Tape deck: stereo cassette tape unit with ALC on record, automatic chromium dioxide/ferrous oxide tape switching, pause control and auto stop.



GEC A 5025H

Speakers: two in teak finish. Finish: black moulded cabinet with silver finish end pieces and satin finish aluminium trim. Smoked record deck cover. No rec. retail price.

A 5025H*

AM/FM radio, stereo cassette recorder/player and record player in moulded black cabinet with teak finish side pieces. Two loudspeakers in teak finish. BSR P 182 turntable with tubular "S" arm, ADC magnetic pick-up, diamond stylus. Cassette unit with twin meters, slider controls, pause control, Dolby noise reduction unit. DIN socket for use with microphone. 4-band AM/FM radio with AFC and stereo decoder. Stereo amplifier 30W + 30W speech and music power (15W + 15W). Each speaker cabinet houses 165mm twin concentric cone, Imp: 8 ohms with 30W peak power handling. Speaker size: 30 × 20 × 40cm. Dimensions of main unit: 66 × 42 × 17.8cm. Price: on application.

■ GOODMAN'S

Goodmans Loudspeakers Ltd,
Downley Road, Havant,
Hampshire PO9 2NL. Tel: Havant (070 42) 486344

MCD 100

AM/FM stereo receiver. Record deck: two speed, belt driven, with strobe turntable and speed control selector. Amplifier: 35 + 35W, FR: 35Hz-20kHz ±1.5dB. THD: less than 1% at full output. Radio tuner: VHF/FM 88.1-108MHz, SW 5.9-10MHz, Med 530-160kHz, Long 150-50kHz. Tape deck with Dolby noise reduction system, selector for ferri-chrome tape bias and equalisation. W and F: 0.2% (DIN). Speakers: Goodmans RB35. Dimensions: 77.2 × 38.1 × 20.8cm. Five pre-sets on FM radio. No rec. retail price.

■ GRUNDIG

Grundig International Ltd,
Newlands Park, London SE26 5NQ.
Tel: 01-659 2468.

RPC 500

Dual 1228 record deck with Shure M95 cartridge. Amplifier output: 2 × 30W (4 ohms). FR: 40Hz-20kHz. Radio tuner covers VHF/L/M. Tape deck CN 830 with Dolby noise reduction system. Main unit dimensions: 69 × 21 × 48cm. Black finish. Ten pre-tuned stations selected by pressure switches with LED indicators which can be used on all three wave bands. Frequency meter, signal strength meter, electronic tuning on VHF/AM.



Goodmans MCD 100



Grundig RPC 600 TP



Grundig RPC 100

RPC 350*

Music centre with Dual 1237A deck and DMS 220 cartridge. Amplifier output: 30W. FR: 20Hz-20kHz. THD: 0.2%. Radio tuner covering VHF, L, M, S. Tape deck with Dolby noise reduction system. W and F: 0.2% DIN. Main unit measures 69 × 20 × 43cm. Features: 8 pre-tuned stations on VHF selected by sensor plates, LED indicators, frequency meter, tuning meter. No rec. retail price.

*Indicates entry is illustrated

RPC 100*

Music centre with Dual 1235 deck and magnetic cartridge. Amplifier output: 15W. FR: 20Hz-20kHz. Radio tuner covering VHF, L, M, S. CB 200 tape deck with W and F: 0.2%. 8 pre-tuned stations on VHF selected by touch sensors with LED indicators, tuning meter. No rec. retail price.

600 1P*

Music centre with remote control and Dual 1239 deck with stereo magnetic system DM95G and belt drive. Output: 2 x 30/50W. Radio tuner covers VHF, L, M. Incorporates C830 cassette deck with Dolby. No rec. retail price.



Grundig RPC 350

■ HACKER SOUND LTD

Shadsworth, Blackburn, Lancs.

Tel: Blackburn (0254) 661521.

MC 600 A*

Music centre with Garrard 125 SB deck and Shure 75/6 cartridge. Amplifier output 20W + 20W into 8 ohms. FR: 20Hz-20kHz. THD: 0.1% at 1kHz. Radio tuner with band coverage FM, L, M. Tape deck with Dolby, W and F: 0.2%. Speakers measure 30 x 22 x 48cm. Main unit dimensions: 66.6 x 41.9 x 18.4cm, teak and walnut finish. Features: sockets for rear speakers for ambiophonic reproduction, rumble filter, contour, scratch filter, oscillator shift, microphone, headphones, memory rewind and CrO₂ switch. Price: £428.50 (plus VAT).



Hacker MC 600A

assisted cassette ejection. Normal/CrO₂/FeCr tape selection. five pre-set FM buttons, bias equaliser, tuning meter. Price: £459.00 (inc. VAT).

■ HITACHI

Hitachi Sales (UK) Ltd, Hitachi House, Station Road, Hayes UB3 4DR.

Tel: 01-848 8787.

SDT 7820

Music centre with Hitachi deck two-speed belt drive. Amplifier with output: 20W. FR: 30Hz-20kHz. Radio tuner covers FM, M, L. Tape deck with Dolby noise reduction system. 8in twin come speakers measure 25.5 x 18 x 54cm. Main unit in simulated teak measures: 59.5 x 41 x 19cm. Features: full auto stop, CrO₂/normal tape selection, five LED recording indicators. Price: £289.00 (inc. VAT).

SDT 7785

Music centre with two-speed belt drive Hitachi deck. Amplifier with output: 30W. Radio tuner covers FM, L, M, S. Tape deck with Dolby noise reduction system. Speakers to choice from Hitachi range. Main unit in brushed aluminium measures 67 x 40 x 19.7cm. Features: power

SDT 300

Music centre with two-speed belt drive Hitachi deck with stroboscope. Amplifier: 25W. Radio tuner covers FM, L, M, S. Tape deck with Dolby noise reduction system and auto reverse. Two way speakers each with 8in bass and 1in dome tweeter. Speaker size: 27 x 24.5 x 47cm. Main unit in simulated teak measures 42.1 x 40.5 x 19.1cm. Features: signal strength meter, air damped cassette eject, switchable AFC, FM stereo indicator. Price: £439.00 (inc. VAT).

SDT 400

As above except main unit measures: 77.2 x 38.3 x 19.3cm. Features: separate tuning meters for each band. Normal/CrO₂/FeCr tape selector. Price: £459.00 (inc. VAT).

SDT 170

Music centre with two-speed belt drive Hitachi deck. Amplifier: 20W. Radio tuner: FM, L, M, S. Tape deck with Dolby noise reduction unit. Features: aid damped cassette eject, LED

recording indicator. A or B speaker selection, 5 FM pre-set buttons. Normal/CrO₂/FeCr tape. Price: £349.00 (inc. VAT).

■ HMV

Intersound Electronics Ltd, Victoria Road, London NW10 6ND.
Tel: 01-965 6834.

MCH 10*

Music centre with automatic single play record deck with ADC stereo magnetic cartridge. Slider controls and rotary tuning. Output: 30W into 4 ohms. Four-track two-channel cassette deck with Dolby noise reduction unit. Radio tuner covers FM, L, M. Dimensions: 17 × 58.2 × 38.5cm. Two-way speakers with 165mm and 90mm drive units. Speakers measure 35.5 × 25.4 × 16mm. Price: £208.89 (plus VAT).

MCH 11*

Music centre with auto single play turntable with Shure magnetic cartridge. Radio tuner: FM, L, M, S. Dolby noise reduction unit on cassette which has autostop, VU meter, switching for chrome tapes, level control meter and oscillator frequency switch. Output: 55W. Dimensions: 15.9 × 80.8 × 37.7cm. Speakers with 207mm and 90mm drive units measure 47.5 × 37.7 × 21cm. Price: £262.22 (plus VAT).

■ ITT CONSUMER PRODUCTS (UK) LTD

Chester Hall Lane, Basildon, Essex SS14 3BW.
Tel: Basildon (0268) 3040.

MC 10D

Music centre with BSR P182 record deck, Audio Technica AT70 magnetic cartridge. Amplifier output: 2 × 10W into 4 ohms. FR: 30Hz-20kHz ±3dB. Radio tuner covers FM, L, M. Tape deck with Dolby noise reduction. W and F: 0.25% weighted. SS10 speakers with 8 × 5in. drive units measure 22.2 × 17 × 37.5cm. Main unit in black and teak measures 59 × 40 × 16.5cm. Features: fade in/out on cassette. Manual recording with two meters, flywheel tuning, FM stereo LED, FM scale repeated on upper fascia for tuning ease. Price: £192.50 (plus VAT).

MC 22*

Music centre with BSR P200 record deck, Audio Technica AT70 magnetic cartridge. Amplifier: 2 × 22W into 4 ohms. FR: 30Hz-20kHz ±3dB. THD: 10%. Radio tuner covers FM, L, M. Tape deck with Dolby and DLPF weighted. W and F: 0.25%. SS22 speakers. Crossover frequency: 6kHz. Drive units: Goodmans 70mm tweeter and Audax 200mm bass. Dimensions: 27.7 ×



HMV MCH 10



HMV MCH 11



ITT MC22

18.4 × 43.1cm. Main unit measures 59 × 40 × 16.5cm. Finish: black and anthracite grey. Features: fade in/out on cassette, manual recording with two meters, tuning meter, dynamic low pass filter, switchable AFC, flywheel tuning. Price: £231.85 (plus VAT).

■ JVC

JVC (UK) Ltd, Eldonwell Trading Estate, Staples Corner, 6-8 Priestley Way, London NW2 7AF.
Tel: 01-450 2621.

MF 33/MF 47*

Music centre with auto return/auto cut turntable, JVC cartridge. Amplifier output: 15W per channel. Radio tuner covers FM, L, M,

*Indicates entry is illustrated

S. Tape deck with Dolby. Speakers not supplied. Main unit measures 46 × 27 × 21.8cm. Price: on application.

MF 55 Mk II

Music centre with JVC cartridge. Amplifier output: 30W. Radio tuner covers FM, L, M, S. Tape deck with JVC's automatic noise reduction system. Speakers not supplied. Main unit measures: 70.1 × 38 × 15cm. Features: stroboscope on turntable. Price: on application.



JVC MF-33

■ KORTING

Europa Electronics Ltd, Howard Place, Shelton, Stoke-on-Trent, Staffs ST1 4NW. Tel: Stoke (0782) 25477.

Infracenter 699*

Details available on application.

■ PANASONIC

National Panasonic UK, 308 Bath Road, Slough, Berks. Tel: Slough (75) 34522.

SG 1030L

Music centre with DC belt drive-auto return record deck, ceramic cartridge. Amplifier: 10W. FR: 20Hz-20kHz. Radio tuner covers FM, L, M. Tape deck with W and F: 0.15%. Speaker dimensions: 26 × 20 × 40cm. Main unit measures 60 × 35.2 × 16.5cm and is finished in simulated teak and aluminium. Features: external tape monitor, aerial sockets, mechanical pause, oil damped eject, oil damped cueing. Price: £177.73 (plus VAT).



Korting Infra-center 699

SG 3000

Music centre with DC belt drive, auto return record deck, moving magnet cartridge. Amplifier: 17W. THD: 5%. Radio tuner covers FM, L, M. Tape deck with Dolby 'B'. Two-way speakers measuring 26 × 20 × 40cm. Silver finish. Features: cueing light, oil damped eject, oil damped cueing, external aerial sockets, CrO₂ switch, mechanical pause, VU meter, FM auto/FM mono, LED tuning indicator. Price: to be announced.

SG 4000

Music centre with DC belt drive and auto return record deck, moving magnet cartridge. Amplifier: 22W. THD: 1%. Radio tuner covers FM, L, M, and has 6 pre-sets. Tape deck with Dolby 'B' noise reduction system. Two way speakers measure 26 × 20 × 40cm. Silver finish. Features: three-position tape select, tape track location system, loudness, FM Auto/FM

mono, LED tuning indicator, oil damped eject, oil damped cueing, cueing light, mechanical pause, external aerial sockets, two VU meters. Price: to be announced.

SG 5070

Music centre with FG servo belt drive, auto return record deck, moving magnet cartridge. Amplifier: 30W into 4 ohms. FR: 10Hz-25kHz ±1.5dB. THD: 1%. Radio tuner covers FM, L, M, S with 6 FM pre-sets. Tape deck with Dolby 'B'. W and F: 0.15%. Two-way speakers measuring 26 × 20 × 40cm. Main unit: 68.3 × 41.9 × 17.8cm. in simulated rosewood. Features: strobe, pitch controls, three-position tape select, loudness, two VU meters, tuning meter, A or B speakers, oil damped eject, oil damped cueing, mechanical pause, external tape monitor, external aerial sockets, voltage selector. Price: £385.33 (plus VAT).

SG 5090

Music centre with direct drive, auto return record deck, moving magnet cartridge. Amplifier: 35W. FR: 10Hz-30kHz ±1.5dB.

Radio tuner covers FM, L, M, S with 6 FM sensor pre-sets. Tape deck with Dolby 'B'. W and F: 0.08%. Optional speakers. Main unit in simulated rosewood measures 74.2 x 44.8 x 17.9cm. Features: as 5070 with full auto stop cassette. Price: £444.40 (plus VAT).

SG 6070*

Music centre with direct drive auto return record deck, moving magnet cartridge. Amplifier: 45W into 4 ohms. FR: 20Hz-25kHz ± 1.5 dB. THD: 1%. Radio tuner covers FM, L, M, S with 6 FM sensor pre-sets. Tape deck with Dolby 'B'. W and F: 0.08%. Optional speakers. Main unit measures 74.2 x 44.9 x 18.7cm and is finished in simulated rosewood. Features: sensor operation of record deck, cassette, function selectors. Timer/clock, strobe, record synchronisation, loudness, high filter, oil damped eject, peak LED, external tape, auxiliary, voltage selector, memory, rewind auto play. Price: £639.96 (plus VAT).



Panasonic SG 6070

■ PERIOD HIGH FIDELITY

Period High Fidelity Ltd, Clivemont Road, Cordwallis Trading Estate, Maidenhead, Berks. Tel: Maidenhead (0628) 21221/2.

PHF 1: 4: 6: 8: 9: 14: 15: 16: 17: 18: 20: 21*

All models in a wide range of period reproduction cabinets covering Regency, Queen Anne, Louis XV, etc. All have the same specifications: Garrard 125SB record deck. Amplifier with output of 20W and FR: 20Hz-20kHz. THD: 0.15% at 1kHz. Radio tuner covers VHF, M, L. Tape deck with Dolby noise reduction unit, W and F: 0.3% DIN. Speaker drive units 1 x 8in. and 1 x 3in. with crossover frequency 1500Hz. Dimensions of each speaker: 35 x 29 x 56cm. Prices: £575.00 to £1,795.00 (plus VAT).



Period High Fidelity PHF 4



Period High Fidelity PHF 17

■ PHILIPS ELECTRICAL LTD

City House, 420-430 London Road, Croydon CR9 3QR. Tel: 01-689 2166.

AH 985*

Stereo music centre with two-speed record player, GP 400 II Super M magneto dynamic cartridge and diamond stylus. Amplifier output: 2 x 20W. FR: 25Hz-25kHz. THD: <1%. Radio tuner covering FM, L, M. Tape deck with Dolby. Main unit measures 67.3 x 17 x 46cm. No rec. retail price.



Period High Fidelity PHF 6

*Indicates entry is illustrated

AH 994

Music centre with Philips two-speed belt drive record deck with GP400II magnetic cartridge. Amplifier: 40W per channel. FR: 30Hz-20kHz ± 1.5 dB. THD: <0.1% at 2 x 30W, <0.7% at 2 x 40W. Radio tuner covers FM, L, M. Tape deck with Dolby noise reduction. W and F: <0.2% DIN. Recommended speakers AH 483 extra. Main unit in neutral grey with brushed aluminium front measures 64.5 x 43 x 13cm. Features: LED recording meter, stereo expander control, FM pre-sets. No rec. retail price.



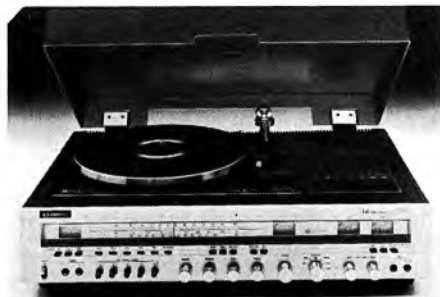
Philips AH 985

■ PYE

Pye Ltd, 137 Ditton Walk, Cambridge
CB5 8QD.
Tel: Teversham (022 05) 2781.

TAPC6000*

Hi-Fi music centre. Amplifier section: Output of 30W per channel. Distortion: <1% harmonic distortion, <1.5% intermodulation. FR: 30Hz-20,000Hz ± 1.5 dB. Controls for contour, bass, treble, high filter. Sockets for 2 mics, tape in/out, 2 x 2 loudspeakers, 2 headphones. Tuner section: FM tuner with wave range 87.5-108MHz. THD: 0.6%. Sensitivity: 2.5 μ V for 26dB. AM tuner with FM, L, M bands. Sensitivity: 90 μ V for 26dB. Selectivity: 30dB. Cassette deck: chromium and ferro tape. W and F: <0.2%. Record player: Philips GCO 37 with speeds 33 1/3, 45rpm and GP 400 Super M II cartridge. W and F: <0.15%. Rumble: <-38dB DIN A, <-58dB DIN B. Stylus force: 0.4 g adjustable. Recommended speakers: Pye 5775. General dimensions: 60 x 20 x 40cm. Price: £334.22 (plus VAT).



Pye TAPC 6000

■ REALISTIC

Tandy Corporation (Branch UK), Bilston Road, Holyhead Road, Wednesbury, Staffs WS10 7JN.
Tel: 021-556 6101.

Clarinette 350*

Price: £199.50 (inc VAT).

■ SABA

Saba Radio and Television Ltd, 10-12 Cornbrook Park Road, Manchester M15 4EE.
Tel: 061-872 7661.

RPC 963

Dual PE 3044 record deck with Shure M75D cartridge. Amplifier: 20W. Radio tuner covers FM, L, M, S. Tape deck with Saba noise limiter.



Realistic Clarinette 350

Two-way speakers measuring 22 x 13.5 x 33cm. Main unit in metallic grey or light walnut measures 63 x 37.5 x 20cm. Features: provision for chrome dioxide tapes. 6 pre-set FM stations. Price: £329.78 (plus VAT).

Every component beats DIN 45 500.



The TAPC 6000 is a true hi-fi music centre. It delivers 30 watts per channel continuous power into 8 ohms at less than 1% THD.

The record deck has an acoustically isolated turntable, adjustable bias system for spherical or elliptical cartridges, low mass pick-up arm, direct stylus force read out and comes complete with high quality magnetic cartridge.

The sensitive LW, MW and stereo VHF tuner features five VHF pre-set LED touch buttons,

VHF pre-set tuning meter, signal strength meter and mute/RIF control.

The cassette deck has Dolby[®] tape select, automatic or manual recording level control with twin VU meters and tachometer motor control with hysteresis clutch for wow and flutter less than 0.1%.

See and hear the TAPC 6000 at your local Pye dealer.

THE PYE HI-FI SOUND PROJECT.

You can rely on Pye 

Pye Limited, 137 Ditton Walk, Cambridge CB5 8QD.

[®]Dolby is a registered trade mark of Dolby Laboratories Inc.

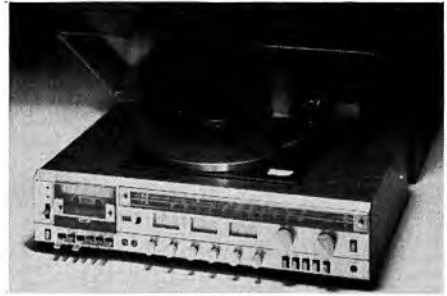
*Indicates entry is illustrated

■ SAKAI

Wren Electronics Ltd, Dawson Road, Mount Farm Estate, Milton Keynes, Bucks.
Tel: Milton Keynes (0908) 71611.

MC 3000*

Record deck with magnetic cartridge. Amplifier: $2 \times 25\text{W}$. FR: $25\text{Hz}-80\text{kHz} \pm 3\text{dB}$. THD: 1%. Radio tuner covers FM, L, M. Tape deck with Dolby noise reduction system. W and F: 0.15%. Choice of speakers: SA 3000/SA3030. Main unit measures $60 \times 24 \times 40\text{cm}$. Features: damped cassette eject, front loading, tuning and signal meters, belt drive player. No rec. retail price.



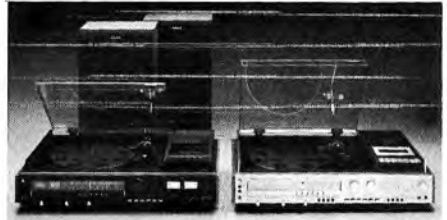
Sakai MC 3000

■ SANYO

Sanyo Marubeni (UK) Ltd, 8 Greycaine Road, Watford, Herts WD2 7UD.
Tel: Watford (92) 46363.

GXT 4580

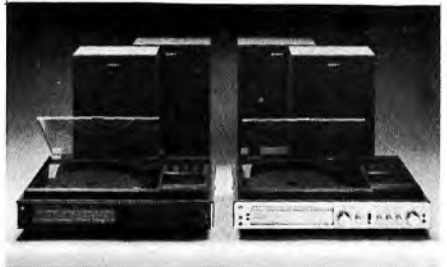
Music centre with Sanyo deck. Amplifier: $20\text{W} \times 2$ into 8 ohms. FR: $20\text{Hz}-20\text{kHz} \pm 3\text{dB}$. Radio tuner covers FM, L, M, S. Tape deck with Dolby. W and F: 0.15% MC3 speakers comprising 20cm bass, 10.4cm mid and 6.8cm HF unit. Main unit measures $47 \times 27 \times 22\text{cm}$ and is of teak finish. Features: radio touch controls, FM pre-setting, piano keys, full auto stop, memory counter. FeCr/CrO₂/normal tape. Price: £349.95 (plus VAT).



Sony HMK-80

G 2811 KL

Music centre with Sanyo deck. Amplifier $18\text{W} \times 2$ into 8 ohms. FR: $30\text{Hz}-30\text{kHz}$. Radio tuner with band coverage FM, L, M, S. Tape deck with Dolby, W and F: 0.1%. Speakers: 20cm bass, 10.4cm mid, 6.8cm. HF unit measuring $4 \times 27 \times 22\text{cm}$. Main unit measures $68.6 \times 17.5 \times 35.8\text{cm}$. Metal finish. Features: 3 digit tape counter, radio with colour console and 7 pre-select stations. Price: £309.50 (plus VAT) but not inc. speakers.



Sony HMK-33

DXT 5502*

Music centre with Sanyo deck. Amplifier $15\text{W} \times 2$. FR: $30\text{Hz}-40\text{kHz} \pm 3\text{dB}$. Radio tuner covers FM, L, M. Tape deck with Dolby. W and F: 0.15%. Speakers with drive units 16.5cm bass/mid and 6.8cm. HF, crossover frequency 3.5kHz. Speakers measure $43 \times 26 \times 18\text{cm}$. Main unit in teak measures $55 \times 20 \times 40\text{cm}$. Features: cassette deck with push button controls, two speed record deck, anti-skate device and diamond stylus, piano keys, auto stop. Price: £280.00 (plus VAT) but without speakers.



Sony HMK-11

G 2711 Super 2*

Music centre with Sanyo deck, two-speeds, magnetic cartridge with diamond stylus. Amplifier output 10W x 2. FR: 30Hz-20kHz \pm 6dB. Radio tuner with band coverage FM, L, M. Tape deck with Dolby. W and F: 0.15%, twin recording level meters, tape counter, auto stop. Main unit measures 59.1 x 19.6 x 40.2cm. Finish in teak. Price: £268.50 (plus VAT) inc. speakers.

■ **SCHNEIDER**

Kuba Radio Sales and Services Ltd, 1105 London Road, Thornton Heath, Surrey CR4 6JJ.
Tel: 01-764 5255.

TS 1853 Hi-Fi

Dual 1235 record deck with DN221 magnet cartridge. Amplifier: 2 x 25W. Radio tuner covers FM, L, M. Tape deck with Dolby noise reduction system will take normal, chrome and ferro-chrome. Three-way speakers measure 36 x 25 x 13.5cm. Main unit measures 79 x 35 x

17cm and is finished in anthrazit metallic or anthrazit walnut. Features: connection for four speakers, 4 FM pre-sets, DIN sockets for mic, headphones. Price: £341.50 (plus VAT).

TS 1885 Hi-Fi

Dual 1237A record deck with magnetic cartridge DN221. Amplifier output: 2 x 40W. Other details as 1853. Finish: metallic or walnut graphite. Features: quadrophonic, 7 FM pre-sets, DIN sockets for mic, headphones, and additional tape. Price: £425.00 (plus VAT).

■ **SHARP ELECTRONICS (UK) LTD**

107 Hulme Hall Lane, Manchester M10 8HL.
Tel: 061-205 7321.

SG 400/CP 400*

Record deck with IM cartridge. Amplifier output: 25W at 4 ohms. FR: 35Hz-20kHz -1.5dB. THD: 1%. Tuner: VHF/FM, L/M/S. Tape deck with Dolby 'D' noise reduction system. W and F: 0.2%. Speaker dimensions: 26 x 25.5



Sanyo DXT 5502



Sharp SG 400/CP400



Sanyo G 2711 Super 2



Skantic 2075

*Indicates entry is illustrated

× 48cm. Main unit dimensions: 75.3 × 35.1 × 18cm. Five preset stations on FM. Price: £355.51 (plus VAT).

SG 450

Music centre with record deck with universal plug-in leadshell and IM cartridge. Amplifier: 25W into 4 ohms. FR: 35Hz-20kHz. THD: 1%. Radio tuner covers FM, L, M, S. Four-track two-channel tape recorder with Dolby. W and F: 0.2%. Main unit in black finish measures 84 × 39.5 × 17.4cm. Features: DIN spec, APSS on tape, 6 preset sensors. Price: £355.51 (plus VAT).

SG 320/CP 315

Record deck: Two-speed rim driven, ceramic cartridge, sapphire stylus. Amplifier: 15W into 4 ohms. FR: 30Hz-35kHz —3dB. THD: 5%. Radio tuner covers FM, L, M, S. Four-track, two-channel tape deck with W and F: 0.35% DIN. CP 315 speakers measuring 26.5 × 43 × 17.6cm. Main unit in matt black measures 71.1 × 38.1 × 16.4cm. Features: APSS, auto CrO₂/normal tape change-over, mechanical pause. Price: £284.40 (plus VAT).



Skantic 3063



Sony HMK 55

SG 500

Music centre with direct drive record deck, VM cartridge. Amplifier: 45W. FR: 25Hz-15kHz. THD: 1%. Radio covers FM, L, M, S. Auto programme search system on tape, Dolby noise reduction system, remote control as option extra (£88.95), sensor touch tuning on FM. Price: £635.51 (plus VAT).

■ **SKANTIC**

Skantic (UK) Ltd, Station Road, Edenbridge, Kent TN8 6EY.

Tel: Edenbridge (073 271) 5231.

2075 Music Centre*

Output: 40W RMS. Modular construction with built-in facility for simulated four channel reproduction. FM and Medium Wave radio with stereo decoder and five pre-set programmes. Skantic record player with Excel ES 70F magnetic cartridge. Single lever operation. Anti skating and adjustable stylus pressure devices. Cassette deck with auto CrO₂ switch, DNL noise suppression, auto stop, digital counter, pause control. AFC. Sockets for mic, stereo headphones, tape recorder. Loudness compensation control. Auto and manual recording level controls. Pair of bass reflex speakers with 16.5cm bass speaker and 2.5cm dome tweeter. Acrylic dust cover. Available in white or black with speakers in white or black lacquer, teak, walnut or rosewood finish. Prices: on application.

3063 Music Centre*

Output: 60W RMS. Built-in facility for simulated four-channel reproduction. FM stereo radio with four sensor control programme selectors and pointer instrument tuning indicator. Record player with Pickering magnetic cartridge and single lever action. Anti skating and adjustable stylus pressure devices. New three motor Dolby stereo cassette recorder/player with DNL noise suppression. Auto stop, digital counter, pause control. AFC. Sockets for mics, tape recorder, stereo headphones. Loudness compensation control. Accepts standard, CrO₂ and ferrous oxide tapes. Auto and manual recording level controls. Bass reflex speakers each with 16.5cm bass, 10cm middle and 2.5cm dome tweeter. Dust cover. Available in black with speakers in choice of teak, walnut, rosewood, white finish. Price: on application.

■ **SONY (UK) LTD**

Consumer Information, Sony Showroom, 134 Regent Street, London W1R 6DJ.

Tel: 01-439 3874.

HMK 55*

Sony belt drive with VL 32G cartridge. Amplifier output: 18W. Radio tuner: VHF, L, M, S. Tape deck with Dolby 'B' system. W and F: 0.2%. Speakers: SS51 with 160mm woofer and 50mm tweeter. Speaker dimensions: 25 × 18 × 46cm. Dimensions of main unit: 66 × 50 × 18cm. Finish: silver or black (HMK 55B). Features: supplied with stereo headset and stereo mic. Can accept FeCr tape. Price: approx. £483.00 (inc VAT).

HMK 11*

Music centre with belt drive turntable and magnetic cartridge. Amplifier: 12W per channel into 8 ohms. Radio tuner covers FM, L, M, S. Tape deck with W and F: 0.2%. Two-way speakers measure 30 × 19 × 50cm. Main unit measures 61.3 × 42.8 × 14.6cm. Finish: black and silver. Features: microphone supplied. Price: approx. £249.00 (inc. VAT).

HMK 33*

Music centre with belt drive turntable and magnetic cartridge. Amplifier: 18W per channel into 8 ohms. Radio tuner covers FM, L, M, S. Tape deck with Dolby noise reduction system. W and F: 0.2%. Two-way speakers measure 30 × 19 × 50cm. Main unit in black or silver measures 61.3 × 42.8 × 14.6cm. Features: programme sensor, microphone supplied. Price: approx. £322.15 (inc. VAT).

HMK 80*

Music centre with 5 presets on FM. Radio tuner covers FM, L, M, S. Direct drive turntable with strobe light and pitch controls. Dolby cassette deck with three-position tape selector, twin VU meters, peak indicator and record level controls. Amplifier: 100W. Speakers are optional (£55.85). Features: microphone, headphones. Price: approx. £483.00 (inc. VAT).

■ STEREOSOUND

Stereosound Productions Ltd, 12-14 Wakefield Road, Brighouse, Yorks.
Tel: Brighouse 714355.

1515*

Comprises P182 single play turntable with V100 magnetic cartridge. AM/FM tuner, cassette recorder with CrO₂. Output: 20W. Speakers: 6in. woofers and 4in. tweeters. Rec. price: £222.22 (plus VAT).

8080

Comprises P182 single play turntable with ceramic cartridge. Output: 8W per channel.

*Stereosound 1515**Toshiba SM3750*

AM/FM radio tuner. Cassette recorder with CrO₂. Speakers: 8 × 5in. Dimensions of main unit: 16.7 × 76.7 × 35.6cm. Dimensions of speakers: 35.5 × 22.9 × 18.1cm. Finish in black or walnut. Price: £186.67 (plus VAT).

■ TOSHIBA (UK) LTD

Toshiba House, Frimley Road, Camberley, Surrey.

Tel: Camberley (0276) 62222.

SM-2950

Music centre with Toshiba belt drive 30C/M T/T, semi-auto, magnetic cartridge, cueing lever. Amplifier: 17W × 2 into 4 ohms. FR: 20Hz-40kHz. THD: 1% max. Radio tuner covering FM, L, M, S. Tape deck with DC servo motor, two rec meters, tape counter, Dolby, W and F: 0.25%. Speakers: 17cm, 9.7cm, measure 24.5 × 18.4 × 42.5cm. Main unit: 62 × 39 × 18cm. Finish in silver and simulated wood. Price: £266.22 (plus VAT).

SM-3350*

Toshiba belt-drive, semi-auto, cueing, magnetic cartridge. Amplifier: 23W × 2 into 4 ohms. FR: 20Hz-40kHz. THD: 1%. Radio tuner with FM pre-sets covers FM, L, M, S. Compact cassette with Dolby, two meters, three step tape select,

*Indicates entry is illustrated



Toshiba SM 3350

DC servo motor, W and F: 0.25%. Speakers: 17cm bass, 9.7cm HF, crossover frequency: 5000Hz, dimensions 25.7 × 18.4 × 46cm. Main unit in silver and simulated wood measures 62 × 39 × 18cm. Features: free stop, dust cover. Price: £310.67 (plus VAT).

SM-3650

Toshiba belt drive, semi-auto, cueing, magnetic cartridge. Amplifier: 26W × 2 into 4 ohms. FR: 20Hz-40kHz. THD: 1%. Radio tuner covers FM, L, M, S, with presets on FM. Tape deck: compact cassette with Dolby, two level meters, DC servo motor, W and F: 0.2%. Speakers: 20cm bass and 9.7cm HF, dimensions: 28.5 × 21.8 × 50cm. Main unit in silver and simulated wood measures 81 × 43.5 × 18.5cm. Features: stand by timer with LED display for auto recording, electric clock, free stop dust cover. Price: £390.67 (plus VAT).

SM-3750*

Toshiba fully auto belt drive with stroboscope, FG servo, Magnetic cartridge. Amplifier: 32W × 2 into 4 ohms. FR: 40Hz-40kHz. THD: 1%. Radio tuner with 6 FM presets covers FM, L, M, S. Tape deck: compact cassette with Dolby, three step tape select, two level meters, auto rec with timer. Speakers: 20cm bass, 9.7cm HF, crossover frequency: 5000Hz, dimensions: 28.5 × 21.8 × 50cm. Main unit: 69.2 × 43 × 10.9cm. Features: electronic clock with LED display for auto recording. Free stop cover. Price: £417.33 (plus VAT).

SM-3100

Belt drive turntable with MM cartridge, auto cut device. Amplifier output: 2 × 8W into 8 ohms. THD: 1%. Radio tuner covers FM, L, M. Cassette deck with twin recording level meters, tape counter, tape select button. Speakers each measure 27.5 × 47 × 19cm. Main unit measures 69 × 36 × 20cm. Price: £248.00 (plus VAT).

SM-3150

Music centre with belt drive turntable, cueing lever, auto-cut. Amplifier output: 2 × 12W into 8 ohms. THD: 1%. Radio tuner covers FM, L, M. Cassette deck with Dolby, twin recording level meters, tape counter, tape select, memory rewind. Two-way speakers measure 27.5 × 47 × 19cm. Main unit in walnut measures: 69 × 36 × 20cm. Price: £284.00 (plus VAT).

■ ULTRA

Thorn Consumer Electronics Ltd, 284 Southbury Road, Enfield, Middlesex. Tel: 01-363 5353.

6922

Music centre with BSR P163 deck and Shure M75 cartridge. Amplifier: 25W. FR: 40Hz-20kHz. THD: <1%. Radio tuner covers FM, L, M, S. Tape deck with Dolby 'B'. W and F: <0.3% to DIN 45507. Speakers: 2 × 5in., 1 3/4in. Crossover frequency: 3kHz, dimensions: 24 × 20 × 46cm. Main unit measures 62.3 × 41 × 19.3cm. Finish in teak and black. Features: VHF touch tuning with 6 presets. No rec. retail price.

6971

Music centre with BSR P182 deck. Amplifier: 6W. FR: 40Hz-18kHz. THD: <1%. Radio tuner covers FM, L, M. Tape deck with Dolby 'B', W and F: <0.3% to DIN 45507. Speakers: 6 1/2in. round, dimensions 22 × 18.5 × 37cm. Main unit in black and silver with teak surrounds measures 56 × 34.5 × 17cm. Features: switchable AFC, FM stereo beacon, auto stop on all cassette functions. No rec. retail price.

6920

Music centre with Thorn SP 202 Vernitron V100 cartridge. Amplifier: 10W. FR: 40Hz-18kHz. THD: <1%. Radio tuner: VHF, L, M. Tape deck with Dolby 'B', W and F: <0.3% to DIN 45507. Speakers: 6 1/2in. unit and capacity fed tweeter 'effective above 4kHz. Dimensions: 20 × 18 × 37cm. Main unit all black measures 56 × 34 × 16cm. Features: belt drive record deck. No rec. retail price.

■ VAN DER MOLEN

Van Der Molen, 101 Hainault Road, Romford, Essex. Tel: Romford (70) 22018.

Stereo 40 MC

Music centre with Garrard belt drive and Vernitron V101 cartridge. Amplifier: 15W. FR: 20Hz-20kHz. THD: >0.2%. Radio tuner with

coverage of FM, L, M. Tape deck with Dolby, W and F: $\geq 0.25\%$. Speakers: $6\frac{1}{2}$ in., dimensions $24.75 \times 15.25 \times 40.65$ cm. Main unit in teak or rosewood measures $64.75 \times 34.90 \times 16.5$ cm. Features: LED flywheel tuning indicators, audio output meters. Price: on application.

■ WALTHAM

Waltham Electronics (UK) Ltd.
155-159 Queens Road, Watford,
Herts. WD1 3QH.
Tel.: Watford (92) 24543.

STM 15*

Four wave band radio music centre. BSR deck. Amplifier output: 8W per channel. Radio tuner: VHF, L, M, S. Cassette tape recorder. Speakers: $23 \times 15 \times 35.5$ cm. Main unit dimensions: $52 \times 38 \times 18$ cm. Finish: teak. Features: slide controls for volume, balance, and tone. Rotary controls for tuning and pushbuttons for wave band, tape recorder, on/off, and function controls. Acrylic dust cover. Built-in storage compartment for cassettes. Headphone socket. No rec. retail price.

SIM 35*

Same as STM 15 but front loading cassette tape recorder. Output: 16W. Speaker dimensions: $15.2 \times 22.9 \times 35.5$ cm. Main unit dimensions: $41.3 \times 58.4 \times 20.5$ cm. Finish: teak. No rec. retail price.

SIM 55*

Music centre with BSR P182 record deck. Amplifier: 12.5W per channel. Radio tuner covers FM, L, M, S. Waltham cassette deck with twin VU meters. Speakers in simulated veneer measure $23 \times 15 \times 35.5$ cm. Main unit in black with silver trim measures $66.8 \times 39.4 \times 19.7$ cm. Features: hinged acrylic dust cover, built-in cassette storage compartments, chromium dioxide tape facility and noise reduction system. Headphone socket. No rec. retail price.



Waltham STM 55.

■ WYE ELECTRONICS LTD

27 Station Road, Birmingham, Chesterfield,
Derbyshire. Tel: Chesterfield (0246) 70297.

808

BSR 129 R2 record deck. Amplifier output: 10W. FR: 60Hz-20kHz ± 3 dB. THD: 10%. Tuner: VHF/L/M. Tape deck — W and F: 0.15%. Speakers: 8×5 in. Dimensions: $20.6 \times 15 \times 35$ cm. Main unit dimensions: $61 \times 46 \times 18$ cm. Teak finish. Auto stop, pause, ALC. No rec. retail price.

601

Music centre. Output: 20W. THD: 3%. FR: 40Hz-16kHz. Inputs: phono, tape, aux. Record player with BSR P182 and SC12M cartridge. Radio tuner covers FM, L, M. Tape recorder with W and F: 0.15%. No rec. retail price.



Waltham STM 15



Waltham STM 35

Bib®

Audiophile Edition

The finest record and tape care accessories in the world



GROOV-KLEEN (PARALLEL TRACKING)
Automatically removes dust from record whilst playing. ★ Ref 101A-AE



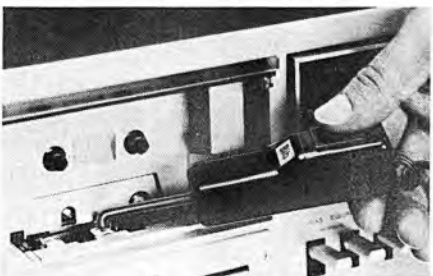
RECORD VALET
Gently removes dust and dirt from record grooves. Ref 110-AE



GROOV-STAT ELECTRONIC 3000, STATIC TESTER
An electronic static reducer, and simple tester for static. Ref 3000-AE Ref 94-AE



STYLUS CLEANER
A delicate brush removes harmful deposits from stylus. Ref 112-AE



TAPE HEAD DEMAGNETISER
Suitable for demagnetising heads of all tape decks. Ref 90-AE



TAPE HEAD CLEANER
For removing tape oxide, dust and dirt from tape heads. † Ref 115-AE

Bib®

★ Pat. Pending. Ref. Des. No. 982790. † Pat. Pending.
Bib Hi-Fi Accessories Ltd., Kelsey House, Wood Lane End, Hemel Hempstead, Herts. HP2 4RQ.
Bib Hi-Fi Accessories Inc., 3363 Garden Brook Drive, Dallas, Texas 75234, U.S.A.
Bib Hi-Fi Accessories (Australia) Pty. Ltd., P.O. Box 755, North Sydney 2060, NSW, Australia.

Pickup and Record Accessories

*Indicates entry is illustrated

Abbreviations used in this section are given on page 5.

■ ADASTRA

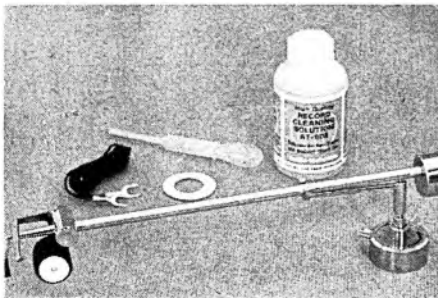
Adastra Electronics Ltd,
Unit N22, Cricklewood Trading Estate,
Claremont Road, London NW2 1TU.
Tel: 01-452 62889.

D.50 Discoduster

A comprehensive record cleaning kit with balanced aluminium arm, impregnated cylinder and superfine groove brush. The weighted base can be permanently fixed or used free standing, and the two pivots with choice of arm location enable the Discoduster to be used with a wide variety of automatic, or transcription type decks. Supplied with two replacement treated



Audio Technica ATS



Audio Technica AT 6002

cylinders, and fluff removing brush. Price: £2.50 (plus VAT).

A.114

Completely cabinetted mains operated stereo preamplifier suitable for low output magnetic cartridges, tape head, etc. On/off switch. Tape/ phono input selection, pilot lamp. Input impedance: up to 70K, crosstalk: -40dB, noise ratio -45dB. Input: 60mV max. Output: 2V. Price: £10.90 (plus VAT).

R.50 Cassette head cleaner

Simple-to-operate head cleaner which removes dust, dirt and oxide and maintains high polished surface on tape heads. Top pack presentation. Price: 45p (plus VAT).

■ ADC

BSR Ltd, Powke Lane, Cradley Heath,
Warley, West Midlands B64 5QH.
Tel: Cradley Heath (0384) 65191.

Low Mass magnesium headshell

Price: £5.00 (plus VAT).

ADC Sound Level meter

With pink noise frequency test record. Accessory for ADC frequency equalisers. Price: £60.00 (plus VAT).

Stabiliser Weight

Low frequency 500gm. Price: £8.40 (plus VAT).

Slide Adaptor

Diecast SME type. Price: £17.11 (plus VAT).

Extra headshell

Carbon fibre extra headshell for ADC LMF-2
Carbon fibre tonearm. Price: £8.91 (plus VAT).

■ AUDIO PACKS

Tape Recorder Spares Ltd,
206-210 Ilderton Road, London SE15 1NS.
Tel: 01-639 7844.

Audio Packs

Pre-packed spares and audio accessories.

Connecting cords

Cables of various types with plugs, sockets and other terminations covering all equipment in use for domestic radio.

Adaptors

Convert from any type of plug or socket termination to any other type.

Audio spares

Plugs, sockets, chassis mounted components,

*Indicates entry is illustrated

fuses and audio accessories. Pre-packed for counter or showroom display.

Mains units*

Three different 4.5-9V battery eliminators complete with connecting leads for use with all standard battery-operated tape recorders and radios. Full specifications on request.

Sound selector units*

A range of five units for routing signals to phones, speakers and amplifiers. Four of the units provide for the selections of up to three pairs of stereo headphones or up to three pairs of speakers. The fifth unit, model HZ793, provides facilities for connecting any three signal sources to any three amplifiers. Particularly suitable for demonstration purposes in showrooms and for comparative tests. Prices on request.

■ AUDIO TECHNICA

Harman UK, St. Johns Road,
Tyler's Green, High Wycombe,
Bucks HP10 8HR.
Tel: Penn (049 481) 5331.

AT 6008 Rotary Disc Cleaner

Complete with cleaning solution reservoir with special double layered padding construction which enables you to apply cleaner evenly over entire record. Price: £3.36 (inc. VAT).

AT 6010 Record Cleaning Kit

Special cleaning solution AT 6008, included in kit, is effective in loosening coagulated dirt in the groove. Price: £2.55 (inc. VAT).

AT 6003 Tri Capsule

Stand with thick acrylic covers which will hold up to three spare cartridges in headshells. Price: £4.58 (inc. VAT).

ATS Standard Headshell*

For 1005 arm. Weight: 8g. Price: £4.16 (inc. VAT).

ATN Light Headshell

Price: £2.81 (inc. VAT).

ATD Headshell for AT1009 Arm

Weight: 7g. Price: £6.24 (inc. VAT).

AT 6002*

Improved Autocleanica. Sweep arm. Conducting arm and brush with grounding wire, dissipates static charges. Supplied with record cleaning solution. AT 608. Price: £4.58 (inc. VAT).

AT 605

Acoustic insulators. For use with turntable or speakers, will effectively neutralise both vertical and horizontal vibrations and minimise acoustic feedback. Adjustable for height, set of four complete with turntable spirit level. Price: £14.49 (inc. VAT).

AT 607

Stylus cleaner. Powerful cleaning solution, which effectively cleans the stylus. Small brush is attached to bottle cap for convenience. Price: £1.20 (inc. VAT).

AT L2

Oil lift, for use in conjunction with AT 1005 II arm. Price: £7.07 (inc. VAT).

AT-MG

Anti-resonance magnesium headshell—universal fitting. Price: £6.60 (inc. VAT).

AT 618

Disc stabiliser—designed to improve resistance to vibration and increase inertia thus improving the stability of the speed of revolution. Audio Technica claims that in properly tuned audio equipment it increases the firmness of the sound image and the depth of field of the reproduced sound. Particularly effective with good budget priced turntables. Price: £11.33 (inc. VAT).

AT 609

Ultra low loss cartridge to headshell wiring—featuring gold plated connectors to minimise corrosion. 99.99% pure silver litz wire conductors for lowest resistance, lowest noise and maximum signal conductivity. Replaces all conventional inefficient connectors. Price: £2.48 (inc. VAT).

AT 620

Vital Link phono to phono lead giving maximum fidelity when used between source/amplifier and inter-amplifier connections featuring gold plated phonoplugs for minimum corrosion: low capacity foam dielectric for minimum high frequency loss and minimum phase shift; braided sheath plus conductive propylene outer for superior RF shielding and hum protection; Litz wire inner conductor for superior signal conductivity. Price: £16.67 (inc. VAT).

AT 6012

The Sonic Broom—a very special disc cleaner—full record width, humid leading edge collects large particles, controlled fibre size of mid section gets deep into the groove to remove

smaller particles while rear edge removes residue left on record surface by most cleaners. Price: £5.23 (inc. VAT).

AT 615

Spirit level—essential for correct turntable operation since turntables should be level to operate correctly. Price: £6.17 (inc. VAT).

AT 610A

Improved low capacitance phono lead for turntable/amplifier connections reduces spurious noise and capacitative effects between pickup and equaliser circuitry. Price: £3.06 (inc. VAT).

AT 606

Heavy duty audio insulator set for use with speakers or turntables weighing 16 to 32kg. Adjustable for height and designed to absorb both horizontal and vertical vibration. Complete with spirit level. Price: £16.48 (in. VAT).

AT 6004

Telescopic record cleaning arm—easy to install on virtually any size of turntable or music centre. Price: £6.17 (inc. VAT).

AT 608II

Improved anti-static fluid. Price: 75p (inc. VAT).

AT 6010A

Modified and improved disc cleaner. Price: £3.19 (inc. VAT).

AT 6010B

Hand disc cleaner. Price: £15.68 (inc. VAT).

PDQ

Complete record care kit comprising AT 6002 cleaning arm, anti-static fluid, hand disc cleaner, stylus cleaning solvent in presentation pack with compartment for cartridge of choice if required. Price: £10.63 (inc. VAT).

MS 10

Magnesium solid anti-resonance headshell with Sterling silver Litz connectors—10g weight. Price: £12.36 (inc. VAT).

MG 9

Magnesium solid anti-resonance headshell with Sterling silver Litz connectors—9g weight. Price: £10.29 (inc. VAT).

LT 12

Aluminium solid anti-resonance headshell with Sterling silver Litz connectors—12g weight. Price: £10.29 (inc. VAT).



BASF record cleaning arm

■ **BASF**

BASF United Kingdom Ltd, Audio/Video Tapes Division, Haddon House, 2-4 Fitzroy Street, London W1P 5AD. Tel: 01-637 8971.

Checkpoint Accessories for Records*

Stylus Cleaning Fluid 36p; Record cleaning arm £3.00; cleaning pad £2.10; cleaning cloth 28p; handling pad 56p; stylus cleaning kit £1.04; turntable levelling kit £2.28; replacement roller and brush 40p; record care kit £3.70; deluxe record care kit £6.44; record and cassette care kit £7.06. (all plus VAT).

*Indicates entry is illustrated



BASF Checkpoint Accessories

■ **BIB**

Bib Hi-Fi Accessories Ltd,
Kelsey House, Wood Lane End,
Hemel Hempstead, Herts HP2 4RQ.
Tel: Hemel Hempstead 61291.

Model 42*

Record cleaner consisting of an aluminium arm with integral rest, fitted to a self-adhesive base with a brush and velvet roller attached. Price: £2.59 (inc. VAT).

Model 45 Auto-changer Groov-Kleen

Finished in chrome and fits most units with flat top cartridge housings. Complete with velvet and stylus cleaning brush. Adaptor available for Garrard Zero 100. Price: £1.49 (inc. VAT).

Model 50 Groov-Kleen

Has all the features of the Model 60 but made in high quality plastic. The base is black and the cranked arm is white. Price: £1.75 (inc. VAT).

Model 43 Record care kit

Contains Groov-Kleen in chrome finish, record dust off, spirit level, stylus and turntable cleaner. Price: £3.76 (inc. VAT).

Model 32A Stylus balance

Made from non-magnetic material and fitted with non-scratch base. Measures from ¼ to 5g and calibrated to be accurate to within ¼g. Simple to use and supplied with full instructions. In presentation case. Price: £1.87 (inc. VAT).



Bib 101A Groov-Kleen



Bib 44 record level

Model 2000 SP

Cleans records while you play them. Improves reproduction and reduces record and stylus wear. Fitted with adjustable counterweight and arm rest. Finished in chrome. Spare replacement roller and tracking brush provided. For low level turntables (model 2000/L). Price: £3.48 (inc. VAT).

Ref: 71 Record Dust-Off

For removing dust and dirt quickly and simply from records to reduce record and stylus wear. Measuring just over 5in, it is convenient to hold in the hand and covers the full width of record grooves, making it easy to remove surfaced dust by applying gently to the record as it revolves. Supplied with protective cover. Price: 95p (inc. VAT).

Ref: 69 Anti-Static Liquid

Non-flammable, non-toxic, ideal for cleaning tape heads, record stylii, glass, plastic and colour TV screens. 39p (inc. VAT).



Bib Electronic 3000



Bib Groov-Kleen Ref 42



Bib Record Valet Ref 110



Bib De-Luxe Record Care Kit Ref 107



Bib Stat Kleen Anti-Static turntable mat

Ref: 80 3-Way Record Care Kit

Another handy care kit which includes the Model 42 Groov-Kleen, Record Handler and Record Dust-Off, which can be used dry or moist. Price: £3.65 (inc. VAT).

Ref: 102 Stat-Kleen Anti-Static Turntable Mat*

A most effective way of removing static-charge from records immediately the record starts to play. The mat can be suited to fit all turntables and is placed over, or replaces, the existing mat. Price: £2.59 (inc. VAT).

Ref: 103 Stylus Cleaner

This kit comprises a special angled stylus cleaning brush and bottle of stylus cleaning liquid, supplied in a handy size plastic box. Price: 73p (inc. VAT).

Ref: 105 Music Centre Care Kit

An all-in-one record and cassette care kit, comprising Bib Groov-Kleen, cleaning brush, stylus cleaner, record dust-off, cassette head cleaner, re-record tabs and extractor tool, pack of replacement cassette title labels. Price: £5.27 (inc. VAT).

Ref: 101A Bib Groov-Kleen (Parallel Tracking)*

Easy to install, the Bib Groov-Kleen is supplied with two types of base and two height extensions to suit any modern single play record desk. While records play, the delicate brush lifts out dirt (from the record grooves) which is then collected on the velvet roller. The brush and roller are housed on a lightweight carrier which tracks across the record at the same speed as the tone arm. A separate brush for cleaning the velvet is provided. Supplied complete with spare roller and brush, packed in a permanent storage case. Price: £3.97 (inc. VAT).

Ref: 44 Bib Record Level*

Maintains a perfectly level turntable, thereby preventing unnecessary wear on styli and records. Triangular in shape the Bib level is

*Indicates entry is illustrated

centrally positioned over the turntable spindle and has two spirit bubbles for accurate and easy checking. Made of durable plastic. Price: £1.86 (inc. VAT).

Static Reducer Electronic 3000*

Gives controlled operation with both audio and visual signals, being a safe way of neutralising static charge. Electronic 3000 is battery powered and operates from a single HP11 cell. Both audio and visual signals indicate that the instrument is functioning correctly, and length of discharge time is under direct control by means of a simple push button. 3000 comes in a permanent storage box complete with free static tester for use before and after Bib Groov-Stat treatment. Price: £9.98 (inc. VAT).

Record and Stylus Cleaning Kit Ref. 64

Suitable for all records and styli. Comprises BIB record roller cleaner in dust free storage container, cleaning brush and anti-static fluid. Price: £1.99 (inc. VAT).

Record Valet Ref. 110*

Handle incorporates reservoir for anti-static fluid. Removable brush searches out dust from the record grooves. Top and base cover of steel. Comes complete with 22cc bottle of anti-static fluid, pad cleaning brush. Price: £5.49 (inc. VAT).

De-Luxe Record Care Kit Ref. 107*

Contains Groov-Kleen, Stylus cleaner and record dust-off. Price: £4.99 (inc. VAT).

■ BSR

BSR Ltd, Powke Lane, Cradley Heath, Warley, West Midlands B64 5QH.
Tel: Cradley Heath (0384) 65191.

Cartridge Carrier

Quick-change slide-in carrier. Permits changing or inspecting cartridge easily and quickly without interfering with wiring. Models to suit all BSR McDonald pick-up arms (except 210 mini-changer). Price: £1.38 (plus VAT).

■ CAVAC

Cavac Systems Ltd, 38 Bennet Road, Reading, Berks RG2 0QC.

Anti-Static Record Sleeves

12 x 12in. anti-static sleeves which reduce the charge produced as an album is removed from sleeve. Trial offer: 5 for £1.00 plus P & P.

■ CONDOR

Condor Electronics Ltd,
100 Coombe Lane, London SW20 0AY.
Tel: 01-946 0033.

Music Bug

Audio transducer which uses walls, ceilings and floors to reproduce sound with exceptional clarity and quality. It measures just 4in. dia. and 1½in. deep, accepts power up to 30W and is able to capture full dynamic range. Full details and price on application.

C-113 Music Centre Care System

Presentation pack comprising record cleaning arm, disc wipe, record/Stylus cleaning fluid with brush, cassette head cleaner, polishing stick and tape cleaning fluid. Price: £4.75 (plus VAT).

C-106 Record Care System

Cleaning arm, disc wipe, record/stylus cleaning fluid and stylus brush. Price: £3.50 (plus VAT).

C-100 Auto record cleaning arm

In bright chrome and black with 8-position roller, weighted base for free or permanent standing, brush tufts honed to a point enabling efficient sweeping and tracking action. Price: £2.35 (plus VAT).

C-116 Mini Record Care System

Record cleaner, cleaning cloth, 30cc bottle of record/stylus cleaning fluid and stylus brush in a kit. Price: £1.45 (plus VAT).

C-101 Record Cleaner

Newly designed record cleaner with two openings for adding fluid and stylus brush incorporated in the top. Price: 89p (plus VAT).

Vac-O-Rec

Device to be used before and after playing records to keep them in mint condition. Price: £21.95 (plus VAT).

Vac-O-Rec Mark II

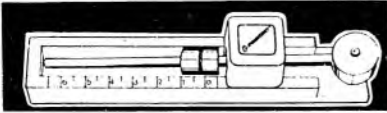
Same as above but with new styling. Price: £24.95 (plus VAT).

C-45 Record changer auto-cleaner

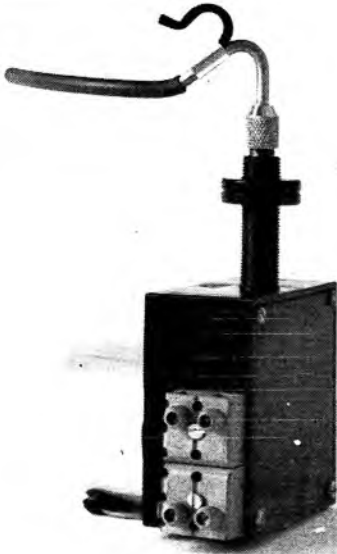
Designed to fit auto changers and still allow the automatic function. Price: £1.30 (plus VAT).

Discoota

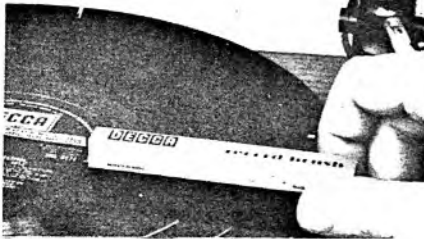
Humid record cleaner with compact design which allows storage on turntable. Removable cap gives access to fluid tank. Price: 50p (plus VAT).



Connoisseur stylus balance



Decalift



Decca record brush



Decca record cleaner

C-103 Stylus Cleaning Brush

Price: 11p (plus VAT).

C-119 Anti-Static Mat

Fibre mat for all turntables. Presented in record sleeve for use as points-of-sale literature. Price: £2.99 (plus VAT).

C-69S Record Stylus Cleaning Fluid

Price: 40p (plus VAT).

C-205 Record Care Pack

Storage case holding record grip, disc wipe, two brushes and fluid. Price: £2.75 (plus VAT).

C-206 Record Grip

Plush lined to eliminate finger smears from record surface. Price: 85p (plus VAT).

C 212 Anti-Static Gun

To neutralise static charges in records and lenses. Price: £5.00 (plus VAT).

■ **CONNOISSEUR**

A. R. Sugden & Co (Engineers) Ltd,
Connoisseur Works, Atlas Mill Road,
Brighouse, Yorks HD6 1ES.
Tel: Brighouse (048 47) 2142.

Lightweight Metal Headshell

Interchangeable with SAU2, BD2, BD2/A, BD3, BD100p/u arms.

Connoisseur Stylus Balance*

Precision stylus balance with sliding weight adjustment. Scale calibrated 0-6g. Simple operation giving accurate stylus pressure settings.

■ **DECCA**

Decca Special Products, Ingate Place,
Queenstown Road, London SW8 3NT.
Tel: 01-622 6677.

Magnetic bias compensator

Neat, simple, unobtrusive device using magnetism precisely to neutralise the force which draws a pickup towards the centre of the turntable. Type A for Mk I and Mk I 'Super' *jjss* arms, and for Deram ARI arm. Price: £1.30 (plus VAT).

Central locator

Fits on *jjss* arm like *jjss* head. Pickup arm is correctly positioned when the locator moulding fits the turntable centre spindle. Price: 45p (plus VAT).

*Indicates entry is illustrated



Denon AU-310



Disc-a-Vac

Decalift*

Motorising lifting and lowering device which can be controlled at the turntable and/or remotely. Supplied with 6.3V AC transformer (suitable for 110/230V). Price: £9.00 (plus VAT).

Record Brush*

One million conductive man-made bristles, each 8-9 microns in diameter. Cleans the record of dust and static. No anti-static fluids required. Price: £5.40 (plus VAT).

Record Cleaner*

An electrically conducting arm carrying a brush made from 20,000 conducting man-made bristles. Can be accommodated on most turntables. Requires no anti-static fluid. Price: £5.50 (plus VAT).

■ DENON

Eumig (UK) Ltd, 14 Priestley Way,
London NW2 7TN.
Tel: 01-450 8070.

AU-320 Cartridge Transformer

Change-over between two cartridges and among two different impedances and "Pass" can be made by handling front switches. High S/N ratio is achieved by triple shielding. High performance secured by low-capacitance output cord and gold plating terminals. Flat wide band characteristic and excellent phase characteristic enables it to reproduce discrete 4-channel discs. Step-up ratio: 1/10, primary imp: 3 ohms, secondary imp: 4 ohms. FR: 10Hz-100kHz ± 1 dB. Dimensions: 9.7 x 6.5 x 15.5cm. Details on application.

AU-310 Cartridge Transformer*

With "Pass" position. Selection is possible between transformer passing and non-passing (Pass) circuits by handling front switch, convenient when MC-type and MM-type cartridges are mounted alternately on a single tone arm. Compact high performance transformer and high S/N ratio is ensured by double shielding and low-capacitance output cord. Step-up ratio: 1/10. Primary imp: 4ohms, Secondary imp: 4 ohms. FR: 20Hz-40kHz ± 1 dB. Load imp: 50K. Dimensions: 5.1 x 5.3 x 18.1cm. Full details on application.

■ DISC-A-VAC

Janorhurst Ltd, Century House,
Shortmead Street, Biggleswade, Beds.
Tel: Biggleswade (0767) 314252.

Disc-A-Vac*

Recording cleaner on vacuum principle sucking air in through the top vent and blowing out dust through rear vent. As record revolves velvet pads clean the grooves and carbon fibre bristle remove majority of static. Full details included. Price: £17.80 (plus VAT).

■ DISCLEANER

Discwasher Hi-Fi Ltd, Unit 16F, Randles Road,
Knowsley Industrial Estate, Knowsley,
Merseyside L34 9EZ.

Discleaner

Cleans even the most stubborn grease marks from record grooves and cleans the surface leaving it free from dust and grease. Specially designed nylon pile evenly distributes the cleaning and anti-static fluid.

■ **EAGLE**

Eagle International, Precision Centre,
Heather Park Drive, Wembley HA0 1SU.
Tel: 01-902 8832.

■ **PRE402***

Mains-powered stereo pickup pre-amplifier for magnetic cartridges including Eagle LC 05 and LC 07. Provided with dual phono sockets. RIAA equalisation. Price: £7.65 (plus VAT).

■ **FF2 Stereo pickup amplifier**

Designed for use with magnetic cartridges, having RIAA equalisation. Fitted with phono socket input and outputs. Powered by a PP3 battery or equivalent. Price: £8.45 (plus VAT).

■ **HS 200**

Replacement headshell, lightweight type, matt black finish, standard connector and colour-coded leads. Price: £3.75 (plus VAT).

■ **ELECTROLUBE**

QED Audio Products Ltd, 112 Windmill Road, Sunbury-on-Thames, Middlesex TW16 7HD.
Tel: Sunbury (76) 87344.

■ **EL2 Record Clean***

When sprayed on disc Record Clean neutralises static charge, the solvent frees dust particles embedded in grooves, and dry lubrication ingredient allows stylus to track grooves with minimum resistance. Price: £1.81.



Electrolube Record Clean

■ **EL8 Stat-Mat**

Anti-static turntable mat impregnated with new conductive material, claimed to be 10 times more conductive than most other coating. Price: £2.51.

■ **EMI**

EMI Tape Ltd, Tape House, Dawley Road, Hayes, Middlesex.
Tel: 01-573 3888.

■ **Record Cleaning Arm**

To remove dust and static from the record a split second before stylus tracks the groove. Replacement pack available.

■ **Record Ioniser Fluid**

Slow-drying anti-static fluid formulated for use with Record Cleaning Arm. Roller pad retains sufficient moisture to clean records being played without leaving surface residue.

■ **Stylus Cleaner and Brush**

Disposes of dirt particles and extending life of stylus.

■ **Record Care Kit**

Comprehensive package containing Record Cleaning Arm, Record Ioniser, Stylus Cleaner, Brush and Record cleaning roller.

■ **Cleaning Pad**

Four sided cleaner with nylon plush pile surface.

■ **Cleaning Cloth**

Easy to use and helps maintain records in top condition.

■ **Anti-Static Mat**

Helps to eliminate static and improve sound. The mat neutralises negative charge in record so reducing interference.

■ **EXPERT PICKUPS**

PO Box No. 3, Ashted, Surrey KT21 2QD.
Tel: Ashted (27) 76604.

■ **Stylus Replacement Services**

For all makes of cartridge including magnetic and moving coil.

■ **78 rpm Records**

Stylus range for all periods including Edison, Pathe, etc. Advice available as to the best method of reproducing old 78 rpm records. Diamonds and sapphire styli made to original specifications.

*Indicates entry is illustrated

Leak Pick-ups

Sole service agents for Leak Mk II Pickup.

■ GARRARD

Garrard Engineering Ltd, Newcastle Street,
Swindon, Wilts SN1 2LH.

Tel: Swindon (0793) 35381.

MRM101 Music Recovery Module*

Garrard Music Recovery Module is designed to eliminate sudden large impulses introduced by a scratch or small hole in the record surface. It contains its own pre-amp unit and is plugged into the audio system between the record player and amplifier. It runs from mains and has simple controls. Controls: on/off switch with LED indicator, filter in/out switch with LED indicator to permit good records to be played through filter, and a scratch identification LED indicator to permit scratch-level adjustment for maximum filtering. Price: £116.25 (plus VAT).



Garrard MRM 101

■ GOLDRING

Goldring Products Ltd,
Anglian Lane,
Bury St. Edmunds IP32 6SS.

Tel: Bury St. Edmunds (0284) 64011.

Exstatic Turntable Mat

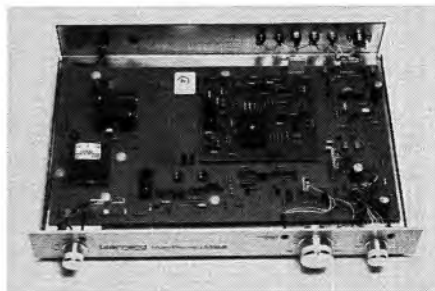
Anti-static carbon-fibre impregnated felt mat which reduces positive charge on disc, enabling dust to be easily swept away. Price: £3.60 (plus VAT).



Groovac Mk IV

Exstatic Disc Cleaning Brush

Carbon fibre filaments penetrate into grooves removing deeply engrained dust as well as surface dust. Price: £5.50 (plus VAT).



Garrard MRM 101

■ GROOVAC

R.I. Audio, Kernick Road, Penryn,
Cornwall TR10 9DQ.

Tel: Penryn (0326) 72753.

Groovac Mk IV*

Anti-static vacuum record cleaner which consists of a precision lightweight arm and a suction unit acoustically isolated in a special enclosure, fitted with mains switch and indicator. Tracking force 0.4gm. The nozzle is fitted with 2 brushes—one, an earthed carbon fibre brush to discharge static electricity and the other with fine hairs to facilitate removal of dust from the bottom of grooves. Counterbalanced and with integral rest incorporating anti-skating device. Fixes by magnetic base or self adhesive pad. Price: £19.50 (inc. of VAT and postage).

■ G. F. C. HADCOCK

Audio Division, The Old Vicarage,
Doveridge, Derby DE6 5NN.

Tel: Uttoxeter (088 93) 2452.

GH Uni-lift Mk III*

Raising and lowering device suitable for most pickup arms. Two-hole fixing for stability. Complete with template for easy installation. Screw adjustment of horizontal arm. Damped adjustable rate of descent ensures accurate lowering and cueing. Price: £8.50 (plus VAT).

■ HOWLAND-WEST

Howland-West, 3-5 Eden Grove, London N7
8EQ.

Tel: 01-609 0293.

Alignment Protractor

Made in laminated perspex. Provides facilities

for checking (1) vertical tracking angle, (2) lateral tracking angle and (3) channel balance and separation. Price: 80p (plus VAT).

“AntiStat” Record Cleaner

A record cleaning device using a piezoelectric quartz crystal giving ionisation from a double element, complete with built-in velvet pad and nylon fibre brush. Designed for easy handling, finished in black, and is supplied with separate stiff brush for cleaning velvet pad. Price: £5.25 (plus VAT).

■ **KEITH MONKS**

Keith Monks (Audio) Ltd, 26-28 Reading Road South, Fleet, Aldershot, Hants.
Tel: Fleet (025 14) 2056819.

KMAL/S/BA — Record Sweeper*

High quality brush assembly with antistatic lead and animal hair, variable height adjustment. R.R.P.: £7.40.

KMAL/S/DLK Damped Levelling Kit

Set of four adjustable feet for turntable with spirit level. R.R.P.: £5.95.

RCM Mark 2 — Record Cleaning Machine*

Single Version Record Cleaning Machine process involves application of alcohol and distilled water; the liquid plus dirt is then removed by vacuum action. Used by broadcasting companies, sound studios, gramophone libraries, hi-fi and record shops and private enthusiasts. S.R.P.: £606.85. Plastic cover £32.80. 1,000 sleeves with special high density plastic inners £42.70. Special spares pack for Record Cleaning Machine £34.20.

RCM Mark 3

As above but twin deck version. S.R.P.: £841.50. Plastic cover £42.80. List of approved record cleaning centres available on request.

KMAL/S/PBA Pivot Sweeper*

Similar to Record Sweeper but with unipivot base. If required the base may be fixed to record deck. Incorporates an antistatic lead. Brush is of animal hair. S.R.P.: £6.90 (plus VAT).

KMAL/S/SL Spirit Level

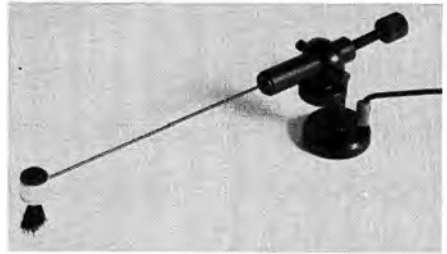
A small round spirit level to aid levelling of record deck. S.R.P.: £1.50 (plus VAT).

KMAL/RCK. Record Cleaning and Stylus Maintenance Kit*

Incorporating a disc preener and antistatic fluid. This kit also includes a stylus brush to aid stylus hygiene. Price: on application.



Hadcock Uni-Lift



Keith Monks KMAL/S/BA



Keith Monks RCM Mark 2 Record Cleaning Machine



Keith Monks KMAL/S/PBA Pivot Sweeper

*Indicates entry is illustrated



Keith Monks KMAL/RCK



Keith Monks MKAL/S/RW50

KMAL/S/RW50. Record Weight*

To prevent the stylus receiving unwanted resonances, this weight is placed over the record on the turntable. This will help ensure even support throughout the records area. It will also help create good disc to mat contact, necessary for high quality reproduction of discs. Price: on application.

■ KELSONICS

Kelsonics Ltd, Kelsey House, Wood Lane End, Hemel Hempstead, Herts HP2 4RQ.
Tel: Hemel Hempstead (0442) 61291.

K8 Record Valet*

Handle incorporates a reservoir into which a few drops of Kelsonics Anti-Static liquid are inserted in order to maintain the velvet cleaning pad in a moist condition. Adjacent to the pad,



Kelsonics K8



Kelsonics K8



Kelsonics K-22

and running the full length of the cleaner, is a removable brush. Dust can easily be removed from the pad by the separate brush provided. Top and base cover are engineered in finest steel. Price: £4.99 (inc. VAT).

K.22 Record Cleaner*

Manual record cleaner with bottle of cleaning fluid. Price: £1.19 (inc. VAT).

K23 Stylus Cleaner

Stylus cleaning kit. Price: 69p (inc. VAT).

K25 Anti-Static

Two bottles of universal anti-static cleaner. Price: 65p (inc. VAT).

K1 Automatic Record Cleaner

Automatic record cleaner which cleans records as they play. It has telescopic arm and bases of differing height making it suitable for all single play decks. Cleaner comes complete with spare brush and roller, stylus cleaning brush, roller cleaning brush and permanent storage box. Price: £5.99 (inc. VAT).

K21 Static Reducer

Battery powered static reducer which neutralises in seconds dust-attracting static charge on records. Length of discharge time is controlled by simple push-button, and audio/visual signals are transmitted during operation. Price: £8.99 (inc. VAT).

■ **KNOWIN**

Knowin (UK) Ltd, Knowin House, 37 Churchill Way, Fleckney, Leicestershire LE8 0UD. Tel: Leicester (0533) 403331.

Archifix Boxes*

Polystyrol boxes measuring 35 × 32 × 18cm available in a variety of colours, each storing 50 LP's. Single boxes may be systematically arranged in various ways either horizontally or vertically. If required they can be used for the construction of large shelf-walls for music shops or large collections. Connecting strips reinforce shelf construction and give the impression of an integral unit.

Archi-Boy 30cm

A box for 30 LP's measuring 35 × 32 × 12cm in polystyrol available in white, red or black. Units can be stacked, fixed to walls and given an integral appearance by use of connecting strips. Archi-Boy can be used with original Archifix.

Archifix Box 17cm

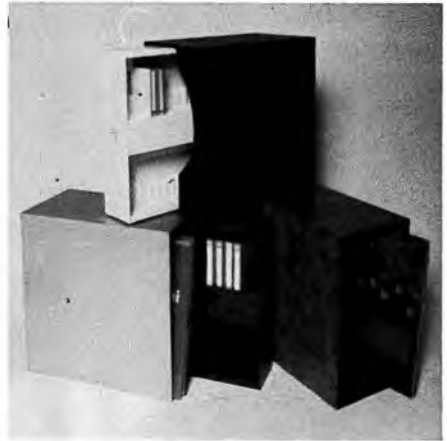
Mini-box with four partitions to hold 80 singles measures 20 × 19 × 27cm. Made of polystyrol and available in a variety of colours. May be integrated into the Archifix filing system.

"L" Racks*

Will take up to 30 LP's. Measurements 33 × 33 × 15cm in polystyrol and available in a variety of colours. They can be free standing or wall mounted. Single stander 17cm will take approx 50 singles and measures 18 × 18 × 15cm.

Blatter Max

Facilitates choice of records. A polystyrol rack available in 30cm for LP's or 17cm for singles.



Knowin Archifix Boxes



Knowin "L" Racks



Knowin K3000

Disco-Case

Carrying case in range of colours to meet any taste. Designed for record carrying but also useful as a multipurpose case. Measures: 33.5 × 40 × 9cm. Made of polystyrol.

Disco-Antistatic K3000*

Special liquid antistat mixture which removes dust, dirt or wet/dry liquids from the record surface without leaving residue. Reduces static

* Indicates entry is illustrated

charge. For this special liquid Knowin has designed a record washing device comprising record bath, funnel, sieve and ten filters to clean liquid after use.

Other Products

Above are only some examples of Knowin record and tape care. Full catalogue is available.

■ LEDA

Leda Audio Accessories Ltd, 7 Thane Works, Thane Villas, London N7 7NU.
Tel: 01-607 1107/8.

LA 10 Record Cleaner*/LA 33 Discota/LA 39 Combi-Cleaner

Choice of three humid record cleaners, each with access to apply Leda record cleaning fluid (LA 11). Safe efficient record and stylus care.

LA 16 Record Cleaning Arm*

Finished in black and silver, this arm complements most modern turntables. Adjustable height, minimum counterbalance overhang, and light tracking, make this a most useful and effective accessory.

LA 29 Record Supa-Care Pack 1*

Plush velvet disc wipe, record handling grip, fluid and brush, are the record and stylus protection products stored in this custom made storage case.



Leda LA-16



Leda LA-10

LA39 Micron 8 Carbon Fibre Record Cleaner*

This comprehensive set of audio care items includes: self-tracking cleaning arm, disc wipe, cassette head cleaner, cloths, brushes and fluids. Complete Hi-Fi maintenance kit for the Audiophile, assembled in a large illustrated presentation pack.

LA 40 Hi-Fi Care Compendium

This comprehensive set of Audio Care items includes: Self-tracking Cleaning Arm, Disc Wipe, Cassette Head Cleaner, Cloths, Brushes and Fluids. Complete Hi-Fi maintenance kit for the Audiophile, assembled in a large illustrated presentation pack.

Leda manufacture a wide range of record and tape care products. Further information and prices are available on request.

■ LYRICHORD

N. Miers & Co Ltd, 28 Piercing Hill, Theydon Bois, Epping, Essex CM16 7LE.
Tel: 037-881 2611.

Cartridge carriers

Slide-in type for BDS 80, 90, 95 MP60, P128, P200. Price: £2.06.

Plinth

Fromosia veneered wood plinth suitable for BSR units. Price: £19.77.



Leda Micron-8



Leda LA-29

Dust cover

Lift off dust cover for above plinth £5.50.

Dust cover

Friction hinged dust cover for above plinth. £12.00.

LMG

Lightweight magnesium headshell. Price: £4.21 (plus VAT).

LMH-2

Low mass carbon fibre headshell for ADC units. Price: £7.00.

■ **MAYWARE**

15 Heather Walk, Edgware, Middx.
HA8 9TS.
Tel: 01-958 9421.

Formula 4 Alignment Protractor (formerly BJ)*

Enables correct setting up and measuring tracking accuracy of all pickup assemblies over entire disc surface. Send SAE for original 'Hi-Fi News' review. Made in plastic ivoryine. Price on application.

Stylus Pressure Gauge

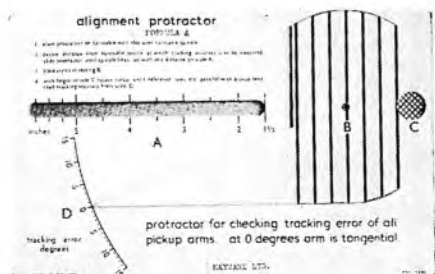
Incorporates water level indicator for measuring from 9.1g to 3g. Will measure existing playing weight or can be used to adjust arm to a required tracking force. Price: on application.

■ **METROCARE**

Metrosound Audio Products Ltd,
Freedex House, 4-10 North Road,
Islington, London N7 9HN.
Tel: 01-607 8141.

M.3 Record Care Kit No. 1

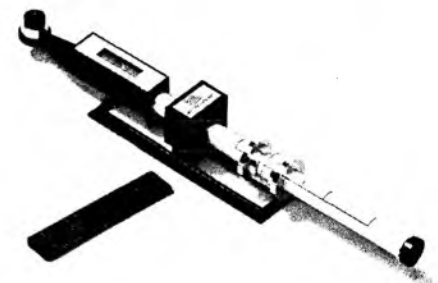
Comprising bottle of Metro-Spray spirit-based anti-static record cleaning fluid; special texture sponge applicator with moulded handle; and soft stylus cleaning brush. Price: 86p (inc VAT).



Formula 4 — alignment protractor



Metrostylus M64



Metrostylus stylus balance

M10 Metro-Mat

A carbon molecule loaded rubber anti-static turntable made to neutralise the negative static charge on records. Packed in record sleeves. Price: £1.94 (inc. VAT).

M11 Hi-Fi Stylus Cleaning Kit

Bottle of specially developed mild solvent fluid. Moulded plastic retaining clip on bottle for soft nylon cleaning brush. Price: 69p (inc. VAT).

M26 Ioniser

High-fidelity record cleaner. Permanently anti-static humid soft velvet enclosed in plastic moulding. Price: 86p (inc. VAT).

M43 Super Groovemaster

High quality record cleaning arm finished in satin anodised aluminium and contrasting black; pivoted on dye-cast free standing base. Brush supplied for cleaning velvet roller after use. Price: £2.92 (inc. VAT).

M52 Metrocure Hi-Fi Kit No. 2

Moulded record cleaner with plush velvet foam backed pad held in protective tray. Bottle of record/stylus cleaning fluid and stylus cleaning brush. Price: £1.00 (inc. VAT).

*Indicates entry is illustrated



Metrosound M101 turntable alignment kit



Metrosound M111

M53 Metrocare Hi-Fi Kit No. 3

Metrocare ioniser, record/stylus cleaning fluid and stylus cleaning brush contained in permanent moulded storage case with tinted transparent cover. Price: £1.94 (inc. VAT).

M54 Metrocare Hi-Fi Kit No. 4

Metrocare Super Groovemaster, ioniser, record/stylus cleaning fluid and stylus cleaning brush contained in permanent moulded storage case with tinted transparent cover. Price: £4.75 (inc. VAT).

M55 Autochange Groovemaster

Record cleaning device attached to pickup headshell by means of self-adhesive shoe. Finished in bright chrome plate. Whole unit weighs less than 1½gm. Price: £1.45 (inc. VAT).

M60 Junior Groovemaster

Record cleaning arm finished in bright chrome plated plastic, pivoted on adjustable self-adhesive base. Price: £1.86 (inc. VAT).

M64 Phono Cartridge Kit*

Comprising microscope, screwdriver, tweezers, stylus cleaning fluid and brush. An essential for the safe installation and maintenance of pickup cartridges. Price: £3.15 (inc. VAT).

M66 Stylus Balance*

A professional stylus balance calibrated to within 1/20g with scale divisions at 1/10g between 0 and 3g. Ensures accurate tracking weight of pickup in tone arm. Price: £3.15 (inc. VAT).

M72 Turntable Care Kit

Comprises spirit level, oiler of advanced design with special oil to reach and lubricate all



Metrosound microscope

bearings and moving parts, cleaning brushes and cloth and fluid for cleaning stylus and deck. Housed in a special purpose permanent storage case. Price: £3.83 (inc. VAT).

M80 Turntable Spirit Level

A very accurate spirit level, specially designed to set up turntables correctly. Price: 97p (inc. VAT).

M81 Duostatic Record Cleaner

A world patented record cleaner incorporating two cleaning surfaces. One consists of polyester with conductive interwoven yarn for static release and the other of thick pile rayon velvet for dust removal. Price: £2.27 (inc. VAT).

M34 Ioniser Fluid

For use in conjunction with M25 ioniser. Price 43p (inc. VAT).

M44 Groovemaster Replacement Kit

Spare brush and roller for M43 super groovemaster cleaning arm. Price 43p (inc. VAT).

M67 Anti-Static Aerosol Spray

Metrocare anti-static spray will reduce static and clean surfaces of records and turntable covers. The aerosol action assists spread and penetration of the fluid. Supplied with a velvet applicator pad. Price: £1.86 (inc. VAT). Also Standard model of above. Price: £5.98 (inc. VAT).

M89 Replacement Kit: Replacement brush, felt pad, self-adhesive base fixing for M90 Lintrack or M95 super Lintrack. Price: 43p (inc. VAT).

M93 Stylus Microscope*

Giving 20 times magnification, supplied complete with clip to aid focusing and full instructions for use. Price: £2.10 (inc. VAT).

M95 Super Lintrack

Similar to M90 but with extra-long runners, low profile base and pillar, spare roller and adhesive pad, which makes it suitable for 99% of turntables on the market. Price: £3.50 (inc. VAT).

M99 Metrostat*

Vinyl records are prone to static charges with a tendency to increase in dry room conditions. Solely negative charges attract all airborne particles to the record surface producing audible cracks and pops and increasing wear. M99 is a piezo-electric crystal crushing device that emits a stream of positive ions with the grip of the actuator and secondly an emission of negative ions on release. Inherently discs are negatively charged and attract the positive ions upon grip of actuator. The following stream of negative ions will not be attracted and thus



Metrosound M102

remain neutral, therefore airborne particles will not be attracted. Supplied complete and ready for use. Price: £6.99 (inc. VAT).

M100 Turntable spirit level

Combines precision engineering and high accuracy needed when testing the level of transcription turntables. Visibility is greatly enhanced due to contrast provided by the black ring around the cavity and the chrome plated outer bezel. Price: £1.20 (inc. VAT).

M101

Comprehensive kit containing stylus microscope, spirit level, stylus balance, tweezers and screwdriver, supplied in strong attractive storage case with full instructions for use. Price: £6.47 (inc. VAT).

M106 Q-up tone arm lift

Particularly suited to Thorens TD 160, TD 166 but is fully adjustable and can be installed on most manual turntables. A boon to owners of turntables which do not incorporate end of side arm lift. Action is triggered by the tone arm entering run-out groove. Tripping and lifting force are both adjustable as is height of lifting lever. Price: £5.62 (inc. VAT).

M111 Metrocare Record Storage system*

In anodised aluminium. Holds up to 60 LP records, supports them firmly in upright position without excessive pressure, thus reducing likelihood of warping and damage. Price: £7.99 (inc. VAT).

M96 Rotary Cleaner

Latest technique in record cleaning uses a soft polymer roller with a very high surface tension to lift dust from the record surface. Washing the roller with soap and water cleans it and restores its tackiness. Cannot harm record surfaces and will last for years. Price: £4.99 (inc. VAT).

*Indicates entry is illustrated

M102 Record Cleaner Pad*

Attractive low price cleaning aid. Price: 45p (inc. VAT).

M104 Microniser Carbon Fibre Brush

Hand-held cleaner containing approx. one million fine carbon fibres. Effectively reduces static charges and enables harmful deposits to be brushed away at the same time. Price: £5.40 (inc. VAT).

■ **MICRO SEIKI**

Harman UK, St. John's Road,
Tyler's Green, High Wycombe,
Bucks. HP10 8HR.
Tel: Penn (049 481) 5331

Headshells

H505X — cast magnesium weighing 9g. £8.44;
H707X — spare headshell for MA707 arm
£5.78; H10 — cast magnesium headshell £4.89
(all plus VAT).

SE22

Heavy rubber compound turntable mat. Price: £16.44 (plus VAT).

ST10

Brass disc stabiliser. Price: £25.33 (plus VAT).

AST05

Tonearm stabiliser. Price: £14.67 (plus VAT).

MLC12S

Silver co-axial connecting cable gold-plated 5-pin plug to 2 gold-plated phono plugs. Price: £48.44 (plus VAT).

MLC7S

Silver co-axial connecting cable gold-plated phono plugs at each end. Price: £48.44 (plus VAT).

AX1

Extra tonearm mount. Price: £11.11 (plus VAT).

AX2

Tonearm mount. Price: £26.22 (plus VAT).

■ **MUSONIC**

S & B Trading, Stylus House,
34-38 Verulam Road, St. Albans, Herts.
AL3 4DF.
Tel: St. Albans (56) 50611/2

DisClens (MR8)

A soft cloth impregnated with an anti-static preparation. One wipe removes dust and dirt from the record, leaving it clean and static free. This helps increase stylus and record life. Price: 34p (plus VAT).

Stylus Cleaner (MR9)

A specially prepared solution which when applied to the stylus tip with the brush provided, cleans and renders it antistatic for longer stylus and record life. Attractively packed in a re-usable plastic wallet. Price: 44p (plus VAT).

DisClosures (MR14)

Special heavy duty welded sleeves made from glass clear PVC. The clarity and strength of these sleeves make them ideal for record shop browsers or for protecting private record collections. Price: per pack of five: £1.46 (plus VAT).

Disc Guards (MR15)

In plain white paper with see-through centre and lined throughout with polythene. Designed to fit snugly inside the printed LP sleeve and provide extra protection for valuable LP records. Price per pack of five: 73p (plus VAT).

Super Active 30cc (MR16) 15cc (MR17)

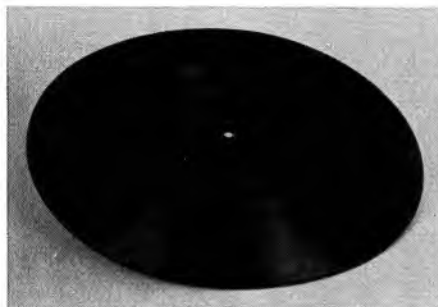
This is the famous formula anti-static fluid which produces excellent results in cleaning and neutralising static in records and other plastic products. The fluid can be applied with a sponge or cloth, and is ideal for re-charging all anti-



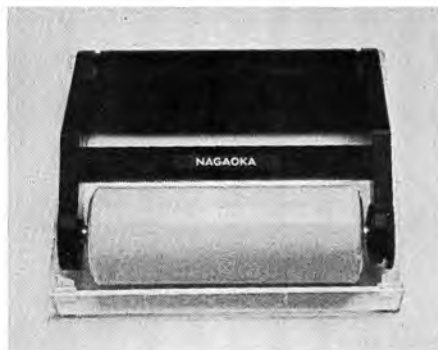
Musonic MR 22 Kleensweep



Musonic MR 25 Trackduster



Musonic MR 27 Antistatmat



Nagaoka M-RC 100 rolling record cleaner

static cleaning devices. Supplied in dropper bottles of either 30cc fl oz or 15cc fl oz approximately. Price: MR16 34p; MR17 29p (plus VAT).

Steel Needles (MR18)

Steel needles in packs of 20. Price: 60p (plus VAT).

Stroboscope (MR19)

Enables you to check accuracy turntable speed. Price: 10p (plus VAT).

Stylus cleaning brush (MA21)

Price: 10p (plus VAT).

Kleen-Sweep (MR22)*

Hand held record cleaner incorporating stylus

cleaning brush. Can be used wet or dry. Price: 87p (plus VAT).

Kleen-Sweep Fluid (MR23)

Specially formulated fluid for record and stylus cleaning to be used in conjunction with MR22. Price: 44p (plus VAT).

Record and Stylus Cleaning Kit (MR24)

Consisting of one Kleen-Sweep with one bottle of Fluid. Price: £1.21 (plus VAT).

Trackduster (MR25)*

Record cleaning arm fashioned in black and chrome finish to complement any turntable. Cleans while records are played by usual brush and roller method. Arm height is adjustable, and unit can be used free standing or fitted permanently. Price: £2.62 (plus VAT).

Trackduster Spares Kit (MR26)

Price: 53p (plus VAT).

Antistatimat (MR27)*

Made from carbon impregnated rubber and therefore electrically conductive. It will drain the static charge from a record without the aid of fluid or cloths. Price: £1.97 (plus VAT).

Precision turntable level (MR28)

Circular spirit bubble level mounted in plastic with transparent plastic dome. Accurate levelling ensures correct tracking and minimises stylus and record wear. Can be stuck or screwed to any deck. Price: £1.16 (plus VAT).

Gripex (MR29)

Anti-slip dressing for drive belts and idler wheels. Supplied in 30cc bottles complete with brush. Dried off in 15-20 minutes leaving a powerful anti-slip surface. Price: 60p (plus VAT).

Hi-Fi Care Kit (MR32)

Price: £4.13 (plus VAT).

Music Centre Care Kit (MR33)

Price: £4.86 (plus VAT).

■ **NAGAOKA**

Kelsonics Ltd, Kelsey House, Wood Lane End, Hemel Hempstead, Herts HP2 4RQ. Tel: Hemel Hempstead (0442) 61291.

K7 Rolling Record Cleaner*

New type of cleaner that lifts dust and dirt straight out of the record grooves. It uses a

*Indicates entry is illustrated



Nagaoka record cleaner

special grade of rubber elastomer which never loses its original surface tackiness. Just rolling over the record surface is sufficient to remove all dust and dirt in the grooves. The roller can be readily detached from the handle and washed in water with detergent. This will completely restore the adhesive on the surface and the roller can be washed over and over again with no deterioration. Price: £7.40 (inc. VAT).

K-RC-100*

Standard model of above. Price: £5.98 (inc. VAT).

■ **NION**

RTB Ltd, 17 Verran Road,
Camberley, Surrey.
Tel: Camberley (0276) 20572

Nion Dust Remover*

Incorporates a negative ion emitter which lifts existing mat. Nion claims that RMF 40 anti-collects it on a velvet pad. Adjustable stand with choice of magnetic or adhesive fixing and removable trailing arm which tracks grooves accurately. Price: £19.90 (inc. VAT).

RMF40 Turntable Mat

Can be used on its own or as an addition to an existing mat. Nion claims that RMF 40 anti-static mat reduces rumble and improves stylus tracking by minimising the stall on the record. Price: £2.90 (inc. VAT).



Nion dust remover



Pyser sound guard

■ **PIXALL**

Milty Products Ltd, New Mansion House,
173/191 Wellington Road South, Stockport,
Cheshire SK1 3UA.
Tel: 061-480 8142.

Record Cleaner 'Off-the-Record'

Comprises a 3in. wide × 2¼in. dia roller with supporting bracket and handle. A specially coated adhesive tape, five feet in length, is wound round the roller and protected, when not in use, by an acetate wrapper. To clean a record the disc should be placed on a flat surface and the roller applied at a tangent to the centre label. It is then roiled across the grooves towards the outer rim with application of slight pressure. When the tape becomes choked with dust the top layer can be peeled off leaving a fresh surface ready for use. Refills are available. Note: Pixall does not reduce static charge — it is primarily a record cleaner. Price: £1.97 (inc. VAT). Refill 55p (inc. VAT).

■ **PYSER**

Pyser Ltd, Fircroft Way, Edenbridge, Kent.
Tel: Edenbridge (0732) 864111.

Sound Guard*

American produced dry lubricant which increases record life by significantly reducing record wear. Liquid is sprayed onto the surface and when buffed up immediately following application it leaves a three millionth-of-an-inch film solid lubricant of low shear strength tightly bonded to the groove surface fortified with an antistatic agent. One property of this coating is that while it bonds to the record surface it will not bond to itself. Accordingly, re-application does not cause build-up which could interfere with stylus tracking or frequency response. Marketed in 2oz bottle with pump sprayer and top mounted buffing pad. Each kit will treat approx. 25 LP's (both sides) and refills are marketed separately. Price: £4.99 (inc. VAT). Refill: £3.25 (inc. VAT).



QAS record care

■ **QAS**

Quality Audio Supplies, Wollaton Road,
Beeston, Nottingham NG9 2PB.
Tel: Nottingham (0602) 256141.

Wide range of individually blister-packed audio accessories including phono plugs, DIN plugs and sockets, 4mm and wander plugs, couplers, screw terminals, slider switches, audio switching units.

Dusta-Disc

Counterbalanced arm to mount alongside turntable for cleaning records while playing. Comprises base with height adjustment, arm with counterbalance weight, super-fine brush for cleaning grooves, plus a soft fabric roller for applying anti-static fluid.

See Speaker Accessories Section for details of other QAS equipment.

Record Care*

Anti-static record cleaning pads, anti-static cleaning cloths (2 per pack), anti-static fluid 30cc bottle.

■ **Q.E.D.**

Q.E.D. Audio Products, 112 Windmill Road,
Sunbury-on-Thames, Middlesex TW16 7HD.
Tel: Sunbury-on-Thames (76) 87344/5.

Disc Switching Unit*

Enables two record player decks to be connected and controlled without changing leads by hand.

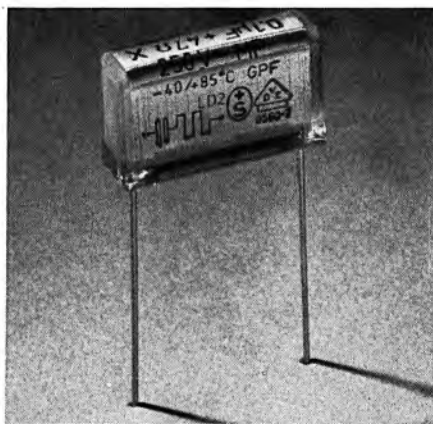


QED disc switching unit

*Indicates entry is illustrated



QED mains interference suppressor



QED light switch suppressor

Fitted with phono sockets. Size: 10 × 6.5 × 5cm. Price: £8.38 (plus VAT).

Interference Suppressors*

Plug in type which reduces interference by approx 1,000 times. Max current 3 amps, operating voltage 250V. Price: on application.

Light Switch Suppressor*

Radio frequency interference generated by light switches and reproduced via audio system in form of clicks can be overcome by this device which is easy to fit and does not require soldering. Price: on application.

■ ROGERS

Swisstone Electronics Ltd,
4-14 Barmeston Road,
London SE6 3BN.
Tel: 01-697 7511.

Spectra Record Damping Anti-Rumble Mat

Constituted of several layers of polyurethane and silicone of various densities vacuum spread, bringing to a large number of turntables a quality of sound which would lead an unsuspecting listener to imagine that the loudspeakers or amplifier had been changed. By use of the Spectra mat Swisstone claims that distortion is reduced, sound becomes purer with no bass roaring and no more sibilant trebles. To obtain best results it is essential that the record plays totally flat, so that damping operates on optimum conditions. Price: £16.69 (inc. VAT).

Anzai A75 Moving Coil Cartridge Step-up Transformer

A limited availability step-up transformer for correct matching of moving-coil pickup cartridges to a normal 47K input impedance RIAA equalised high fidelity disc input. Especially recommended for Denon DL 103, DL 103S, Entre EC-1. Koetsu, EMT, Supex 900, Supex 909 cartridges. FR: 5Hz-100K-1dB at 100K. Primary imp: to suit cartridges requiring 6-40ohms input imp (optimum 100hms) Secondary Load: 47-56K. There is no secondary load resistor as the transformer has no impedance peaks which require loading down. Distortion less than 0.05%. Core: 78% mumetal; Triple Shield. Price: £99.56 (inc. VAT).

■ ROSS ELECTRONICS

Ross Electronics Ltd, 32 Rathbone Place,
London W1P 9AD.
Tel: 01-580 7112.

Connecting Leads

Purpose made connecting leads with a variety of end fittings that permit instant connection or extension between pickup sources and amplifiers with dissimilar input/output connectors, Display packed with header card.

Shielded Adaptors

One-piece, male/female interconnectors to provide direct connection between a wide variety of dissimilar plugs and sockets.

RE-612

Ionizer record cleaner. Anti-static velvet pad aligns ions in one direction on record surface to thus eliminate static. Also removes dust and dirt to keep records noise-free and preserve life. Price: 96p (plus VAT).

RE-614

Special formula, low-toxicity cleaning fluid for use with RE-612 ionizer record cleaner and most other types. Price: 48p (plus VAT).

RE-615

Stylus cleaning kit with purpose made brush and special cleaning fluid removes static, dirt and grit from record styli safely and completely. Price: 78p (plus VAT).

RE-616

Record care kit of ionizer, velvet pad and cleaning fluid spray removes static, dirt and grit from record surfaces to improve reproduction and preserve record life. Price: £1.38 (plus VAT).

RE-623

Record auto cleaner. Precision engineered arm with offset head pivoted on heavy, free-standing base reduces record wear and improves reproduction by removing dirt and grit from surfaces and grooves in advance of the record stylus. Anti-static liquids are not required. Price: £3.26 (plus VAT).

RE-637

Compact audio care kit containing essential equipment for the maintenance of audio systems, including music centres with automatic record decks. Kit comprises: headshell-fitting record groove cleaner, ionizer record cleaner, stylus cleaning brush and fluid, plus cassette cleaner. In fitted, plastic storage case with instructions. Price: £3.52 (plus VAT).

RE-639

Music centre care kit. All the record and cassette care equipment needed to ensure consistent,



Ross RE-627 Rosstat

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STD CODE: 054 881 323

SWA means Styli With Assurance

*Indicates entry is illustrated

trouble-free operation from high-fidelity systems and music centres. Kit comprises: record auto cleaner, stylus brush and cleaning fluid, ionizer, record cleaner. A cassette head cleaner systems and music centres. Kit and tape head cleaning fluid with tool are also included. In fitted plastic case that provides permanent storage. Price: £6.65 (plus VAT).

RE-625

Linear tracking record cleaner arm that overcomes problems that prevent the use of conventional types. In particular, high mass affecting turntable speed is eliminated by a tracking weight of less than 0.5 grams. Height above record is reduced to a minimum and there is no overhang to hinder operation in confined spaces. Price: £3.90 (plus VAT).

Connectors

Plugs and sockets, chassis mounting and inline, to DIN and USA standards.

RE-627*

The Rossstat dual electron emission gun neutralises the surface of vinyl records to thus prevent the attraction of airborne particles which can cause noisy reproduction and increased wear to the stylus and record. Pressure on the trigger causes the emission of a stream of positive electrons to neutralise the negative charge on the record surface; as the trigger is released, the gun emits negative electrons which are not attracted so that the record remains neutral. Ergonomically styled in white plastic with chrome-plated trigger. Price: £7.40 (plus VAT).

Stereo Preampifier

Permits use of magnetic cartridges with amplifiers providing inputs for ceramics or crystal only. Shielded case. Phono input and output. FR: 30Hz-20kHz. Input impedance: 50K. Gain: 10mV to 0.5V output. Maximum input: 30mV. Price: £8.70 (plus VAT).

■ SHURE ELECTRONICS LTD

Eccleston Road, Maidstone,
Kent ME15 6AU.
Tel: Maidstone (0622) 59881.

SFG-2 Stylus Force Gauge*

Accurate beam balance type gauge designed for measuring tracking force in the range of 0.5g to 3g. Measures existing playing weight of arm, or can be used to adjust arm to a desired tracking force. Price: £4.20 (plus VAT).

■ SONY (U.K.) LTD

Consumer Information, Sony Showroom,
134 Regent Street, London W1R 6DJ.
Tel: 01-439 3874.

Head Shell SH 135*

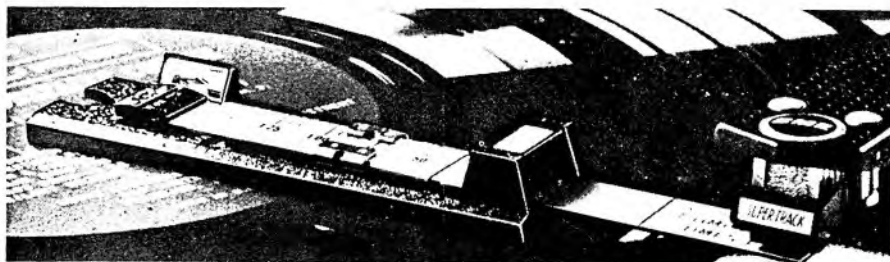
For PS 1350, 2350, 1700, 3300, 4300, 11, 22,
Lightweight weighing only 7.5g. Price: no
application.

Head Shell SH 150

For PS 6750, HMK 70, 77. Fully compatible



Sony SH-135



Shure SFG2 force gauge

with most types of arm. Weight: 10.5g. Price: on application.

Head Shell SH 160*

Carbon fibre headshell weighing 12.5g with high stiffness and low resonance for low sound coloration. Ideal for moving coil cartridges. Price: on application.

RK 112/113*

One metre lead, two phono plugs for connection of record deck to amplifier. Plugs are gold plated to give low contact resistance. RK 113 same but two metres long. Price: on application.

RK 114

A one metre lead, 2 phono plugs to two phono sockets, to extend record deck lead equipped with phono plugs. Low capacitance. Plugs are gold plated to give low contact resistance. Price: on application.

■ **SOUNDS PROFESSIONAL**

A div. of F.W.O. Bauch Ltd,
49 Theobald Street,
Borehamwood, Herts.
Telephone 01-953 0091.

EARC Antistatic Record Cleaner*

Combines both electrostatic and conventional cleaning within a single simple-to-use unit so that the record can be completely cleaned in a single sweep. The user merely passes it slowly over the rotating record from the centre outwards. Any static is eliminated by a powerful positive and negative field generated by piezo-electric technique operated by finger pressure alone — no batteries are needed. EARC's soft brushes sweep up the loosened particles on to a velvet cushion for easy removal. Price: £7.99 (inc. VAT).

■ **TANTRAK**

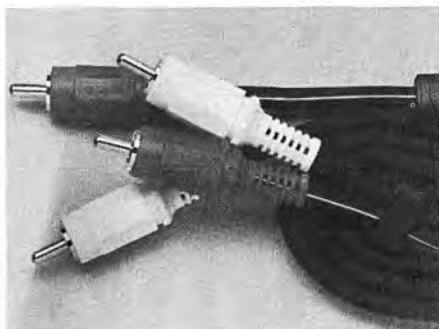
Dorking Audio Systems Ltd,
23 South Street, Dorking, Surrey.
Tel: Dorking (0306) 882897.

Tangential Record Cleaner*

British designed tangential tracking record cleaner for removing dust from the surface of a record as it is played. Tantrak is a free-standing device with heavy base which supports a static arm parallel to the record surface. Roller carrier assembly slides along the arm driven by the fabric-covered roller tracking the grooves of the record. Assembly is simply lifted off the arm at the end of the record so that dust collected on



Sony SH-160



Sony RK 112/113



Tantrak in use with (top) high profile platter and (below) with low profile arm

*Indicates entry is illustrated

the underside of the roller may be brushed away. Tantrack is designed especially for use on turntables with a very 'low-profile' platter, but a second, higher, arm is supplied for turntables with 'high-profile' platters with strobe markings, for example. Price: £6.25 (plus VAT).

■ 3M

3M United Kingdom Ltd,
3M House, PO Box 1,
Bracknell, Berks RG12 1JU.
Tel: Bracknell 58357

Turntable Mats

This cushion of conductive polymeric foam. Contact between disc and mat reduces dust-attracting electrostatic field resulting in virtual elimination of grit and grime. Price: £2.99.

■ CECIL E. WATTS LTD

Darby House, Sunbury-on-Thames,
Tel: Sunbury-on-Thames (76) 83252.

Dust Bag*

Automatic Record Cleaner — effective method of removing dust from the record whilst being played. New Formula Parostatik Antistatic



Cecil E. Watts dust bag



Cecil E. Watts professional parostat

Fluid provides a humid condition to minimise static build-up during play. Adjustable dual pedestal for temporary or permanent fixing. Price: £1.94 (in. VAT).

Parostatik Disc Preener*

Unique roller design removes dust and dirt from record surface and micro-particles of dust from the record grooves. Built in non-ionic compound prevents static build-up. Price: £1.07 (inc. VAT).

Stylus Cleaner

For all types of pickups. Close pile nylon velvet ribbon efficiently and safely removes pollution from the stylus tip. Price: 42p (inc. VAT).

Manual Parostat with Humid Mop Kit

Versatile dual purpose record cleaner. Restores older and dirty records and maintains new records in prime condition. Over 30,000 finely pointed pure nylon bristles probe down into the bottom of the groove dislodging all dirt, dust and pollution which is collected by two plush pile velvet pads. The Humid Mop cleans and conditions the bristles and pads providing the essential humidity to relax and disperse static charges. Price: £6.00 (inc. VAT).

Manual Parostat

An alternative pack to the above without Humid Mop. Offers the same cleaning function but utilises sponge pad in lid to provide the essential humidity. Price: £5.36 (inc. VAT).

Humid Mop Kit

Provides even greater efficiency in record cleaning when used with Watts Record Cleaning Devices. Cleans and conditions the brushes and pads of the Manual Parostat and Professional Parostat. Also an invaluable aid for cleaning and activating the Dust Bug, Parostatik Disc Preener and Stylus Cleaner. Removes all pollution collected from the record and provides the essential humidity to relax and disperse static charges. Price: £1.39 (inc. VAT).

Parostat Wash Brush

For washing dirty records. Dislodges extraneous matter from the grooves and surface without harming the record in any way. Price: £1.41 (inc. VAT).

Hi-Fi Parostat

For use with new records which are to be played at extremely low tracking pressures. The brush is packed with finer nylon bristles than those used in the Manual Parostat. Provides a greater density of pointed bristles to explore the record grooves with maximum thoroughness. Specially

designed case maintains the essential humid condition. Complete with stylus cleaner. Price: £4.55 (inc. VAT).

New Formula Parostatik Antistatic Fluid

Provides static control without producing any harmful surface film. Developed primarily for use with Watts record cleaning devices but also recommended for controlling static in plastic materials. 1oz-28.42ml size with dropper nozzle as supplied with and replacement for Manual Parastat, Hi-Fi Parastat and Humid Mop Kit. Price: 42p (inc. VAT).

Distilled Water Dispenser

Handy dispenser with dropper nozzle is included with the Hi-Fi Parastat and Humid Mop Kit, also available separately for replacement. Ideal for any application requiring the use of distilled water. Price: 32p (inc. VAT).

Xstatic

Specially designed to combat static on records by temporarily neutralising dust attracting charges. It is not a cleaning device but it enables dust to be removed more readily in the interest of sound quality and record life. A piezo-electric element within the Xstatic is the source of high electrical voltages which are fired towards the record surface. The Xstatic should be used on both sides of the record before it is played and follow each treatment by cleaning the record with one of Watts' other products to remove the dust and dirt from the record grooves and surface. Price: £6.48 (inc. VAT).

Parastat Record Cleaning Machine*

Professional Model for Broadcasting Studios, Radio Stations, Record Libraries, Specialist Dealers, etc. Cleans both sides of the recorded area of EP & LP records in one simple operation. It removes all micro-particles of dust and dirt from the record grooves and at the same time applies an invisible molecular trace of New Formula Parostatik Antistatic Fluid to control the attraction of static. Available to special order only. Price on application.

Spares and Replacement Parts

Dust Bug: Nylon Bristle and Plush Pad. Price: 32p (inc. VAT).

Dust Bug: ½oz New Formula Parostatik Antistatic Fluid with wick insert. Price: 26p (inc. VAT).

Dust Bug: Dual Base Pedestal. Price: 48p (inc. VAT).

Parostatik Disc Preener: Packet of 4 wicks. Price: 32p (inc. VAT).

Manual Parastat: Nylon Brush. Price: £1.41 (inc. VAT).

Manual Parastat: Nylon Velvet Pad Covers (pair). Price: 48p (inc. VAT).

Manual Parastat: White PVC Sponge Lid Pads (pair). Price: 26p (inc. VAT).

Humid Mop Kit: Bottle fitted sponge and wick. Price: 32p (inc. VAT).

Humid Mop Kit: 3 wicks and bottle sponge. Price: 32p (inc. VAT).

Hi-Fi Parastat: Pad cover and 3 ribbons. Price: 32p (inc. VAT).

Watts Publications

A guide to the better care of LP and stereo records. Contains detailed information on the inside story of record care including numerous illustrations and photo micrographs of record grooves taken by Cecil Watts on his famous microscope. Price: 30p (VAT exempt).

Dust Bug Cecil. Pioneer of Direct Disc Recording. This biography by Agnes Watts relates how his unique knowledge of every aspect of gramophone recording led him to solve the problems associated with static and dust on records. 116 pages plus colour and black and white plates. Price: £2.25 (VAT exempt).



Cecil E. Watts parostatic disc preener

*Indicates entry is illustrated

■ WILMEX

Wilmex Ltd, Compton House, New Malden,
Surrey KT3 4DE.
Tel: 01-949 2545.

Disc 22 — turntable mat

Made from natural rubber and high density filler. It offers the following advantages:

1. The effective mass of the support for a record is increased thereby eliminating resonance and vibrations that arise at the record surface on many turntables. The concave surface of DISK 22 is a very effective means of ensuring the best possible contact — even with warped records — between the turntable mat and the record. The record is supported firmly at the rim and the weight of the record itself then brings it into close contact with the rest of the mat surface.
2. DISK 22 is of an unprecedented high weight — 730 grams — which increases the platter flywheel effect and smooths out any wow and flutter that may be present.
3. Stereo separation between the left and right hand channels in a stereo recording is largely determined by the motion of the stylus in the vertical plane. This 'vertical' signal must be

reproduced with great fidelity in order to achieve maximum separation. To give the best possible separation, the DISK 22 mat has been manufactured to achieve extra hardness in the vertical plane.

4. The smooth texture surface of DISK 22 has been finely finished to eliminate ridges and indentations. Dust removal is therefore very simple and there can be no danger of trapped dust or dirt damaging the delicate surface of valued recordings.

Recommended Retail Price: £13.95 (plus VAT).

■ WILSON STEREO LIBRARY LTD

104-106 Norwood High Street,
London, SE27.
Tel: 01-670 6394.

W.S.L. Blank Disc

Highly polished blank vinyl disc for adjusting side thrust and alignment. Indicates the amount of side thrust to be corrected. Mirror-like surface reflects underside of cartridge and stylus and assists in accurate alignment. Supplied with instructions for correcting side thrust. Price: £1.90, postage and packing included.

■ ZEEPA

Zeepa Instruments Ltd, 15 Richmond Grove,
Surbiton, Surrey.
Tel: 01-399 0966.

Static Eliminator*

For neutralising static charges on records.
Price: £7.50 (plus VAT).

Dust Lifter*

Using carbon fibre conductive bristles for cleaning records and neutralising static. Price: £4.95 (inc. VAT).

Clean Sweep*

For cleaning dust off records while on turntable using carbon fibre conductive brush earthed to the record deck. Price: £6.25 (inc. VAT).

Dust Bridge*

For cleaning dust and static charges while record is on turntable, using conductive bristles earthed to record deck or tuner/receiver/amp. Can also be used separately as a record brush. Price: £8.50 (inc. VAT).

T-101 Moving Coil Step-up Transformer*

Uses a specially developed alloy which allows even extremely weak magnetic flux to pass to the amplifier without degradation. The winding technique employed suppresses the line



Zeepa static eliminator



Zeepa dust lifter



Zeepa T-101



Zeepa gold-plated phono plugs



Zeepa dust bridge



Zeepa disk mask



Zeepa audio insulator

capacitance allowing smooth frequency response over an extremely wide range.

Permalloy is used for the magnet shield, each channel being independently shielded and encased in a further shield for improvement of crosstalk and signal-to-noise ratio. All terminals are gold plated to prevent poor contact.

Gold Plated Phono Plugs*

Low capacitance, low resistance. Four RCA phono to phono connection leads. Price £4.50 (plus VAT).

Anti-Static Mat

Using unique conductive fibre for reducing static charges while playing record. Price: £2.95 (inc. VAT).

Anti-Static Cloth

Impregnated cloth for cleaning records. Price: 95p (inc. VAT).

High Definition Cartridge Leads

Pure silver leads for connecting cartridge to headshell, all colour coded. Price: £3.95 (inc. VAT).

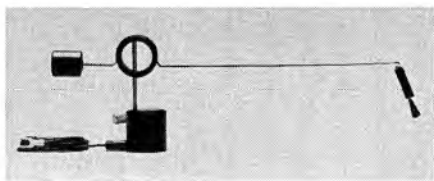
Solid Silver Low Capacitance Phono-to-phono Lead

1 metre high quality, especially for connecting moving coil transformer to amplifier. Price: £61.25 (inc. VAT).

Turntable/Speaker Insulators

Insulators for use under turntable or speakers to prevent acoustic feedback. Price: £18.75 per set (inc. VAT).

*Indicates entry is illustrated



Zeepra clean sweep



Zerostat disc washer

Acrylic Cartridge Headshell Holder

Tidy method of storing headshells in one unit.
Price: £15.75 (inc. VAT).

Carbon Fibre Headshell

Universal fitting, non-resonant headshell with gold plated tages. Price: £7.50 (inc. VAT).

High Definition Speaker Cable

Total overall sound is improved especially in HF area. Price: £32.18 per pair 10m (inc. VAT); £18.90 per pair 5m (inc. VAT).

Gold Cartridge Matcher

Available in 50, 100, 200 and 300ft. For matching cartridges to non-compatible amplifiers. Price: £2.75 (plus VAT).

Disk-Mask*

Removes dust and grit from the record surface by applying liquid that dries on the record and peels off taking dust with it. Price: £6.30 (inc. VAT) for 500cc bottle.

ZEROSTAT

Zerostat Components Ltd,
Edison Road Industrial Estate,
St. Ives, Huntingdon,
Cams. PE17 4LF.
Tel: St. Ives (0480) 62225.

Zerostat

Piezoelectric pistol that emits positive and negative charges by the squeeze of a trigger. Ions shower a large working area and neutralize electrostatic charges eliminating dust-attracting static from records. Arm/cover attraction decreases tracking force of cartridges during winter months of high static/low humidity. Zerostat can eliminate static charge between covers and tonearms. Price: £6.99 (inc. VAT).

Disctracker

Tonearm/cartridge damper cushions the cartridge from record warps. Disctracker is a pneumatic piston device that attaches to virtually any headshell. The damper is friction-free with a shock absorbing value. Disctracker weighs less than one gram and allows warped records to be played without stylus and audio system trauma. It eliminates subsonic woofer flutter and reduces low frequency resonance peaks in all tonearm/cartridge combinations by as much as 18dB. It should improve trackability and reduce record/cartridge wear. Price: £19.95 (inc. VAT).

D3 Discwasher System*

Specially designed brush mounted on milled walnut handle which stores D3 fluid bottle. Patented fabric picks up and physically absorbs micro-dust into the fabric backing. Fluid deals with fingerprints and disc contaminations. Chemical protection and buffering protects vinyl additives necessary for long-term record wear and "release system" pulls dirt away from micro-grooves into Discwasher fabric. Price: £6.99 (inc. VAT).

SC-1 Stylus Cleaner

SC-1 uses nylon bristles stiff enough to remove waxy coatings but gentle enough to avoid damage to cartridge. Drops of D3 fluid will give extra cleaning action. Back of brush incorporates magnifying mirror and brush and mirror retract into walnut case. Price: £3.99 (inc. VAT).

Discwash Fluid D3

1oz — 99p, 6oz — £4.77, 16oz — £9.41 (all inc. VAT).

Gold-ens

Audio connector cables with gold plated contacts. Prices from £4.95 to £9.63 (inc. VAT).

Pickup Cartridges and Arms

*Indicates entry is illustrated

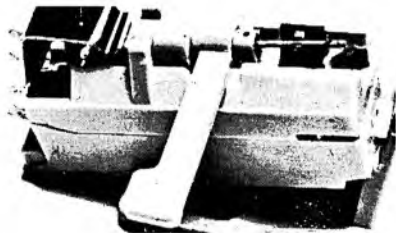
Abbreviations used in this section are given on page 5.

■ ACOS

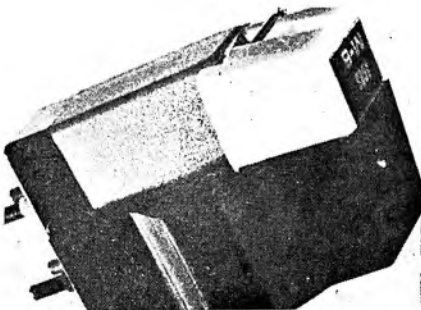
Cosmocord Ltd, Eleanor Cross Road,
Waltham Cross, Herts EN8 7NX.
Tel: Lea Valley (9) 716666.

GP104

Stereo ceramic cartridge. Two versions; turn-over and single-sided. Stylus: 0.5/0.7 thou and 2.5/3 thou. Sapphire or diamond. Pw: 3-4g. Tip mass: 2-3mg. Compliance: (static) lateral 20×10^{-6} , vertical 17×10^{-6} , (dynamic) lateral 6×10^{-6} , vertical 5×10^{-6} . Separation: 20dB at 1kHz, 7dB at 10kHz. FR: 70Hz-15kHz + 5dB. Output: 100mV. Recload minimum 1M. Prices: (diamond) £4.95 (plus VAT); (sapphire) £4.33 (plus VAT).



Acos GP93-1



Acos M6

GP104 Transcription

Stereo ceramic cartridge. Single sided. Diamond stylus 0.5/0.7 thou. Pw: 2-5g. Tip mass: 1.6-2.6mg. Compliance: (static) lateral 20×10^{-6} cm/dyne, vertical 17×10^{-6} cm/dyne; (dynamic) lateral 6×10^{-6} cm/dyne, vertical 5×10^{-6} cm/dyne. FR: 70Hz-12kHz \pm 5dB. Channel separation not less than 20dB at 1kHz. Output: 100mV. Rec load: 1M. Price: (diamond) £4.47 (plus VAT).

M6*

Stereo magnetic cartridge. Sensitivity: 1.25mV at 1cm/sec. Rec load: 47K. Separation: >15dB at 1kHz. FR: 20Hz-20kHz. Stylus: 0.5/0.7 thou. Pw: 1½-2½gm. Price: (diamond) £8.75 (plus VAT).

M6E

Stereo magnetic cartridge. Sensitivity: 1.25mV at 1cm/sec. Rec load: 47K. Separation: >18dB at 1kHz. FR: 10Hz-25kHz. Stylus: 0.25 \times 0.8 thou. Pw: 1¼-2gm. Price: (diamond) £17.86 (plus VAT).

M6EX

Stereo magnetic cartridge. Sensitivity: 0.8mV at 1cm/sec. Rec load: 47K. Separation: >18dB at 1kHz. FR: 10Hz-30kHz. Stylus: 0.25 \times 0.8 thou. Pw: 1-2gm. Price: (diamond) £24.13 (plus VAT).

M7

Stereo magnetic cartridge with spherical diamond stylus. Playing weight 1.5-2.5gm. Tip mass: 0.5/0.7 thou. Compliance: 10×10^{-6} cm/dyne. FR: 20Hz-20kHz. Output: 3.5mV. Recommended load: 47K ohms. Separation normally greater than -22dB. Price: £6.80 (diamond) (plus VAT).

M7E

Elliptical version of above. Price: £15.84 (plus VAT).

■ ADASTRA

Adastra Electronics Ltd, Unit 22,
Cricklewood Trading Estate,
Claremont Road, London NW2 1TU.
Tel: 01-452, 6288-9.

D.1 Crystal Turn-over

This well proved cartridge is suitable for a wide range of pickup heads and its high output matches most record players and phono equipment. Turnover clip-on sapphire styli, 33/45 LP) and 78rpm with standard replacements easily obtainable. Supplied with miniature connectors and individually boxed. Output at

*Indicates entry is illustrated

1kHz: 2.0V. compliance: 2.0×10^{-6} cm/dyne. Frequency: 30-15,000Hz. Stylus pressure: 5-8gm. Size: 19 × 20 × 46mm. Weight: 9g. Price: £1.60 (plus VAT).

D.2 Mono/Stereo Compatible Crystal

An almost universal replacement cartridge enabling 'pre-stereo' equipment to play stereo records monaurally without damaging effects. 0.7mm sapphire styli 'flipover' 33/45 (I.P) and 78rpm. Moulded carrying bracket with fixing slots, centre hold and clip-on shield. Individually boxed. Output at 1kHz: 2.0V. Compliance: 1.5×10^{-6} cm/dyne. FR: 30-15,000Hz. Stylus pressure: 4gm. Size (less shield): 18 × 21 × 32mm. Weight: 4.6g. Price: £1.40 (plus VAT).

D.5 Crystal Turn-over

Intended as the stereo version of Model D.1, this versatile high output cartridge is an ideal replacement for both mono and stereo equipment. Standard fitting bracket; clip-on 33/45 (LP) and 78rpm sapphire styli. Individually boxed. Output at 1kHz: 1.5V. Compliance: 1.5×10^{-6} cm/dyne. FR: 30-15,000Hz. Stylus pressure: 4-6gm. Size: 18 × 20 × 51mm. Weight: 10g. Price: £2.95 (plus VAT).

D.6 Ceramic

Will fit most head shells and features sapphire 'flip-over' styli with 33/45 (LP) and 78rpm selection and protective shield. Individual casket presentation. Output at 1kHz: 0.5V. Compliance: 1.5×10^{-6} cm/dyne. FR:

20-15,000Hz. Stylus pressure: 4-6gm. Size (less shield): 18 × 22 × 32mm. Weight: 3.0g. Price: £3.10 (plus VAT).

D.12 Replacement Stylus for D.11 Cartridge (JSP.1)

Genuine replacement diamond LP stereo styli already assembled in slide-in housing available in see-through plastic box presentation. Price: £3.50 (plus VAT).

D.16

Pickup cartridge with diamond stylus. Playing weight: 1-3g. Compliance: 10×10^{-6} cm/dyne at 100Hz. FR: 20Hz-25kHz. Output: 4mV. Recommended load: 30-100K ohms. Low cost diamond tipped, moving magnet, easy slideout replacement for stylus. Price: £6.00 (plus VAT).

D.17 Replacement Stylus for D.16 Cartridge

Diamond tipped replacement stylus assembly for D.17 model. Price: £4.40 (plus VAT).

■ ADC

BSR Ltd, Monarch Works, Cradley Heath, Warley, Worcs. B64 5QH.

Tel: Cradley Heath (0384) 69272.

LMF-1 Carbon Fibre Tone Arm*

Layered carbon fibre. Total length: 313mm. Length pivot-tip: 237mm. Offset angle: 21°. Over-hang tip: 15mm. Rear over-hang: 76mm max. Tracking error: 0° at 60mm. Suitable cartridge 4-10gm. Resonance (XLM) 1gm 11Hz 10dB peak. Eff. arm mass: 5.5g. Controls: Stylus pressure 0-1.5g. Anti-skate: 0-2gm. Arm height adjustment 38-80mm. Counterweights: 7-15-30g. Accessories supplied: 2 sets low mass nylon cartridge screws, base/height holder, 220pf audio cable with gold plated terminals, 3 counterweights, spanner, driver, templates, manual. Accessories available: Die-cast SME type adaptor. 50g stabiliser weight.

LMF-2 Carbon Fibre Tone Arm*

Layered carbon fibre. Total length: 313mm. Length pivot-tip: 237mm. Offset angle: 21°. Over-hang tip: 15mm. Rear over-hang: 76mm max. Tracking error: 0° at 60mm. Suitable cartridge: 3-11gm. Resonance (XLM 1gm) 11Hz 10dB peak. Eff. arm mass: 8g. Controls: Stylus pressure 0-1.5g. Anti-skate 0-2g. Arm height adjustment 38-80mm. Counterweights 15-30-45g. Accessories supplied: 2 sets low mass nylon cartridge screws, base/height holder, 220 pf audio cable with gold plated terminals, 3 counterweights, spanner, driver, templates, manual. Accessories available: Die-cast SME type slide adaptor, 500g stabiliser weight, spare headshells (LMF-2 only).



ADC magnetic cartridges



ADC Carbon fibre tone-arm

ADC ZLM*

Induced magnet cartridge with nude alicptic TM tapered cantilever stylus. Playing weight: ½-1¼g. Tip mass: 0.33mg. Compliance: 36×10^{-6} cm/dyne. FR: 10Hz-20kHz ± 1 dB, 20Hz-26kHz ± 1 ½dB. Output: nominal output at 1kHz, 1mV per cm/s. Recommended load: 47K. Features: standard 12.7mm dual screw fixing, stylus brush, screwdriver, all mounting hardware, signed frequency response curve. Price: £92.00 (plus VAT).

ADC XLM Mk III*

Induced magnet cartridge with nude .0002 \times .0007in. elliptical tapered cantilever stylus. Playing weight: ¼-1½g. Tip mass: 0.374mg. Compliance: 24×10^{-6} cm/dyne. FR: 10Hz-20kHz ± 1 ½dB. Output: nominal output at 1kHz, 1mV per cm/s. Recommended load: 47K. Features: standard 12.7mm dual screw fixing, stylus brush, screwdriver, all mounting hardware, signed spec card. Price: £58.95 (plus VAT).

ADC VLM*

Induced magnet cartridge with nude .0007 \times .0003in. elliptical straight cantilever stylus. Playing weight: ¾-1½g. Tip mass: 0.469mg. Compliance: 24×10^{-6} cm/dyne. FR: 15Hz-24kHz ± 2 dB. Output: nominal output at 1kHz, 1.1mV per cm/s. Recommended load: 47K. Features: standard 12.7mm dual screw fixing, stylus brush, screwdriver, all mounting hardware. Price: £40.35 (plus VAT).

ADC QLM36 Mk III*

Induced magnet cartridge with DIASA (nude — diamond + sapphire) elliptical .0003 \times .0007in. straight cantilever stylus. Playing weight: ¼-1½g. Tip mass: 0.478mg. Compliance: 24×10^{-6} cm/dyne. FR: 15Hz-22kHz ± 2 dB. Output: nominal output at 1kHz, 1.1mV per cm/s. Recommended load: 47K. Features: standard 12.7mm dual screw fixing, stylus brush, screwdriver, all mounting hardware. Price: £27.80 (plus VAT).

ADC QLM34 Mk III*

Induced magnet cartridge with bushed .0003 \times .0007in. elliptical straight cantilever stylus. Playing weight: 1.3g. Tip mass: 0.771mg. Compliance: 15.5×10^{-6} cm/dyne. FR: 20Hz-20kHz ± 2 dB. Output: nominal output at 1kHz, 1.8mV per cm/s. Recommended load: 47K. Features: standard 12.7mm dual screw fixing, stylus brush, screwdriver, all mounting hardware. Price: £17.00 (plus VAT).

ADC QLM32 Mk III*

Induced magnet cartridge with bushed .0004 \times

.0007in. elliptical straight cantilever stylus. Playing weight: 2-4g. Tip mass: 1.366mg. Compliance: 8×10^{-6} cm/dyne. FR: 20Hz-18kHz ± 2 dB. Output: nominal output at 1kHz, 1.5mV per cm/s. Recommended load: 47K. Features: standard 12.7mm dual screw fixing, stylus brush, screwdriver, all mounting hardware. Price: £15.00 (plus VAT).

ADC QLM30 Mk III*

Induced magnet cartridge with bushed .0007in. spherical straight cantilever stylus. Playing weight: 3-5g. Tip mass: 1.629mg. Compliance: 7×10^{-6} cm/dyne. FR: 20Hz-18kHz ± 3 dB. Output: nominal output at 1kHz, 15mV per cm/s. Recommended load: 47K. Features: standard 12mm dual screw fixing, stylus brush, screwdriver, all mounting hardware. Price: £13.90 (plus VAT).

■ **AKAI**

Akai (UK) Ltd, c/o The Production Village, 82-106 Cricklewood Lane, London NW22 2DP. Tel: 01-450 2011.

PC100

Cartridge for Akai turntables.

RS100

Stylus for Akai turntables.

RS38

Replacement stylus for AC3800L and AC3800I(BL).

■ **AKG**

AKG Acoustics Ltd, 191 The Vale, London W3 7QS. Tel: 01-749 2042.

P6R

Variable reluctance moving iron cartridge with spherical diamond tip .0007in. stylus. Playing weight: 2-4g. Tip mass: 0.9mg. FR: 20-20,000Hz. Output: 6.25V at 5mV per cm/s. Recommended load: 47K. Features: AKG transversal suspension system P6R designed to withstand backcuing. Price: £16.50 (plus VAT).

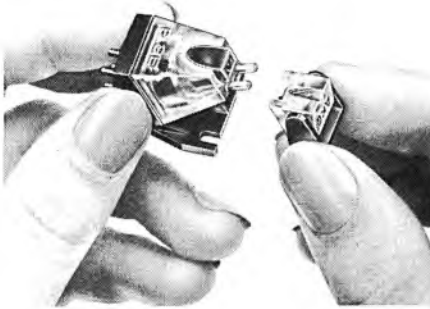
P6E*

Variable reluctance moving iron cartridge with elliptical diamond .0004in. \times .0008in. stylus. Playing weight: 1.5-3g. Tip mass: 0.9mg. FR: 20-20,000Hz. Output: 6.25V at 5mV per cm/s. Recommended load: 47K. Features: AKG transversal suspension system. Price: £21.50 (plus VAT).

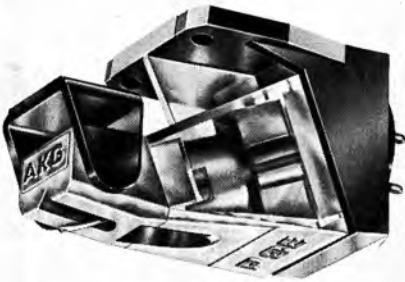
*Indicates entry is illustrated



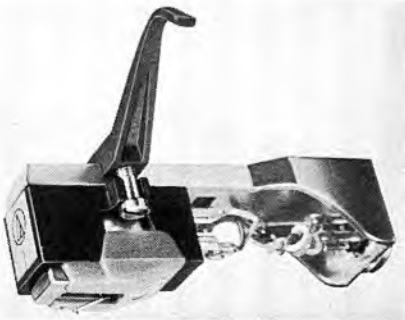
AKG P6E



AKG P8E



AKG P8ES



Audio Technica AT11E

P7E

Variable reluctance moving iron cartridge with elliptical diamond tip .0003in. \times .0007in. stylus. Playing weight: 1.25-2.50g. Tip mass: 0.6mg. FR: 10-21,500Hz. Output: 4.5V at 5mV per cm/s. Recommended load: 47K. Features: AKG transversal suspension system. Price: £32.50 (plus VAT).

P8E*

Variable reluctance moving iron cartridge with elliptical diamond .0002in. \times .0007in. stylus. Playing weight: 0.75 \times 1.25g. Tip mass: 0.45mg. FR: 10-23,000Hz. Output: 4V at 5mV per cm/s. Recommended load: 47K. Features: AKG transversal suspension system, naked mount diamond stylus, each P8E is supplied with own frequency response curve. Price: £60.00 (plus VAT).

P8ES*

Variable reluctance moving iron cartridge with elliptical diamond .0002in. \times .0007in. stylus. Playing weight: 0.75-1.25g. Tip mass: 0.42mg. FR: 10-28,000Hz. Output: 3.75V at 5mV per cm/s. Recommended load: 47K. Features: AKG transversal suspension system, naked mount diamond stylus, each P8ES is supplied with own frequency response curve. Price: £68.50 (plus VAT).

■ AUDIO TECHNICA

Audio Technica Ltd,
Unit 6, Hunslet Trading Estate, Low Road,
Hunslet, Leeds LS10 1BL.
Tel: Leeds (0532) 771441.

AT-14SA

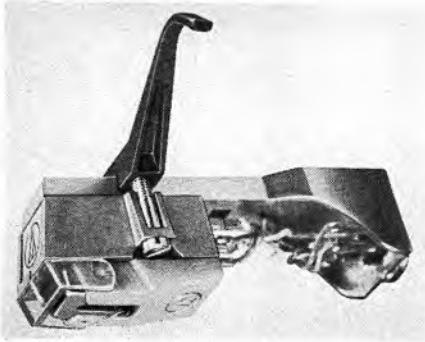
Stereo/CD-4 V-magnet cartridge. Stylus: nude Shibata diamond. FR: 10Hz-45kHz. Channel separation: 32dB at 1kHz. Channel balance: 1.5dB. Output: 2.7mV at 5cm/sec. Compliance: 28×10^{-6} cm/dyne. Price: £34.74 (inc. VAT).

AT-15SA

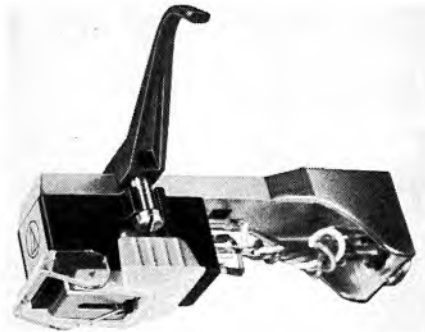
Stereo/CD-4 V-magnet cartridge. Stylus: nude Shibata diamond. FR: 10Hz-50kHz. Channel separation: 33dB at 1kHz. Channel balance: 1.5dB. Output: 2.7mV at 5cm/sec. Compliance: 30×10^{-6} cm/dyne. Channel separation: 33dB. Channel balance: 1.5dB. Output: 2.7mV at 5cm/sec. Price: £63.73 (inc. VAT).

AT-10

Stereo V-magnet cartridge. Stylus: 0.7 spherical diamond. FR: 20Hz-20kHz. Channel separation: 30dB at 1kHz. Channel balance: 2dB. Output: 4.8mV at 5cm/sec. Price: £8.89 (inc. VAT).



Audio Technica AT13EA



Audio Technica AT12XE

AT11E*

Stereo V-magnet cartridge. Stylus: 0.4 × 0.7 elliptical diamond. FR: 15Hz-28kHz. Channel separation: 30dB at 1kHz. Channel balance: 2dB. Output: 4.8mV at 5cm/sec. Price: £11.16 (inc. VAT).

AT13EA*

Stereo dual moving magnet cartridge. Stylus: 0.2 × 0.7 nude elliptical diamond. FR: 10Hz-35kHz. Channel separation: at 10kHz 20dB, at 1kHz 25dB. Output: 42mV at 5cm/sec. Price: £19.50 (inc. VAT).

AT20SS

Hand selected limited production series featuring all the advantages of the AT 15SA but with tighter performance parameters. Recommended only for the best low mass tonearms. Price: £73.67 (inc. VAT).

AT25

A totally new design possessing all the advantages of the dual magnet patented design but built into an anti resonance magnesium sleeve headshell which plugs directly into any Universal fitting tonearm. Even better channel

definition, clarity, frequency response and trackability. Features laminated pole pieces for better signal transmission and toroidal shielded coils for improved signal fidelity. Price: £73.67 (inc. VAT).

AT30E

Dual moving coil cartridge, with user replaceable stylus. The coils are integral with the stylus assembly allowing a worn or damaged stylus to be replaced just like a moving magnet cartridge. Good tracking is achieved by controlling effective mass and utilising a radial damping system. Compliance is individually controlled during manufacture of each assembly to optimise performance. Price: £36.27 (inc. VAT).

ATP-1

Professional dual magnet cartridge. Frequency response: 20Hz-20kHz. Channel balance: 1.5dB. Tracking force 3-5g. Backcuing capability. Stylus 0.6 thou. spherical diamond. Price: £12.15 (inc. VAT).

ATP-2

Professional dual magnet cartridge. Frequency response: 15Hz-22kHz. Channel balance: 1.5dB. Tracking force: 3.5g. Backcuing capability. Stylus 0.4 × 0.7 thou. elliptical diamond. Price: £13.29 (inc. VAT).

ATP-3

Professional dual magnet cartridge. Frequency response: 15Hz-25kHz. Channel balance: 1.5dB. Tracking force 2-3g. Backcuing capability. Stylus 0.3 × 0.7 thou. nude elliptical diamond. Price: £16.82 (inc. VAT).

ATP-12T

Precision professional tone-arm. Static balance type. Length 12in. All adjustments lockable by grub screws. For disco and studio use. Price: £81.42 (inc. VAT).

ATP-16T

Precision professional tone-arm. Static balance type. Length 16in. All adjustments lockable by grub screws. For disco and studio use. Price: £82.00 (inc. VAT).

AT 12 XE*

Dual magnet generating element situated on cantilever pivot to ensure maximum information retrieved from the groove. Stylus: 0.3 × 0.7 nude elliptical diamond. Playing weight: 1-1.75g. Tip mass: 0.45mg. Compliance: 25. FR: 15Hz-28kHz. Output: 4.2mV at 5cm/sec. Recommended load: 47K. Price: £17.89 (inc. VAT).

*Indicates entry is illustrated

AT 15 XE

As above. Stylus: 0.2 × 0.7 nude elliptical diamond. Playing weight: 0.75-1.75g. Tip mass: 0.45mg. Compliance: 43. FR: 5Hz-30kHz. Output: 4.2mV at 5cm/sec. Recommended load: 47K. Price: £47.25 (inc. VAT).

AT 1100

Integrated low mass tonearm featuring dynamic tracing system and super conductive silver Litz wire. Price: £159.95 (inc. VAT).

ATP 12T

Broadcast series 12in. tonearm. All setting up adjustments are lockable via grub screws. Three point mounting adjustable for height and horizontal level. Accepts selection of universal plug in headshells. De-coupled counterweight shaft. Price: £81.42 (inc. VAT).

■ BANG & OLUFSEN

Bang & Olufsen UK Ltd,
Eastbrook Road, Gloucester GL4 7DE.
Tel: Gloucester (0452) 21591.

MMC 205

Integrated stereo spherical cartridge. Weight: 1.5g. Tip mass: 0.5g. Compliance 20cu. FR: 20Hz-20kHz ±3dB. Output: >2.12mV 47K. Recommended load: 47K. With standard ½in. mounting bracket. Price: £27.00 (plus VAT).

MMC 20E

Integrated stereo elliptical cartridge. Weight: 1.5g. Tip mass: 0.5g. Compliance: 20cu. FR: 20Hz-20kHz ±2.5dB. Output: 2.12mV 47K. Recommended load: 47K. With standard ½in. mounting bracket. Price: £30.00 (plus VAT).

MC 20EN

Integrated stereo cartridge. Nude elliptical. Weight: 1.2g. Tip Mass: 0.4g. Compliance: 25cu. FR: 20Hz-20kHz ±2dB. Output: 2.12mV 47K. Recommended load: 47K. With standard ½in. mounting bracket. Price: £35.00 (plus VAT).



Connoisseur SCU1

MMC 20CL

Integrated stereo cartridge. Contact line. Weight: 1g. Tip mass: 0.3g. Compliance: 30cu. FR: 20Hz-20kHz ±1dB. Output: 2.12mV 47K. Features: with standard ½in. mounting bracket. Single crystal sapphire cantilever. Price: £63.00 (plus VAT).

■ CONNOISSEUR

A. R. Sugden & Co (Engineers) Ltd.
Brighouse, West Yorkshire HD6 1ES.
Tel: Brighouse (0484) 712142.

SAU4*

Pick-up arm accepting cartridges of standard ½in. mounting centres. Counter balance to cover cartridges from 5-8g. Arm length 8-7/16in. Effective mass excluding cartridge: 10-12g. Viscous damped unipivot. Suitable for turntables of 1-1¼in. height. Features: ball spirit level mounted above unipivot for visual indication of accurate balance in both planes for stability and optimum cartridge performance. Adjustment by threaded outrigger with weight for critical balance. Cable connections either phono plug, colour coded, or DIN. Finish: anodised aluminium, black and polished chrome. Price: £45.00 (plus VAT).

SCU1*

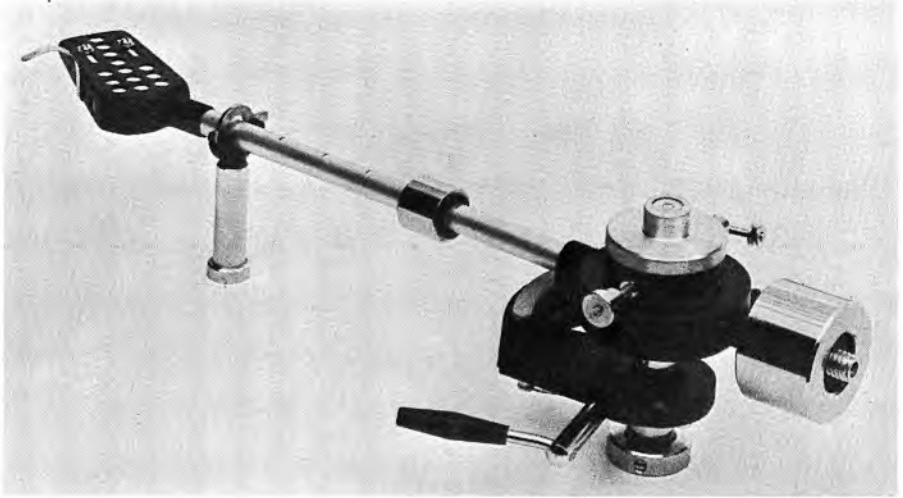
Stereo ceramic cartridge with ½in. fixing centres. Stylus diamond 0.5-0.6 thou or 1 thou for mono. Pw: 2-4g. Tip mass: 1mg. Compliance: lateral 12 × 10⁻⁶cm/dyne, vertical 8 × 10⁻⁶cm/dyne. FR: 30Hz-16kHz. Separation (1kHz) 25-30dB; (10kHz) 18dB. Output with rec load of 100K, 50mV per channel. Price: £7.57 (plus VAT).

SAU2

Pickup arm with gimbal mountings on ball bearings set at 45/45. Automatic bias compensator. Hydraulic lowering device. Decoupled counter balance weight. Additional weight supplied to accommodate different cartridges. Single hole fixing. Height adjustable from 1in. to 2in. Lightweight shell with ½in. fixing centres. Five-pin plug connection to base of pickup. Low resistance self-cleaning contacts. New head shell allows backward-forward horizontal adjustment so that minimum tracking error is obtained with all cartridges. Alignment protractor provided. Supplied with set of leads and separated precision balance with range 0.6g. Price: £20.84 (including VAT). Extension stem for use with high turntables. Price: 75p (including VAT).

SCU2

Ceramic cartridge with diamond stylus. Tip



Connoisseur SAU4

mass: 1g. Compliance: lateral 12×10^{-6} , vert 8×10^{-6} . FR: 30Hz-16kHz ± 2 dB. Price: £8.52, stylus £3.12 (plus VAT).

■ **DECCA**

Decca Special Products, Ingate Place, Queenstown Road, London SW8 3NT. Tel: 01-622 6677.

Deram ceramic (New series)

Stereo/mono cartridge. White shell transcription quality. Pw: 2.5g. Tip mass: 0.6mg. Compliance: 9×10^{-6} lateral, 5×10^{-6} vertical. FR: 18Hz-18kHz ± 3 dB. Separation better than -20 dB at 1kHz. Output: 200mV at 5cm/sec. Rec. load imp: 2M. Stylus: diamond. Price: (spherical stylus) £5.00 (plus VAT); (elliptical stylus) £6.30 (plus VAT).

Deram ceramic*

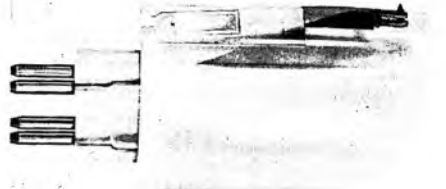
Mono cartridge. Stylus 1 thou diamond. All other details as for stereo/mono cartridge. Price: £4.80 (plus VAT).

NOTE

Deram heads are suitable for use with amplifiers having a sensitivity of 100mV at 2M. Replacement Deram diamond styli: Double Deram pack (2 stereo styli) £2.75 (plus VAT); or £1.50 each (plus VAT).

London

Stereo magnetic cartridge: *J/SS* sum-and-difference system. Stylus: 0.6 thou spherical diamond. Pw: 3g. Effective tip mass: <1mg. Compliance: (lateral) 12×10^{-6} cm/dyne, (vertical) 5×10^{-6} cm/dyne. FR: 20Hz-20kHz.



Decca Deram

Channel separation: better than 20dB. Output: 7.5mV for 5cm/sec. Rec. load: 47K. Price: £33.50 (plus VAT).

London cartridge adaptors

Type A. Simple slide-on adaptor for use with *J/SS* arms (Mk1, Mk1 Super and Professional) to accommodate the London cartridge. Automatically adjusts playing weight. Price: £1.50 (plus VAT). Type B. Simple slide-on adaptor for use with International arm to accommodate the London cartridge. Collar arrangement to adjust for correct playing weight. Price: 30p (plus VAT).

■ **DENON**

Eumig (UK), 14 Priestley Way, London NW2 7NT. Tel: 01-450 8070.

DL-103D

Moving coil stereo cartridge. Output: 0.25mV. FR: 20Hz-65kHz. Weight: 7.5g. Compliance: 12×10^{-6} cm/dyne. Price: on application.

DA-307*

Dynamically damped tone arm. Length:

The Cartridge is the key



Sound is unlocked from the record the instant the Stylus touches down and the quality of the signals picked up by the Cartridge determines the quality of the sound—in other words, what you don't pick up you don't get out, no matter how much you spend on the rest. The key to good and faithful sound is to fit the best Goldring Cartridge that your equipment can accommodate.

Our COMPATIBILITY CHART will tell you which of our 10 stereo magnetic Cartridges will bring out the best in your system, beginning with the beautiful G900 I.G.C. shown above.

 **Goldring**

Sound pure and simple

Goldring Products Limited, Anglian Lane, Bury St. Edmunds, IP32 6SS tel 0284 64011



Denon DA 307



Elite Electronics EEI-500

322mm. Effective length: 244mm. Overhang: 14mm. Tracking error: 2.5. Acceptable cartridge weight: 5-10g. Price: on application.

DA-309

As above but acceptable cartridge weight: 5-15g.

■ **EAGLE INTERNATIONAL**

Precision Centre, Heather Park Drive, Wembley HA0 1SU.
Tel: 01-902 8832.

P750 X

Magnetic cartridge with S750X stylus. Playing weight: $1.7 \pm 0.3g$. Compliance: $18 \times 10^{-6}cm/dyne$ at 100Hz. FR: 20Hz-30kHz. Output: 4mV at 1,000Hz (50mm/sec). Features: tripole induced magnet system, pure elliptical diamond stylus. Price: £33.25 (plus VAT).

P750 E

Magnetic cartridge with S750E stylus. Playing weight: $2 \pm 0.5g$. Compliance: $10 \times 10^{-6}cm/dyne$ at 100Hz. FR: 20Hz-30kHz. Output: 4mV at 1,000Hz (50mm/sec). Features: tripole induced magnetic system, deposited elliptical diamond stylus. Price: £18.75 (plus VAT)

P450 S

Magnetic cartridge with S450S stylus. Playing weight: $2 \pm 0.5g$. Compliance: $10 \times 10^{-6}cm/dyne$ at 100Hz. FR: 20Hz-30kHz. Output: 4mV at 1,000Hz (50mm/sec). Price: £14.00 (plus VAT).

■ **ELAC**

Paul Spring Electronics Ltd,
19-23 Masons Hill, Bromley, Kent BR2 9HD.
Tel: 01-404 0823.

DN791

Radius of tip: $15\mu m$. FR: 20Hz-20kHz. Tracking force: 25g. Weight: 6.5g. Rec. Terminal imp: 47K.

DN792

As above.

DN793E

Radius of tip: $6/18\mu m$. FR: 20Hz-22kHz. Tracking force: 15g. Weight: 6.5g. Rec. Terminal imp: 47K.

DN793E

Radius of tip: $15\mu m$. Other details as 793.

DN794E, DN794, DN795E, DN795

Details on application.

■ **ELITE**

Elite Electronics, 74 Old Oak Common Lane, London W3.
Tel: 01-743 3733/01-486 4808.

EEI-500*

Moving magnet parabolic cartridge. Playing weight: 1.3-2g, 1.5 optimum. Tip Mass: 0.4mg. Compliance: 15×10^{-6} . FR: 10Hz-25kHz. Output: 3.5mV @ 3.54cm/sec. Recommended load: 47K. Price: £39.27 (plus VAT).

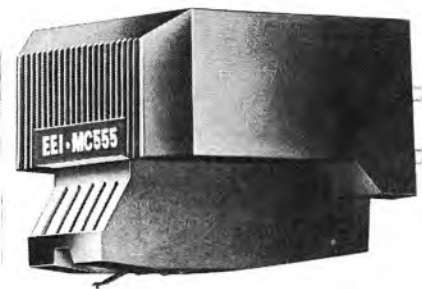
EEI-MC555*

Moving coil conical cartridge. Playing weight: 1.8-2.2g. Tip Mass: 0.38mg. Compliance: 8×10^{-6} . FR: 10Hz-50kHz. Output: 0.1mV @ 3.54cm/sec. Recommended load: 100 ohms. Price: £86.63 (plus VAT).

SM5000

Head amplifier for low-output moving-coil pick-up cartridges. Input Imp: 100 ohms. Output impedance: 47K. Max input: 12mV. Gain: 31dB. FR: 25Hz-20kHz $\pm 0.5dB$, 7Hz-50kHz -30 dB. THD: 0.05%. S/N: 71dB. Dimensions: $8\frac{1}{4} \times 4 \times 2\frac{1}{2}in$. Battery life: 1,000-1,500 hours. Price: £86.63 (plus VAT)

*Indicates entry is illustrated



Elite Electronics EEI-MC555

Replacement Stylii

To suit various host cartridges featuring the Elite parabolic stylus, offering long stylus and record life and low surface noise. Prices: £25.00-£35.00 (plus VAT).

■ EMPIRE SCIENTIFIC

Hayden Laboratories Ltd,
Hayden House, Churchfield Road,
Chalfont St. Peter SL9 9EW.
Tel: Gerrards Cross (49) 88447.

2001/E

Cartridge with stylus 2001/E. Playing weight: 1.25-2.5g. Tip mass: 0.9mg. Compliance: 16cu. FR: 20Hz-20kHz ± 3 dB. Output: 7mV at 3.45cm/sec. Recommended load: 47K. Features: can be used as universal replacement cartridge. Price: £9.50 (plus VAT)

2000E/IV*

Cartridge with stylus 2000E/IV. Playing weight: 0.75-1.5g. Tip mass: 0.6mg. Compliance: 18cu. FR: 20Hz-20kHz ± 2 dB. Output: 4.2mV at 5cm/sec. Recommended load: 47K. Features: successor to 2000E III. Price: £19.20 (plus VAT)

2000X*

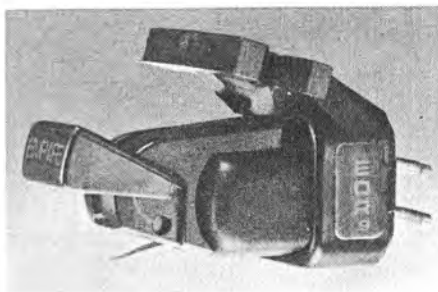
Cartridge with stylus 2000X. Playing weight: 0.75-1.5g. Compliance: 20cu. FR: 20Hz-20kHz ± 1.75 dB. Output: 5mV at 5cm/sec. Recommended load: 47K. Features: usable in any good turntable. Price: £37.00 (plus VAT).

EDR 9*

Cartridge with stylus 5000. Playing weight: 0.75-1.25g. Tip mass: 0.3mg. Compliance: 28cu. FR: 20Hz-35kHz ± 1.75 dB. Output: 4.5mV at 5cm/sec. Recommended load: 47K. Price: £99.00 (plus VAT)



Empire 2000X



Empire EDR 9

■ FORMULA 4

Mayware Ltd,
15 Heather Walk, Edgware, Middx HA8 9TS.
Tel: 01-958 9421.

Mk III Tone Arm*

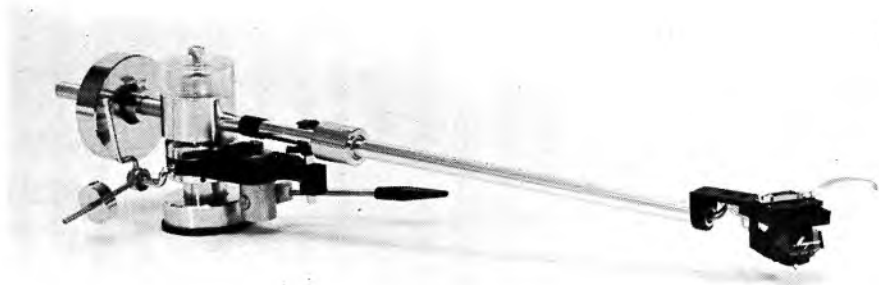
Equally suitable for MC or MM cartridges any compliance. Viscous silicone damping, variable inertia and Bias compensation provided. Features: jewelled uni-pivot friction 0.005g. Geometry optimised for 12in. LP discs off/set angle 23deg.40'. Stylus to pivot 229mm. VTF 0-3g. Price: on application.

■ GOLDRING

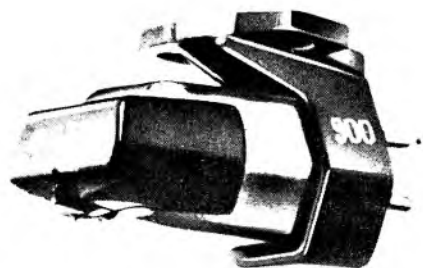
Goldring Products Ltd, Anglian Lane,
Bury St. Edmunds, Suffolk IP32 6SS.
Tel: Bury St. Edmunds (0284) 64011.

G900 Super E Mk II*

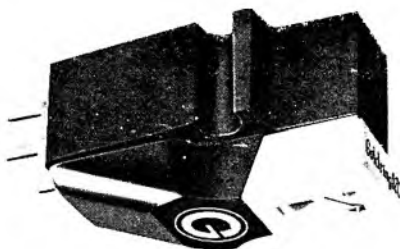
Micro mass moving magnet cartridge. Stylus: 0.0007 \times 0.0002. Playing weight: 0.75-1.5g.



Formula 4 Mk III



Goldring G900 Super E Mk II



Goldring 820

Tip mass: 0.32mg. Compliance: Lat 40×10^{-6} cm/dyne ver 20×10^{-6} cm/dyne. FR: 20Hz-20kHz ± 2 dB. Output: at 5cm/sec, 1kHz 5mV RMS. Rec. load: 47K. Because of its extraordinarily low mass, the G900 SE/2 tracking at less than 1gm, provides extremely low intermodulation distortion. Because of micro mass it offers very flat frequency response with excellent tone burst response. Price: £54.00 (plus VAT).

G900/E

Stereo magnetic cartridge with elliptical 0.0007×0.0003 in. stylus. Playing weight: 1-2½g. Tip mass less than 1mg. Compliance: 25×10^{-6} cm/dyne. FR: 20Hz-20kHz. Output: 6.5mV at 5cm/sec. Recommended load: 47K. Features: low mass only 4gm stylus interchangeable with G900SE. Price: £24.00 (plus VAT).

G800

Stereo magnetic cartridge. Stylus: 0.0006in. Playing weight: 1½-3½g. Tip mass: less than 1mg. Compliance: 20×10^{-6} cm/dyne. FR: 20Hz-20kHz ± 3 dB. Output: 4mV at 5cm/sec 1kHz. Rec. load: 47K. Separation: 20dB at 1kHz. Price: £7.50 (plus VAT).

G800H

Stereo magnetic cartridge. Stylus: 0.006in. Playing weight: 2½-3½g. Tip mass: 1.2mg. Compliance: 18×10^{-6} cm/dyne. FR: 8mV at 5cm/sec 1kHz. Rec. load: 47K. Separation: 20dB at 1kHz. Price: £7.50 (plus VAT).

G800E

Stereo magnetic cartridge. Stylus: elliptical 0.0007×0.0003 in. ($18 \times 8\mu$ m). Playing weight: ¼-1¼g. Tip mass: less than 1mg. Compliance: 30×10^{-6} cm/dyne. FR: 10Hz-23kHz ± 3 dB. Output: 5mV at 5cm/sec 1kHz. Rec. load: 47K. Separation: 20dB at 1kHz. Price: £12.50 (plus VAT).

G800 Super E

Stereo magnetic cartridge. Stylus: elliptical 0.0007×0.0003 in. ($18 \times 8\mu$ m). Playing weight: ½-1¼g. Tip mass: less than 1mg. Compliance: 35×10^{-6} cm/dyne. FR: 10Hz-23kHz. Output: 4mV at 5cm/sec. 1kHz. Price: £17.40 (plus VAT).

G820*

Stereo magnetic cartridge. Stylus: 0.0006in. Playing weight: 1.5-4g. Tip mass: 1mg. Com-

*Indicates entry is illustrated

pliance: 20×10^{-6} cm/dyne. FR: 20Hz-20kHz. Output: 5mV at 5cm/sec. 1kHz. Rec. load: 47K. Separation: 1kHz 20dB. Price: £10.50 (plus VAT).

G820/E

Stereo magnetic cartridge. Stylus: elliptical 0.0007 \times 0.0003in. ($18 \times 8\mu$ m). Playing weight: $\frac{3}{4}$ -2g. Tip mass: 1mg. Compliance: 25×10^{-6} cm/dyne. FR: 10Hz-25kHz. Output: 5mV at 5cm/sec 1kHz. Rec. load: 47K. Separation: 1kHz 20dB. Price: £15.00 (plus VAT).

G820/SE

Stereo magnetic cartridge. Stylus: elliptical 0.0007 \times 0.0003in. ($18 \times 8\mu$ m). Playing weight: 0.6-1.75g. Tip mass: 0.9mg. Compliance: 35×10^{-6} cm/dyne. FR: 10Hz-25kHz. Output: 4mV at 5cm/sec. Rec. load: 47K. Separation: at 1kHz 25dB. Price: £21.00 (plus VAT).

G850

Stereo magnetic cartridge. Stylus: spherical 0.0006in. Playing weight: 2 $\frac{1}{2}$ -4g. Tip Mass: 1.2mg. FR: 20Hz-18kHz. Output: 8mV at 5cm/sec RMS. Rec. load: 47K. Separation: 20dB at 1kHz. Price: £5.75 (plus VAT).

■ GRADO

Transonic Imports (Acoustical) Ltd,
Brooks Court, Stamford,
Lincs.

FCE + 1

Cartridge with elliptical stylus. Playing weight: 1.25-2g. Compliance: 15cu. FR: 10Hz-50kHz. Output: 3mV. Features: Flux bridger. Price: £12.50 (plus VAT).

F3E +

Cartridge with elliptical stylus. Playing weight: 1-1.8g. Compliance: 15cu. FR: 10Hz-55kHz.

Output: 3mV. Flux bridger. Price: £17.50 (plus VAT)

F1 +

Cartridge with elliptical stylus. Playing weight: 1-1.8g. Compliance: 15cu. FR: 10Hz-60kHz. Output: 3mV. Flux Bridger. Price: £37.50 (plus VAT).

G1 +

Cartridge with elliptical stylus. Playing weight: 1-1.8g. FR: 10Hz-60kHz. Output: 3mV. Flux bridger Price: £69.50 (plus VAT).

■ G. F. C. HADCOCK

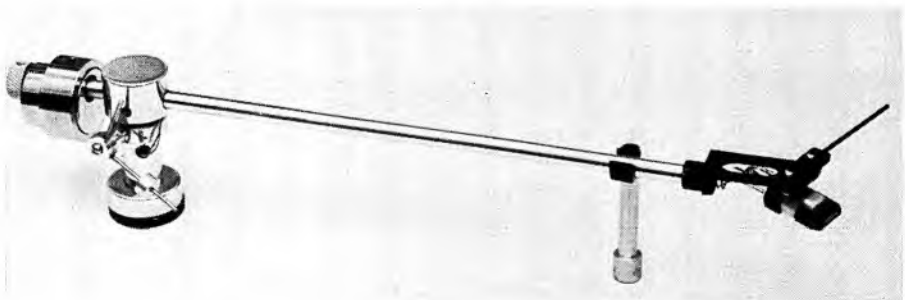
Audio Division, The Old Vicarage,
Doveridge, Derby DE6 5NN.
Tel: Uttoxeter (088 93) 2452.

GH228 Super arm*

Very low mass arm maintaining maximum rigidity. Headshell is detachable for easy fitting; accepts all cartridges from 3-13g, suitable for Decca London with standard counterweight: supplied with counterweight sleeves as standard for heavier cartridges up to 13gm. Silicone fluid damping, adjustable thread weight, tracking force adjustment by fine thread, counterweight decoupled, alignment protractor provided, single hole fixing, separate headshells available, base plate for uni-lift provided. A new 'S' type base plate is available at £2.50 plus VAT so that the arm can be fitted to any deck which has already been cut out for an SME type arm. Overall length: 289.6mm, height 43.90mm, rear overhang 60.9mm, headshell mounting 12.7mm. Price: £51.50. Price with Uni-lift: £60.00 (plus VAT).

228 Super Arm 'D' Type

Basically the same arm as the GH 228 Super but having the additional advantage of detaching the complete arm assembly by means of gold platex plug and socket. The main cables would



Hadcock GH228 Super Arm

be high quality low capacitance, the smaller platform incorporates a GH Uni-lift. This version offers a choice of separate top arm assembly. Price: £79.00 (plus VAT). The Top arm assembly complete with sleeve weights. Price: £40.00 (plus VAT).

■ INFINITY

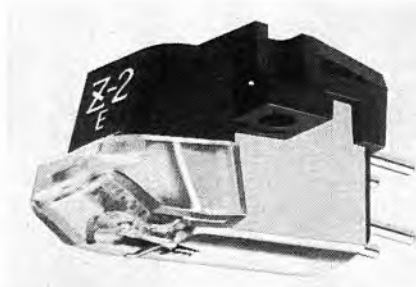
Infinity Systems (UK) Ltd,
PO Box 14,
17 St. Martin's Street,
Wallingford, Oxon OX10 0EB.
Tel: Wallingford 37353

Black Widow Tone Arm

Graphite fibre arm and new damping device that uses silicone fluid. Results claimed are smoother bass and mid-bass response, greater immunity to acoustic feedback and improved tracking. Cartridge weights up to 4-8.5g. Effective mass of arm: 3g. Full details on application. Price: £119.00 (inc. VAT).

■ JVC

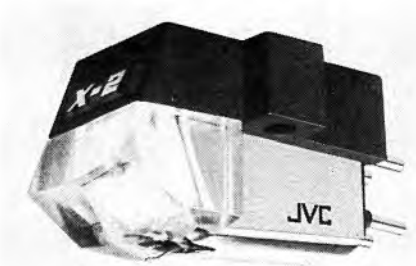
JVC (UK) Ltd, Eldonwell Trading Estate,
Staples Corner, 6-8 Priestly Way,
London NW2 7AF.
Tel: 01-450 2621.



JVC Z-2E

Z-2E*

Moving magnet cartridge with elliptical diamond stylus. Playing weight: 5.5g. Compliance: 12×10^{-6} cm/dyne. FR: 10Hz-35kHz. Output: 4mV (1kHz, 50mm/s). Load: 47ohms. Price: £42.50 (inc. VAT).



JVC X-2

X-2*

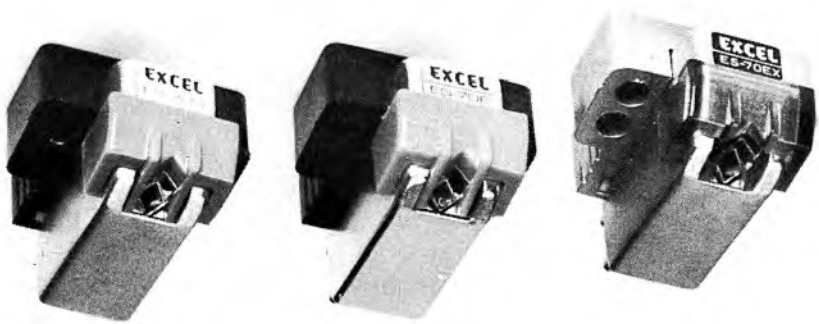
Moving magnet cartridge with Shibata stylus Mark II diamond. Playing weight: 7.5g. Compliance: 12×10^{-6} cm/dyne (at 100Hz dynamic). FR: 10Hz-60kHz. Output: 3mV (1kHz, 50mm/s). Price: £82.00 (inc. VAT).

MC 2

Moving coil cartridge with elliptical stylus. Playing weight: 1.6g. Output: 0.2mV 1K 5cm/s. Features: printed micro coil. Price: on application.

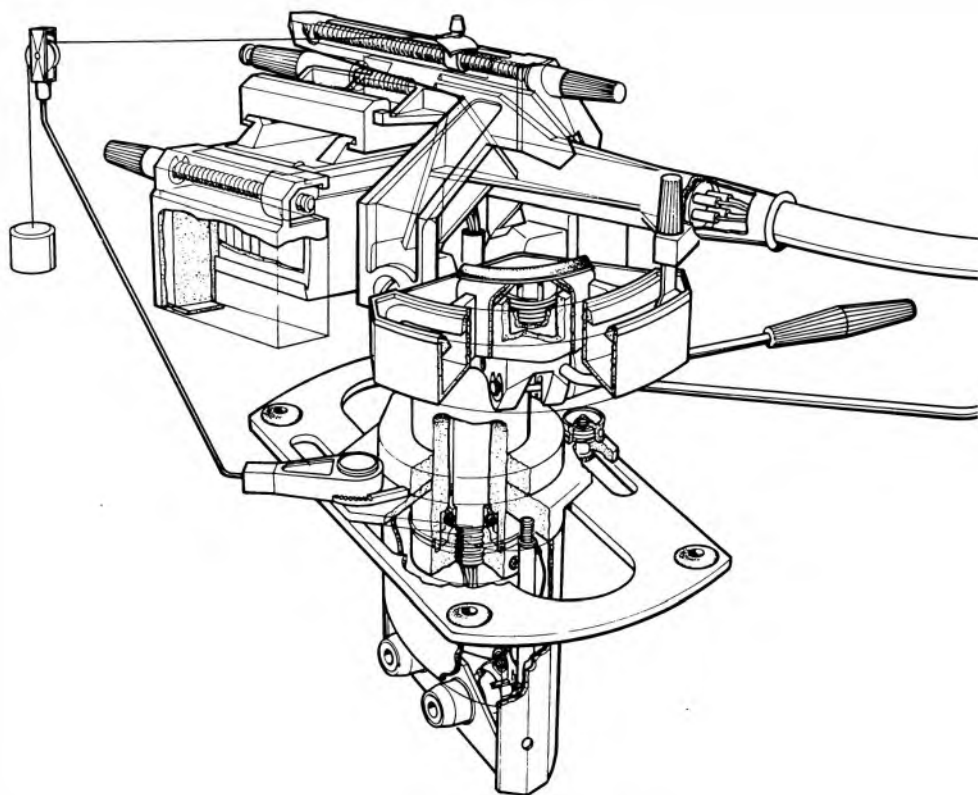
MC 1

Moving coil cartridge with Shibata stylus. Playing weight: 1.5g. Tip mass: 0.2mm. Compliance: 8×10^{-6} cm/dyne. FR: 10Hz-50kHz. Output: 0.2mV 1K at 5cm./sec. Features: printed micro coil direct coupled to stylus. Price: £162.75 (plus VAT).



Kelsonics K3, K5, K6

The pre-eminent pick-up arm

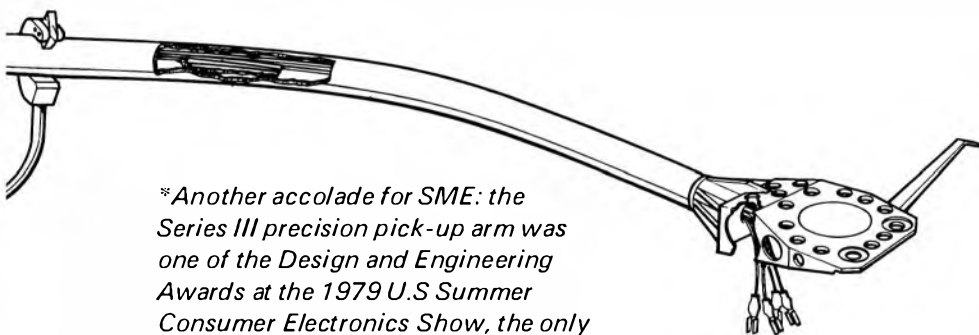


Whilst able to explore the best of the present, the Series III precision pick-up arm anticipates the greater engineering elegance of impending miniature cartridges which may weigh as little as one and a half grammes.

Its unique patented balance system minimises mass and inertia, presenting optimum conditions for even the most delicate transducer.

No other pick-up arm is as versatile, a reason why the Series III is already playing its part in the development of tomorrow's cartridges.

Choose it for your listening pleasure today with confidence in the future.



** Another accolade for SME: the Series III precision pick-up arm was one of the Design and Engineering Awards at the 1979 U.S Summer Consumer Electronics Show, the only pick-up arm to be acknowledged in this way.*

SME

Series III precision pick-up arm

The best pick-up arm in the world

Write to SME Limited, Steyning, Sussex, BN4 3GY, England

*Indicates entry is illustrated

■ KELSONICS

Kelsonics Ltd, Kelsey House,
Wood Lane End,
Hemel Hempstead, Herts HP2 4RQ.
Tel: Hemel Hempstead (0442) 61291

K:6 ES-70 EX*

'Futuristic' ultra high-fidelity cartridge for all matrix surround records. Stylus replacement: S70EX. Tip mass: 0.5mg. Compliance: 20×10^{-6} cm/dyne vert and horizontal. FR: 10Hz-35,000Hz. Output: 3mV. Features: Special eclipse stylus with ultra precision. Super-light and rigid straight cantilever, moving magnet stereo cartridge, 0.2mil \times 0.8mil stylus. Price: £38.00 (inc. VAT).

K:4 ES-70F

Flat type stereo cartridge. Stylus: 0.5 thou. small diamond. Stylus replacement: S70 FR. Weight: 5g. Tip mass: 0.25gm. Compliance: 15×10^{-6} cm/dyne, FR: 15Hz-27,000Hz. Output: 5mV. Price: £14.22 (inc. VAT).

K:5 ES-70E*

Elliptical stereo cartridge. Stylus: 0.3 \times 0.8mil diamond. Stylus replacement: S70ER. Weight:

5g. Compliance: 15×10^{-6} cm/dyne. FR: 10Hz-30,000Hz. Output: 5mV. Price: £18.00 (inc. VAT).

K:3 ES-70S*

Low-cost standard stereo cartridge with stable capability. Stylus: 0.6mil diamond. Stylus replacement: S70SR. Weight: 5g. Compliance: 10×10^{-6} cm/dyne. FR: 15Hz-25,000Hz. Output: 5mV. Price: £7.90 (inc. VAT).

■ LENTEK AUDIO LTD

Lentek Audio Ltd,
Edison Road Industrial Estate,
St. Ives, Huntingdon, Cambs PE17 4LF.
Tel: St. Ives 62225

Entré 1

Stylus elliptical .3 \times 0.8m. Compliance: 10×10^{-6} cm/dyne. FR: 10Hz-50kHz. Channel balance: within 1dB at 1kHz. Output: 0.2mV at 5cm/sec 1kHz. Channel separation: 28dB at 1kHz. Tracking force: 1.8g + 0.3g. Total mass: 5.8g. Price: £87.50 (plus VAT).

■ MAYWARE

Mayware Ltd, 15 Heather Walk,
Edgware, Middlesex.
Tel: 01-958 9421

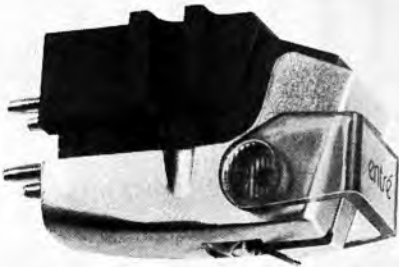
MC-2C

Moving coil cartridge with nude diamond conical stylus. Playing weight: 1.8-2.2g. Tip mass: 0.38g. Compliance: 8×10^{-6} . FR: 10Hz-50kHz Output: 0.15mV. Recommended load: 47K. Impedance: 3ohms. Features: low frequency resonance with Formula 4 arm 10-11hz. New type damper and rigid cantilever. Matching transformer T-24 available. Price: on application.

■ MICRO-ACOUSTICS

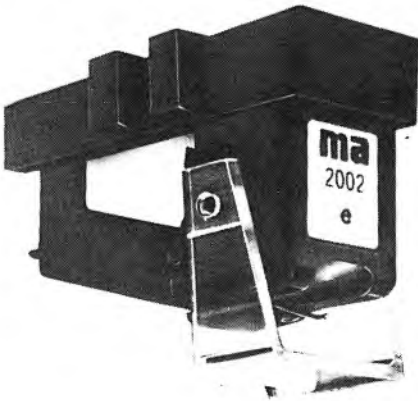
Webland International Ltd, Mirabel House,
117-121 Wandsworth Bridge Road,
London SW6
Tel: 01-736 0989/9410.

These cartridges use an electret transducer directly coupled to the cantilever to faithfully reproduce musical information. As the electret is displacement sensitive each cartridge body contains a miniature passive network to provide a velocity output and predominantly resistive impedance. The latter point ensures a negligible effect on the frequency response caused by any value of cable capacitance up to 1000pF.

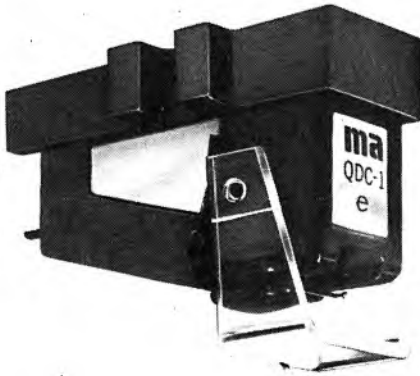


Lentek Entré 1 cartridge





Micro-Acoustics 2002e



Micro Acoustics QDC-1e

2002-e*

Elliptical diamond, beryllium cantilever. FR: 5Hz-20kHz ± 1.5 dB. Tracking force: 0.7-1.4gm. Weight: 4g. Price: £74.00 (plus VAT).

QDC-1e*

QDC-1e uses an elliptical stylus (0.0002in. \times 0.0007in.) mounted on an aluminium cantilever. The compliance of the suspension is such that the QDC-1e doesn't require exceptionally light or delicate tone arms in order to achieve its optimum performance. Price: £59.00 (plus VAT).

282-e

Uses low mass miniature elliptical diamond stylus mounted on ultra-lightweight aluminium cantilever. Weight: 5.2g. FR: 5Hz-20kHz

PICKUP, CARTRIDGES AND ARMS

± 2 dB. Output: 3.5mV each channel at 5cm/sec peak recorded velocity. Load: 10K-100K. Price: £49.00.

530 mp

Electret condenser cartridge with micro point beryllium cantilever. Playing weight: 1-1.5g. Tipmass: 0.25mg. Compliance: 20cu. FR: 5Hz-20kHz ± 1 dB. Output: 3.5mV each channel at 5cm/sec. Features: ultra low body weight, direct coupling of stylus to electret. Price: £121.78 (plus VAT).

■ **MICRO SEIKI**

Harmon UK, St. John's Road, Tyler's Green, High Wycombe, Bucks. HP10 8HR. Tel: High Wycombe (049 481) 5331

MA505

Tonearm with dynamic balance. Price: £114.67 (plus VAT).

MA505S

As above with silver wires. Price: £132.44 (plus VAT).

MA707

Dynamic balance tonearm with variable mass feature. Price: £96.89 (plus VAT).

LC80W

Low output moving coil cartridge with silver coils. Price: £87.56 (plus VAT).

■ **N. MIERS & CO LTD**

28 Piercing Hill, Theydon Bois, Epping, Essex CM16 7LE. Tel: 037-881 2611.

SX6M*

Stereo crystal cartridge. LP/78 diamond stylus. Playing weight: 4-6g. Output: 280mV. Price: £2.42 (plus VAT).

SX6H*

Stereo crystal cartridge. LP/78 diamond stylus. Playing weight: 7g. Output: 700mV. price: £2.42 (plus VAT).

X5H*

Monaural crystal compatible cartridge, sapphire stylus. Playing weight: 5-9g. Output: 1V. FR: 40Hz-10kHz. Price: £1.81 (plus VAT).

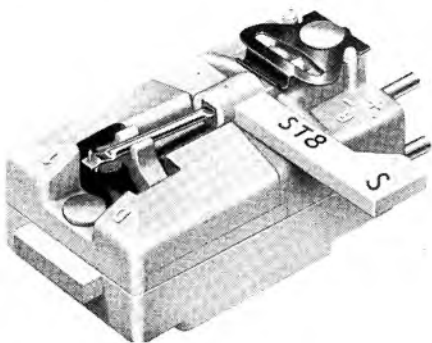
*Indicates entry is illustrated

SC12M

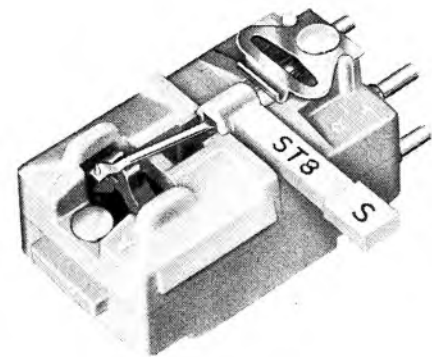
Stereo ceramic cartridge. Output: 100mV. Stylus pressure: 2-6g. Sapphire or diamond stylus. Price: £3.02 (plus VAT).

SC12H

Stereo ceramic cartridge. Output: 170mV. Stylus pressure: 4-6g. Sapphire or diamond stylus. Price: £3.02 (plus VAT).



Miers X5H and X5M



Miers SX6H and SX6M

MISSION

Mission Electronics Ltd,
PO. Box 65, London SW7 1PP
Tel: 01-589 0048

773

Medium output moving coil cartridge. Mass: 5.7g. Tracking force: 1.8g. $\pm 0.25g$. Output voltage: 1.7mV. FR: 20Hz-20kHz $\pm 1dB$. 100Hz-5kHz $\pm 0.25dB$. Paroc stylus. Compliance: $25 \times 10^{-6}cm/dyne$. 18deg vertical tracking angle. Channel separation: 25dB at 100Hz, 40dB at 1kHz, 30dB at 10kHz. Loading Imp: 47K. Finish: Black/Red. Price: £157.00 (inc. VAT).

774 Pickup arm*

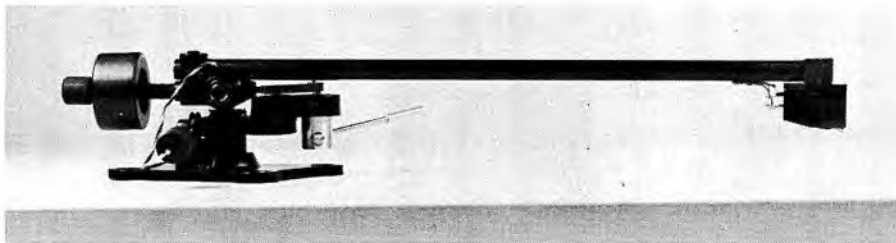
Effective length: 229mm, effective mass:<5.5g. Acceptable cartridge mass range: 2-10g. Interchangeable armtube/headshell assembly. Mounting: SME-type format. Hydraulic damping via viscous fluid. Finish: black. Weight: 0.5kg. Price: £127.00 (inc. VAT).

KEITH MONKS

Keith Monks (Audio) Ltd,
26-28 Reading Road South, Fleet,
Aldershot, Hants.
Tel: Fleet 20568/9.

M9BA Mk 3 (Improved)*

Pickup arm. 9in. arm length pivot to stylus. Designed for low mass ultra high compliant cartridges tracking at very low stylus pressures. Damped unipivot with mercury contact pins and no lead out wires. Bias correction and anti-skating built-in. Damped lift/lowering device. Effective mass: 6g. LF res: 10Hz for 5g cartridge. Friction lateral and vertical: 4mg approx. Torque: 25 to 35mg. 13Hz for 6g mass at 25cu. Mercury contact pin connection designed for low tracking cartridges. Price: £58.00 (plus VAT). Top arm £27.30 (plus VAT), spare counterweights for light, heavy and Decca London £6.00 (plus VAT).



Mission 774 pickup arm



Keith Monks M9BA Mk3 (Improved) tone arm

■ **ORTOFON**

Harman UK, St. John's Road,
Tyler's Green, High Wycombe,
Bucks HP10 8HR.
Tel: High Wycombe (049 481) 5331

Moving Coil Cartridges

MC30 Fine-Line/Diamond £221.33. MC20
Fine-Line/Diamond £68.00. MC10
Elliptical/Diamond £45.78. SL20Q Bi-
Elliptical/Diamond £88.44. SL20E
Elliptical/Diamond £53.33.

Moving Coil System

MC10/STM72 cost saving pack £64.44.

Moving Coil Amplifier

MCA10 battery powered £64.44.

Moving Coil Transformers

T30 £176.89. STM-72 £24.89.

Ultra-Low Mass Magnetic Cartridges

Concorde 30 Integral Headshell/Cartridge Unit
Fine-Line/Diamond £58.67. Concorde 20
Integral Headshell/Cartridge Unit Fine-
Line/Diamond £43.56. LM30 Cartridge/
Adaptor to fit universal headshell Fine-Line/
Diamond £51.56. LM30H As above, but high
compliance version £51.56. LM20 Cartridge/
Adaptor to fit universal headshell Fine-Line/
Diamond £37.33. LM20H As above, but high
compliance version £37.33.

Magnetic Cartridges

M20FL super Fine-Line/Diamond £61.78.
M20E super Elliptical/Diamond £52.89.
VMS20E MKII Elliptical/Diamond £35.11.
F15E MKII Elliptical/Diamond £24.44. FF15E
MKII Elliptical/Diamond £17.33. FF10E
Elliptical/Diamond £12.89.

Styli for Magnetic Cartridges

D20FL super for M20FL super £37.78. D20E
super for M20E super £30.67. D20E MKII for
VMS20E MKII £23.56. N15E MKII for F15E
MKII £13.33. NF15E MKII for FF15E MKII
£10.22. NF10E for FF10E £7.55. N15 MKII for
F15 MKII £11.11. D15E super for M15E super
£30.67. D15 super for M15 super £22.67. D20E
for VMS20E (MKI) £23.56. N15E for F15E
(MKI) £13.33. N15 for F15 (MKI) £11.11.
NF15E for FF15E (MKI) £10.22.

AS212 MkII

Tonearm with anti-skating and cueing device.
Price: £70.67 (plus VAT).

■ **PHILIPS**

Philips Electrical Ltd,
Century House,
Shaftesbury Avenue, London WC2H 8AS.
Tel: 01-437 7777

GP400 Mk2 Super M Cartridge*

Type: stereo magnetic, 1/2 in. fixing. Stylus:
15µm diamond. Compliance: ≥22mm/N

*Indicates entry is illustrated

lateral. $\geq 16\text{mm/N}$ vertical. Separation: $\geq 29\text{dB}$. Sensitivity: 1.3mV/cm/sec at 1kHz . Stylus pressure: $1.5\text{-}3\text{g}$. Weight: 6g .

GP401 Mk2 Super M Pickup Cartridge*

Type: stereo magnetic $\frac{1}{2}\text{in.}$ fixing. Stylus: $7 \times 18\mu\text{m}$ diamond (elliptical). Compliance: $\geq 20\text{mm/N}$ lateral, $\geq 16\text{mm/N}$ vertical. Separation $\geq 29\text{dB}$. Sensitivity: 1.3mV/cm/sec at 1kHz . Stylus pressure: $1.5\text{-}2.5\text{g}$. Weigh: 7g .

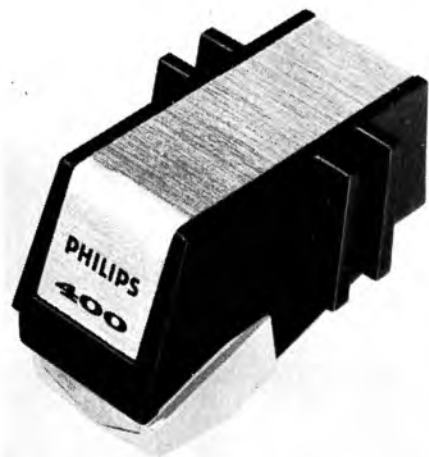
GP412 Mk2 Super M pickup Cartridge*

Type stereo magnetic $\frac{1}{2}\text{in.}$ fixing. Stylus: $7 \times$

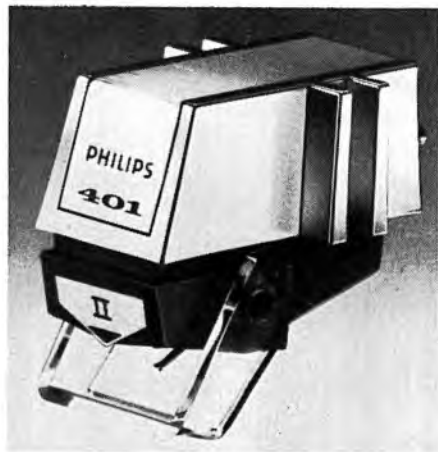
$18\mu\text{m}$ diamond (elliptical). Compliance: $\geq 30\text{mm/N}$ lateral, $\geq 20\text{mm/N}$ vertical. Separation: $\geq 30\text{dB}$ at 1kHz . Sensitivity: 1.5mV/cm/sec at 1kHz . Stylus pressure: $0.75\text{-}1.5\text{g}$. Weight: 7g .

GP422 Mk2 Super M pickup Cartridge*

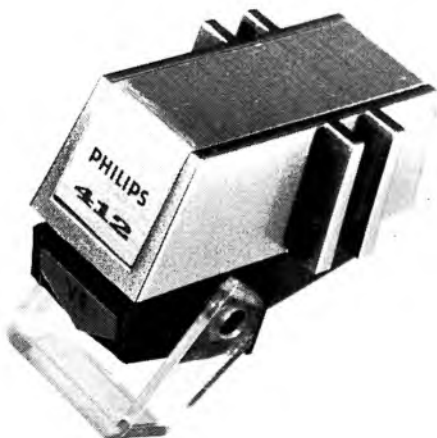
Type: stereo magnetic $\frac{1}{2}\text{in.}$ fixing. Stylus: $7 \times 18\mu\text{m}$ diamond profiled for supersonic tracking. Compliance: $32 \times 10^{-6}\text{cm/dyne}$. Separation: $\geq 30\text{dB}$ at 1kHz . Sensitivity: 1.1mV/cm/sec at 1kHz . Stylus pressure: $0.75\text{-}1.5\text{g}$. Weight: 6.9g .



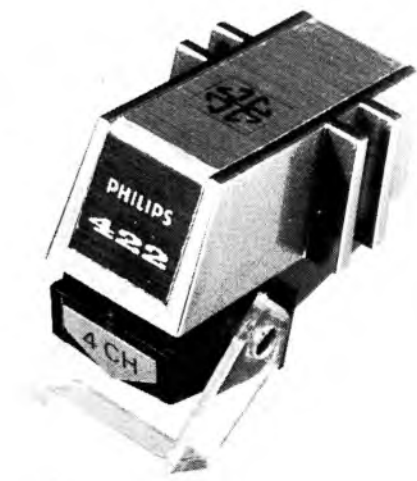
Philips GP400



Philips GP401 Mk II



Philips GP412 Mk II



Philips GP422 Mk II

■ **PICKERING**

Sound Source, Station Approach,
Rickmansworth, Herts.
Tel: Rickmansworth (87) 75242

Quadraredal (CD4) Series

XUV 4500A £76.00; UV 2400Q £70.00; UV
2000Q £45.00; XSV/3000 £64.00.

XV15 625E

Shank elliptical cartridge. Mass: 6g. Test
tracking force: 1.25g. Sensitivity: 1mV/cm/sec.
FR: 20Hz-20kHz ± 2.5 dB, 100Hz-5kHz
 ± 1.5 dB. Price: £27.50.

XV-15 DCF Series

XV-15/1200E £50.50; XV-15/750E; XV-
15/400E £24.00; XV-15/140E £19.00;
XV-15/350 £18.00; XV-15/150 £17.00;
XV-15/100 £14.00; 625DJ £29.50.

V15 Micro Series

IV AME £21.50; IV AM £16.50; IV AT £14.00;
IV ACE £14.00; AC £12.00.

P Series

P/ATE £13.00; P/AT £10.00; P/AC £8.00;
S/E1 £15.50. All above plus VAT.

■ **PIONEER**

Pioneer High Fidelity GB Ltd,
Pioneer House, The Ridgeway, Iver, Bucks.
Tel: Iver (0753) 652222

PC-110-II

Moving magnet cartridge with specially bonded
conical diamond stylus. Playing weight:
optimum 2.2g. Compliance 8.5×10^{-6} cm/dyne
at 100Hz. FR: 15Hz-25kHz. Output: 3.5mV.
Recommended load: 47K. Features: resin
frame, permalloy shield case, weight 5.7g. Price
on application.

■ **REALISTIC**

Tandy Corporation (Branch UK),
Bilston Road, Holyhead Road,
Wednesbury, Staffs. WS10 7JN.
Tel: 021-556 6101

R9000 E-LWS

Integral headshell cartridge with nude elliptical
diamond stylus. Playing weight: 0.75-1.5g. Tip
mass: 0.0002×0.0007 in. FR: 20Hz-20kHz.
Output: 4.7mV at 1K. Recommended load:
47K. Features: universal 4-pin connector. Price:
£27.50 (inc. VAT).

R1000E

Similar to above but Output: 5.0mV. Price:
£24.95 (inc. VAT).

■ **SATIN**

Howland-West Ltd,
3-5 Eden Grove, London N7 8EQ.
Tel: 01-609 0293

M-117G*

Moving coil cartridge with elliptical diamond
stylus. Playing weight: 1.2g. Compliance: $12 \times$
 10^{-6} cm/dyne. FR: 20Hz-25kHz. Output: 3mV
 ± 2 dB. Feature: No transformer or pre-amp
needed. User changeable stylus. Price: £75.00
(plus VAT).

M117S

Moving coil cartridge with Satin stylus. Output:
3mV. Recommended Load: 30K. Features: Red
colouring, no transformer or pre-amp
necessary. User changeable stylus. Other details
not released. Price: £120.00 (plus VAT).

M117Z

Moving coil cartridge with conical stylus.
Output: 3mV. Recommended Load: 30K.
Features: Black colouring, no transformer or
pre-amp necessary. User changeable stylus.
Price: £49.50 (plus VAT).

■ **SEAC**

Zeepa Instruments Ltd,
15 Richmond Grove, Surbiton, Surrey.
Tel: 01-399 0966

WE-308 L*

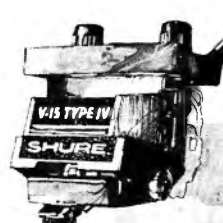
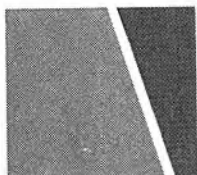
Tone arm with double knife edge bearing,
automatic tracking force. Length overall:
367.5mm. Effective length: 270mm. Price:
£108.00 (plus VAT).



Satin M-117G



fact:
the pickup
cartridge
is the
heart of
hi-fi...



The hi-fi pickup cartridge functions as the *source of sound* (the point at which the recording is linked with the balance of the hi-fi system)—therefore, its role in high fidelity is absolutely critical. Just as the camera can be no better than its lens, not even the finest hi-fi system in the world can transcend the limitations of an inferior cartridge. The cartridge represents a relatively modest investment which can audibly upgrade the sound of your entire record playback system.

Consult with your nearby Shure dealer who will help you select the Shure pickup cartridge that is correct for your system and your cheque-book. We especially recommend that you audition the Shure V15 Type IV. Discriminating critics throughout the world praise this cartridge as the new standard for faithful sound re-creation. It overcomes such ever-present problems as dust, static electricity, "hot" signals, and record warp that cause "clicks" or "pops", and distorted record reproduction. May we send you our brochure?



Shure Electronics Limited, Eccleston Road,
Maidstone ME15 6AU
Telephone: Maidstone (0622) 59881

WE-308

As above but with overall length: 329mm and effective length 240mm. Price: £99.50.

ULS-20*

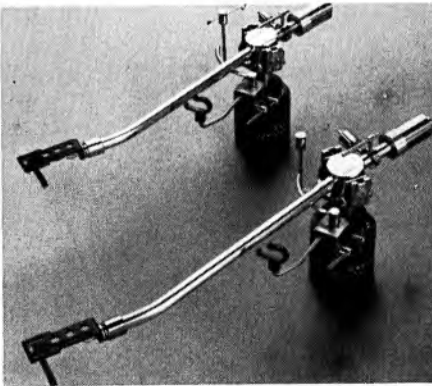
Two Ultimate headshells in box. Price: £16.00 (plus VAT).

Other Accessories

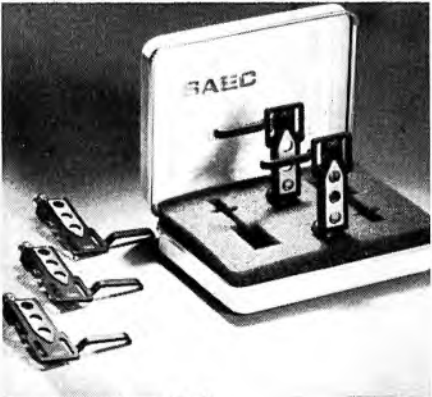
ULS-2 Ultimate headshell £7.00; W-2 twin counterweight for WE308N £18.25; ditto for WE-308L £18.25. Model No. W-2L. AS-500E arm stabilizer £13.50; S-1 arm bracket £39.00 (all plus VAT).

WE-308 SX tone arm*

New concealed double knife-edged bearing system, gold plated pin connectors, low capacitance, gold plated phono cord supplied. Overall length: 329mm, effective length 240mm, overhang 5mm. Price: £265.00 (plus VAT).



Seac WE308L



Seac ULS-20 headshell

■ **SHURE**

Shure Electronics Ltd, Ecclestone Road, Maidstone ME15 6AU.
Tel: Maidstone (0622) 59881

M3D

Stereo Dynetic cartridge. Moving magnet. ½ in. fixing centres. Stylus: 0.7 thou diamond. Playing weight: 3-6g. Compliance: 4×10^{-6} cm/dyne. FR: 20Hz-15kHz. Separation: 20dB at 1kHz. Output: 1mV. Load impedance: 47K. Price £7.80 (plus VAT).

M44C

Stereo Dynetic cartridge. Moving magnet. ½ in. fixing centres. Stylus: 0.7 thou diamond (1 thou and 3 thou stylii available). Playing weight: 3-5g. Compliance: 7.5×10^{-6} cm/dyne. FR: 20Hz-20kHz. Separation: 20dB at 1kHz. Output: 1.8mV. Load impedance: 47K. Price: £11.10 (plus VAT).

M44E

Stereo Dynetic cartridge. Moving magnet. ½ in. fixing centres. Stylus: 0.7×0.4 thou bi-radial diamond (3 thou stylus available). Playing weight: $1\frac{1}{4}$ -4g. Compliance: 15×10^{-6} cm/dyne. FR: 20Hz-20kHz. Separation: >20dB at 1kHz. Output: 1.8mV. Recload: 47K. Price: £11.70 (plus VAT).

M44G

Stereo Dynetic cartridge. Moving magnet. ½ in. fixing centres. Stylus: 0.6 thou diamond (1 thou and 3 thou stylii available). Playing weight: $\frac{3}{4}$ -1 ½g. Compliance: 25×10^{-6} cm/dyne. FR: 20Hz-20kHz. Separation: 25dB at 1kHz. Output: 1.4mV. Load impedance: 47K. Price: £11.10 (plus VAT).

M44-7

Stereo Dynetic cartridge. Moving magnet. ½ in. fixing centres. Stylus: 0.7 thou diamond (1 thou and 3 thou stylii available). Playing weight: $1\frac{1}{2}$ -3g. Compliance: 20×10^{-6} cm/dyne. FR: 20Hz-20kHz. Separation: 20dB at 1kHz. Output: 2.2mV. Load impedance: 47K. Price: £11.10 (plus VAT).

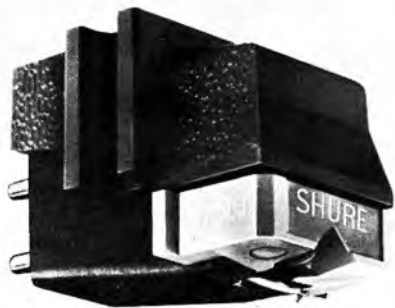
M55E

Stereo Dynetic cartridge. Moving magnet. ½ in. fixing centres. Stylus: 0.7×0.2 thou bi-radial diamond (3 thou stylus available). Playing weight: $\frac{3}{4}$ -2g. Compliance: 15×10^{-6} cm/dyne. Separation: 22dB at 1kHz. Output: 1.3mV. Load impedance: 47K. Price: £13.20 (plus VAT).

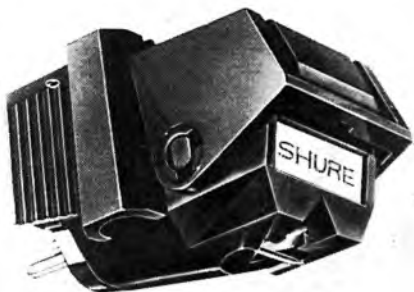
M70B and M70 EJ*

Stereo Dynetic cartridge with spherical and bi-

*Indicates entry is illustrated



Shure M70 EJ



Shure M95 HE



Shure V15 type IV

radial elliptical stylus tips. Playing weight: 1.5-3g. Trackability: 2g 19/400Hz, 26/1kHz, 12/10kHz FR: 20Hz-20kHz. Output: 1.2mV at 1kHz. Recommended load: 47K. Price: £6.30 for M70B and £8.40 for M70EJ.

M75B Type 2

Stereo Dynetic cartridge. Moving magnet. ½in. fixing centres. Stylus: 0.6 thou diamond (3 thou stylus available). Playing weight: 1½-3g. Trackability (see note at end) at 2g. in SME 3009 arm: 400Hz 28cm/sec, 1kHz 35cm/sec, 10kHz 20cm/sec FR: 20Hz-20kHz. Separation:

>20dB at 1kHz. Output: 1mV. Rec load: 47K per channel. Price: £15.60 (plus VAT).

M75ED Type 2

Stereo Dynetic cartridge. Moving magnet. ½in. centres. Stylus: 0.7 × 0.2 thou bi-radial diamond. Playing weight: ¼-1½g. Trackability (see note at end) 1g in SME 3009 arm: 400Hz 22cm/sec, 1kHz 33cm/sec, 5kHz 28cm/sec, 10kHz 19cm/sec. FR: 20Hz-20kHz. Separation at 1kHz: 25dB. Output: 1mV. Rec. load: 47K per channel. Price: £22.00 (plus VAT).

M75G Type 2

Stereo Dynetic cartridge. Moving magnet. ½in. fixing centres. Stylus: 0.6 thou conical diamond (3 thou stylus available). Playing weight: ¼-1½g. Trackability (see note at end) at 1g in SME 3009 arm: 400Hz 20cm/sec, 1kHz 28cm/sec, 10kHz 18cm/sec. FR: 20Hz-20kHz. Separation: >25dB at 1kHz. Output: 1mV. Rec. load: 47K per channel. Price: £18.00 (plus VAT).

M75EJ Type 2

Stereo Dynetic cartridge. Stylus: 0.7 × 0.4 thou bi-radial diamond. Playing weight: 1½-3g. Trackability at 2g in SME 3009 arm: 400Hz 28cm/sec, 1kHz 35cm/sec, 10kHz 20cm/sec. Output: 1mV. Separation: 20dB at 1kHz. Price: £19.50 (plus VAT).

M95HE*

Stereo Dynetic cartridge. Moving magnet. ½in. fixing centres. Stylus hyperelliptical nude diamond (2.5 thou spherical 78 rpm tip also available). Playing weight: ¼-1½g. Trackability (see note at end) at 1g in SME 3009 arm: 400Hz 24cm/sec, 1kHz 33cm/sec, 5kHz 28cm/sec, 10kHz 19cm/sec. FR: 20Hz-20kHz. Separation: 25dB minimum at 1kHz. Output: 0.98mV per channel at 1kHz, 1cm/sec peak recorded velocity. Rec load: 47K per channel. Price: £36.60 (plus VAT).

M95ED

Stereo Dynetic cartridge. Moving magnet. ½in. fixing centres. Stylus 0.7 × 0.2 thou bi-radial diamond. (2.5 thou spherical 78 rpm tip also available) Playing weight: ¼-1½g. Trackability (see note at end) at 1g in SME 3009 arm: 400Hz 24cm/sec, 1kHz 33cm/sec, 5kHz 28cm/sec, 10kHz 19cm/sec. FR: 20Hz-20kHz. Separation 25dB minimum at 1kHz. Output: 0.98mV per channel at 1kHz, 1cm/sec peak recorded velocity. Rec load: 47K per channel. Price: £29.75 (plus VAT).

M95EJ

Stereo Dynetic cartridge. Moving magnet. 1/2 in. fixing centres. Stylus 0.7 x 0.4 thou bi-radial diamond. (2.5 thou spherical 78 rpm tip also available). Playing weight: 1 1/2 3g. Trackability (see note at end) at 2g in SME 3009 arm: 400Hz 28cm/sec, 1kHz 35cm/sec, 5kHz 30cm/sec, 10kHz 20cm/sec. FR: 20-20kHz. Separation: 20dB minimum at 1kHz. Output: 0.98mV per channel at 1kHz. Rec load: 47K per channel. Price: £20.40 (plus VAT).

M24H*

Stereo and discrete 4-channel cartridge with Hyperbolic diamond tip. Playing weight: 1-1 1/2g. Tip mass: 0.39g. Trackability: 400Hz-20cm/sec, 1,000Hz-28cm/sec, 5000Hz-47cm/sec, 10,000Hz-50cm/sec. FR: 20Hz-50kHz. Output: 0.6mV at 1kHz, 1cm/sec. Recommended load: stereo: 20-100K ohms in parallel with 100-250 pico farads. Discrete 4-channel: 100K in parallel with 100 pico farads. Price: £43.20 (plus VAT).

V15 Type III

Stereo Dynetic cartridge. Moving magnet. 1/2 in. fixing centres. Stylus: 0.7 x 0.2 thou bi-radial diamond (0.6 thous and 2.5 x 0.5 thou tips also available). Playing weight: 3/4-1 1/4g. Trackability (see note at end) at 1g in SME 3009 arm: 400Hz 26cm/sec, 1kHz 38cm/sec, 5kHz

35cm/sec, 10kHz 26cm/sec. FR: 10Hz-25kHz. Separation: >25dB at 1kHz >15dB at 10kHz. Output: 0.7mV at 1kHz 1cm/sec. Rec. load: 47K. Price: £61.50 (plus VAT).

V15 Type IV*

Stereo Dynetic cartridge with hyper elliptical nude diamond stylus. Playing weight: 3/4-1 1/4g. FR: 10Hz-25kHz. Trackability at 1g in SME pickup arm: 400Hz 29cm/sec. 1kHz 42cm/sec. 5kHz 47cm/sec. 10kHz 37cm/sec. Output: 0.8mV at 1cm/sec, 1kHz. Recommended load: 47K. Built-in dynamic stabiliser and electrostatic neutraliser. Price: £80.70 (plus VAT).

NOTE

Trackability is a term introduced by Shure to give a measure of the total performance of a cartridge. It takes into account the mechanical design parameters of tip mass, inertia, compliances throughout the system, tracking pressure, recorded velocity, etc. Explanatory leaflet available on request.

■ **SME**

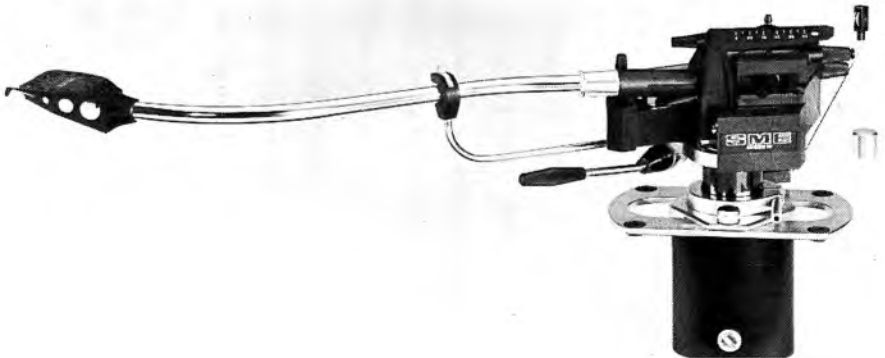
SME Ltd, Mill Road, Steyning, Sussex BN4 3GY.
Tel: Steyning (0903) 814321.

Model 3009*

Series II Improved precision pickup arm. Non-detachable shell. Pivot to stylus: 9in. nominal. Low-friction pivots. Vertical axis: high precision fully protected ball races. Horizontal axis: knife edges. Less than 0.02g applied at the stylus will deflect the arm in either plane. Low inertia: Tracking force: 0-1.5g applied precisely without the use of a gauge. Lever operated hydraulically damped lowering and raising control. Shell accepts all cartridges with 1/2 in. (12.7mm) fixed centres, weighing 4-9g 4ft. (1.22m) audio lead, low capacity for magnetic

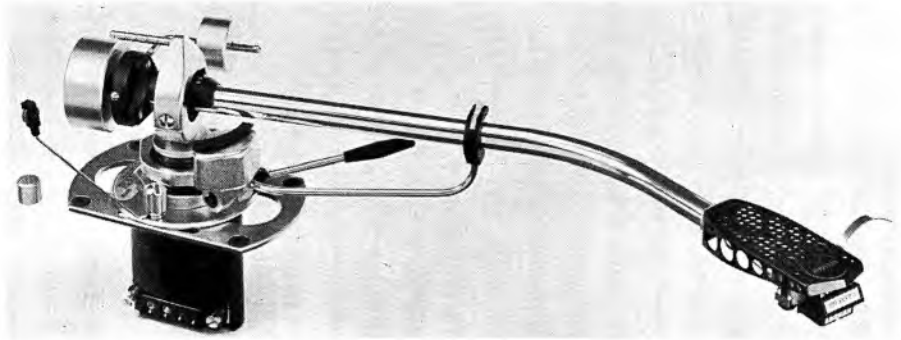


SME Series III



SME Model 3009

*Indicates entry is illustrated



SME Fluid Damper FD 200

cartridges. SME phono plugs are standard, DIN 5-pole supplied on request. Camera finish in satin chrome, gun black anodised alloy and polished stainless steel. Complete with mounting template, alignment protractor, shell hardware, fixing screws and fully illustrated instruction book. Price: £71.75 (plus VAT).

Model 3009/S2*

Series II Improved precision pickup arm. Detachable shell. Other details as above. Price: £78.65 (plus VAT).

Series III*

Pickup arm with unique balance system enables cartridges weighing 0-12g to be operated under conditions of minimum inertia. Integral carrying arm replaces conventional tone arm and shell and is interchangeable for multi-cartridge use. Features: low friction pivots, vertical axis. Tracking force: up to 2.5g. All electrical contacts heavily gold-plated. Price: £130.95 (plus VAT).

■ SONOTONE

Vernitron Ltd, Thornhill, Southampton, Hants SO9 5QF.
Tel: Southampton (0703) 444811.

V300

Stereo magnetic cartridge. Tracking weight: 22.5g. FR: 20Hz-20kHz. Output: 2.4mV/cm/sec. Separation: better than 20dB at 1kHz. Channel Diff: less than 2dB. Inductance: 200mH per channel. Stylus: 0.0006in. spherical diamond.

V300E

As above but with elliptical stylus 0.0007in. \times 0.0004 diamond.

V100

As V300 but without modern stylus.

V100E

As V100 but elliptical stylus 0.0007 \times 0.0004in. diamond.

V101

As V100 but tracking weight 2-4g.

General Features

All magnetic cartridges available with stylus suitable for 78rpm records.

■ SONUS

C. E. Hammond and Co Ltd,
105-109 Oyster Lane, Byfleet, Surrey.
Tel: Byfleet (91) 51051.

Gold Series II Blue Label

Magnetic cartridge with Pathemax stylus. Playing weight: 0.75-1.25g. Compliance: 50cms/dyne \times 10⁻⁶. FR: \pm 6dB up to 45kHz. Output: 0.8mV \pm 2dB (4mV at 5cm/sec. Recommended Load: 4000 picofarad maximum. Price: £77.00 (plus VAT). Calibrated versions £92.99 (plus VAT).

Gold Series II Red Label

Magnetic cartridge with bi-radial stylus. Playing weight: 0.75-1.25g. FR: \pm 3dB up to 20kHz. Other details as above. Price: £60.50 (plus VAT). Calibrated versions £85.90 (plus VAT).

Gold Series Green Label

Magnetic cartridge with spherical stylus. Other details as Blue Label. FR: \pm 3dB up to 20kHz. Price: £50.60 (plus VAT). Calibrated version £78.95 (plus VAT).

Silver Series II Silver P

Magnetic cartridge with Pathemax stylus. Playing weight: 1-1.5g. Compliances 40cm/dyne \times 10⁻⁶. FR: Up to 45kHz \pm 10dB.

Output: 1mV \pm 2dB (5mV at 5cm/sec). Recommended Load: 47K. Price: £41.80 (plus VAT).

Silver Series II Silver E

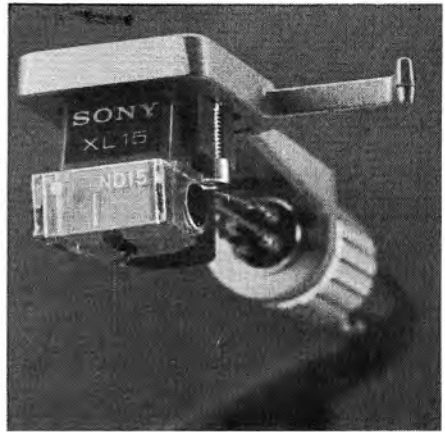
Magnetic cartridge with Bi-radial stylus. FR: \pm 3dB 20Hz-20kHz. Other details as Silver P. Price: £39.60 (plus VAT).

Black Series II Black A

Magnetic cartridge with Bi-radial stylus. Playing weight: 1.25-1.75g. Compliance: 30cm/dyne \times 10⁻⁶. FR: 20Hz-20kHz \pm 2dB. Output: 1mV \pm 2dB (5mV at 5cm/sec.). Recommended Load: 47K. Price: £29.00 (plus VAT).

Black Series Black C

Magnetic cartridge with spherical stylus. Playing weight: 1.5-2g. Compliance: 25cm/dyne \times 10⁻⁶. Other details as Black A. Price: £24.99 (plus VAT).



Sony XL-15

■ **SONY (UK) LTD**

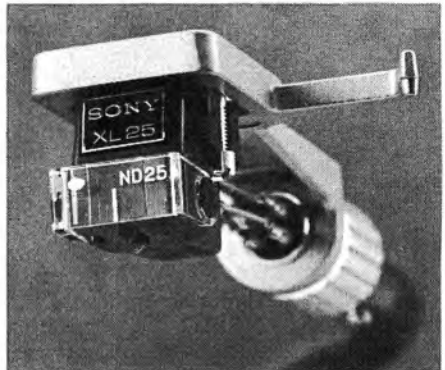
Consumer Information, Sony Showroom,
134 Regent Street, London W1R 6DJ.
Tel: 01-439 3874.

Cartridges

VL 32 G Cartridge for PS1350/ PS2350/
PS1700/ PS3300/ PS212 PS11/ PS22/
HMK55/HMK77/.

Styli

ND136G Stylus for HMK11, 33. ND 133G
Stylus for HMP40/HMK70/HMK30. ND 134G
Stylus for PS1350/PS2350/ PS11/PS22/
HMK55/HMK77/ PS1700/PS3300. ND 100G
ND 15G Stylus for PST1, PST2 Stylus for
EX1K, EX2K.



Sony XL-25

XL15*

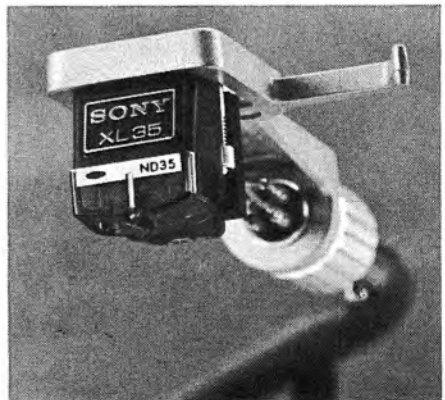
Magnetic cartridge with conical diamond 0.6 mil stylus. Playing weight: 1.2-2.5g (1.7g rec.) Compliance: 15 \times 10⁻⁶cm/dyne. FR: 10Hz-30,000Hz. Output: 4mV. Rec. Load: 50K-100K. Features: specially heated cantilever for rigidity.

XL 25*

Magnetic cartridge with elliptical diamond 0.3 \times 0.8 mil stylus. Playing weight: 1-2g (1.5 rec.) Compliance: 15 \times 10⁻⁶cm/dyne. FR: 10-30,000Hz. Output: 4mV. Rec. Load: 50K-100K. Features: specially heat treated tapered cantilever.

XL 35*

Magnetic cartridge with elliptical 0.3 \times 0.8 mil stylus. Playing weight: 1-2g (1.5 rec.) Com-



Sony XL-35

Newnes Technical Books bring you Audio

Newnes Book of Audio

Editor: K.G. Jackson
1979 144 pages £4.95 US \$11.25

Q & A Hi-Fi
Clement Brown
1974 104 pages £3.50 US \$8.00

Q & A Radio Repair
Les Lawry-Johns
1979 96 pages £3.50 US \$8.00

Electronic Projects in Audio
R. A. Penfold
1979 96 pages £5.25 US \$12.00

Beginner's Guides

all at £2.95 US \$6.75 each

Audio
Ian R. Sinclair
1977 190 pages

Tape Recording
Ian R. Sinclair
1978 176 pages

Radio Eighth Edition
Gordon J. King
1977 240 pages

Master Series

all at £2.95 US \$6.75 each
Creative Tape Recording
John Gardner
1977 144 pages

Electronics in Music
T.D. Towers
1976 128 pages

Hi-Fi Installation
Gordon J. King
1976 160 pages

Hi-Fi Loudspeakers and Enclosures
Dave Berriman
1979 136 pages

In-Car Entertainment
Vivian Capel
1977 128 pages

Stereo Cassette Recording
I.R. Sinclair
1976 120 pages



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Telephone: 01-743 1131/2; 743 1313.

PICKUP, CARTRIDGES AND ARMS



Sony XL-45

pliance: 15×10^{-6} cm/dyne. FR: 10Hz-35,000Hz. Output: 3mV. Rec. Load: 50K-100K. Features: Carbon-clad cantilever, Alnico magnet.

XL 45*

Magnetic cartridge with line contact type nude diamond. Playing weight: 1-2g (1.5 rec.) Compliance: 20×10^{-6} cm/dyne. FR: 10-45,000Hz. Output: 3mV. Rec. Load: 50K-100K. Features: Carbon-clad cantilever, samarium cobalt ring magnet.

XL 55*

Moving coil cartridge with 0.3×0.8 mil solid diamond stylus. Playing weight: 1-2.2g (rec) 10-50,000Hz. Output: 0.2mV. Rec. Load: 40 ohms. Features: HA 55 head amplifier required.

HA 55 Head Amplifier*

For XL 55 above.



Sony XL-55

■ STANTON

Wilmex Ltd, Compton House,
New Malden, Surrey KT3 4DE.
Tel: 01-949 2545.

500A

Magnetic cartridge with D5107A stylus. Playing weight: 2-5g. FR: 20Hz-20kHz. Output: 1mV. Rec. load: 47K. Price: £16.60 (plus VAT).

500AL

Magnetic cartridge with D5107AL stylus. Playing weight: 3-7g. FR: 20Hz-17kHz. Output: 1mV. Recommended load: 47K. Specially designed for disco and industrial use. Price: £16.60 (plus VAT).

500E

Magnetic cartridge with D5100E stylus. Playing weight: 2-5g. FR: 20Hz-20kHz. Output: 1mV. Rec. load: 47K. Price: £19.99 (plus VAT).

500EE

Magnetic cartridge with D5100EE stylus. Playing weight: 1-2g. FR: 10Hz-20kHz. Output: 1mV. Rec. load: 47K. Price: £23.25 (plus VAT).

680EE*

Magnetic cartridge with D680 stylus. Playing weight: 0.75-1.5g. FR: 20Hz-20kHz. Output: 0.82mV. Rec. load: 47K. Price: £34.35 (plus VAT).

681EEE*

Magnetic cartridge with D6800EEE stylus. Playing weight: 0.75-1.5g. FR: 12Hz-22kHz.



Sony HA-55 Head amplifier

*Indicates entry is illustrated



Stanton 680 EE



Stanton 681 EEE

Output: 0.7mV. Rec. load: 47K. Price: £53.30 (plus VAT).

881S

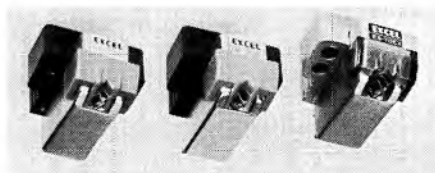
Magnetic cartridge with D81 stylus. Playing weight: $\frac{3}{4}$ -1 $\frac{1}{4}$ g. High compliance. FR: 10Hz-20kHz. Output: 4.5mV/5cm/sec. Recommended load: 47K. Stereohedron stylus for low record wear. Price: £87.95 (plus VAT).

STAX

Wilmex Ltd, Compton House,
New Malden, Surrey KT3 4DE.
Tel: 01-949 2545.

UA7 tone arm

Length: 255mm, hydraulic lowering device, tracking pressure 0-3g, detachable arm tube. Price: £135.00. Carbon Fibre version £166.00 (plus VAT).



South Western Agencies

■ SWA

E and W Magee Ltd,
Spring Gardens, Bigbury,
Kingsbridge, Devon TQ7 4AP.
Tel: Bigbury (054 881) 323.

Diamond and Sapphire Styli*

Range exceeding 1160 types, augmented by manufacturers' original styli and large range of cartridges. Agents operating in most parts of UK. Prices: on application.

SWZ CM 1-D

SWA CM 1-D cartridge with 874 stylus. Playing weight: 1.2-2g. Tip mass: 0.65mg. Compliance: 25×10^{-6} cm/dyne. FR: 10Hz-28kHz. Output: 3mV/1000Hz. Recommended load: 30K-100K. Features: Channel separation above 25dB/1000Hz. Price: £7.00 (plus VAT).

■ TECHNICS

National Panasonic (UK) Ltd,
107-109 Whitby Road,
Slough, Berks SL1 3DR.
Tel: Slough (75) 34522.

EPC-100C

Moving magnet cartridge with elliptical stylus. Playing weight: 1.25g. Compliance: 12×10^{-6} cm/dyne. FR: 10Hz-50kHz. Output: 1.5mV. Recommended Load: 10 ohms. Mounted in own headshell. Price: £186.62 (plus VAT).

EPC-300MC

Moving coil cartridge with elliptical stylus. Playing weight: 2g. Compliance 8×10^{-6} cm/dyne. FR: 10Hz-50kHz. Output: 0.1mV. Mounted in own headshell. Price: £50.62 (plus VAT).

■ TENOREL

Condor Electronics Ltd,
100 Coombe Lane, London SW20.
Tel: 01-946 0033.

T2001SE

Magnet cartridge with Shibata nude stylus. Playing weight: 1-2.5g. Tip mass: .75g. Com-

pliance: 25×10^{-6} cm/dyne. FR: 15-45,000Hz. Output: 5.5mV at 1kHz 5cm/sec. Recommended load: 47K. Features: Shibata styli suitable for CD4. Price: £19.50 (plus VAT).

T2001 DSS

As T2001 but packed complete with spare stylii.

T2001 DHS

Complete with universal headshell.

■ **ULTIMO**

Condor Electronics Ltd,
100 Coombe Lane, London SW20 0AY.
Tel: 01-946 0033.

20C

Moving coil cartridge with Shibata diamond stylus. Playing weight: 1.5 ± 0.3 g. Compliance: 10×10^{-6} cm/dyne. FR: 20-40,000Hz ± 3 dB. Output: 0.18mV at 1kHz 5cm/sec. Recommended load: 47K. Features: low output, moving coil cartridge requires transformer model DU6A. Price: Approx. £120.00 (plus VAT).

10X

Moving coil cartridge with elliptical stylus. Playing weight: 1.5 ± 0.3 g. Compliance: 10×10^{-6} cm/dyne. FR: 20-20,000Hz ± 2 dB. Output: 1.8mV at 1kHz 5cm/sec. Recommended load: 47K. Features: high output. Price: Approx. £59.25 (plus VAT).

20A

Moving coil cartridge with Shibata diamond stylus. Playing weight: 1.5 ± 0.3 g. Compliance: 8.17×10^{-6} cm/dyne. FR: 20-30,000Hz ± 2 dB, 50kHz $-3 + 2$ dB. Output: 2mV at 1kHz, 5cm/sec. Recommended load: 47K. Features: high output, moving coil does not need pre-amp. Price: £82.50 (plus VAT).

20B

Moving coil cartridge with Shibata diamond stylus. Playing weight: 1.5 ± 0.3 g. Compliance: 8.17×10^{-6} cm/dyne. FR: 20-30,000Hz $+ 2$ dB, 50kHz $-3 + 2$ dB. Output: 2mV at 1kHz, 5cm/sec. Recommended load: 47K. Features: beryllium cantilever suitable for CD4. Price: £59.25 (plus VAT).

10A

Moving coil cartridge for stereo or CD4 with conical stylus. Weight: 9.6g. Compliance: 10×10^{-6} cm/dyne. FR: 20Hz-40kHz. Output: 2mV at 1kHz 5cm/sec. Price: £69.00 (plus VAT).

DV 30A/30B

Moving coil cartridge with Shibata type 3 stylus. Playing Weight: 1.5g. Compliance: 12×10^{-6} . FR: 20Hz-20kHz. Output: 1.8mV at kHz cm/sec. Recommended Load: 47K. Integral headshell SME type fitting, high output. Price: 30A £125.00 (plus VAT), 30B £150.00 (plus VAT).

DV 30C

Moving coil cartridge with Parco stylus. Playing weight: 1.5g. Compliance: 12×10^{-6} . FR: 20Hz-40kHz. Output: 0.18mV at 1kHz cm/sec. Recommended load: 47K. Price: £165.00 (plus VAT).

■ **VIDEOTONE**

Videotone Ltd,
98 Crofton Park Road, London SE4.
Tel: 01-690 1914.

Coral 777

Moving coil cartridge. Playing weight: 5.5g. Compliance: 13×10^{-6} cm/dyne. FR: 10Hz-35kHz. Output: 0.3mV (50cm/sec). Load: 10.2 ohms. Price: £48.00 (plus VAT).

T100 Step-up transformer

Low cost and efficient means of giving required signal boost: FR: 5Hz-50kHz. Gain: 26dB. Input imp: 6 ohms, matching output imp: 47K. Crosstalk: 50dB. Price: £35.00 (plus VAT).

777EX

Moving coil cartridge with elliptical diamond stylus. Playing weight: 1.3-2.3g. Compliance: 19×10^{-6} cm/dyne. FR: 5Hz-40kHz. Output: 3mV. Price: £62.00 (plus VAT).

H200 amplifier

Battery power amplifier offering superior performance over T100. FR: 8Hz-45kHz $+ 0 - 1$ dB. Input Imp: 200 ohms. Output imp: 12K, matching imp: 47K. Gain: 26dB. Price: £45.00 (plus VAT).

■ **YAMAHA**

Natural Sound Systems Ltd, 10 Byron Road, Wealdstone, Harrow, Middlesex HA3 7TL.
Tel: 01-863 8622.

Cartridges (stereo)

CG-7000—£21.12; CG-6500—£17.60; CG-5500—£17.60; CG-E (elliptical) £25.19. (All plus VAT).



Amplifier



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Racking Systems

*Indicates entry is illustrated.

Abbreviations used in this section are given on page 5.

■ AKAI

Akai (UK) Ltd,
c/o The Production Village,
82-106 Cricklewood Lane, London NW22 2DP.
Tel: 01-450 2011.

PRO 1

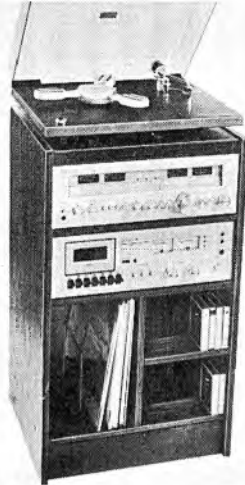
AM2250 amplifier, AT2250L tuner, CS702D cassette deck, AP100C turntable, SW 137 ii speakers plus RV 150 rack, which is in walnut with metallic edging and easy to assemble.

PRO 2

GXC 750D three head cassette deck, AM 2600 amplifier, AP 306 quartz lock turntable, SW 187 speakers, AT 2600 tuner housed in RV 250 rack.

■ AMSTRAD

Amstrad Consumer Electronics Ltd,
1-7 Garman Road, London N17 0UF.
Tel: 01-801 4431.



Amstrad SR302



Ferguson System 25



Amstrad SR301

SR301*

Turntable, amplifier, tuner, cassette. Record and cassette storage.

SR302*

Turntable, receiver, cassette. Record and cassette storage.

■ FERGUSON

Thorn Consumer Electronics Ltd,
284 Southbury Road, Middlesex EN1 1TJ.
Tel: 01-366 1155.

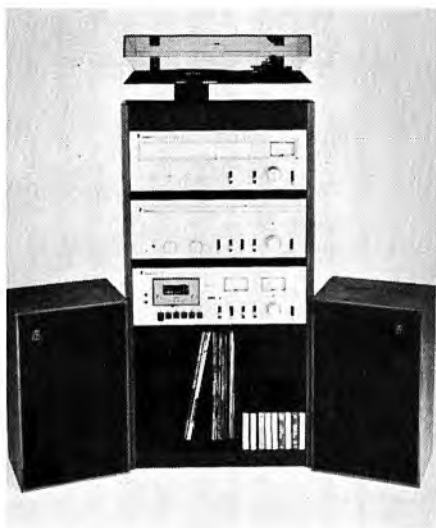
3934 System 25*

Comprises 3939 amplifier, 3938 tuner, 3936 cassette deck, 3937 record deck, 3935 housing unit and 2942 speakers. Features: output 25W. THD: 0.1%, Dolby B noise reduction unit. Belt

*Indicates entry is illustrated



Ferguson System 15



Fidelity Series 200

drive turntable, strobe, three position tape switching. Floor standing speakers (optional). Price: approx £475.00 including speakers (plus VAT).

3949 System 15*

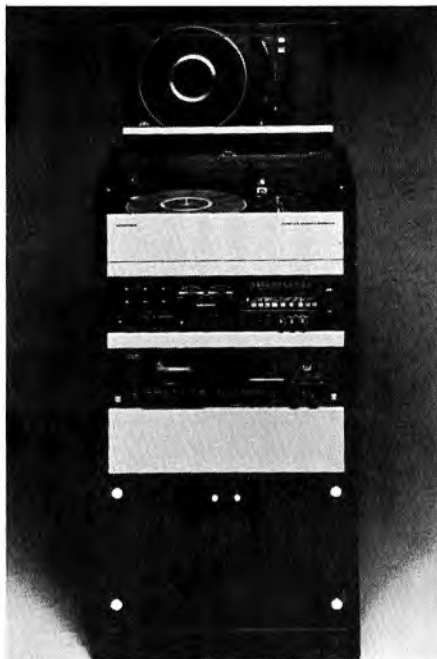
Complete unit supplied assembled with record deck, tuner-amp, cassette, speakers in housing unit. Features: output 15W; Dolby B noise reduction unit. Three position tape switching, magnetic cartridge, "S" arm, belt drive. Price: approx £310.00 (plus VAT).

■ FIDELITY

Fidelity Radio Ltd,
Victoria Road, London NW10 6ND.
Tel. 01-965 8771.

Series 200*

Tower housing series 200 Hi-Fi system. Output:



Grundig System 20

20W per channel. Distortion: 0.5%. Price: on application.

■ GRUNDIG

Grundig International Ltd,
Newlands Park, London SE26 5NQ.
Tel: 01-659 2468.

System 20*

Record player PS 1010 with smoke transparent cover, S-pick-up arm, tone-arm lift, strobe. Speeds: 33 1/3, 45 rpm. Alternative PS 1020. Cassette decks CNF 250 or CNF 350, receivers R25 or R35. Output: not less than 50W.

System 10

Record player PS 1010 (as above) and cassette deck CNF 250. Choice of R25 or R35 receiver. Finish: black ash wood veneer, satin metallic trim, smoked perspex cover and doors and matching components in black. Storage for LP's and cassettes. Output: not less than 50W. Enclosed record deck, castors, built-in junction box results in only one mains lead.

System 30*

PS 1020 record deck (as above), front loading cassette deck CNF 350, choice of receivers 25,

35 and 45. Output: 50W to 70W. Enclosed Dolby B suitable for all types of tapes. Two Vu thermostatic cooling fan. Cassette drawer and record storage space.

■ **HITACHI**

Hitachi Sales (UK) Ltd,
Hitachi House, Station Road,
Hayes, Middlesex.
Tel: 01-848 8787.



Grunaig System 30

HC 500 VM

HT350 direct drive turntable, FT340 stereo tuner, HA330 stereo amplifier, D550 Dolby cassette deck. Output: 50 + 50W. Choice of speakers. Upright console with matt black finish and simulated teak sides. Supplied with chrome plated metal stand for records and cassettes. Price: £538 (inc. VAT).

HC 500 VW

As above. Upright console with cassette storage drawer and space for records and accessories. Finished in simulated teak. Price: £508.95 (inc. VAT).

HC 250 VM

HT 350 direct drive turntable, FT 340 tuner, HA250 amplifier, D220 tape deck. Choice of speakers. Features as HC 500 VM. Price: £466.00 (inc. VAT).

HC 200 HW

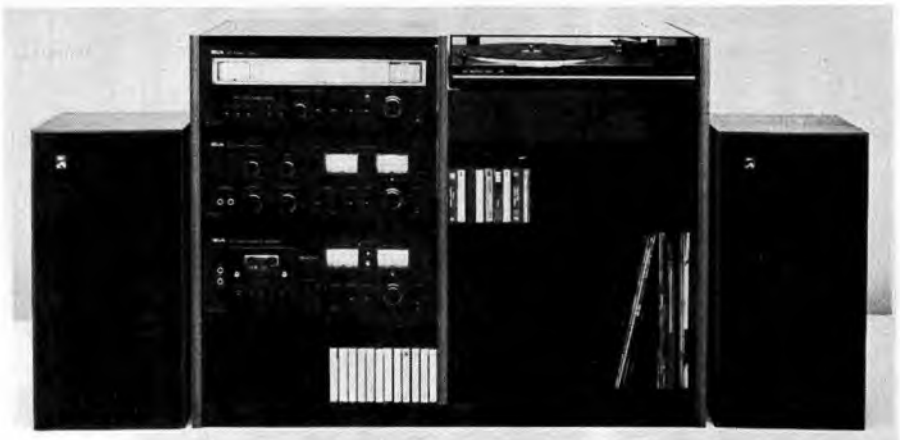
HT 350 direct drive turntable, SR303L stereo receiver, D220 stereo cassette deck. Output: 20 + 20W. Choice of speakers. Low level cabinet finished in simulated teak. Fitted with two sliding doors for enclosed record and tape storage. Price: £387.95 (inc. VAT).

HC 250 HW

HT 350 direct drive turntable, SR503L stereo receiver, D550 stereo cassette deck. Output: 25 + 25W. Choice of speakers. Features as HC 200 HW. Price: £438.95 (inc. VAT).

HC 350 HW

HT 350 direct drive turntable, SR603 stereo receiver, D550 tape deck. Choice of speakers. Features as HC 200 HW. Price: £459.45 (inc. VAT).

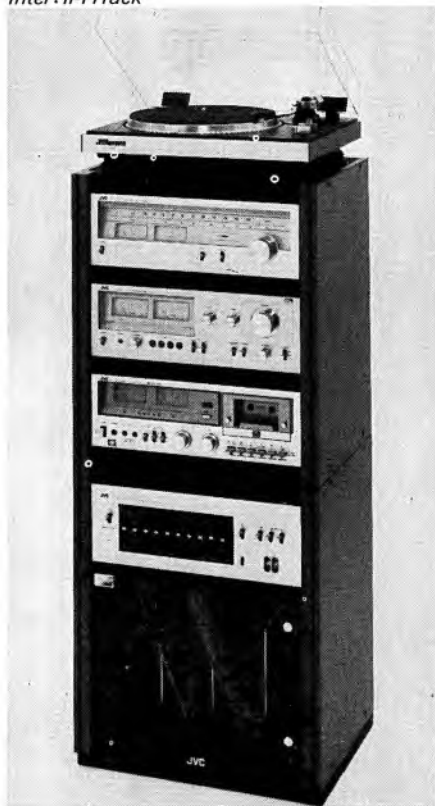


HMV Series 4000

*Indicates entry is illustrated



Intel Hi-Fi rack



JVC rack

■ HMV

Intersound Electronics Ltd,
Victoria Road, London NW10 6ND.
Tel: 01-965 6834.

Series 4000*

Compact rack finished in walnut-effect with all components inter-connected. Comprises 4000A amplifier, 4000T tuner, 4000C cassette deck, 4000P record player, 4000S speakers and 4000R rack. All components to DIN specification. Price: £533.50 (plus VAT).

■ INTEL

Intel, 47 Hays Mews, London W1.
Tel: 01-493 1921.

Hi-Fi Racking System*

Comprising stereo record deck with magnetic cartridge, fully auto with belt drive, anti-skating, adjustable arm weight. Tape deck with Dolby B suitable for all types of tapes. Two Vu meters. Auto stop, DIN sockets, LED indicator, peak level indicator and auto stop indicator. 80W amplifier, four wave band tuner with six soft touch buttons for VHF. Speakers comprising 21cm and 6.5 drive units. Foam reticulated front. Finish: black ash. Price: on application.

■ ITT

ITT Consumer Products (UK) Ltd,
Chester Hall Lane, Basildon, Essex.
Tel: Basildon 3040.

Hi-Fi 80 Music System*

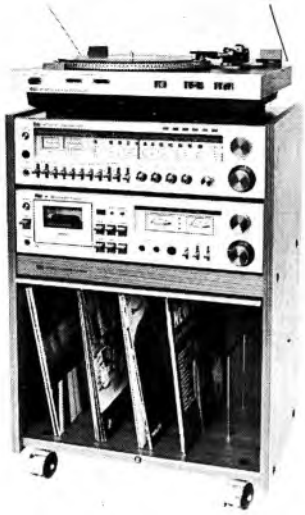
Made up of record players 8011 or 8012; receivers 8031, 8032 or 8033; cassette decks 8021; HiFi 80 rack, and choice of speakers. Rack also serves as a storage unit for records and cassettes or can be fitted with wood-veneered side-panels in the more traditional arrangement on a shelf or room-divider.

■ JVC

JVC (UK) Ltd,
Eldonwell Trading Estate, Staples Corner,
6-8 Priestley Way, London NW2 7AF.
Tel: 01-450 2621.

LX 3000 System A*

Rack comprising P3030 pre-amp, M3030 power amp, T3030 tuner, KD 95 cassette deck, QL10 turntable. Speakers not included in price. Features: digital readout for turntable speed and for tuning indication on T3030. Price: £3,500 (plus VAT).



ITT Hi-Fi80

■ **MARANTZ**

Marantz Audio UK Ltd,
193 London Road, Staines, Middlesex.
Tel: Staines 50732.

MR 500

Upright rack in black finish to fit three component size with record rack at base.

MR 504*

Similar to MR 500 but with glass door on record compartment and real wood veneer.

MR 505

Similar to MR 500 but with full length glass door and real wood veneer.

MR 600

Upright rack to fit two receiver size components plus turntable on top with record rack at base. Black finish.

MR 605*

Similar to MR 600 with glass door on record compartment and real wood veneer.

RM3100

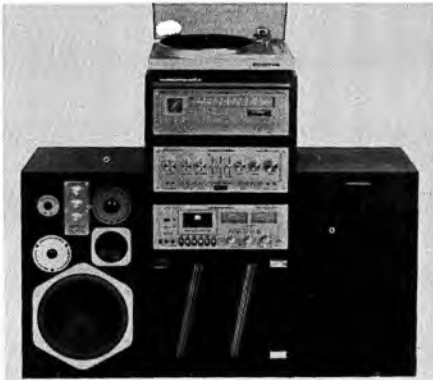
Professional steel rack with 19in. mounting. Fits all Marantz components with optional RHA1 and RHA2 handles.

■ **NORDMENDE**

NordMende (UK) Ltd,
NordMende House, Rickfords Hill,
Aylesbury, Bucks HP20 2RT.
Tel: Aylesbury (0296) 20501.

Philharmonic*

Three racks to suit differing requirements and



Marantz MR504



Marantz MR605



Nordmende systems

*Indicates entry is illustrated

surroundings. HR1200 is a wide rack with ample space for either 3 or 4 components, a drawer for cassettes and accessories and two glass-fronted compartments for records. It measures 94.9 × 85.6 × 39cm. HR1000 is a tower style rack for four components, accessories and record storage measuring 48.4 × 108.2 × 39cm. HR800 low style for receiver and record deck with storage for records and tapes. A typical Philharmonic Hi-Fi system would comprise RP1100 record deck, CD1200 tape deck, RE1100 receiver and rack.

■ OPTONICA

Sharp Electronics (UK) Ltd,
107 Hulme Hall Lane, Manchester M10 8HL.
Tel: 061-205 7321.

1616*

Comprising SM1616 amplifier, RO2727 turntable, ST1616 tuner, RT1616 cassette deck housed in cabinet measuring 78 × 40.6 × 108cm. Price: £570.00 approx retail.

■ PIONEER

Pioneer High Fidelity (GB) Ltd,
Pioneer House, The Ridgeway,
Iver, Bucks SL0 9JL.
Tel: Iver 652222/7.

X33

Comprising SA408 amp, TX 408L tuner, PLST2X turntable, CT 506 cassette, CB300 rack. Speakers CS333X optional. Features: 20W system, Dolby cassette, manual turntable, three band tuner. Price: on application.

X55

Comprising SA508, TX 608L tuner, PL200X turntable, CT600 cassette, CB700 rack. CS434X speakers optional. Features: 25W system, Dolby cassette, auto return turntable, three band tuner. Price: on application.

X77

Comprising SA608 amplifier, TX 608L tuner, CT600 cassette, PL300X turntable, CB700 small rack. CS535X speakers optional. Features: 45W system, Dolby cassette, auto return turntable, three band tuner. Price: on application.

X99

Comprising SA708 amplifier, TX 608L tuner, PL400X turntable, CTF550 cassette, CB900 rack. CS 636X speakers optional. Features: 65W system, Dolby cassette suitable for metal tapes, quartz direct drive fully auto turntable, three band tuner. Price: on application.



Optonica 1616

■ PYE

Pye Ltd,
137 Ditton Walk, Cambridge CB5 8QD.
Tel: Teversham 817401.

System 1*

5673 turntable, TA 4000 receiver, 3533 cassette deck, HU3 housing unit, 5775 speakers. Going price: £399.99 (inc. VAT).

System 2

As above with HU4.

System 3

5673 turntable, TA 8000 receiver, HU4 housing unit, 5777 speakers. Going price: £499.99 (inc. VAT).

System 4

5673 turntable, TA 6000 receiver, 3537 cassette deck, HU3 housing unit, 5775 speakers. Going price: £499.99 (inc. VAT).

System 5

5877 turntable, TA 12000 receiver, HU4 housing unit, 5777 speakers. Going price: £599.99 (inc. VAT).

System 6*

5673 turntable, A 8000 amplifier, T 8000 tuner, 3537 cassette deck, HU3 housing unit, 5777 speakers. Going price: £699.99 (inc. VAT).



Pye System 1



Pye System 6

System 7

5877 turntable, TA 12000 receiver, 3537 cassette deck, HU3 housing unit, 5777 speakers. Going price: £699.99 (inc. VAT).

System 8

5877 turntable, A 12000 amplifier, T 8000 tuner, 3537 cassette deck, HU1 housing unit, 5777 speakers. Going price: £799.99 (inc. VAT).

Rack System

AM/FM tuner, model 6190; separate pre-amplifier, model 6290; 60W per channel power amplifier, model 6390; a switching unit, model 6090; cassette deck, model 3537. All these units in a rack and sold with the 5777 loud-speakers, with a going price of £799.00.

■ **SAKAI**

Wren Electronics Ltd, Dawson Road, Mount Farm Estate, Milton Keynes, Bucks. Tel: Milton Keynes 71611.

System One

Comprising SSR1 rack, CD3010 cassette deck, PA3050 amplifier, TU 3020 tuner, RP3040 record deck. SA5050 speakers. Incorporating full electronic logic cassette deck and remote facility. 2 × 50W per channel output. Tuner 1.5µV, three wave bands, direct drive turntable, magnetic cartridge, removable fronts to speakers. No rec. retail price.

System Two

Comprising SSC2 rack, CD3010 cassette deck, RC3030 receiver, RP 3040 record deck. SA 3030 speakers. Features as above except output: 2 × 30W. No rec. retail price.

■ **SANSUI**

Sansui Audio Europe NV, Unit 10A, Lyon Industrial Estate, Rockware Avenue, Greenford, Middlesex. Tel: 01-525 1133.

System "A"

Comprising G301, SR232E, SC50 cartridge, SC1120, GX 100 rack. Optional speakers. Price: £368.00 (plus VAT).

System "B"

Comprising AU 217, TU 217, SC1110, SR222 Mk II, SC37 cartridge, GX 5 rack, RX 100 accessory drawer. Optional speakers. Price: £440.50 (plus VAT).

System "C"

Comprising G401, SR232E, SC1120, GX 100 rack. Optional speakers. Price: £395.00 (plus VAT).

System "D"

Comprising AU 317, TU 217, SC1110, SC37 cartridge, SR222 Mk II, GX 5 rack, RX 100 accessory drawer. Optional speakers. Price: £485.00 (plus VAT).

■ **SONY**

Consumer Information, Sony Showroom, 134 Regent Street, London W1R 6DJ. Tel: 01-439 3874.

System 1

Feature PS212 direct drive turntable. Output: 15W per channel and separate tuner. TC U2 Dolby cassette deck.

*Indicates entry is illustrated

System 2

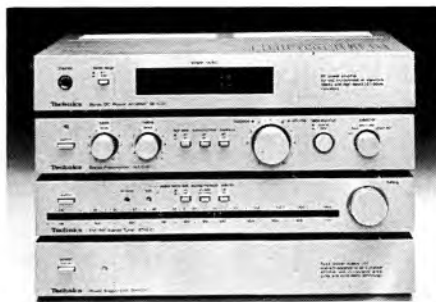
As above with stereo receiver with programme sensors. TC U2 Dolby cassette deck.

System 3 and 4

25W per channel output. Illuminated function indicators, separate signal strength and centre tuning meters.

System 5

Teak effect finish. PS 212 turntable, TCU2 Dolby cassette deck with 25W per channel amplifier and tuner with programme sensors. Additional pair of speakers can be used.



Technics Concise component series

■ TECHNICS

National Panasonic (UK) Ltd, 101-109 Whitby Road Trading Estate, Slough SL1 3DR.
Tel: Slough 34522.

Concise Component Series*

Compact high quality matching components. Initially comprising SE-C01 stereo DC power amp, SU-C01 stereo pre-amp, ST-C01 FM/AM stereo tuner.



Teleton Hi-Fi centre

■ TELETON

Teleton Electro (UK) Co Ltd, Somerton Works, Prince Avenue, Westcliffe-on-Sea, Essex.
Tel: Southend 337681.

TC 202B*

Comprising SX500 cassette, TRP200 record deck, LS500 speakers, HFC202 cabinet, LS1 speaker stands. Three way speakers. Features: 20W per channel output. Dolby noise reduction system. Belt drive record deck, record and tape storage.

TC 302*

Comprising A500 amplifier, T500 tuner, C500 cassette deck, TRP200 record deck, LS 303 speakers, HFC 302 cabinet. Three-way speakers. Features: 30W per channel output. Dolby noise reduction system. Belt drive record deck, record storage in cabinet.



Teleton Hi-Fi centre

TC 204

Comprising TA500 receiver, C500 cassette deck, TRP200T record deck, LS203 speakers, HFC 204 cabinet. Two way speakers. Features: 20W per channel output. Dolby noise reduction system. Belt drive record deck. Record and tape storage.

■ TENSAI

Wren Electronics Ltd, Dawson Road, Mount Farm Estate, Milton Keynes, Bucks.
Tel: Milton Keynes 71611.

System One

Comprising TFL 805 cassette deck, TA 2045 amp, TT3045 tuner, TD855 turntable and SRR1 rack. TS950 speakers included. Features: front loading cassette deck. Output: 48W per channel. Twin VU meters, mic mixing and level

RACKING SYSTEMS



Toshiba 225H system



Waltham W156

control. Sensitivity: 1.6mV. Direct drive turntable. Tone arm operated by separate motor. No rec. retail price.

System Two

Comprising TFL 805 cassette deck, TR 1030 receiver, TD861 turntable and STC2 rack. TS 900 speakers. Features: as system one but plus 30W per channel and 3 wave bands. No rec. retail price.

■ TOSHIBA

Toshiba (UK) Ltd, Toshiba House, Frimley Road, Frimley, Camberley, Surrey GU16 5JJ. Tel: Camberley 62222.

225H System*

Comprising SRF225 turntable, SB225 integrated amplifier, ST225 tuner, PC-230D Dolby cassette deck with AR-225 audio rack. SS-225 speakers included. Features: Horizontal

format rack with glass-fronted record storage and tape storage drawer. Price: £488.89 (plus VAT).

225V System

Comprising components as above in AR-4V rack. Features: vertical format rack with optional glass door. Price: £477.33 (plus VAT).

230 System

Comprising SR-A230 turntable, SB-230 amplifier, ST-230 tuner, PC-230 Dolby cassette deck in AR-4V audio rack. SS-230 speakers included. Features: vertical format rack with optional glass door. Price: £444.00 (plus VAT).

335 System Mk II

Comprising SR-F325 turntable, SC-335 power amplifier, SY-335 pre-amp, ST-335 tuner, PC-335 Dolby cassette deck, AR-4V audio rack. Speakers are not included. Vertical format rack with optional glass door. Price: £472.89 (plus VAT).

■ UHER

Uher Ltd, 24 Market Place, Falloden Way, London NW11. Tel: 01-455 1771/01-458 8491.

Hi-Fi Tower

Comprising tuner, amplifier, cassette deck in rack with cassette and record storage space.

■ WALTHAM

Waltham Electronics (UK) Ltd, 155-159 Queens Road, Watford, Herts WD1 2QH. Tel: Watford 24543.

W156*

Comprises W157 front loading cassette deck with Dolby, W158 tuner, W159 amplifier, W160 BSR 182 semi-auto turntable with ADC magnetic cartridge, W161 speakers with 8in. woofers and tweeters. Housed in purpose wood finish cabinet.

■ YAMAHA

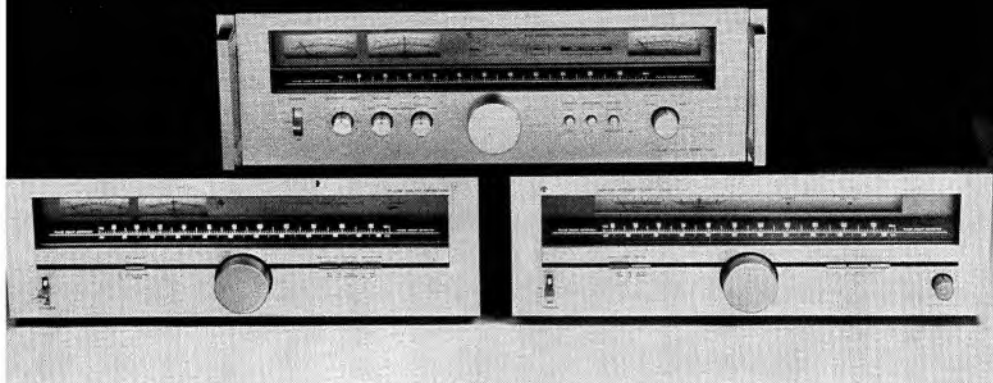
Natural Sound Systems Ltd, 10 Byron Road, Wealdstone, Harrow, Middlesex HA3 7TL. Tel: 01-863 8622.

600 System

Comprising N410 pre-amp, N420 power-amp, N430 FM tuner. Price: £843.60 (plus VAT).

400 System

Comprising N410 pre-amp, N430 FM tuner. Price: £710.40 (plus VAT).



The practical alternative to living in a broadcasting studio.

In the past if you wanted to hear a perfect radio broadcast, you had to listen to it in the broadcasting studio itself.

Or make do with a lesser version at home.

Now, thanks to Trio tuners, there's no difference.

What you hear from your Trio tuner is exactly the same sound as monitored at the broadcasting studio.

Nothing lost.

Nothing gained. And that means Trio tuners outperform everything else on the market.

The secret's in the special FM detector which Trio engineers developed to match the performance level of the studio.

It's called the Pulse Count Detector and consists of crystal oscillator, mixer, low-pass filter and pulse counter.

Together these give a perfect linear bandwidth of over 3.92 MHz, which is far superior to the non-linear 2 MHz bandwidth found in ordinary FM tuners.

And that's not all. Trio Pulse Count Detector tuners also have signal to noise ratios measuring in excess of 80 dB, with

stereo separation of more than 45 dB all the way from 50 to 10,000 Hz.

Plus distortion components which are so low that even if modulation levels were to exceed a full Megahertz in bandwidth, total harmonic distortion would still be less than 0.05%.

Of course, if you want to get rid of distortion altogether, that's possible too. With our KT 917 tuner.

It's fitted with a totally new approach to the problem – the Distortion Detection Loop.

By monitoring distortion and correcting tuning accordingly it actually drives distortion into the null point. And if all this sounds impressive in black and white, we guarantee it'll sound even more impressive in real life.

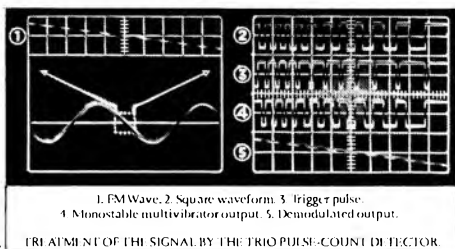


I like where I live, but I'd rather hear broadcasting studio sound. Please send me details of your Trio tuners.

Name _____
Address _____

HFYB 79

To: B. H. Morris & Co. (Radio) Ltd.,
Dept. C, Precision Centre, Heather Park Drive,
Wembley HA0 1SU. Agents in Eire: Peat Wholesale, Dublin.



Radio Tuners

*Indicates entry is illustrated

Abbreviations used in this section are given on page 5.

■ AIWA

Aiwa Sales and Service (UK) Ltd,
30-32 Concord Road,
Westwood Park Trading Estate,
London W3 0TH.
Tel: 01-993 1672

AT 9700*

Tuning range: 87.5-108MHz FM only. Variable tuning with no presets. AFC. Sensivity (mono) $1.6\mu\text{V}$ (50dB quieting). Sensitivity (stereo) $16\mu\text{V}$ (50dB quieting). Signal strength/tuning meter. S/N ratio (stereo); 78dB (IHF-75kHz deviation). Variable output. Aerial input impedance: 75 ohms/300 ohms. Dimensions: $44.8 \times 37.6 \times 14.9\text{cm}$. Mains voltage tapping: 120/240V 50/50Hz. Price: £282.30 (plus VAT).



Aiwa AT 9700



Amstrad EX 303

■ AKAI

Rank Audio Visual, Rank Hi-Fi,
PO Box 70, Great West Road,
Brentford TW8 9HR.
Tel: 01-368 9222.

AT 2600

Variable tuning. AFC. Sensitivity: $1.7\mu\text{V}$ (IHF) Signal strength/tuning meter. S/N ratio (stereo): 75dB. Variable output. Aerial input imp: 300 ohms balanced, 75 ohms unbalanced. Dimension: $44 \times 33.6 \times 14.1\text{cm}$. Mains voltage: 240V 50/60Hz. Price: £215.02 (plus VAT).

AT 2250L

Matching tuner for AM2250 amplifier. Sensivity: 1.3dB. Selectivity: 1HF more than 65dB. Signal strength, FM tuning meters. Price: on application.

■ ALBA

Alba Radio & Television Ltd, Bull Lane,
Edmonton, London N18 1RA.
Tel: 01-803 4451.

2000

Tuning range: 87.5-108MHz. Variable tuning. AFC. Sensitivity (stereo): 1mV (IHF). Signal strength/tuning meter. S/N ratio (stereo): -73dB 1mV . Output: 1V 7K. Dimensions: $43.6 \times 27.8 \times 13\text{cm}$. Mains voltage tappings: 240V. No rec. retail price.

■ AMSTRAD

Amstrad Consumer Electronics Ltd,
1-7 Garman Road, London N17 0UF.
Tel: 01-801 4431.

EX 303*

AM/FM radio tuner. Tuning range: MW 525-1600kHz, LW 150-270kHz, FM 88-108MHz. Variable tuning. AFC. Sensitivity: $1.7\mu\text{V}$. Signal meter and tuning meter. S/N ratio: 65dB. Output: 1-1V variable. Aerial input



Amstrad EX 202

*Indicates entry is illustrated



Cambridge Audio T55



A & R T21



Armstrong 623

imp. 75 ohms FM. Dimensions: 42 x 34 x 14.5cm. Mains: 240V AC. Price: £71.00 (plus VAT).

EX 202*

Tuning range: FM 87.5-108MHz, MW 525-1650kHz, LW 155-270kHz. Manual tuning. AFC. Sensitivity: 2.5µV 30dB S/N. Signal strength/tuning meter. S/N ratio (stereo): 58dB. Fixed output. Aerial input impedance: 75 ohms. Dimensions: 42 x 34 x 14.5cm. Mains voltage tapings: 240/110V. Price: £60.60 (plus VAT).

■ A & R

Amplification and Recording (Cambridge) Ltd, French's Mill, French's Road, Cambridge CB4 3NP. Tel: Cambridge (0223) 54507.

T21*

Designed to match A60 amplifier range. Tuning range: 87.5-108MHz FM only. Variable tuning and 5 presets. Tuning scale: electronic LED pointer using 21 LEDs at 1MHz centres. AFC. Signal strength meter. Sensitivity: better than 2µV at 75 ohms (IHF). Ultimate S/N ratio: better than 68dB. Capture ratio: 1.5dB. Selectivity: 60dB at ±400kHz. Output: 1V max from 1K, variable down to 10mV. Aerial input impedance: 75 ohms and 300 ohms nominal. Dimensions: 45 x 24 x 6cm. Mains supply.

220-240V standard, 110-120V on request. Price: teak or walnut £140.00 (plus VAT), black £144.00 (plus VAT).

■ ARMSTRONG AUDIO LTD

Warlters Road, London N7 0RZ. Tel: 01-607 3213.

623 (AM-FM)*

Tuning range: FM: 87.5-108MHz. AM: 145-1,625kHz. Variable and three presets on FM and three presets on FM and AM. AFC. Sensitivity: 1.5µV. Image frequency rejection: 50dB IF rejection. 100dB. Signal strength and tuning meters. Capture ratio: 1.75dB. Selectivity: 56dB. S/N: 65dB mono. Fixed output: High: 0dB (775V) 600 ohms. Low: 100mV. Aerial input imp: 75-80 ohms and 240-300 ohms. Dimensions: 31.2 x 28.5 x 8.2cm. Mains: 105-135 and 215-250V. Price: £168.00 (inc. VAT).

624 (FM)

FM only, otherwise similar to 623 (AM-FM). Price: £130.00 (inc. VAT).

■ CAMBRIDGE AUDIO

Cambridge Audio Ltd, 105-109 Oyster Lane, Byfleet, Surrey. Tel: Byfleet (91) 51051.

T55*

FM stereo tuner with range 88-108MHz. Variable tuning. AFC. Sensitivity: 1.4µV. Two indicator lamps for tuning. S/N mono: 65dB. Output: 1V max from 5K source (variable). Aerial input imp: 75 ohms co-ax or 300 ohms balanced. Dimensions: 41.9 × 24.4 × 5.1cm. Mains voltage tapping: 110/120/220/240V. Price: £159.00 (plus VAT).

■ **DENON**

Eumig (UK) Ltd,
14 Priestley Way, London NW2 7TN.
Tel: 01-450 8070.

TY-1000

Tuning Range: 88-108MHz. Sensitivity: 1µV mono. Selectivity: 36dB wide 90dB narrow. S/N ratio: 87dB mono 84dB stereo. Dimensions: 41 × 17 × 30.7cm. Price: on application.

TU-850

Tuning frequency: 88-108MHz. Sensitivity: 1.7µV. Selectivity: 65dB. S/N ratio: 84dB. Power source: 120V, 220/240V. Dimensions: 43.4 × 16.4 × 40cm. Price: on application.

TU-400

FM tuner. Tuning frequency: 88-108MHz. Sensitivity: 1.7µV. Selectivity: 85dB. S/N ratio: 82dB. Power source: 220V. Dimensions: 43 × 14.6 × 30.3cm. Price: on application.

TU-300

FM tuner. Tuning frequency: 88-108MHz. Sensitivity: 1.8µV. Selectivity: 79dB. S/N ratio: 75dB. Power source: 220V. Dimensions: 43 × 14.6 × 30.3cm. Price: on application.

TU-200

AM/FM tuner. Tuning frequency: 88-108MHz. Sensitivity: 1.9µV. Selectivity: wide 30dB, 80dB narrow. S/N ratio: 75dB. Power source: 220V. Dimensions: 43 × 14.5 × 30.3cm. Price: on application.

■ **DUAL**

Hayden Laboratories Ltd,
Hayden House, Churchfield Road,
Chalfont St. Peter,
Bucks SL9 9EW.
Tel: Gerrards Cross (49) 88447.

CT 1641

AM/FM tuner covering: FM, L, M, S. Sensitivity: <0.8. Selectivity: >85.7 touch FM presets, Digital tuning, LED display. Dimensions: 44 × 15 × 38.4cm. Price: £366.00 (plus VAT).

CT 1440

AM/FM tuner covering: FM, L, M, S. Sensitivity: <1.2. Selectivity: >80. Features and size as 1641. Price: £222.00 (plus VAT).

CT 1240

AM/FM tuner covering: FM, L, M, S. Sensitivity: <2. Selectivity: >80. Features and Size as 1641. Price: £170.00 (plus VAT).

■ **EAGLE**

Eagle International, Precision Centre,
Heather Park Drive, Wembley HA0 1SU.
Tel: 01-902 8832.

T 7400*

Radio tuner covering: FM, L, M. Variable tuning with auto AFC. Sensitivity: 1.9µV. Signal strength/tuning meter. S/N ratio (stereo): 60dB. Variable output control on front panel. Aerial input imp: 75/300 ohms. Dimensions: 40 × 29 × 13.2cm. Mains: 240V. Price: £119.00 (plus VAT).

■ **HARMAN/KARDON**

Harman UK, St John's Road, Tyler's Green,
High Wycombe, Bucks.
Tel: High Wycombe (049-481) 5331.

500

AM/FM stereo tuner with variable tuning. Sensitivity (mono): 1.9µV. Dimensions: 42.5 × 13.3 × 26cm. Price: £500.00 (plus VAT).

Citation 18

FM tuner. Details on application. Price: £514.67 (plus VAT).



Harrison-Chapman ST200



Eagle T 7400

*Indicates entry is illustrated



Hitachi FT 8000



Luxman ST 50

■ HARRISON-CHAPMAN

Gimar Ltd, 95 Grays Inn Road, London WC1.
Tel: 01-405 9665.

ST200*

FM/AM tuner to complement the S200 amplifier. Range: 88-108MHz. Pushbutton tuning. Sensitivity mono: $15\mu\text{V}$. Sensitivity stereo: $1.0\mu\text{V}$ for 25dB quieting. S/N: 50dB S/N mono: 70. Dimensions: $42.8 \times 24 \times 8.5\text{cm}$. Price: £223.43 (plus VAT).

■ HITACHI

Hitachi Sales (UK) Ltd, Station Road,
Hayes UB3 4DR.
Tel: 01-848 8787.

FT 4000

Tuning range: FM, L, M. Variable tuning. AFC. Sensitivity (mono): $12\mu\text{V}$. Sensitivity (stereo): $1.8\mu\text{V}$. Signal strength/tuning meter: Yes. S/N ratio: 75dB. Fixed output. Selectivity: 75dB. Dimensions: $43.5 \times 27.2 \times 11\text{cm}$. Mains voltage tappings: 240V. Price: on application.

FT 5000

FM/AM tuner. Automatic band sweep, digital synthesiser. AFC. Sensitivity (mono): $500\mu\text{V}$. Sensitivity (stereo): 12dBf. Five-stage LED indicator. S/N ratio: 65dB. Selectivity: 70dB. Dimensions: $43.5 \times 27.2 \times 11\text{cm}$. Mains voltage tappings: 240V. Price: on application.

FT 8000*

FM tuner. Automatic band sweep. Digital synthesiser tuner, six-station memory. Sensitivity (stereo): $1.9\mu\text{V}$. Five-stage LED indicator. S/N ratio (stereo): 72dB. Selectivity: 80dB. Dimensions: $43.5 \times 38.4 \times 7.8\text{cm}$. Mains voltage tappings: 240V. Price: on application.

■ JVC

JVC (UK) Ltd, Eldonwell Trading Estate,
Staples Corner, 6-8 Priestly Way, London NW2
7AF.

Tel: 01-450 2621.

TV 5

FM/AM tuner with range of 88-108MHz. Variable tuning. Sensitivity (stereo): $0.9\mu\text{V}$. Signal strength and tuning meters, both LED. S/N ratio (stereo): 70dB. Dimensions: $42 \times 29.5 \times 10.8\text{cm}$. Mains voltage tappings: 240V. Price: on application.

■ LUXMAN

Howland-West, 3/5 Eden Grove, London N7
8EQ.

Tel: 01-609 0293.

ST50*

Digital synthesiser with FM tuning range 88.1MHz-107.9MHz. Pushbutton, digital display, memory storage tuning. Sensitivity: 9.8dBf ($1.7\mu\text{V}$). Sensitivity (stereo): 13.3dBf ($4.5\mu\text{V}$). Signal strength. S/N ratio (stereo): 70dB (mono). Output: 1V 100 ohm (fixed), 0-1V K (variable). Aerial input imp: 75 ohm-300 ohm. Dimensions: $44.2 \times 40 \times 10.1\text{cm}$. Mains: 240V. Price: £1,020.00 (plus VAT).

T2*

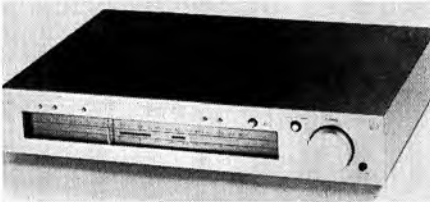
Solid state AM/FM tuner. Tuning range: 87.5MHz-108MHz FM. Variable tuning. Sensitivity (stereo): $1.9\mu\text{V}$. Signal strength, centre indicator. S/N ratio: 75dB. Output: 1V aerial input impedance: 75-300 ohms. Dimensions: $43.8 \times 33.1 \times 8.4\text{cm}$. Mains voltage tappings: 220-240V. Price: £168.00 (plus VAT).

T4*

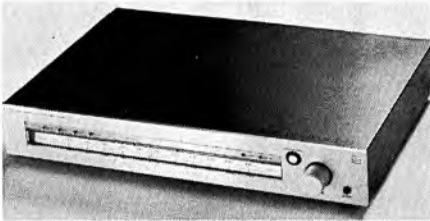
Accutouch closed logo locked AM/FM tuner. Tuning range: 87.5-108MHz. Variable tuning. Sensitivity (stereo): $1.8\mu\text{V}$. Signal strength, centre indicator. S/N ratio (stereo): 75dB. Output: 1V. Aerial input impedance: 75-300 ohms. Dimensions: $43.8 \times 33.1 \times 8.4\text{cm}$. Mains voltage tappings: 220-240V. Price: £245.00 (plus VAT).



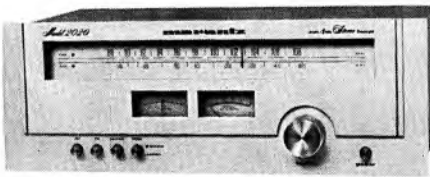
Luxman T2



Luxman T4



Luxman T12



Marantz 2050



Marantz 2100L

T12*

Accutouch Quartz locked FM tuner. Tuning range: 87.5-108MHz. Tuning range: 87.5mHz. Variable tuning. Sensitivity: 1.8µV. Signal strength meter. S/N ratio: 80dB. Output: fixed at 1V, variable 0-1V. Aerial input impedance: 75-300 ohms. Dimensions: 43.8 × 22.3 × 7.8cm. Mains voltage tapping: 220-240V. Price: £425.00 (plus VAT).

5T10

Accutouch CLL FM tuner. Tuning range: 87.5-108MHz. Variable tuning. Sensitivity (stereo): 1.8µV. Signal strength, tuning meter. S/N ratio (stereo): 80dB. Output: fixed at 1V, variable 0-1V. Aerial input impedance: 75-300 ohms. Dimensions: 44.2 × 40 × 10.1cm. Mains voltage tappings: 220-240V. Price: £540.00 (plus VAT).

■ **MARANTZ**

Audio (UK) Ltd, Debmarc House,
203 London Road, Staines, Middlesex.
Tel: Staines (81) 50732.

2100L*

Stereo tuner with range: 87.5-108MHz, 525-1605kHz, 150-350kHz. Variable tunings (mono): 30dB 1.5µV. Sensitivity (stereo) 4.5µV. Signal strength and centre tuning meters. S/N ratio (stereo): 62dB. Fixed output. Aerial input imp: 300 ohms, 75 ohms. Mains 110-240V. Dimensions: 41.6 × 24 × 14.6cm. Price: £133.00 (plus VAT).

2050L*

AM/FM stereo tuner. Tuning range: 87.5-108MHz, 525-1605kHz, 150-350kHz. Variable tuning. AFC. Sensitivity (mono): 1.7µV. Sensitivity (stereo): 5µV. Signal strength and centre tuning meters. S/N ratio (stereo): 60dB. Output: fixed. Aerial input impedance: 300/75 ohms. Dimensions: 41.6 × 24 × 14.6cm. Mains voltage tappings: 240/110V. Price: £97.70 (plus VAT).

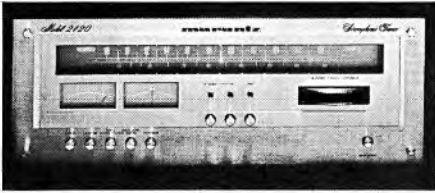
2110L

AM/FM stereo tuner with range 87.5-108MHz, 525-1605kHz, 150-350kHz. Sensitivity (mono): 1.5µV. Sensitivity (stereo): 4.5µV. Oscilloscope showing signal strength, centre tuning, multipath and audio signal. S/N ratio (stereo): 64dB. Output: fixed. Aerial input impedance: 300/75 ohms. Dimensions: 41.6 × 30 × 14.6cm. Mains voltage tappings: 240-110V. Price: £193.70 (plus VAT).

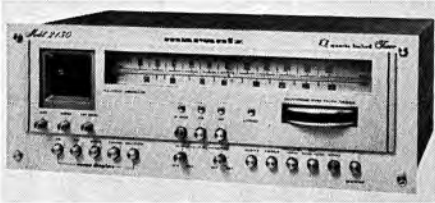
2120*

Tuning range: 87.5-108MHz, 525-1605kHz.

*Indicates entry is illustrated



Marantz 2120



Marantz 2130

Variable tuning. Sensitivity (mono): $1.3\mu\text{V}$. Sensitivity (stereo): $4\mu\text{V}$. Signal strength and centre tune meters. S/N ratio (stereo): 66dB. Fixed output. Aerial input impedance: 300/75 ohms. Dimensions: $41.6 \times 24 \times 14.6\text{cm}$. Price: 240/110V. Price: £193.70 (plus VAT).

2130*

AM/FM stereophonic tuner. Tuning range: 97.5-108MHz, 525-1605kHz. Variable tuning. Quartz locked AFC. Sensitivity (mono): $1.1\mu\text{V}$. Sensitivity (stereo): $3.8\mu\text{V}$. Oscilloscope showing signal strength, centre tuning, multipath and audio signal. S/N ratio (stereo): 72dB. Variable output. Aerial input impedance: 300/75 ohms. Dimensions: $41.6 \times 30 \times 14.6\text{cm}$. Mains voltage tapings: 240/110V. Price: £311.00 (plus VAT).

■ MONOGRAM

Monogram Professional Audio,
281 Balmoral Drive, Hayes, Middlesex.
Tel: 01-573 1566.

3600

FM Stereo receiver covering bands 87.5-108 MHz, 10 preset memories. Digital frequency read-out, Digital clock. Sensitivity (mono): 0.08mV . Sensitivity (stereo): $5\mu\text{V}$ —30dB. Aerial imp: 750 ohm, 300 ohm. Totally linear electronic display. Auto station search, fine tuning and lock. Auto signal strength skip and lock. Preset scan up to 100 stations. Discrete stereo decoder. Simultaneous/automatic mono/stereo transmission indication. AFC. Mute threshold. Dimension $19 \times 12 \times 3\text{in}$. Price: £389.00 (plus VAT).

■ NAKAMICHI

Natural Sound Systems Ltd,
10 Byron Road, Wealdstone, Harrow,
Middlesex HA3 7TL.
Tel: 01-863 8622.

430

FM Tuner. Tuning range: 88-108MHz. Variable tuning. Sensitivity (mono): $4\mu\text{V}$. Sensitivity (stereo): $40\mu\text{V}$. S/N ratio: mono better than 70dB, stereo better than 68dB. Dimensions: $40 \times 8 \times 22.2\text{cm}$. Price: on application.

■ OPTONICA

Sharp Electronics (UK) Ltd,
107 Hulme Hall Lane,
Manchester M10 8HL
Tel: 061-205 7321.

ST3636C

FM tuner with range 87.6-108MHz. Variable tuning. Auto lock. Sensitivity mono: $1.4\mu\text{V}$. Signal strength and tuning meter. S/N ratio (stereo): 60dB. Output: 0.35V fixed 0.55V variable. Aerial input impedance: 300 ohms/75 ohms. Dimensions: $44 \times 37 \times 14\text{cm}$. Price: £159.90 (plus VAT).

ST5100C

FM tuner with range 87.6-108MHz. Variable tuning. AFC. Sensitivity (mono): $1.6\mu\text{V}$. Signal strength and tuning meters. S/N ratio (stereo): 62dB. Output: 0.4V fixed. Aerial input impedance: 300 ohms/75 ohms. Dimensions: $43 \times 39 \times 7.5\text{cm}$. Price: £97.00 (plus VAT).

ST7100N

FM tuner with range 87.6-108MHz. Variable tuning and digital readout. Auto lock. Sensitivity (mono): $1.4\mu\text{V}$. Signal strength meter and tuning meter. S/N ratio (stereo): 62dB. Output: 0.4V fixed, 0.6V variable. Aerial input impedance: 300 ohms/75 ohms. Dimensions: $43 \times 39 \times 7.5\text{cm}$. Price: £168.00 (plus VAT).

ST9100N

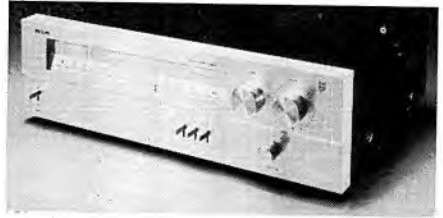
FM tuner with range 87.6-108MHz. Auto scan, manual preset and memory. Digital synth. Sensitivity (mono): $1.4\mu\text{V}$. Aerial input impedance: 300 ohms/75 ohms. Dimensions: $43 \times 39 \times 7.5\text{cm}$. Price: £364.00 (plus VAT).

■ PANASONIC

National Panasonic (UK) Ltd,
107-109 Whitby Road, Slough,
Berks. SL1 3DR.
Tel: Slough (75) 27516.

ST 2400

FM/AM tuner with variable flywheel tuning. AFC. Sensitivity stereo: $1.5\mu\text{V}$. Separate signal strength and centre FM tuning meter. S/N ratio: 58dB. Output 0.6V fixed. Aerial input imp: 300 ohms balanced, 75 ohms unbalanced. Dimensions: 41.5 x 25 x 10.5cm. Mains: 220/240V 50Hz AC. Price: £79.96 (plus VAT).



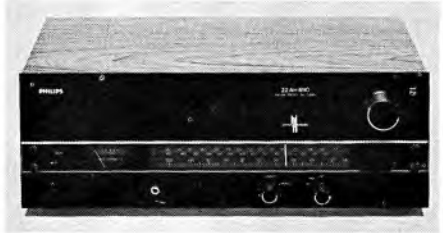
Philips RH 186

■ **PHILIPS ELECTRICAL LTD.**

City House, 420 London Road,
Croydon, Surrey.
Tel: 01-689 2166.

RH 186*

AM/FM stereo tuner. Tuning range: 520-1605kHz, 87.5-108MHz. Manual tuning. Switchable AFC. Sensitivity (mono); $3.5\mu\text{V}$ for 50dB sig/noise. Sensitivity (stereo): $40\mu\text{V}$ for 50 dB sig/noise. Signal strength meter, tuning meter. S/N ratio (stereo): 70dB mono. Output: fixed 1V, Variable 1V. Aerial input impedance: 75 ohms and 300 ohms. Dimensions: 48 x 38 x 15cm. Mains voltage tappings: 240V. Price: £133.20 (plus VAT).



Philips AH 690

AH 170

AM/FM stereo tuner. Tuning range: 520-1605kHz, 150-255kHz, 87.5-108MHz. Manual tuning. AFC. Sensitivity (mono): $1.7\mu\text{V}$ for 26dB sig/noise. Sensitivity (stereo): $80\mu\text{V}$ for 46dB sig/noise. Signal strength meter. Output: 370mV into 5K fixed. Aerial input impedance: 300 ohms. Dimensions: 48.2 x 28 x 7.8cm. Mains voltage tappings: 240V. Price: £100.26 (plus VAT).



Pioneer TX 608 L

AH 690*

AM/FM stereo tuner available only with AG 590 amplifier. Details as AH 170 except for tuning meter, Output: fixed. Dimensions: 38 x 22 x 14cm. Price: £83.40 (plus VAT).



Pioneer TX 7800

■ **PIONEER**

Pioneer High Fidelity (GB) Ltd,
Pioneer House, The Ridgeway,
Iver, Bucks SLO 9JL.
Tel: Iver (0753) 652222.

TX 408L

AM/FM stereo tuner. Variable tuning. Sensitivity (mono): $2.0\mu\text{V}$. S/N ratio (stereo): 65dB. Aerial inputs impedance: 75 ohms, 300 ohms. Mains voltage tappings: 220/240V. Price: on application.



Pioneer TX 9800

TX 608 L*

AM/FM stereo tuner. Variable tuning.

*Indicates entry is illustrated

Sensitivity (mono): 1.9 μ V. S/N ratio (stereo): 74dB. Aerial input impedance: 75 ohms, 300 ohms. Mains voltage tappings: 220/240V. Price: on application.

TX 7800*

AM/FM stereo tuner. Tuning range 88-108MHz, 55-160 \times 10kHz. Variable tuning. Sensitivity (mono): FM 1.6 μ V, AM 1.5 μ V. Servo-lock touch sensor signal and tuning meters. S/N ratio (stereo): 79dB. Output: variable. Aerial input impedance: 75 ohms, 300 ohms. Dimensions: 42 \times 39 \times 15cm. Mains voltage tappings: 220/240V. Price: on application.

TX 9800*

AM/FM stereo tuner. Tuning range: 88-108MHz, 55-160 \times 10kHz. Variable tuning. Sensitivity (mono): FM 1.5 μ V, AM 1.5 μ V. Quartz-lock stereo tuning, signal and tuning meters. S/N ratio (stereo): 80dB. Output: variable. Aerial input impedance: 75 ohms, 300 ohms. Dimensions 42 \times 39 \times 15cm. Mains voltage tappings: 220/240V. Price: on application.

TXD 1000

FM/AM tuner. Auto tuning, six station memory for both FM and AM. Manual override. Sensitivity (mono): FM 1.9 μ V, AM 0.3 μ V. Digital read-out. S/N ratio (stereo) 75dB. Output: variable. Aerial input impedance: 75 ohms, 300 ohms. Dimensions: 42 \times 36.5 \times 9.8cm. Mains voltage tappings: 220/240V. Price: on application.

■ PYE

Pye Ltd, 137 Ditton Walk,
Cambridge CB5 8QD.
Tel: Teversham (022 05) 2781.

T 8000*

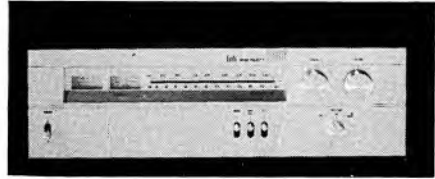
Variable tuning. AM/FM. Switchable AFC. Sensitivity: 1.7 μ V to 1HF, 3.5 μ V mono, 40 μ V stereo for 50dB quieting. Separate signal strength and tuning meters. S/N ratio: 70dB. Fixed and variable output. Aerial input imp: 300-750 ohms. Dimensions: 48 \times 15 \times 38cm. Mains: 240V 50Hz AC. Price: £150.22 (plus VAT).

■ QUAD

The Acoustical Manufacturing Co. Ltd,
St. Peters Road, Huntingdon PE18 7DB.
Tel: Huntingdon (0480) 52561.

Quad FM3*

Stereo FM tuner. Range: 88-108MHz. Variable tuning. High stability tuned stages maintain



Pye T 8000



Quad FM3

accuracy without AFC. Sensitivity: 2 μ V for full limiting. Aerial input: 75 ohms coaxial and 300 ohms balanced. Output: 100mV per channel for 30% modulation. Stereo decoder fitted. Image rejection: 56dB. IF rejection: 80dB. Capture ratio: 3dB. FR: 20Hz-15kHz \pm 1dB. Separation: 40dB at 1kHz. Distortion: 1kHz at 40kHz deviation, 0.3%. Recommended load: greater than 50K. De-emphasis: 50 μ sec or 75 μ sec as required. Mains: 100-125V 200-250V 50-60Hz. Dual gate MOSFET input stage. Integrated circuits (ICs) in IF and decoder. Ceramic filters in IF chain. Output via 5-pin DIN connector. Size: 26 \times 16.5 \times 9.2cm. Price: £126.00 (inc. VAT).

■ REALISTIC

Tandy Corporation (Branch UK),
Bilston Road, Holyhead Road, Wednesbury,
Staffs WS10 7JN.
Tel: 021-556 6101/2.

TM 800B

FM/AM tuner. 3 Band Variable FM 87.4 to 108MHz. MW 510 to 1650kHz. SW 145 to 360kHz. Built in AFC. THD Mono: 0.1%. Stereo: 0.5%. Tuning strength meter. S/N Ratio: 65dB. Variable output. Aerial input imp: 75 ohm and 300 ohm. FM muting (switchable) 38.7 \times 29.2 \times 11.7cm. 220/240v AC 50Hz £99.95 (inc. VAT).

TM 1001

AM/FM tuner with variable tuning. FM 87.5 to 108.5MHz AM 510 to 1660kHz. Switchable signal seeking "Auto Magic" AFC wide/narrow band THD 0.1% (wide) 0.2% (narrow). Signal strength and tuning meters.



Revox B 760



Rogers T75

S/N ratio: 70dB. Variable output. Aerial input imp: 75 ohm and 300 ohm. FM Muting. FM 25/75 micro second de-emphasis 41 x 30.5 x 14.6cm. 220/240V AC 50Hz £129.95 (inc. VAT).

■ **REVOX**

F.W.O. Bauch Ltd,
49 Theobald Street, Boreham Wood,
Herts WD6 4RZ.
Tel: 01-953 0091.

Model A76*

Stereo tuner, VHF only: 87.5-108MHz, variable tuning. Two tuning meters. Sensitivity: 1µV mono (IHF), 10µV stereo (IHF). Aerial: 60-240 ohms. VHF S/N: 70dB at 75kHz deviation. VHF distortion: 0.2% at 1kHz, 40kHz deviation mono or stereo. Output: 1V adjustable. Mains: 110-250V, 50-60Hz AC. Price: £353.00 (plus VAT).

B 760*

Variable tuning or pushbutton, 15 user-programmable stations, tuning range 87-107.975MHz. Tuning by quartz-referenced digital synthesiser. Sensitivity (mono): 2µV for S/N ratio of 46dB. Signal strength and tuning meter. S/N ratio (stereo): 75dB (input of 1mV, 75 ohms) Output: 1.16V fixed or variable (separate output sockets). Aerial Input imp: 60-75 ohms co-axial, 240-300 ohms balanced. Dimensions: 45.2 x 34.8 x 15.1cm. Mains: 100, 120, 140, 200, 220, 240V 50/60Hz. Price: £675.00 (plus VAT).

■ **ROGERS**

Swisstone Electronics Ltd,
4-14 Barmeston Road, Catford,
London SE6 3BN.
Tel: 01-697 8511.

I75 Series II*

Stereo tuner. Range: 88-108MHz. Sensitivity: 1.0µV. Capture ratio: 1.5dB. IF Rejection: 80dB. Signal strength and tuning meter. Nominal output: (30% modulation) 200mV o/p, 20-15,000Hz <0.5%. S/N: mono 70dB, Stereo 65dB. Price: £125.00 (plus VAT).

■ **SAKAI**

Wren Electronics Ltd,
Dawson Road, Mount Farm Estate,
Milton Keynes, Bucks.
Tel: Milton Keynes (0908) 716111.

TU 3020

AM/FM tuner. Variable tuning. AFC. Sensitivity (mono): 1.5µV. Sensitivity (stereo): 40µV 50dB quieting. Signal and tuning meters. S/N ratio (stereo): 74dB. Output: fixed. Aerial input impedance: 300 ohms, 75 ohms. Dimensions: 44.4 x 37.7 x 12.9cm. Mains voltage tappings: 240V. No rec. retail price.

■ **SANSUI**

Sansui Audio Europe NV, Unit 10A,
Lyon Industrial Estate, Rockware Avenue,
Greenford, Middlesex.

TU 9900

FM tuner. Sensitivity: 0.9µV. THD: less than 0.2% (wide bandwidth); signal to noise ratio: better than 76dB stereo; capture ratio; less than 1dB; selectivity: (wide bandwidth) better than 55dB at 400kHz. Frequency response: 30 to 15kHz + .5 — 0.8dB; stereo separation (wide bandwidth) better than 50dB at 1kHz. Auto noise canceller. Finish: matt black. Dimensions: 46 x 16 x 31cm. Price: on application.

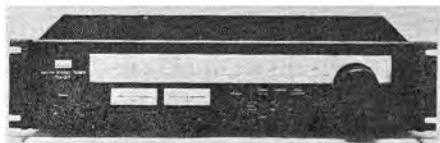
TU 719*

AM/FM tuner. Tuning range: 88-108MHz. 530-1,600kHz. Variable tuning. AFC. Sensitivity (mono): 13dBf. Sensitivity (stereo): 35dBf. Signal strength/tuning meter. S/N ratio (stereo): 76dB. Variable output. Aerial input impedance: 300 ohms, 75 ohms. Dimensions: 43 x 40.5 x 16.8cm. Mains voltage tappings: 240V. Price: on application.

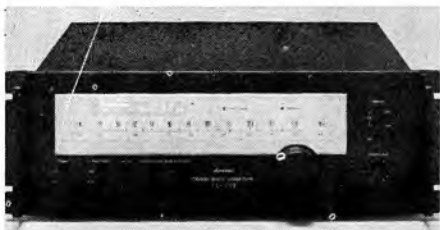
TU 417

As above except: Sensitivity (mono): 10.1dBf, Sensitivity (stereo): 19dBf. S/N ratio (stereo): 73dB. Price: on application.

*Indicates entry is illustrated



Sansui TU 317



Sansui TU 719



Sharp Optonica ST 1616

TU 317*

FM/AM tuner. Tuning range: 88-108MHz, 530-1,600kHz. Variable tuning. AFC. Sensitivity (mono): 10.3dBf. Sensitivity (stereo): 19dBf. Signal strength, tuning meter. S/N ratio (stereo): 73dB. Output: fixed. Aerial input impedance: 300 ohms, 75 ohms. Dimensions: 43 × 31 × 11cms. Mains voltage tappings: 240V. Price: on application.

TU 217

As above except: Sensitivity (mono): 10.5dBf; Sensitivity (stereo) 20dBf. S/N ratio (stereo) 72dB. Price: on application.

■ SHARP

Sharp Electronics (UK) Ltd,
Sharp House, 107 Hulme Hall Lane,
Manchester M10 8HL.
Tel: 061-205 7321.

ST 1515

Large flywheel tuning with FM, M. Sensitivity (mono): 40kHz. Sensitivity (stereo): 1.6μV. S/N ratio (stereo): 62dB DIN. Output: FM 0.25V

fixed, AM 0.2V fixed. Dimensions: 40.8 × 27.5 × 14.4cm. Mains (voltage tappings): AC 110/220/240V. 50/60Hz. Price: £99.90 (inc. VAT).

ST 3636

Flywheel tuning with FM, M. AFC: 'auto lock' tuning system avoids drift. Sensitivity (Mono): 40kHz. Sensitivity (stereo): 1.4μV. S/N ratio (stereo): 65dB DIN. Output: FM 0.35V fixed, 0.55V variable, AM 0.2V fixed, 0.35V variable. Dimensions: 44.2 × 37.3 × 14.4cm. Mains (voltage tappings): AC 110/220/240V. 50/60Hz. Price: £179.90 (inc. VAT).

ST 1616*

Sensitivity: 1.6μV. Image rejection ratio: 75dB. Spurious frequency rejection ratio: 75dB. Features: switchable muting, air check calibrator and high blend. Price: to be announced.

■ SONY (UK) LTD.

Consumer Information, Sony Showroom,
134 Regent Street, London W1R 6DJ.
Tel: 01-439 3874.

ST A7B

Tuning range: FM 87.5-108MHz; AM 530-1605kHz. Digital tuning quartz locked. Sensitivity (mono): (50dB quieting)-2.8μV IHF, 14.2dB. Sensitivity (stereo) (50dB quieting) 30μV IHF, 34.8dBf. Signal strength and tuning meters. S/N ratio: 75dB. Output: fixed 750mV 2K; variable 0-1.5V, 450 ohms. Aerial input imp: 300 ohms balance, 75 ohms unbalanced. Dimensions: 43 × 44 × 17cm. Mains: 240V, 50Hz. No rec. retail price.

ST-A 3L

AM/FM tuner with range: 87.5-108MHz, 530-1605kHz, 150-350kHz. Variable tuning. Sensitivity: 1.4μV. Signal strength and tuning meter. S/N ratio (stereo): 60dB. Aerial input impedance: 300 ohms balanced, 75 ohms unbalanced. Dimensions: 41 × 32.5 × 14.5cm. Mains voltage tapping: AC 110, 127, 220, 240V. Price: on application.

ST 313L

AM/FM tuner with range: 87.5-108MHz, 530-1605kHz, 150-350kHz. Programme sensor facilities for five stations on both VHF and LW, otherwise variable. Sensitivity (stereo): 1.6μV. Signal strength and tuning meter. S/N ratio (stereo): 70dB. Aerial input impedance: 300 ohms balanced, 75 ohms unbalanced. Dimensions: 41 × 27.7 × 14.5cm. Mains voltage tappings: 240V. Price: on application.

■ **J. E. SUGDEN & CO LTD.**

Carr Street, Cleckheaton,
Yorks BD19 5LA.
Tel: Cleckheaton (0274) 872 501.

R51*

FM stereo tuner. Tuning range: 88-108MHz. Six push buttons plus AFC, noise filter, stereo threshold control, variable de-emphasis. Sensitivity mono $2.0\mu\text{V}$. Other specs as for T48 below. Aerial input: 75 ohms coaxial and 300 ohms balanced. Dimensions $28 \times 10 \times 17\text{cm}$. Mains: 110/120V, 220/240V. Price: £128.00 (plus VAT).

T48*

Tuning range: 88-108MHz. Six push buttons. AFC. Sensitivity mono: $2.0\mu\text{V}$. Sensitivity stereo: $6.0\mu\text{V}$. Image frequency rejection: 70dB. IF rejection: 80dB. Capture ratio: 2.5dB. Selectivity: 40dB. S/N mono: 70dB. S/N stereo: 66dB. Fixed output: 0.5 volt. Aerial input imp: 75 or 300 ohms. Dimensions: $16 \times 28 \times 13\text{cm}$. Mains: 110-120, 220-230, 240 Volts. Price: £112.00 (plus VAT).

■ **TEAC**

Harman UK, St. John's Road,
Tyler's Green, High Wycombe,
Bucks HP10 8HR.
Tel: High Wycombe (049 481) 5331.

ATX Series

Details on application. ATX 30 £105.78. ATX 50 £168.00. Both plus VAT.

■ **TECHNICS**

National Panasonic (UK) Ltd,
101-109 Whitby Road Trading Estate,
Slough, Berks. SL1 3DR.
Tel: Slough (75) 34522.

ST-C01

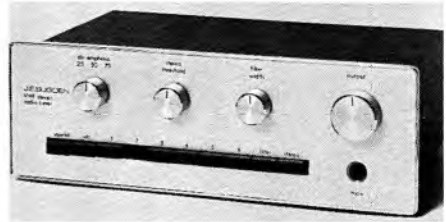
FM/AM stereo tuner. Variable tuning. Range: 88-108MHz. Sensitivity: $1.9\mu\text{V}$, $1.2\mu\text{V}$ for 30dB, $1.7\mu\text{V}$, $1.1\mu\text{V}$ for 26dB, $1.5\mu\text{V}$, $0.9\mu\text{V}$ for 20dB. Sensitivity (stereo): $20\mu\text{V}$. S/N ratio (stereo): 63dB. Dimensions: $29.7 \times 4.9 \times 25.5\text{cm}$. Price: on application.

ST-8011L

AM/FM three-band stereo tuner. Range: 88-108MHz. Sensitivity: $2.0\mu\text{V}$, $1.3\mu\text{V}$ at 30dB, $1.8\mu\text{V}$, $1.2\mu\text{V}$ at 26dB, $1.6\mu\text{V}$, $0.9\mu\text{V}$ at 20 dB. S/N ratio (stereo): 65dB. Dimensions: $43 \times 9.7 \times 24\text{cm}$. Price: on application.



J. E. Sugden T48



J. E. Sugden R51

ST-8077K

AM/FM sterec tuner. Range: 88-108MHz. Sensitivity: $1.8\mu\text{V}$, $0.9\mu\text{V}$ at 30dB, $1.6\mu\text{V}$, $0.8\mu\text{V}$ at 26dB, $1.4\mu\text{V}$, $0.7\mu\text{V}$ at 20dB. S/N ratio (sterec): 65dB. Dimensions: $45 \times 5.3 \times 31.6\text{cm}$. Price: on application.

ST-9030

FM Sterec tuner. Range: 88-108MHz. Sensitivity: $1.2\mu\text{V}$ at 30dB, $1.1\mu\text{V}$ at 26dB, $1.0\mu\text{V}$ at 20dB. Dimensions: $45 \times 9.2 \times 37\text{cm}$. Price: on application.

ST-9038

Quartz synthesizer FM sterec tuner. Range: 87.6-107.9MHz. Sensitivity: 1.2 at 30dB, $1.1\mu\text{V}$ at 26dB, $1.0\mu\text{V}$ at 20dB. Dimensions: $45 \times 5.3 \times 28.5\text{cm}$. Price: on application.

ST-8044L

Three-band sterec tuner. FR: 88Hz-108MHz. Sensitivity: $1.9\mu\text{V}$ at 30dB, $1.7\mu\text{V}$ at 26dB, $1.5\mu\text{V}$ at 20dB. THD: 0.15% mono, 0.3% sterec. S/N ratio: 68dB mono, 65dB. Dimensions: $43 \times 14.2 \times 25.4\text{cm}$. Price on application.

*Indicates entry is illustrated

■ TELETON

Teleton Electro (UK) Ltd,
Teleton House, Waterhouse Lane,
Chelmsford, Essex CM1 3DW
Tel: Chelmsford (0245) 62442.

T 500

AM/FM tuner. Range: 87.4-104.5MHz, 510-1,630kHz, 145-355kHz. Variable tuning. Switchable AFC. Sensitivity (mono): FM $2\mu\text{V}$ for 26dB, $200\mu\text{V}$ for 26dB, $300\mu\text{V}$ for 26dB. Signal strength, tuning meter. S/N ratio (stereo): 53dBs. Output: variable. Aerial input impedance: 300 ohms balanced. Dimensions: $28 \times 20 \times 51.7\text{cm}$. Mains voltage tapplings: 240V. Price: on application.

■ TENSAI

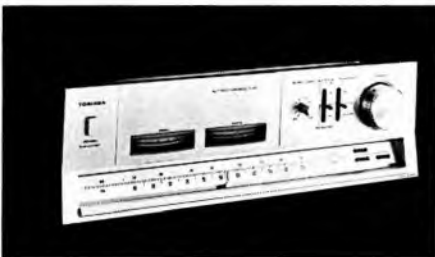
Wren Electronics Ltd,
Dawson Road, Mount Farm Estate,
Milton Keynes, Bucks.
Tel: Milton Keynes (0908) 71611.

TT 3045

AM/FM tuner. Variable tuning. AFC. Sensitivity (mono): $1.6\mu\text{V}$. Sensitivity (stereo): $2.5\mu\text{V}$. Signal strength, centre tuning. S/N ratio (stereo): 60dB. Output: fixed. Aerial input impedance: 75 ohms, 300 ohms. Dimensions: $49 \times 13.2 \times 31.2\text{cm}$. Mains voltage tapplings: 240V. No rec. retail price.

■ TOSHIBA

Toshiba (UK) Ltd, Toshiba House,
Frimley Road, Frimley, Camberley,
Surrey GU16 5JJ.
Tel: Camberley 62222.



Toshiba ST-420



Toshiba ST-230

ST-420*

Tuning range: FM/AM. Sensitivity: $1.9\mu\text{V}$ stereo. Image frequency rejection: 85dB. IF rejection: 90dB. Special large scale for tuning. Capture ratio: 1.0dB. Selectivity: 70dB. S/N stereo: 75dB. Fixed output: 450mV 400Hz 100%. Variable output: $0-600\text{mV}$ 400Hz 100%. Aerial input imp: 300 ohms-75 ohms. Dimensions: $45 \times 34 \times 13.5\text{cm}$. Mains: 220-240V. Price: £128.00 (plus VAT).

ST-230*

FM/AM tuner. Range: 88-108MHz. Sensitivity: $1.9\mu\text{V}$. S/N ratio (stereo): 68dB. Signal strength, tuning meter. Dimensions: $42 \times 14.6 \times 25.7\text{cm}$. Price: £88.44 (plus VAT).

■ TRIO

Distributors: B. H. Morris & Co (Radio) Ltd,
Precision Centre, Heather Park Drive,
Wembley, Middlesex HA0 1SU.
Tel: 01-902 9422.

KT5500*

Tuning range: 88-108MHz FM, 535-1,600kHz AM. Variable tuning. Automatic AFC. Sensitivity (mono): $1.9\mu\text{V}$. Sensitivity (stereo): $4.0\mu\text{V}$. Signal strength and tuning meters. S/N ratio (stereo): 68dB. Fixed output. Aerial input imp: FM 75 ohms unbalanced, 300 ohms balanced. Dimensions: $38 \times 29 \times 14\text{cm}$. Mains voltage: 240V. Price £88.44 (plus VAT).

KT 313L

AM/FM stereo tuner. Range: 88-108MHz, 150-350kHz, 535-1600kHz. Variable tuning. Sensitivity (mono): $0.9\mu\text{V}$. Sensitivity (stereo): $25\mu\text{V}$. Signal strength/tuning meters. S/N ratio (stereo): 72dB. Output: fixed. Aerial input impedance: 75 ohms unbalanced, 300 ohms balanced. Dimensions: $40 \times 30 \times 13.9\text{cm}$. Mains voltage tapplings: 240V. Price: on application.



Trio KT5500

KT 615

AM/FM stereo tuner. Range: 88-108MHz, 535-1600kHz. Variable tuning. Sensitivity (mono): $0.9\mu\text{V}$. Sensitivity (stereo): $25\mu\text{V}$. Signal strength, tuning meter. S/N ratio (stereo): 78dB. Output: fixed. Aerial input impedance: 75 ohms unbalanced, 300 ohms balanced. Dimensions: $44 \times 40.2 \times 15.3\text{cm}$. Mains voltage tappings: 240V. Price: on application.

KT 413

As above but pushbutton tuning up to five stations for each FM and AM. Auto-scan. Signal LED indicator only. S/N ratio (stereo) 72dB. Dimensions: $40 \times 28 \times 13.9\text{cm}$.

KT 917

FM tuner 88-108MHz. Variable tuning. Sensitivity (mono): $0.75\mu\text{V}$. Sensitivity (stereo): $25\mu\text{V}$. Signal strength, tuning meter. S/N ratio (stereo): 84dB. Output: variable. Aerial input impedance: 75 ohms unbalanced, 300 ohms balanced. Dimensions: $46 \times 46.3 \times 16.1\text{cm}$. Mains voltage tappings: 240V. Price: on application.

KT 815

AM/FM tuner. Variable tuning. Range: 88-108MHz, 535-1600kHz. Sensitivity (mono): $0.8\mu\text{V}$. Sensitivity (stereo): $25\mu\text{V}$. Signal strength, tuning meter. S/N ratio (stereo) 80dB. Output: variable. Aerial input impedance: 75 ohms unbalanced, 300 ohms

balanced. Dimensions: $44 \times 40.2 \times 15.3\text{cm}$. Mains voltage tappings: 240V. Price: on application.

LO 7 TII

FM tuner with range 88-108MHz. Variable tuning. Sensitivity (mono): $1.5\mu\text{V}$. Sensitivity (stereo) $56\mu\text{V}$. Signal strength, tuning meter. S/N ratio (stereo): 80dB. Output: fixed. Aerial input impedance: 75 ohms, 300 ohms. Dimensions: $48 \times 34.2 \times 10\text{cm}$. Mains voltage tappings: 240V. Price: on application.

■ YAMAHA

Natural Sound Systems Ltd,
10 Byron Road, Wealdstone,
Harrow, Middlesex HA3 7TL.
Tel: 01-863 8622.

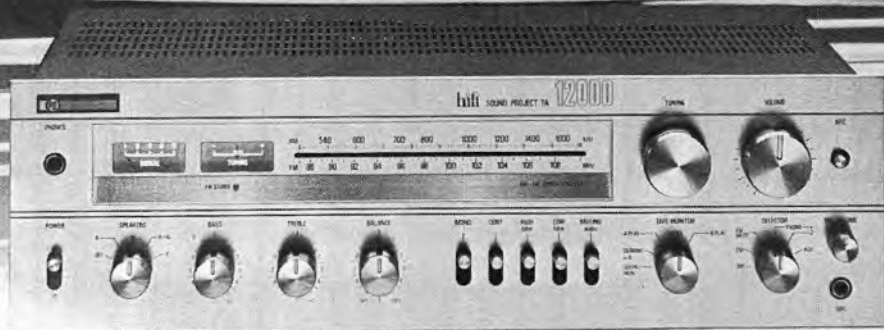
T-1

AM/FM stereo tuner. Range: 88-108MHz. Variable tuning. S/N ratio (stereo): 84dB. Aerial input impedance: 75 ohms, 300 ohms. Dimensions: $43.5 \times 9.7 \times 37.6\text{cm}$. Price: on application.

T-2

FM stereo tuner. Range: 87.6-108MHz. Variable tuning. S/N ratio (stereo): 85dB. Aerial input impedance: 75 ohms, 300 ohms. Dimensions: $43.5 \times 7 \times 34.9\text{cm}$. Price: on application.

Less than 0.05% distortion at 60 watts.



The Pye TA12000. With 65 watts RMS per channel output, distortion less than 0.05% at 60 watts.

And more besides.

Like a signal strength meter, centre tuning meter for precise station location and phase-locked loop stereo decoder. MOS field effect transistors give distortion-free FM reception and double-action

output protection circuits safeguard your speakers.

All this makes the TA12000 outstanding value for money.

And it's just one of twenty units in the Pye Hi-Fi Sound Project Range, to be seen and heard at your local dealer.

THE PYE HI-FI SOUND PROJECT.

You can rely on Pye 

Pye Limited 137 Ditton Walk Cambridge CB5 8DN

Receivers

* Indicates entry is illustrated

Abbreviations used in this section are given on page 5.

■ AIWA

Aiwa Sales and Service (UK) Ltd,
30 and 32 Concord Road,
Westwood Park Trading Estate,
London W3 0TH.
Tel: 01-993 1672.

AX 7400*

Amplifier

Power output: 25W + 25W into 8 ohms. FR: 20Hz-30kHz. Damping factor: 40, 20. Inputs: phono, DIN 1, DIN 2. Controls: three step bass and treble with turnover frequencies at 200Hz



Aiwa AX7600



Aiwa AX7400



Akai AA1135

and 400Hz for bass and 2.5kHz and 5kHz treble, loudness, AFC, high filter, speaker selection.

Tuner

Sensitivity FM: 2mV (IHF), sensitivity stereo: 250mV/m 48dB (S/N 20dB). Variable tuning, wavebands: FM/AM.

General:

Dimensions: 42 × 36 × 15cm. Price: £197.74 (plus VAT).

AX 7600*

Amplifier

40W + 40W into 8 ohms. FR: 10Hz-70kHz. Damping Factor: 50, 25. Inputs: phono, aux, DIN 1, DIN 2, Tape 1, Tape 2. Controls as above.

Tuner

Sensitivity FM: 1.8mV (IHF). Sensitivity AM: 250µV 48dB (S/N 20dB) Variable tuning with coverage: AM/FM.

General

Dimensions: 45 × 36.5 × 16.2cm. Price: £263.57 (plus VAT).

■ AKAI

Rank Audio Visual, Rank Hi-Fi, PO Box 70,
Great West Road, Brentford,
Middlesex TW8 8HR.
Tel: 01-568 9222.

AA 1135*

Amplifier

Output: 35W into 8 ohms. FR: 20Hz-20kHz. Damping factor: 30. Inputs: phono, aux, tape (2). Controls: power, speaker selector, bass, treble, tape monitor, selector, mode, loudness, FM mute, balance, volume.

Tuner

Sensitivity FM: 1.8mV. Sensitivity AM: 10mV. Variable tuning covering FM/AM.

General

Finish: wood veneer, brushed aluminium fascia. Dimensions: 48 × 15.5 × 34.5cm. Price: £196.62 (plus VAT).

AA1125

Amplifier output: 25W. FR: 20Hz-20kHz. THD: 0.3%. Tuner sensitivity: 1.9µV. Tape monitoring, comprehensive control features including tape monitoring for two tape machines, and facility for dubbing from one to the other. Loudness boost, FM mute, combined

*Indicates entry is illustrated

FM/AM tuning meters. Full details and price: on application.

AA1150

Amplifier output: 50W. FR: 20Hz-20kHz. THD: 0.1%. Tuner sensitivity: 1.7 μ V. Control facilities include 5 illuminated displays. Tape monitoring allows dubbing between two tape machines in both directions, illuminated meters for signal strength and FM stereo. FM mute switch adjustable for level. Separate left/right channel adjustment for bass and treble, loudness boost and high and low filters. Full details on application. Price: £268.84 (plus VAT).

■ **ALBA (RADIO AND TELEVISION) LTD**

Bull Lane, Edmonton, London N18 1SD.
Tel: 01-803 4451.

2125*

Amplifier

Output: 28W. FR: 20Hz-20kHz. Inputs: DIN, phono, tape \times 2. Controls: volume, treble, bass, balanced, speaker switching.

Tuner

Sensitivity: 1 μ V 75 ohms. Waveband coverage: 87.5-108MHz. Variable tuning.

General

Dimensions: 43.6 \times 27.8 \times 13cm. Finish: teak with matt silver front. No rec. retail price.

2150

Amplifier

Power Output: 50W. FR: 20Hz-20kHz. Inputs: DIN, phono, tape \times 2. Controls: volume, loudness, treble, bass, balance, speaker switching.

Tuner

Sensitivity: 1 μ V 75 ohms. Waveband coverage: 87.5-108MHz. Variable tuning.

General

Dimensions: 43.6 \times 27.8 \times 13cm. Finish: teak with matt silver front. No rec. retail price.

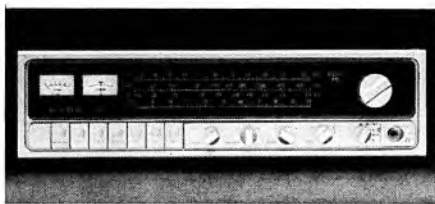
■ **AMSTRAD**

Amstrad Consumer Electronics Ltd,
1-7 Garman Road, London N17 0UF.
Tel: 01-801 4431.

5050*

Amplifier

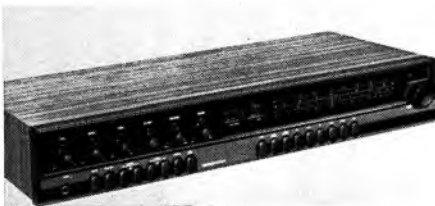
Power output: 25W. FR: 15Hz-30kHz. Damping factor: 72. Inputs: phono, aux, tape



Alba 2125



Amstrad EX222



Amstrad 5050



Amstrad EX333

monitor. Controls: bass, middle, treble, balance, volume, panorama, quietness-loudness.

Tuner

Sensitivity FM: 1.8 μ V. Wavebands coverage: FM, L, M. Variable tuning.

General

Dimensions: 66 \times 36 \times 11cm. Price: approx £117.40 (plus VAT).

EX 333***Amplifier**

Power output: 35W. FR: 15Hz-30kHz \pm 3dB. Inputs: mag, aux, tape mono. Controls: volume, bass, balance, treble, rumble filter, scratch filter, meter range, power on/off, mute, AFC, input select, tune, loudness, mono/stereo.

Tuner

Sensitivity FM: 1.7 μ V. Sensitivity AM: 300 μ V. Wavebands: FM, L, M. Variable tuning.

General

Dimensions: 42 \times 35 \times 14.5cm. Finish: brush grained aluminium front with black finish, steel casing. Price: £123.38 (plus VAT).

EX 222***Amplifier**

Output: 25W. FR: 15Hz-30kHz \pm 3dB. Inputs: tape, phono, aux, bass and treble controls.

Tuner

Sensitivity (FM): 2.5 μ V 30dB. Sensitivity AM: 320 μ V. Variable tuning.

General

Dimensions: 42 \times 34 \times 14.5cm. Finish: brushed aluminium, silver, black. Price: £90.04 (plus VAT).

■ ARMSTRONG AUDIO LTD

Walters Road, London N7 0R7.

Tel: 01-607 3213.

625(FM)**Amplifier**

Power output: 40W into 8 ohms. THD: 0.08% at rated output. FR: 20-20,000Hz. Power bandwidth: 25-45,000Hz. Damping factor: better than 50. Inputs: Disc (2), tape-aux. Tape output (DIN): 0-250mV.

Tuner

Sensitivity FM: 1.5 μ V IHF. Capture ratio: 1.75dB. Image rejection FM: 50dB. IF rejection FM: 100dB. Stereo separation: 40dB at 1kHz. Pilot tone rejection: 65dB. Pilot harmonic

rejection: 65dB. THD stereo: <0.2%. Waveband coverage: 87.5-108MHz.

General

Dimensions: 50 \times 28.5 \times 8.2cm. Teak or rosewood finish. Variable tuning and 6 presets. Price: £215.00 (inc. VAT).

626(AM-FM)*

AM-FM versions of 625 with similar specifications. 3 AM and 3 FM presets and variable tuning. Price: £237.00 (inc. VAT).

■ AUDIO PRO

Audio Pro (Hi-Fi) Ltd, Brook House, Crewe Road, Wheelock, Sandbach, Cheshire.

Tel: Sandbach (093 67) 7520.

TA 150

Microprocessor controlled receiver.

Amplifier

Output: 85W. FR: 10Hz-150kHz. Damping factor: >60 at 8 ohms.

Tuner

Wavebands: 87.5-108kHz. Sensitivity: <1.4 μ V, 75 ohms DIN at 40kHz deviation and 30dB S/N. AM range: 520-1640kHz.

General

Dimensions: 49.5 \times 26 \times 11.5cm. Finish: black. Price: on application.

■ BEOMASTER

Bang & Olufsen (UK) Ltd, Eastbrook Road, Gloucester GL4 7DE. Tel: Gloucester (0452) 21591.



Audio Pro T150



Armstrong 626

*Indicates entry is illustrated



Beomaster 1500



Beomaster 2200



Beomaster 4400

Beomaster 1902

Stereo FM receiver featuring low profile look with touch operation of programme selection and volume control. Amplifier: Power: 2 x 30W per channel. THD: less than 0.13%. Damping factor: better than 70 into 4 ohms. Inputs: sockets for magnetic pickup and tape recorder. FR: 20Hz-40kHz ± 1.5 dB. Features: Three position pre-set level for volume control and visual indication of volume level, programme source, tone controls, tuning balance, stereo/mono and standby. Finish: matt black and anodised aluminium with side panels in teak or rosewood. Oak and white finishes to special order. Dimensions: 62 x 25 x 6cm. Price: £225.00 (plus VAT).

Beomaster 2402

Same as 1900 but with cordless remote control 'commander'. Price: £280.00 (plus VAT).

1500*

Amplifier output: 25W into 4 ohms. FR: 20Hz-35kHz. Damping Factor: >50. Inputs: gram, tape. Controls: volume, treble, bass, balance. Tuner sensitivity FM: 25 μ V. AM Sensitivity: <90 μ V. Variable tuning with four FM presets. Dimensions: 50 x 9 x 25cm. Teak or rosewood finish. Price £165.00 (plus VAT).

2200*

Amplifier output: 2 x 40W. FR: 20Hz-20kHz. Damping factor: >30. Inputs: gram, tape. Controls: volume, bass, balance, treble. Tuner Sensitivity FM: <20 μ V. AM sensitivity: <100 μ V. Variable tuning and 5 FM presets. Wavebands: FM, L, M. Dimensions: 66 x 35 x 13.6cm. Teak or rosewood finish. Price: £250.00 (plus VAT).

4400*

Amplifier output: 2 x 75W. FR: 20Hz-35kHz ± 1.5 dB. Damping factor: >65dB. Inputs: tape 1, tape 2. Controls: linear switch, hi filter, lo-filter, ambio-switch. Sensitivity FM: <20 μ V. Variable tuning and 6 presets. Waveband coverage: 87.5-108MHz. AFC. Dimensions: 57.5 x 28 x 9.5cm. Teak or rosewood finish. Price: £350.00 (plus VAT).

■ EAGLE INTERNATIONAL

Precision Centre, Heather Park Drive,
Wembley HA0 1SU, Middlesex.
Tel: 01-902 8832.

R7200

Amplifier output: 30W. Controls: volume, balance, bass, treble, speakers, input, tuning, loudness, muting, mono/stereo, tape monitor, de-emphasis 25/50 (rear). Tuner covering: FM/AM with variable tuning. Dimensions: 45.6 x 32 x 31cm. Finish: brushed metal/wood finish sleeve. Price: £106.00 (plus VAT).

R7400

Amplifier

Output: 40 + 40W. FR: 20Hz-35kHz. Inputs: phono, aux, tape. Controls: volume, bass, treble, balance, speaker A/B/off/both, loudness, FM muting, mode, tape source/monitor, selector, wavebands, phono, aux, tuning, de-emphasis (rear panel).

Tuner

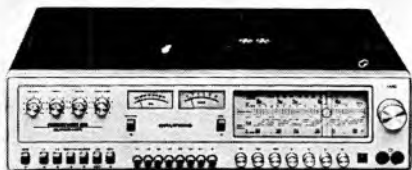
Sensitivity FM: 2 μ V for 30dB quieting. Sensitivity AM: 250 μ V for 20dB quieting. Waveband coverage: FM, L, M. Variable tuning.

General

Dimensions: 43 x 29 x 13.5cm. Finish: brushed metal/wood effect. Price: to be announced.

■ GOODMAN'S LOUDSPEAKERS LTD

Downley Road, Havant, Hants PO9 2NL.
Tel: Havant (0705) 486344.



Grundig 25



Grundig R200

Module 130**Amplifier**

Amplifier output: 65 + 65W into 4 ohms. FR: 8Hz-70kHz. Damping factor: 44. Inputs: mag and ceramic pickup, aux, mic. Controls: 5 sliders giving ± 10 dB at 100, 400, 900, 4000 and 10,000. Mic gain control and all usual selectors.

Tuner

Sensitivity FM: $1.6\mu\text{V}$ (for 30dB S/N). Sensitivity AM: $250\mu\text{V}$ (for 20dB S/N). FM/MW. Manual tuning plus five presets on FM.

General

Dimensions: 53.6 \times 38 \times 15.5cm. Teak effect finish. No rec. retail price.

■ GRUNDIG

Grundig (Great Britain) Ltd, Hi-Fi Division, Newlands Park, London SE26 5NQ.
Tel: 01-659 2468.

Receiver 25***Amplifier Section**

Power output: 30W. FR: 20Hz-20kHz. Damping factor: 27. Controls: volume, balance, bass, treble, muting, AFC, monitor, MPX, loudness control, noise filter (-3 dB at 7kHz).

Tuner Section

Sensitivity FM: $1.5\mu\text{V}$ (300 ohms) $0.75\mu\text{V}$ (75 ohms). Sensitivity AM: $4-15\mu\text{V}$. Waveband coverage: 87.5-108MHz, 510-1620kHz, 145-350kHz, 5.4-16.2MHz. Variable tuning with 7 preset VHF push buttons.

General

Dimensions: 54 \times 15 \times 32cm. No rec. retail price.

Receiver 35**Amplifier**

Power output: 30W. FR: 20Hz-20,000Hz. Damping factor: 27. Controls: volume, balance, bass, treble, middle tone control, muting, AFC, monitor, MPX, noise filter, loudness.

Tuner

Sensitivity: $1.4\mu\text{V}$ (300 ohms) $0.70\mu\text{V}$ (75 ohms). Sensitivity (AM) $615\mu\text{V}$. Waveband coverage: 87.5-108MHz, 510-1620kHz. Variable tuning with 8 preset VHF touch sensors.

General

Dimensions: 54 \times 15 \times 32cm. No rec. retail price.

Receiver 100

Output: 15W. Waveband coverage: VHF, L, M, S. 8 touch sensors on VHF. No rec. retail price.

Receiver 45

Output: 50W. FR: 20Hz-20kHz. Tuner sensitivity: $1\mu\text{V}$. VHF/M wavebands. 8 touch sensors on VHF. Dimensions: 54 \times 15 \times 32cm. No rec. retail price.

R 48**Amplifier**

Output: 50W into 4 ohms. FR: 20Hz-20kHz. Damping factor: 33. Inputs: PU, Tape 1, Tape 2, monitor. Controls: volume, balance, bass, mid, treble, high filter, loudness, monitor. Digital frequency display.

Tuner

Sensitivity (FM): $1.2\mu\text{V}$ (300 ohms) DIN, sensitivity: $6\mu\text{V}$. Waveband coverage: 87.5-108MHz, 510-1620kHz. 7 presets plus MPX, AFC, Mute.

General

Dimensions: 54 \times 32 \times 15cm. Finish: metallic brown. No rec. retail price.

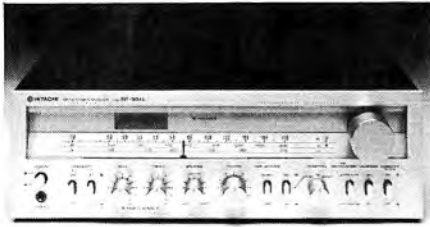
R 200***Amplifier**

Output: 25W into 4 ohms. FR: 20Hz-20kHz. Damping factor: 31. Inputs: PU, tape. Controls: volume, bass, balance, treble, loudness, high filter.

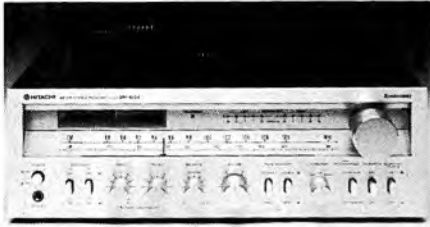
Tuner

Sensitivity FM: $1.8\mu\text{V}$ Sensitivity (AM): $12\mu\text{V}$

*Indicates entry is illustrated



Hitachi SR304



Hitachi SR604

(LW). Waveband coverage: 87.5-108MHz, 570-1620kHz, 145-320kHz. 7 presets plus MPX, AFC, Muting.

General

Dimensions: 57 × 33 × 11cm. Finish: metallic silver. No rec. retail price.

■ HARMAN KARDON

Tannoy, St. Johns Road, Tylers Green, High Wycombe, Bucks HP10 8HR.
Tel: Penn (049 481) 5221.

340

AM/FM stereo receiver. Amplifier output: 20W per channel into 8 ohms. THD: 0.08%. FR: 3Hz-100kHz. Damping factor: less than 30. Inputs: phono 47K. Dimensions: 40.4 × 12.5 × 31.1cm. Price: £212.44 (plus VAT).

450

AM/FM stereo receiver with output: 20 + 20W into 8 ohms. THD: 0.04%. FR: 3Hz-140kHz. Inputs phono: 47K. Dimensions: 42.6 × 14 × 32.4cm. Price: £265.87 (plus VAT).

560

AM/FM stereo receiver with output of 40 + 40W into 8 ohms. THD: 0.03%. Damping factor: less than 30 at 8 ohms. Inputs: phono: 47K. Dimensions: 42.6 × 14 × 32.4cm. Price: £310.22 (plus VAT).

670

AM/FM stereo receiver with output power 60

+ 60W. FR: 3Hz-140kHz. Damping factor: less than 30. Inputs: phono 47K. Dimensions: 47.6 × 15.9 × 36cm. Price: £443.56 (plus VAT).

Citation

AM/FM receiver with output power 80 + 80W. Details on application. Price: £1,154.67 (plus VAT).

■ HITACHI SALES (UK) LTD

Hitachi House, Station Road, Hayes, UB3 4DR.
Tel: 01-848 8787.

SR 204

Output: 15W. FR: 20Hz-20kHz. Low distortion power IC, LED signal indicator. Tuner covers FM, M. FM sensitivity: 2.5µV. Dimensions: 43.5 × 11 × 35cm. Price: on application.

SR 304*

Output: 20W. FR: 20Hz-20kHz. All stages direct coupled Darlington OCL, PLL IC, FM muting, subsonic filter. Sensitivity FM: 1.8µV Sensitivity AM: 300µV. Wavebands: FM, L, M. Dimensions: 43.5 × 14.4 × 35cm. Price: on application.

SR 504

Output: 30W. Other details as 304.

SR 604*

Output: 35W. FR: 20Hz-20kHz. Dyna harmony circuit. All stages direct coupled, Darlington OCL, PLL. Sensitivity FM: 1.7µV Sensitivity AM: 300µV. Wavebands: FM, M. Dimensions: 43.5 × 14.4 × 35cm. Price: on application.

SR 804

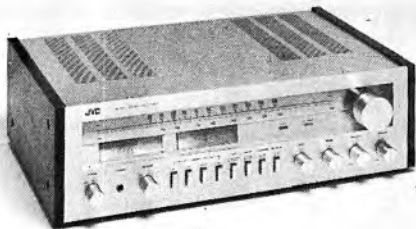
Output: 50W. FR: 20Hz-20kHz. Dynaharmony receiver PLL IC, FM mute, high and low filter. Sensitivity FM: 1.64µV. Sensitivity AM: 370µV. FM, M. General: 46 × 14.5 × 36cm. Price on application.

■ ITT

ITT Consumer Products (UK) Ltd, Chester Hall Lane, Basildon, Essex SS14 3BW.
Tel: Basildon (0268) 3040.

8033

Receiver with output: 60W ±1dB into 4 ohms. FR: 20Hz-20kHz ±0.5dB. Damping factor: 30. Inputs: magnetic, tape, aux. Dimensions: 48 × 35 × 14cm. Price: £329.00 (inc. VAT):



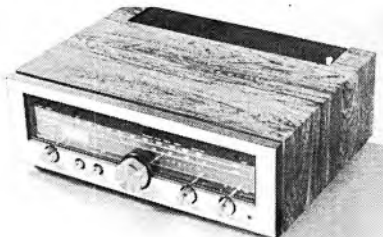
JVC JRS81



Luxman R1070



Lux R1030



Lux R1040

8031

Receiver with output 22W into 4 ohms. FR: 20Hz-20kHz ± 0.5 dB. Damping factor: 10. Inputs: magnetic, tape, aux. Dimensions: 48 x 35 x 14cm. Price: £178.00 (inc. VAT).

8032

Receiver with output: 40W into 4ohms. FR: 20Hz-20kHz ± 0.5 dB. Damping factor: 30. Inputs: magnetic, tape, aux. Dimensions: 48 x 35 x 14cm. Price: £277.00 (inc. VAT).

■ JVC

JVC (UK) Ltd, Eldonwell Trading Estate, Staples Corner, 6-8 Priestly Way, London NW2 7AF.
Tel: 01-450 2621.

JR-S81W*

FM/AM stereo receiver with output of 38W per channel into 8 ohms. FR: 20Hz-20kHz. Damping factor: 40. Inputs: phono, aux/tape play. Sensitivity FM: 2.2 μ V. Sensitivity AM: 300 μ V, 30 μ V. Waveband coverage: FM, M. Variable tuning. Dimensions: 15.1 x 49.8 x 35cm. Price: on application.

JR-S61W

FM/AM stereo receiver with output of 20W per channel into 8 ohms. FR: 20Hz-20kHz. Damping factor: 40. Inputs: phono, aux/tape play. Sensitivity FM: 2.2 μ V. Sensitivity AM: 300 μ V, 500 μ V. Waveband coverage: FM, L, M. Variable tuning. Dimensions: 14.9 x 44.4 x 34.8cm. Price: on application.

Integrated Receivers

JR-S501, JR-S401, JR-S301, JR-S301, JR-S201L details on request.

■ LUX

Howland-West, 3-5 Eden Grove, London N7 8EQ.
Tel: 01-609 0293.

F 1050**Amplifier**

Output: 55W. FR: 10Hz-50kHz. Damping factor: 60. Inputs: phono, aux, monitor. Controls: power switch, volume, tuning, bass, treble, speaker switch, high/low filters, tape selector, tape-monitor, tape dubbing, FM muting, loudness switch, FM Dolby switch, LED.

Tuner

FM sensitivity: 4.6 μ V. AM Sensitivity: 15 μ V. Variable tuning on FM/AM wavebands.

General

Dimensions: 49 x 35.5 x 18cm. Finish: rose-wood. Price: £460.00 (plus VAT).

R 1120**Amplifier**

Output: 120W. FR: 15Hz-70kHz ± 1 dB. Inputs: phono 1, phono 2, aux, monitor. Controls as R 1050 plus subsonic filter, input selector.

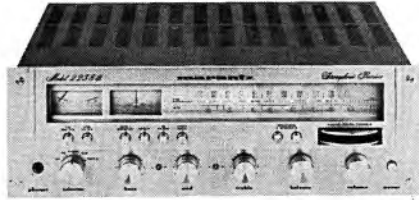
Tuner

Sensitivity FM: 4.0 μ V. Sensitivity AM: 200 μ V/m. FM/AM wavebands.

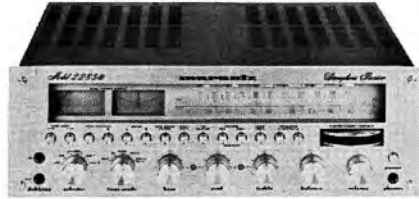
*Indicates entry is illustrated



Marantz 1530



Marantz 2238B



Marantz 2285B



Marantz 2600

General

Dimensions: 49 × 41.5 × 18cm. Finish: rosewood. Price: £645.00 (plus VAT).

R 1030*

Amplifier

Output: 30W. FR: 10Hz-40kHz. Damping factor: 40. Inputs: aux, phono, monitor, power switch, volume, bass, treble, tunings input selector, tape monitor, speaker switch, high/low filters, muting switch.

Tuner

Sensitivity FM: 4.8µV. Sensitivity AM: 15µV. FM/AM waveband coverage. Variable tuning.

General

Dimensions: 50 × 31.5 × 16.6cm. Finish: rosewood. Price: £250.00 (plus VAT).

R 1040*

Amplifier

Output: 40W. FR: 10Hz-50kHz ±1dB. Damping factor: 60. Inputs: phono, aux, monitor. Controls: power switch, volume, bass, treble, tape monitor, tuner, input selector, speaker switch, high and low filters, muting switch.

Tuner

Sensitivity FM: 4.8µV. Sensitivity AM: 15µV. Variable tuning on AM/FM.

General

Dimensions: 48.5 × 35.3 × 17cm. Finish: rosewood. Price: £355.00 (plus VAT).

Luxman R-1070

Amplifier

Output: 75W. FR: 15Hz-100kHz. Inputs: phono 1/2, monitor, aux. Controls: power switch, volume, treble, loudness, bass, speaker switch, tuning, FM muting, subsonic Hi-cut filters, tape selector, tape monitor, tape dubbing.

Tuner

Sensitivity FM: 4.0µV. Sensitivity (AM): 250µV/M. Waveband coverage: FM, AM. Variable tuning.

General

Dimensions: 49 × 40.5 × 18cm. Rosewood finish. Price: £540.00 (plus VAT).

■ **MARANTZ**

Audio UK Ltd, Debmarc House, 193 London Road, Staines, Middlesex. Tel: Staines (81) 50132.

1515L

Amplifier

Output: 26W FR: 18Hz-30kHz. Damping factor: 28. Inputs: phono, aux × 2 tapes. Controls: bass and treble, speaker selector, loudness mono filter, FM muting.

Tuner

Sensitivity FM: 1.7µV. Sensitivity AM: 30µV. Waveband coverage: FM, L, M. Variable tuning.

General

Dimensions: 44 × 35.8 × 13.7cm. Finish:

aluminium fascia—black case. Price: £106.50 (plus VAT).

1530*

As 1515 except that output is 48W and Damping factor: 30. Inputs: phono, aux × 2, tape × 2. Price: £168.75 (plus VAT).

1550L**Amplifier**

Output: 64W per channel. FR: 18Hz-30kHz. Damping factor: 40. Inputs: phono, aux × 2, tape × 2. Low filter and tape monitor, bass and treble controls, speaker selector, loudness mono filter, FM muting.

Tuner

Sensitivity FM: 1.7 μ V, Sensitivity AM: 30 μ V. Waveband coverage: FM, L, M. Variable tuning.

General

Dimensions: 44 × 35.8 × 13.7cm. Finish: Aluminium fascia black case. Price: £239.80 (plus VAT).

2226 BL**Amplifier**

Power Output: 44W. FR: 18Hz-35kHz. Damping factor: 30. Inputs: phono, aux, tape × 2. Controls: FM muting, "gyro" touch tuning, bass mid and treble, low and high filters, speaker selector.

Tuner

Sensitivity FM: 1.6 μ V. Sensitivity AM: 25 μ V. Waveband coverage: FM, L, M. Variable tuning.

General

Dimensions: 44 × 36.5 × 14.6cm. Finish: aluminium fascia black case. Price: £173.20 (plus VAT).

2238 BL***Amplifier**

Power Output: 52W per channel. FR: 10Hz-40kHz. Damping factor: 50. Inputs: phono, aux and tape × 2. Controls: gyro touch tuning, bass, mid and treble controls, low and high filters, filter selection, FM muting.

Tuner

Sensitivity FM: 1.6 μ V. Sensitivity AM: 25 μ V. Waveband coverage: FM, L, M. Variable tuning.

General

Dimensions: 44 × 36.5 × 14.6cm. Finish: aluminium fascia black case. Price: £264.75 (plus VAT).

2252B

Similar to 2238 except power output: 70W per channel and sensitivity (FM) 1.5 μ V. Price: £328.75 (plus VAT).

2265B**Amplifier**

Output: 85W per channel. FR: 10Hz-40kHz. Damping factor: 40. Inputs: phono × 2, aux × 2. Controls: tape copy, "gyro" touch tuning, bass, mid and treble controls, low and high filters. FM muting.

Tuner

Sensitivity FM: 1.5 μ V. Sensitivity AM: 20 μ V. Waveband coverage: FM, M. Variable tuning.

General

Dimensions: 44 × 36.5 × 14.6cm. Finish: aluminium fascia with black case. Price: £390.00 (plus VAT).

2285B*

Power Output: 110W. Similar to 2265B except: output 110W. MPX noise filter, multipath indicator. Sensitivity FM 1.3 μ V. Price: £443.40 (plus VAT).

2330B**Amplifier**

Output: 143W per channel. FR: 10Hz-60kHz. Damping factor: 45. "Gyro" touch tuning. Controls: bass, mid, treble with variable turn-over, MPX noise filter, multipath indicator, plus facilities of 2226B.

Tuner

Sensitivity FM: 1.3 μ V. Sensitivity AM: 20 μ V. Waveband coverage: FM, M. Variable tuning.

General

Dimensions: 49 × 38.6 × 14.6cm. Finish: aluminium fascia with black case. Price: £557.00 (plus VAT).

2385

Output: 200W. FR: 10Hz-60kHz. Damping factor: 40. Tuner sensitivity AM 15 μ V. Other details as 2330B. Price: £862.00 (plus VAT).

2500**Amplifier**

Output: 300W per channel. FR: 10Hz-60kHz. Damping factor: 40. Controls: oscilloscope tuning display and facilities of 2285B.

Tuner

Sensitivity FM: 1.2 μ V. Sensitivity AM: 15 μ V.

*Indicates entry is illustrated

Waveband coverage: FM, M. Variable tuning.

General

Dimensions: 49 × 43.8 × 17.7cm. Finish: aluminium fascia with black case. Price: £1,262.00 (plus VAT).



Optonica 2121

2600*

Similar to 2500 except: Output: 340W. Price: £1,357.00 (plus VAT).

■ MBO

MBO Electronics (UK) Ltd,
Gelderd Road, Leeds LS12 6NB.
Tel: Leeds (0532) 791261.

RD 2000

Stereo receiver. Four wave bands. Designed at 20 deg. angle. Finish: black. Price: £206.00. CD2000 stereo cassette deck with auto programme detect. Price: £165.00.

■ NAKAMICHI

Natural Sound Systems Ltd,
10 Byron Road, Wealdstone, Harrow,
Middlesex HA3 2TL.
Tel: 01-863 8622.

530

Amplifier

Output: 55W per channel. FR: 10Hz-20kHz. Damping factor: greater than 80. Inputs: 1V 100K.

Tuner

Sensitivity: 2.4µV at 300 ohms (12.8 dBf). Waveband coverage: 88-108MHz.

General

Dimensions: 50 × 13 × 35cm. Finish: black. Price: £443.56 (plus VAT).

730

Amplifier

Output: 105W per channel. FR: 5Hz-20kHz. THD: 0.02%. Damping factor: greater than 100. 1kHz, 8 ohms. Inputs: phono, aux, tape, main amp.

Tuner

Sensitivity: 2.2µV at 300 ohms (12dBf) for 30dB quieting. Wavebands: 88-108MHz.

General

Dimensions: 50 × 9 × 37cm. Price: £799.90 (plus VAT).

630

FM tuner pre-amplifier. FM stereo distortion: less than 0.08% (40dB selectivity, 1kHz).



Optonica 3131

Selectivity: better than 40dB (Normal) better than 80dB (Narrow). Details on request. Price: £488.40 (plus VAT).

■ OPTONICA

Sharp Electronics (UK) Ltd,
107 Hulme Lane, Manchester M10 8HL.
Tel: 061-205 7321.

SA2121C*

Amplifier

RMS power output 30W per channel. Damping factor: 20. Inputs: phono 2.5mV 50K, tape × 2 150mV 50K, aux 150mV 50K. Controls: volume, bass, treble, balance, mute (audio), low cut, stereo/mono, loudness, tape dub, select, wavebands.

Tuner Section

Sensitivity FM: 1.8µV. Sensitivity AM: 400µV. Wavebands: FM, L, M. Variable tuning.

General

Dimensions: 55 × 39 × 14cm. Price: £204.35 (plus VAT).

SA3131C*

RMS power output 40W per channel. Damping factor: 20. All other details as SA2121C. Price: £266.57 (plus VAT).

SA510/N

Amplifier

RMS power output 30W per channel. FR: 10Hz-55K pre-amp. Damping factor: 40. Inputs: phono 2.5mV 47K, aux 150mV 47K, tape (2) 150mV 47K. Controls: volume, bass, treble, balance, tone, select, tape, loudness.

Tuner

Sensitivity FM: 5.6µV. Sensitivity AM: 450µV.

Waveband coverage: FM, AM. Variable tuning. LED tuning and signal strength meters.

General

Dimensions: 44 × 29 × 14cm. Finish: wood.
Price: £132.44 (plus VAT).

■ PANASONIC

National Panasonic (UK) Ltd,
107-109 Whitby Road, Slough SL1 3DA.
Tel: Slough (75) 27516.

SA 80L*

Amplifier

Output: 18W per channel. FR: 30Hz-15kHz
±1dB phono, 10Hz-25kHz ±1dB aux. THD:
0.3%. Damping factor: 16. Inputs: phono
1.5mV 47K, aux 150mV 33K, tape 150mV 33K.

Tuner

Band coverage: FM, L, M. Sensitivity (FM):
2.0µV (IHF 58). S/N ratio (stereo): 65dB (IHF).

General

Loudness, tape monitor, connection facilities
for two sets of loudspeakers. Price: £115.51
(plus VAT).

■ PHILIPS ELECTRICAL LTD

City House, 420 London Road,
Croydon, Surrey.
Tel: 01-689 2166.

AH 682*

Output: 2 × 2W. Details on application. Price:
£135.60 approx.

AH 683*

Output: 2 × 35W. Details on application.
Price: £172.80 approx.

AH 684*

Output: 2 × 45W. Details on application.
Price: £220.80 approx.

AH 686*

Output: 2 × 65W. Details on application.
Price: £266.40 approx.



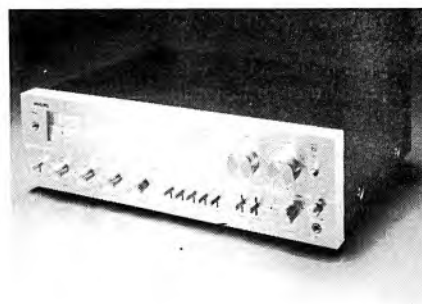
Philips 662



Philips 683



Philips 684



Philips 686



Panasonic SA80

AH 794

Output: 2 × 40W. Features: switchable high, low and loudness filters. Audio mute switch, source/tape monitoring with 3-head recorders. 5FM presets. LED indicator. FR: 20Hz-20kHz ±1dB. Controls: bass, treble, loudness. Damping factor: 40. Inputs: phono, tape A, tape B, monitor. FM, L, M with FM sensitivity: 1μV. Dimensions: 56.8 × 14.2 × 36cm. Price: £172.80 approx.



Pioneer SX590

■ PIONEER

Pioneer High Fidelity (GB) Ltd, Shriro House, The Ridgeway, Iver, Bucks SL0 9JL. Tel: Iver 652222.

SX 590*

Amplifier

Output: 20W. Damping factor: 25. Inputs: phono × 1, 2.5mV 50K, tape × 1 150mV 50K, aux × 1 150mV 50K. Controls: bass, treble, loudness, mute, tape monitor, speakers A-B balance.



Pioneer SX790

Tuner

Sensitivity: (FM) 1.9μV. Sensitivity (AM): 15μV. Waveband coverage: 88-108MHz, 55-1600kHz. Variable tuning.



Pioneer SX1980

General

Dimensions: 43.5 × 31.4 × 14.4cm. Finish: walnut veneer-side panels, black steel top, brushed aluminium front panel. Price on application.

LX 590

As 590 but Output: 30W.

SX790*

Amplifier

Output: 45W per channel. Damping factor: 30. Inputs: phono × 1 1.5mV 50K, tape × 2 150mV 50K, aux × 1 150mV 50K. Controls: bass, treble, loudness, muting, low filter, duplicate, balance, speakers A + B.

Tuner

Sensitivity FM: 1.8μV. Sensitivity AM: 15μV. Waveband coverage: 88-108MHz, 55-1600kHz. Variable tuning.

General

Dimensions: 48 × 32 × 14cm. Finish: walnut veneer top side panels, brushed aluminium front panel. Price: on application.

SX690

Amplifier: Output 30in. Damping factors: 25.

Other details as 790. Tuner: sensitivity FM 1.9μV. Other details as 790. General: Dimensions: 43.5 × 31.4 × 14.4cm. Finish as 790. Price: on application.

SX 980

Amplifier

Output: 80W. FR: 5Hz-100kHz. Damping factor: 30. Inputs: phono × 2 2.5mV 50K, tape × 2 150mV 50K, aux 1 150mV 50K, mic 1 7.5mV 50K. Controls: bass, treble, loudness, muting, duplicate, filters, balance, speakers A + B.

Tuner

Sensitivity FM: 1.7μV. Sensitivity AM: 15μV. Waveband coverage: 88-108MHz, 55-1600kHz. Variable tuning.

General

Dimensions: 52.6 × 44 × 17.6cm. Finish: walnut veneer, brushed aluminium front panel. Price: on application.

SC 890

Similar to 980 except: Output: 60W. Sensitivity FM: $1.8\mu\text{V}$.

SX 1980***Amplifier**

Output: 270W. FR: 5Hz-100kHz. Damping factor: 40. Inputs: phono \times 2 2.5mV 50K, tape \times 2 150mV 50K, aux \times 1 150mV 50K, mic \times 1 7.5mV 50K. Controls: bass, treble, loudness, muting, high/low filters, tape duplicate, balance, switchable cartridge load and speakers A + B and C.

Tuner

Sensitivity FM: $1.5\mu\text{V}$. Sensitivity AM: $15\mu\text{V}$. Waveband coverage: 88-108MHz, 55-1600kHz. Variable tuning, Quartz lock.

General

Dimensions: 56 \times 49.7 \times 21.1cm. Finish: veneered walnut, brushed aluminium front panel. Price: on application.

SX 1080**Amplifier**

Output: 120W. Damping factor: 30. Other details as 1980.

Tuner

Details as 1980.

General

Dimensions: 52.6 \times 44 \times 17.6cm. Finish: walnut veneer, brushed aluminium front panel. Price: on application.

■ PYE

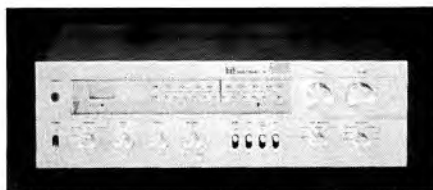
Pye Ltd, 137 Ditton Walk,
Cambridge CB5 8QD.
Tel: Teversham (022 05) 2781.

TA 12000*

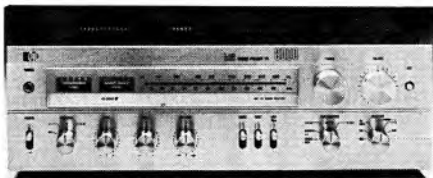
AM/FM stereo receiver. Amplifier section: output 65W per channel. FR: 20Hz-20,000Hz $+0.5$, -1.5dB . Inputs: phono (1, 2), mic, aux, tape/monitor (A, B). Controls include: contour, bass, treble, low and high filter, audio muting. Output: speakers, headphone. FM tuner: Sensitivity; $1.7\mu\text{V}$, waveband 87.5-108MHz. AM tuner sensitivity: $60\mu\text{V}$. Wave range 520-1605kHz. General: Dimensions: 48 \times 15 \times 38cm. Price: £301.33 (plus VAT).

TA 8000*

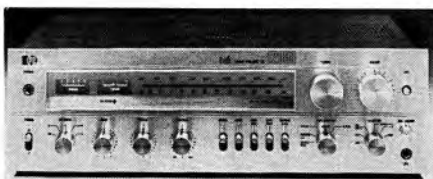
AM/FM stereo receiver. Amplifier section: output 45W per channel. FR: 20Hz-20,000Hz $+0.5$, -1.5dB . Inputs: phono (1, 2), aux, tape/monitor (A, B). FM tuner: Sensitivity: $2\mu\text{V}$.



Pye TA 4000



Pye TA 8000



Pye TA 12000

Wave range 87.5-108MHz. AM tuner: Sensitivity $68\mu\text{V}$. Range: 520-1605kHz. General: Dimensions: 48 \times 15 \times 38cm. Price: £248.00 (plus VAT).

TA 6000

AM/FM stereo receiver. Amplifier section: output 34W per channel. FR: 20Hz-20,000Hz $+0.5$, -1.5dB . Inputs: phono (1, 2), aux, tape/monitor (A, B), FM tuner: Sensitivity: $2\mu\text{V}$. Wave range: 87.5-108MHz. AM tuner: Sensitivity: $68\mu\text{V}$. General: Dimensions: 48 \times 15 \times 38cm. Price: £194.67 (plus VAT).

TA 4000*

AM/FM stereo receiver. Wavebands: FM, L, M. Output: 20W per channel; FR: 30Hz-20,000Hz THD: 1%. Inputs: phono (1, 2) aux, tape/monitor (A, B). FM tuner: wave range 87.5-108MHz. Sensitivity: $25\mu\text{M}$. AM Tuner: $90\mu\text{V}$, wave range 520-1605kHz. General: Dimensions: 48 \times 15 \times 38cm. Price: £141.33 (plus VAT).

*Indicates entry is illustrated

■ REALISTIC

Tandy Corporation (Branch UK),
Bilston Road, Wednesbury,
West Midlands WS10 7JN.
Tel: 021-556 6101.

STA 2000*

Amplifier

Output: 75W. FR: 15-25,000Hz ± 2 dB. S/N ratio: aux/tape 75dB phono 70dB. Inputs: aux/tape 140mV phono 2.2mV. Controls: selector, 2 aux, dual concentric bass, treble; balance, 2 tape monitor two-way dubbing. Hi MPX filter, FM mute, mono/stereo, loudness, 20dB alternator, A/B speakers.

Tuner

FM sensitivity (IHF) 1.7 μ V. THD: 0.3%. AM sensitivity: 10 μ V for 20dB S/N AM/FM variable.

General

Dimensions: 49 × 42.1 × 16.5cm. Finish: walnut veneer trim. Price: £349.95 (inc. VAT).

STA7

Amplifier

Output 5w/channel. FR: 15-30,000Hz ± 2 dB. S/N ratio: aux/tape 65dB phono 60dB. Inputs: aux/tape 160mV phono 2.2mV. Controls: selector, bass, treble, balance, volume, tape monitor, mono/stereo, speakers A/B, loudness.

Tuner

FM sensitivity (IHF) 2.2 μ V. THD: 0.6%. AM sensitivity: 10 μ V for 20dB S/N AM/FM, variable tuning.

General

Size: 42 × 30 × 8.9cm. Finish: Matt black. Price: £119.95 (inc. VAT).

STA 64B*

Amplifier

Output: 22W. FR: 15-30,000Hz ± 2 dB. S/N ratio: aux 70dB phono 65dB. Inputs: 150mV aux 2.5mV phono. Controls: selector, bass, treble, balance, volume, speakers A/B/rev, loudness, tape mono, mono/stereo.

Tuner

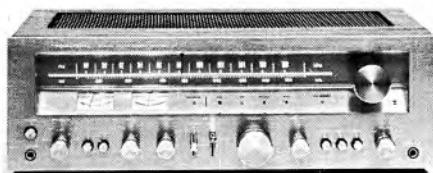
FM sensitivity (IHF). 2.2 μ V (6.2dBf). THD: 0.6%. AM sensitivity. 10 μ V for 20dB S/N. Variable tuning.

General

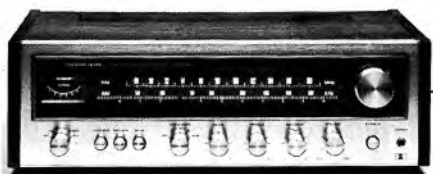
Dimension: 47 × 33.5 × 13.3cm. Finish: walnut veneer cabinet. Price: £179.95 (inc. VAT).



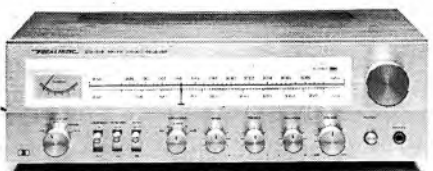
Realistic STA78L



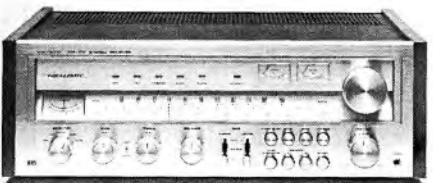
Realistic STA95



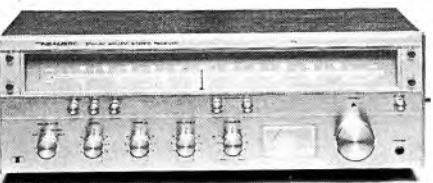
Realistic STA52B



Realistic STA64B



Realistic STA2000



Realistic STA42

STA 52B***Amplifier Section**

Output: 22W FR: 15-25,000Hz ± 2 dB. S/N ratio: aux/tape 68dB phono 65dB. Inputs: 150mV aux/tape in 2.5mV phono. Controls: selector, speakers A/B bass, treble, balance, volume, loudness, tape mon. mono/stereo.

Tuner Section

FM sensitivity (IHF) $2.5\mu\text{V}$ (13.2dBf). THD: 0.8%. AM sensitivity: $10\mu\text{V}$ for 20dB S/N. Variable tuning.

General

Dimension: 44 \times 28.5 \times 13.2cm. Finish: walnut veneer case. Price: £149.95 (inc. VAT).

STA 95***Amplifier**

Output: 58W/channel. FR: 30-20,000Hz ± 1 dB. S/N ratio: aux/tape 80dB. Phono 65dB. Inputs: 160mV aux/tape 2.5mV phono. Controls: speakers A/B/rev. Hi-filter, lo-filter, detented bass, treble volume, 2 tape mon, A/B, dubbing A/B/B/A. Loudness, mono/stereo MPX filter, selector, FM mute. dub out.

Tuner

FM sensitivity (IHF) $2\mu\text{V}$. THD: 0.5%. AM sensitivity $25\mu\text{V}$ for 20dB S/N. Variable tuning.

General

48 \times 30 \times 16cm. Finish: walnut veneer case. Price: £269.95 (inc. VAT).

STA 78L***Amplifier**

Output: 26W/channel 15-25,000Hz -2 dB. S/N ratio: aux/tape 75dB phono 65dB. Inputs: 160mV aux/tape 2.2mV phono. Controls: selector, speakers/A/B/rev bass, treble, balance, volume, hi-filter, FM mute, mono/stereo tape mon. Loudness.

Tuner

FM sensitivity (IHF) $1.9\mu\text{V}$. THD: 0.5%. AM sensitivity (MW) $10\mu\text{V}$ for 20dB S/N. Radiated sensitivity (LW) 500V for 20dB S/N. Variable tuning.

General

Dimension: 43.2 \times 31.8 \times 15.2cm. Finish: walnut veneer case. Price: £199.95 (inc. VAT).

STA 42***Amplifier**

Output: 14W RMS/channel 15-30kHz ± 2 dB.

S/N ratio—aux/tape 65dB phono 60dB. Inputs: 160mV aux/tape in 2.2mV phono. Controls: selector, bass, treble balance, volume, speaker A/B, tape mon, mono, Loudness.

Tuner

FM sensitivity (IHF): $2.8\mu\text{V}$ (14.2dBf). THD: 0.6%. AM sensitivity: $10\mu\text{V}$ for 20dB S/N. Variable tuning.

General

Dimension: 42 \times 27 \times 14cm. Finish: walnut veneer case. Price: £99.95 (inc. VAT).

■ SABA

Saba Radio and Television Ltd,
10-12 Cornbrook Park Road,
Manchester M15 4EE.
Tel: 061-872 7661.

9240**Amplifier**

Output: 2 \times 70W into 4 ohms. FR: 10Hz-80kHz. THD: 0.03%. Inputs: mono, muting, tape 1, tape 2, aux, monitor. AFC. Controls: bass, treble, balance, speaker, selection.

Tuner

Wavebands coverage: FM, M. Sensitivity FM: $8\mu\text{V}$ for 46dB S/N. Selectivity (FM): 80dB.

General

Dimensions: 54 \times 13.5 \times 33cm. Features: LED diodes indicate 14 different function and operating modes. Subsonic filter. Price: £368.89 (plus VAT).

9241**Amplifier**

Output: 2 \times 70W into 4 Ohms. FR: 18Hz-50kHz ± 1.5 dB. THD: 0.03%. Controls: bass, treble, presence, loudness, volume. Damping factor: 30. Outputs: 2 speakers 4-16 ohms switchable, 2 aux speakers 4-16 ohms switchable.

Tuner

Waveband coverage: FM, M. Sensitivity FM: $8\mu\text{V}$ for 46dB S/N. Selectivity (FM): 80dB.

General

Dimensions: 54 \times 13.5 \times 33cm. Speaker selection switch offers following possibilities: All speakers off/stereo speakers in Room 1/ stereo speakers in Room 2/ stereo speakers in Rooms 1 & 2/ surround stereo speakers in Room 1/ surround stereo speakers in Room 1

*Indicates entry is illustrated

plus stereo speakers in Room 2. Finish: anthracite silver metallic. Price: £408.89 (plus VAT).

■ SANSUI

Sansui Audio Europe NV, Unit 10A,
Lyon Industrial Estate, Rockware Avenue,
Greenford, Middlesex.

G301

Amplifier

Output: 30W into 8 ohms. FR: 10Hz-50kHz +1 —2dB. Damping factor: 30. Inputs: mic 8mV 10K, phono 2.5mV 47K, aux 150mV 47K. Controls: bass, treble, loudness, balance, stereo/mono mode.

Tuner

Sensitivity (FM): 1.2 μ V. Sensitivity AM: 50dB/m (300 μ V/m). Waveband coverage: 88-108MHz. Variable tuning.

General

Dimensions: 43.3 × 35.4 × 15.3cm. Price: £154.00 (plus VAT).

G401

As 301 except output: 42W. Controls include: mic mixing, A + B speakers output switch. Price: £172.00 (plus VAT).

G7700

Amplifier

Output: 120W. FR: 5kHz-75kHz. Damping factor: 50. Inputs: phono 1 and 2, aux, mic, tape. Controls: treble/bass, filters, loudness, muting.

Tuner

Sensitivity FM: 36dBf. Sensitivity AM: 50dB/m. Waveband coverage: 88-108MHz. Variable tuning.

General

Dimensions: 46.5 × 40.5 × 17.7cm. Finish: silver. Price: on application.

G5700

As 7700 except output: 75W and sensitivity FM* 37dB.

G5500

Amplifier

Power output: 60W. FR: 5Hz-50kHz +.2 —2dB. Damping factor: 50. Inputs: phono 2.5mV 47K, aux 150mV 47K, mic 6mV. Controls: treble/bass, filter, loudness, audio muting, mic mixing.

Tuner

Sensitivity FM: 18dBf. Sensitivity AM:

300 μ V(M). Waveband coverage: 88-108MHz. Variable tuning.

General

Dimensions: 46.4 × 40.8 × 18.1cm. Finish: silver with wooden case. Price: on application.

TA500

Amplifier

Output: 50W. FR: DC -70K +1 —3dB. Damping factor: 50. Inputs: phono 2.5mV 47K, tape 150mV 47K, aux 150mV 47K. Controls: dual volume, treble/bass, speakers, loudness.

Tuner

Sensitivity FM: 19dBf. Sensitivity AM: 300 μ V/m. Waveband coverage: 88-108MHz. Variable tuning.

General

Dimensions: 43 × 39.9 × 16.8cm. Finish: Black. Rack mountable. Price: on application.

TA300

As 500 except output: 30W. FR: 10Hz-50kHz +1 —3dB. Damping Factor: 40.

■ SONY

Sony (UK) Ltd, Consumer Information,
134 Regent Street, London W1R 6DT.
Tel: 01-439 3874.

STR 212L*

Amplifier

Output: 150W per channel. FR: 10Hz-20kHz. Damping factor: 20. Inputs: phono, tape. Controls: volume, tuning, bass, treble, loudness, mode, function, programme, sensors.

Tuner

Sensitivity FM: 1.7 μ V (S/N 26dB). Waveband coverage: FM, L, M. Five VHF and 5 LW programme sensors.

General

Dimensions: 41 × 14.5 × 29.6cm. Price: on application.

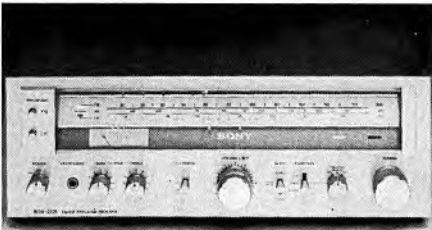
STR313L*

As 212 except output: 25W. Sensitivity (FM): 1.6 μ V.

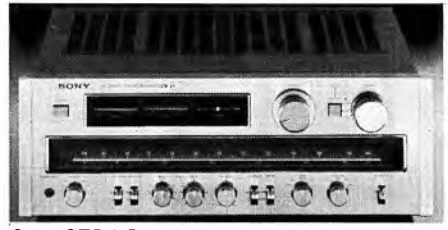
STR V3L*

Amplifier

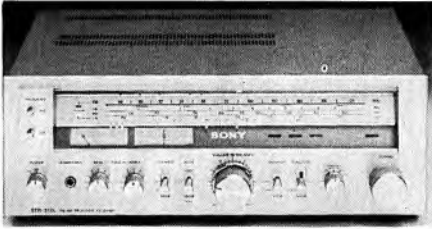
Output: 28W into 8 ohms. FR: 10Hz-35kHz. THD: 0.3%. Damping factor: 30. Inputs: phono 2.4mV 50K, high level 150mV 50K.



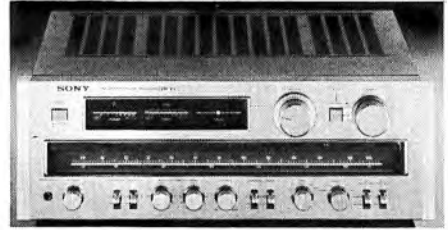
Sony STR-212L



Sony STR-V5



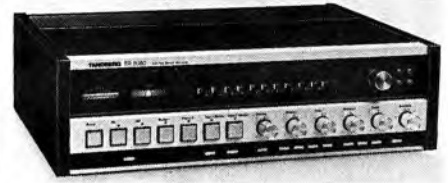
Sony STR-313L



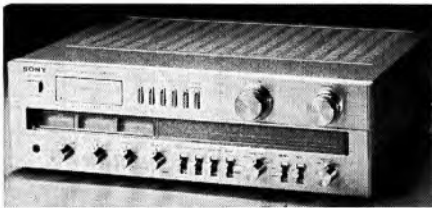
Sony STR-V6



Sony STR-V3L



Tandberg 2080



Sony STR-V4L

Tuner

Sensitivity: 1.6 μ V. Selectivity: 70dB. Waveband coverage: FM, L, M.

General

Dimensions: 44 x 14.5 x 37cm. Price: on application.

STR V4L*

Similar to V3L but output: 53W. Dimensions: 48 x 14.5 x 39.5cm.

STR V5*/STR V6*

Details on application.

■ **TANDBERG (UK) LTD**

Farnell House, 81 Kirkstall Road,
Leeds LS3 1HR.

Tel: Leeds 35111.

TR 2080*

Amplifier

Power output: .80W per channel. FR: 6-80,000Hz. Inputs: tape (2), phono. Loudness compensation button. Controls: on/off, power, 2 tape, loudness.

Tuner

Sensitivity FM: 0.8 μ V. Sensitivity AM: 25 μ V. Capture ratio: 0.9dB. Image rejection FM: 70dB. Waveband coverage: 87.5-108MHz.

General

Dimensions: 51 x 15.3 x 35.3cm. Black or rosewood finish. Price: £523.56 (plus VAT).

TR 2060L*

Amplifier

Power output: 55W. FR: 7Hz-80kHz, 10Hz-

*Indicates entry is illustrated

20kHz. Inputs: 2 × tape, 2 × phono. Controls: 2 × tape monitor buttons, volume, bass, treble, balance, speakers, tape, copy, loudness, high and low filters, muting.

Tuner

Sensitivity FM: 20 μ V (40 μ V). Sensitivity AM: 25 μ V. Waveband coverage: 87.5-108MHz. Variable tuning.

General

Dimensions: 20 × 14 × 6in. Black or rosewood finish. Price: £354.67 (plus VAT).

2045*

Output 40W into 8 ohms. FR: 8Hz-50kHz. Damping Factor: 50. Inputs: tape 1, tape 2, phono. Five preset pushbuttons on FM. Dimensions: 51.5 × 14.3 × 32cm. Price: £298.67 (plus VAT).



Tandberg TR2060L



Tandberg TR2045

■ TECHNICS

National Panasonic (UK) Ltd,
101-109 Whitby Road Trading Estate,
Slough, Berks SL1 3DR.
Tel: Slough (75) 34522.

SA-200L

Amplifier

Output: 25W per channel. FR: 20Hz-20kHz. THD: 0.04%. Damping factor: 16. Inputs: phono, aux, tape 1, rec/play.

Tuner

Sensitivity: 1.9 μ V. Selectivity: 70dB. Waveband coverage: FM, L, M.

General

Dimensions: 43 × 14.2 × 30cm. Price: £179.95 (inc. VAT).

SA-300L

Similar to 200L but output of 35W. Price: £239.95 (inc. VAT).

SA-400

Similar to 200L but wavebands cover FM, M and Output: 45W. Price: £279.95 (inc. VAT).

SA500*

Amplifier

Output: 60W per channel. FR: 20Hz-20kHz. THD: 0.04%. Damping factor: 16. Inputs: phono 2.5mV 47K, aux 140mV 33K, tape 1 180mV 39K, tape 2 150mV 33K.

Tuner

Wavebands: 88-108kHz, 525-1605kHz.



Technics SA-500

Sensitivity FM: 1.9 μ V. Sensitivity AM: 30 μ V. Variable tuning.

General

Dimensions: 45 × 14.9 × 32.9cm. Price: £349.95 (inc. VAT).

SA-600

Similar to SA-400 except: Output: 80W. Damping factor: 25. Price: £399.95 (inc. VAT).

SA-700L

Similar to SA 600 except output: 110W per channel. Price: £524.95 (inc. VAT).

■ TELETON

Teleton Electro (UK) Co. Ltd,
Somerton Works, Prince Avenue,
Westcliff-on-Sea, Essex.
Tel: Southend (0702) 337681.

TA 500

Amplifier

Power output: 20W. FR: 30Hz-20kHz. Damping factor: 10. Inputs: phono, aux. Controls: volume, balance, treble, bass, Hi-cut

switch, loudness switch, mode switch, speaker switch.

Tuner

Sensitivity: FM: $2.5\mu\text{V}$. Sensitivity AM: $300\mu\text{V}$, $200\mu\text{V}$. Waveband coverage: FM, L, M. Variable tuning.

General

Dimensions: $42 \times 3.8 \times 12.9\text{cm}$. Price: on application.

■ TENSAI

Wren Electronics Ltd,
Dawson Road, Mount Farm Estate,
Milton Keynes, Bucks.
Tel: Milton Keynes (0908) 71611.

TR 1030*

Amplifier

Power output: $2 \times 27\text{W}$. FR: 10Hz-40kHz. Damping factor: 50. Controls, tone, volume, balance, loudness, tape dubbing, low filter, mode, A/B speaker mute.

Tuner

Sensitivity FM: $1.6\mu\text{V}$. Sensitivity AM: $300\mu\text{V}$. Waveband coverage: FM, L, M.

General

Dimensions: $49 \times 13.2 \times 33\text{cm}$. Finish: brushed aluminium. Price: on application.

TR 1045

Amplifier

Output: $2 \times 48\text{W}$. FR: 10Hz-50kHz. Damping factor: 80. Controls: $2 \times$ tone, volume, balance, mic level, 2 tape dubbing, high low filter, mute, A/B speaker. Other details as TR 1045.

■ TOSHIBA (UK) LTD

Toshiba House, Great South West Road,
Feltham, Middlesex.
TEL: 01-751 1281.

SA-750*

Amplifier

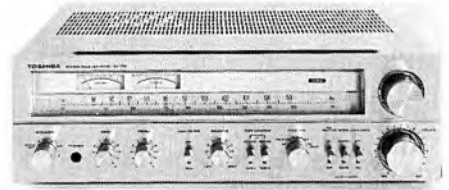
Output: $50\text{W} \times 2$ into 8 ohms. FR: 20Hz-20kHz. Damping factor: 50. Inputs: phono, aux, tape 1 & 2. Controls: bass, treble, balance, tape duplicate, two filters, stereo, mono, loudness.

Tuner

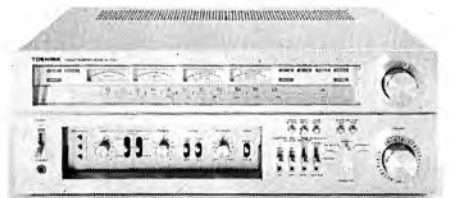
Sensitivity FM: $1.8\mu\text{V}$. Sensitivity AM: 300mV . FM/AM coverage with variable tuning.



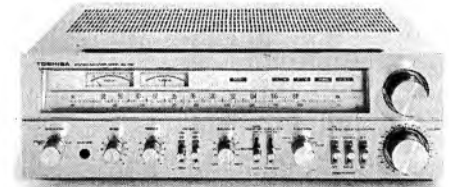
Tensai TR1030



Toshiba SA-735



Toshiba SA7100



Toshiba SA-750

General

Dimensions: $48 \times 40 \times 14.5\text{cm}$. Simulated wood cabinet. Price: £240.00 (plus VAT).

SA-735*

Amplifier

Output: 35W per channel into 8 ohms. FR: 20Hz-20kHz. THD: 0.3%. Inputs: phono 2.5mV 47K, aux 150mV 47K, tape 150mV 47K.

Tuner

Sensitivity FM: 10.8dBf. Sensitivity AM: $30\mu\text{V}$ or $300\mu\text{V}$ with ferrite antenna. Wavebands: FM, M.

General

Dimensions: $45 \times 14.5 \times 40\text{cm}$. Price: £168.44 (plus VAT).

*Indicates entry is illustrated

SA-7100*

Amplifier

Output: 2 × 100W. FR: 20Hz-20kHz. Inputs: phono (2), aux, tape. THD: 0.2%.

Tuner

Sensitivity: 1.8μV. Selectivity: 80dB. Wavebands: FM, M.

General

Dimensions: 55 × 19 × 46cm. Price: £328.44 (plus VAT).

■ TRIO

B. H. Morris & Co (Radio) Ltd,
Precision Centre, Heather Park Drive,
Wembley, Middx. HA0 1SU.

Tel: 01-902 9422.

KT 313-L*, KT-917*, K-815*

Details on application.

■ YAMAHA

Natural Sound Systems Ltd
10 Byron Road, Wealdstone, Harrow,
Middlesex HA3 7TL.

Tel: 01-863 8622.

CR 2020

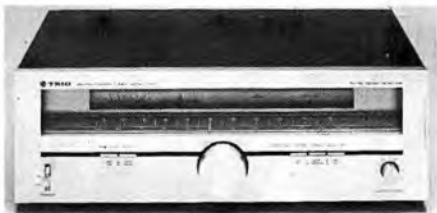
Amplifier output: 100W into 8 ohms. FR: 10Hz-50kHz. THD: 0.05%. Damping factor: 40. Inputs: phono 1, phono 2, aux, tape 1, tape 2. Tuner: Sensitivity 1.3μV. Selectivity 80dB. Waveband coverage VHF, M. Variable tuning. General dimensions: 54 × 16.7 × 41.5cm. Price: £532.80 (plus VAT).



Trio KT-313



Trio KT-917



Trio KT-815

Other Models

CR220 £150.96; CR420 £195.36; CR620 £266.40; CR820 £355.20; CR1020 £444.00 (all plus VAT). Full details on request.

Record Decks

* Indicates entry is illustrated.

Abbreviations used in this section are given on page 5.

■ ADC

BSR Ltd, Powke Lane, Cradley Heath, Warley, West Midlands B64 5QH.

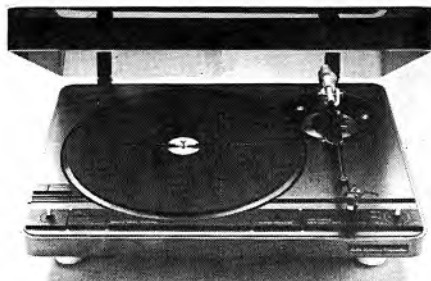
Tel: Cradley Heath (0384) 65191.

1700 DD Quartz*

Direct drive quartz-locked semi-automatic with rigid straight arm. Mounted on unique ABS moulded sandwich base. Available complete with ADC XLM Mk III cartridge. Speeds: 33 1/3, 45 rpm. Wow: less than 0.3%. Rumble: DIN 'B' —70dB. Turntable 302mm weighing 2.3lb made of diecast aluminium. Direct drive. Pickup arm: low mass straight arm with cradle suspension, micron polished instrument bearings, tempered spring anti-skate, viscous cueing, plug-in carbon fibre headshell with gold plated connector pins. Finish: "Rolls Royce" metallic black. Soft-rubber anti-static mat, LED power indicator, electronic micro-switches, free standing/removable dust cover, auto-return arm. Price: £136.75 (plus VAT).

1500 PG*

Semi-automatic belt drive turntable with low resonance 'S' shaped arm. Mounted on unique ABS moulded sandwich plinth. Available complete with ADC QLM34 Mk III cartridge. Speeds: 33 1/3, 45 rpm. Wow: less than 0.5%.



ADC 1700DD

Rumble: DIN 'B' —67dB. Turntable: 302mm weighing 2lb and made of die cast aluminium. Belt drive. Motor: frequency generator servo-controlled DC motor. Pickup arm S-shaped statically balanced arm with open cradle suspension, ball race lateral bearings, anti-skate control, viscous cue, decoupled counterweight, plug-in magnesium headshell. Finish "Rolls Royce" metallic finish. Soft-rubber anti-static mat, LED power indicator, electronic micro-switches. Free standing/removable dust cover. Auto-return arm. Price: £84.95 (plus VAT).

1600 DD*

Semi-automatic direct drive turntable with low mass straight arm. Mounted on unique ABS moulded plinth. Available complete with ADC QLM36 Mk III cartridge. Speeds: 33 1/3, 45 rpm. Wow: less than 0.4%. Rumble: DIN 'B' —68dB

Turntable: 302mm, weighing 2.3lb made of diecast aluminium. Direct drive. Motor: low speed, electronically controlled DC brushless direct drive motor. Pick-up arm: low mass straight arm with cradle suspension, micro polished instrument bearings, tempered spring anti-skate, viscous cueing, plug-in carbon fibre headshell with gold plated connector pins. Finish: "Rolls Royce" metallic black. Soft



ADC 16DD



ADC1500FG

*Indicates entry is illustrated

rubber anti-static mat. LED power indicator, electronic micro-switches, free standing/removable dust cover. Auto-arm return. Price: £108.55 (plus VAT).

■ AIWA

Aiwa Sales & Service (UK) Ltd,
30 and 32 Concord Road,
Westwood Park Trading Estate,
London W3.
Tel: 01-993 1672.

AP 2200*

DD turntable with PU arm and cartridge, semi-automatic. Speeds: 33 1/3, 45 rpm. W and F: 0.035%, 0.065% DIN. S/N ratio: 60dB (IEC-B) 70dB DIN 'B'. Turntable platter 306mm aluminium diecast, solid resin cabinet. Direct drive. Motor: 2-phase, 8-pole linear torque DC servo motor. Static balanced pickup arm, 215mm effective arm length. Features: front controls, adjustable insulator feet, synchronising facility with Aiwa cassette decks. Price: £122.67 (plus VAT).

Aiwa AP2200



AP 2500*

DD turntable with PU arm. Speeds: 33 1/3, 45 rpm. W and F: 0.03%, 0.045% DIN. S/N ratio: 60dB (IEC-B) 75dB (DIN-B). Turntable 314mm aluminium die cast. Weight: 1.4kg, solid resin cabinet. Direct drive. Motor: 3-phase, 8-pole, 24 slot FG servo motor. Static balanced pickup arm 237mm effective arm length. Features: front controls, stylus set down muting, photo electric play end detec. Price: £186.61 (plus VAT).

Aiwa AP2500



■ AKAI

Rank Audio Visual, PO Box 70,
Great West Road, Brentford,
Middlesex TW8 9HR.
Tel: 01-568 9222.

AP 100*

Speeds: 33 1/3, 45 rpm. W and F: 0.05%. Turntable: 300mm aluminium die cast weighing 6.1kg made of styrene. Belt driven. Motor: 4-pole synchronous. 220mm S-shaped tone arm, oil damped. Finish: metallic silver, auto return. Price: £83.95 (plus VAT).

Akai AP100

AP 101

Speeds: 33 1/3, 45 rpm. W and F: 0.05%. Turntable: 300mm aluminium die cast weighing 6.3kg, made of styrene. Belt driven. Motor: 4-pole synchronous. 220mm S-shaped tone arm, oil damped. Finish: metallic silver, auto stop. Price: £96.80 (plus VAT).

AP 306

Direct-drive turntable. Speeds: 33 1/3, 45 rpm. Wow: 0.025%. Turntable: 314mm alloy die cast. DC servo motor. Quartz crystal oscillator ensures totally accurate speed. Auto return tone arm, damped cueing. Price: on application.

Ap 206

Direct drive, auto-return turntable. Speeds: 33 1/3, 45 rpm. Wow: 0.025%. Turntable: 314 aluminium die cast. DC servo motor. Same basic design as AP306. Strobe pitch controls. Price: on application.

■ AMSTRAD

Amstrad Consumer Electronics Ltd,
1-7 Garman Road, London N17 0UF.
Tel: 01-801 4431.

TP12D*

Integrated turntable fitted with pickup arm, mounted on base with transparent dust cover. Speeds: $33\frac{1}{2}$, 45 rpm. W and F: less than 0.1% WRMS. Rumble: better than -47dB. Speed constancy: No change with $\pm 40\%$ supply volts variation. Turntable 300mm diameter. Weight: 0.75kg. Aluminium platter. Belt drive. S-shaped pickup arm. Offset angle 22° , length 220mm. Fully adjustable counterbalance and bias compensation. Standard detachable headshell. Viscous cueing device. Finish: black veneered base with removable hinged transparent dust cover. Price: approx. £59.74 (plus VAT).



Amstrad TP12D

BD 800*

Record deck with arm, plinth and cover. Speeds: $33\frac{1}{2}$, 45 rpm. W and F: 0.1%. Rumble: 46dB. Turntable: 300mm. Belt drive. Motor: 240V. Pickup arm: fully damped, detachable head. Finish: black. Price: £62.34 (plus VAT).



Amstrad BD800

■ AR

Teledyne Acoustic Research International,
High Street, Houghton Regis,
Dunstable, Beds LU5 5QJ.
Tel: Dunstable (0582) 603151.

AR 77 XB*

Plinth mounted, hinged lid, stylus force gauge, stylus overhang adjustment guide, connecting cables, 45 rpm adaptor and special screwdriver. Speeds: $33\frac{1}{2}$, 45 rpm. W and F: 0.03%. Rumble: -65dB DIN 'B'. Turntable: 298mm. Belt drive. Motor: permanent magnet synchronous motor. Pickup arm: integral low mass tonearm with removable low mass cartridge shell. Finish: walnut base with transparent plastic hinged dust cover. Price: £75.00 or £83.00 with cartridge (plus VAT).



AR77XB

■ ARISTON

Ariston International (Electronics) Ltd,
Maybole KA19 7BH, Scotland.
Tel: Maybole (0655) 82424.

RD 11S*

No pickup arm. Complete with plinth and cover. Speeds: $33\frac{1}{2}$, 45 rpm. W and F: 0.3%. Rumble: -74dB weighted. Turntable: 30cm dia. Weight: 3.27kg, made of mazak material. Belt drive. Motor: 24 pole sync. Finish:



Ariston RD11S

*Indicates entry is illustrated

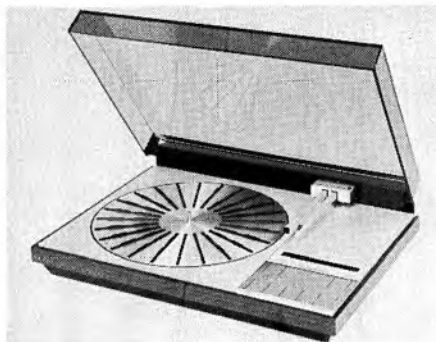
rosewood, black, walnut. Price: £210.00 (inc. VAT).

■ BEGRAM

Bang & Olufsen (UK) Ltd,
Eastbrook Road, Gloucester GL4 7DE.
Tel: Gloucester (0452) 21591.

Beogram 4002*

Plinth-mounted motor unit with tangential arm and MMC 4000 integrated cartridge. Hinged translucent dust cover. Servo driven tone arm plus detector arm for automatic record size and speed sensing. Computer-like data unit gives completely automatic operation. Speeds: 33 1/3 and 45 rpm (with 6% fine speed adjustment). W and F: better than $\pm 0.05\%$ DIN ($\pm 0.025\%$ RMS). Rumble: better than -65dB DIN 'B'. Turntable: 12in. aluminium alloy radially ribbed. Belt drive DC tachomotor. Individual speed indicator lights. Power supply: 110, 130, 220 and 240V AC 50/60Hz. Price: approx. £325.00 (plus VAT).



Beogram 4002

1500

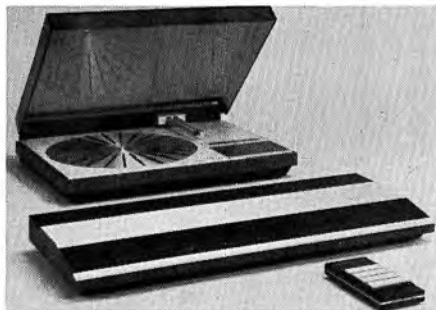
Automatic integrated record player fitted with pickup arm and MMC 20S cartridge on plinth with hinged dust cover. Speeds: 33 1/3, 45rpm. Wow: $< \pm 0.035\%$ WRMS. Rumble: $> 62\text{dB}$ DIN weighted. 12in. aluminium turntable. Belt drive DC tachomotor. Magnesium alloy pickup arm, anti-skating device. Finish: teak/rosewood. Price: approx. £95.00 (plus VAT).



Beogram 2200

2200*

Auto record player with plinth, magnesium alloy pickup arm and MMC 20E cartridge. Speeds: 33 1/3, 45 rpm. W and F: $< \pm 0.06\%$. Rumble: $> 65\text{dB}$ weighted. Turntable: 12 in. weighing 0.8kg and made of aluminium. Belt drive. Motor: electronic servo drive, DC 2.5V. Pickup arm: integrated magnesium alloy. Finish: all controls on front panel. Self sensing 7 in. or 12 in. position on turntable. Price: £145.00 (plus VAT).



Beogram 4004

4004*

As 4002. Remote controlled when used with Beomaster 2400. Price: £335.00 (plus VAT).

■ B-I-C

B-I-C 60-61 Leslie Park Road,
Croydon, Surrey CR0 6TP.
Tel: 01-656 2631/2.

912*

Automatic single play turntable with base, cover and tone arm. Speeds: 33 1/3, 45 rpm. W and F: better than 0.06%. Rumble: better than



B-I-C 912

—68dB DIN 'B'. Turntable: 12in. Belt drive. Motor: 24-pole synchronous 300 rpm. Pickup arm: tubular aluminium, static balanced. Finish: metallic silver. Features: stroboscope, user control variable isolation adjustment. Price: on application.

914*

As 912 but pickup arm dynamic balanced, removable at pivot, optional carbon fibre tone arm. Price: on application.

916 MP*

Automatic single play turntable with base, cover, tone arm. Speeds: 33½, 45 rpm. W and F: better than 0.04%. Rumble: better than —70dB DIN 'B'. Turntable: 12in. Digital belt drive microprocessor. Motor: 24-pole 300 rpm synchronous. Pickup arm: low mass aluminium tubular, removable at pivot. Optional carbon fibre. Features: user control variable isolation adjustment, digital stroboscope. Finish: brushed aluminium. Price: on application.

918 MP*

As 916 except: quartz crystal servo control, digital belt drive microprocessor. Two motors: platter drive 24-pole 300 rpm synchronous, tone arm drive servo. Pickup arm: ultra low mass carbon fibre, removable at pivot, jewel bearings. Features also include: digital stopwatch/timer, LED programme indicators. Price: on application.

■ BLACK KNIGHT RUMBLECARE

Bank Top Workshop, Currier Lane,
Ashton-under-Lyne, Lancs. OL6 6TA.
Tel: 061-330 2836.

Rumblecure*

Specialise in vibration problems arising from inter-action between speakers and turntable via structure of building (solid-borne vibration). All items made up to suit each individual case owing to the very complicated nature of vibration behaviour. For example Rumblecure make special top-quality corner speakers with dead-centre, centre of gravity. Anti-vibration cushioning can thus be built-in to prevent vibration entering the floor and structure. Obviously the better the outfit the greater will be the vibration problem, especially on wooden floors or even hollow concrete beams. Floor vibrators will be recognised as a resonant bass 'hangover' in heavy bass notes. Subsequent powerful vibrations will reach the record and thence the stylus to 'cloud' the signal. It follows that this is no simple matter and hi-fi 'experts' (self-styled) prefer to avoid the issues owing to

*B-I-C 914**B-I-C 916MP**B-I-C 918MP*

the need to condemn turntables and forfeit 'Con'-'Review' fees.

Countless permutations of equipment, rooms and types of structure reduce this to a very personal service where years of practical 'know-how' must be applied *on the spot*. The average cost of a visit would be about £75.00 to include the specially prepared goods made up for the outfit. The presence of vibration at the stylus tip

*Indicates entry is illustrated

is easily proved on such visits *before* any work is done. This would result from the preliminary correspondence for which 2 × 9p stamps must be included with *each letter* leading up to the visit. Such visits can be at your convenience and this includes Sundays.

The top quality corner speakers (reflex) can be demonstrated on these visits, and 20W per channel is ample for these highly efficient assemblies.

■ CONNOISSEUR

A. R. Sugden & Co (Engineers) Ltd, Brighouse, West Yorkshire HD6 1ES.

Tel: Brighouse (0484) 712142.

BD 101 Transcription Unit*

Available in three versions: with SAU2 arm, with SAU4 arm, or without arm. Speeds: 33⅓, 45 rpm. W and F: less than 0.1%. Rumble: —65dB DIN 45539. Turntable: 12in. dia. aluminium platter. Belt drive, synchronous motor. Plinth in walnut veneer with anti-vibration suspension and adjustable feet. Price: without arm £52.00, with SAU2 arm £70.00, with SAU4 arm £90.00 (all plus VAT).

BD1*

Two-speed motor unit supplied as motor only. Two fixed speeds, 33⅓ and 45 rpm. Wow: <0.1%. Flutter: <0.1%. Rumble: —65dB. 10¼in. non-ferrous lathe-turned turntable. Precision ground belt drive. Unique drive arrangement eliminates transmission noise. Press button speed change. Low hum field. Slim line construction. Only 1¼in. required below mounting platform. Mains: 100-120V and 200-240V 50 or 60Hz. Price: £25.48 (inc. VAT).

BD2*

Integrated transcription unit. Includes a BD1 motor unit (mounted on a larger platform and fitted with pressbutton speed change) and a type SAU2 pickup arm. Hydraulic arm lift, operated from front. Anti-vibration mounted. Supplied either chassis only or plinth mounted. Acrylic cover. Size: 12¼ × 14 × 4¼in. (2in. below and 2in. above the platform). Price: (chassis model) £47.76 (inc. VAT); (assembly mounted on plinth complete with acrylic cover) £63.28 (inc. VAT). With auto lift off £56.27 and £71.72.

BD103*

9V DC servo controlled motor with electronic speed variation on all 3 speeds — 33⅓, 45 and 78 rpm. Externally housed power source, eliminating hum fields, convertible for 120 or 230V mains supply. Belt drive. Turntable, 11½in. diameter. Neon illuminated stroboscope underneath turntable viewed through



Black Knight Rumblecure equipment



Connoisseur BD101



BD 101 less arm



Connoisseur BD103



Connoisseur BD2/a compact plinth and cover



Connoisseur BD1



BD2/De Lux plinth and cover



VD 103 less arm



Denon DP-2550

mirror at front of platform available with either 50 or 60Hz stroboscope. Adjustable magnetic bias. Stylus balance. Hinged acrylic dust cover. Price: £109.69 (plus VAT).

■ **DENON**

Eumig (UK) Ltd, 14 Priestley Way, London NW2 7TN.

Tel: 01-450 8070

DP-2550

Quartz-locked direct drive record deck. Speeds: 33½, 45 rpm. W and F: less than 0.015%. Turntable: 30cm dia. made of aluminium alloy diecast. AC servo motor. Stroboscope. Price: on application.

DP 2500*

Direct drive player phase-locked to a quartz crystal oscillation. Speeds: 33½, 45 rpm. W and

F: less than 0.015%. Turntable: 30cm made of aluminium alloy diecast. AC servo motor. Dynamically damped tonearm, oil damped cueing device, anti-skating device. Price: on application.

■ **DUAL**

Hayden Laboratories Ltd, Hayden House, Churchfield Road, Chalfont St Peter, Bucks SL9 9EW.

Tel: Gerrards Cross (49) 88447.

CS 714Q*

Two speed integrated unit complete with arm, cartridge, plinth and cover, semi-auto operation, using Ortofon ULM60E cartridge.

*Indicates entry is illustrated

Speeds: 33 1/3, 45 rpm. W and F: $\pm 0.015\%$. Rumble: -75dB DIN B. Turntable: 12in. dia. weighing 1.5kg and made of cast aluminium. Advanced quartz locked direct drive system. Motor: quartz locked pitch control. Pickup arm: straight line, torsion resistant ultra low mass tonearm with tuneable counterweight and Ortofon ULM60E cartridge. Total moving mass only 8gm. Centre cartridge also available. Finish: Main body black. Control panel available in black/silver/metallic brown. Price: £225.00 (plus VAT).

CS 731Q*

As above plus: quartz locked pitch control with LED indication. Price: £275.00 (plus VAT).

■ EAGLE

Eagle International, Precision Centre,
Heather Park Drive, Wembley HA0 1SU.
Tel: 01-902 8832.

D 7500*

Integrated semi-auto turntable in plinth fitted with tonearm and headshell. Smoked acrylic dust-cover. Speeds: 33 1/3, 45 rpm. W and F: less than 0.05%. Rumble: -60dB weighted. Turntable: 300mm dia. weighing 1kg and made of diecast alloy. Belt drive. Synchronous 4-pole motor. Pickup arm: S-shaped tubular with adjustable counterweight and tracking dial. Pulley weight bias compensation and damped cueing control. Standard IEC headshell. Finish: stippled plinth with black feet and turntable mat, grey smoked acrylic dustcover. Features: semi-auto arm manoeuvres, auto-start, auto-cut, auto-return and switch off. Price: £75.00 (plus VAT).

■ ENVIRONMENTAL SOUND

Environmental Sound,
Northallerton, North Yorks.
Tel: Northallerton (0609) 5434/5.

EST 4X*

Plinth, mercury/gold contact unipivot arm. Speeds: 33 1/3, 45 rpm. W and F: 0.40%. Rumble: 66dB (DIN). Turntable weight: 3.5lb. Direct drive, DC servo motor. Pickup: unipivot, mercury gold contacts, magnetic aids compensation. Finish: black. Features: adjustable feet, built-in level mounting. Price: £142.40 (plus VAT).

EST 7

As EST 4X except pickup arm: low mass cartridge. Split bearings, horizontal/vertical movement. Price: £142.40 (plus VAT).



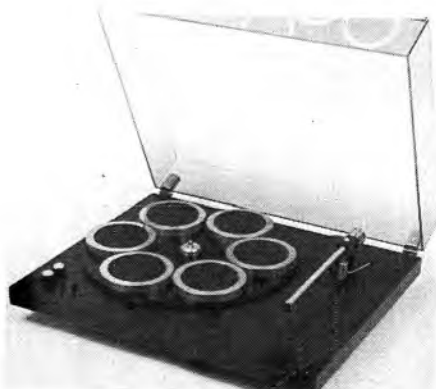
Dual CS731Q



Dual CS714Q



Eagle D7500



Environmental Sound EST4

EST 6

Plinth without arm. Speeds: 33 1/3, 45 rpm. W and F: 0.04%. Rumble: 66dB. Turntable weight: 3.5lb. Direct drive, DC servo motor. Finish: black. Features: adjustable feed, built-in level mounting. Price: £94.40 (plus VAT).

EST 5

Plinth with double gimbal arm. Details as EST 6 except: pickup has double gimbal arm and gravity bias. Price: £113.60 (plus VAT).

■ GARRARD

Garrard Engineering Ltd,
Newcastle Street, Swindon, Wilts SN1 2LH.
Tel: Swindon (0793) 35381.

G120*

Manual single record player with integrated plinth and spring counter-balanced tinted dust cover. Speeds: 33 1/3, 45 rpm. Wow and flutter (DIN) slow weighted: 0.12%. Rumble DIN A: -43dB. Rumble DIN B: -63dB. Die cast aluminium turntable 311mm dia, inertia 160kgm. Flexible belt drive, 4-pole synchronous motor. Pickup arm: fully counter-balanced low mass S-shape: combination jewel and ball bearing pivots; viscous damped cue control; bias compensation; screw-in removable headshell. Metallic finish with matching controls. Price: without cartridge £79.69, with Shure M75/ED II £90.00 (plus VAT).

G125P*

Semi-automatic two speed record player with integrated plinth and spring counter-balanced tinted cover. Also available as a record changer to order. Speeds: 33 1/3, 45 rpm. Wow and flutter (DIN) slow weighted: 0.12%. Rumble DIN A: -43dB. Rumble DIN B: -63dB. Die cast aluminium turntable 311mm dia, inertia 160kgm. Flexible belt drive, 4-pole synchronous motor. Pickup arm: fully counter-balanced low mass S-shape: combination jewel and ball bearing pivots; viscous damped cue control; bias compensation calibrated for elliptical and conical styli; screw-in removable headshell. Metallic finish with matching controls. Price: without cartridge £90.94, with Shure M75/ED II £101.25 (plus VAT).

GT35P*

Semi-automatic two speed record player with DC servo controlled motor, pitch control and stroboscope. Integrated plinth with spring counter-balanced tinted cover. Also available as a record changer. Speeds: 33 1/3, 45 rpm ±3%. W and F (DIN) slow weighted: 0.10%. Rumble DIN A: -45dB. Rumble DIN B: -65dB. Die

*Garrard GT 20**Garrard GT25P**Garrard GT35P*

cast aluminium turntable with strobe, 319mm dia, inertia 220kgm. Flexible belt drive. Pickup arm: fully counter-balanced S-shape; combination jewel and ball bearing pivots; viscous damped cue control; bias compensation calibrated for elliptical and conical styli; screw-in removable head shell. Metallic finish with matching controls. Price: without cartridge: £111.56, with Shure M75/ED II £121.88 (plus VAT).

We've got a lot on our plates.



2.6 kg to be precise. The most you're likely to find on any platter.

And the reason we've created these heavier platters at a time when most other hi-fi manufacturers are still concentrating on the quartz lock servo system, is because we believe they're more advanced.

Don't get us wrong. We're not putting quartz lock down - we've got it ourselves.

But its prime function is to achieve direct drive motor accuracy.

It can't cover up basic deficiencies in transient performance.

Neither can it correct transient load fluctuation.

But when it's *combined* with a heavier platter, it provides a unique solution to all sound deteriorating forces.

The quartz lock servo system improves static conditions, keeping the turntable running at the right speed.

Whilst the heavier platter, with its extremely high moment of inertia (550 kg cm²) resists or absorbs all external disturbances,

from fluctuations in transient load dictated by the actual signal, to vibrations from the floor.

As a result, performance tests show remarkable transient accuracy: 0.00015% transient load fluctuation at mid-frequency, with a test load of 20 g. cm stylus pressure at 33 1/3 rpm.

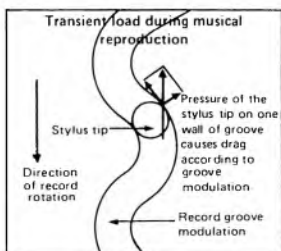
We like having a lot on our plates. It creates the most advanced turntables in the world. **TRIO**

I would like a lot on my plate. Please send me details of your remarkable turntables.

Name _____
Address _____

HFYB 79

To: B. H. Morris & Co. (Radio) Ltd.,
Dept C, Precision Centre, Heather Park Drive,
Wembley HA0 1SU. Agents in Eire: Best Wholesale, Dublin



SP25 Mark IV*

Two-speed automatic record player with plinth and cover. Speeds: 33 1/3, 45rpm. W and F (DIN) slow weighted: —0.16%. Rumble DIN A: —3dB. Rumble DIN B: —59dB. Die-cast aluminium turntable 280mm dia. Flexible belt drive, 4-pole synchronous motor. Pickup arm: S-shaped tubular with ball-bearing pivot, viscous damped cue control, adjustable calibrated stylus force setting calibrated bias compensator. Price: without cartridge £53.76, with Shure M75/6SM £60.00 (plus VAT).

DD130*

Manual, two-speed integrated plinth with spring counter-balanced tinted cover. Speeds: 33 1/3, 45 rpm. W and F: 0.06%. Rumble DIN B: —70dB. Rumble DIN A: —50dB. Turntable: 329mm weighing 200kg and made of die-cast aluminium with stroboscope. DC servo controlled, direct drive motor. DC multipole 240V. Pickup arm: S-shaped, calibrated counter-balanced weight, jewel pivots, viscous damped cue control, bias compensation. Finish: metallic with matching controls. Price: with Shure M75/ED II cartridge £123.75 (plus VAT), without cartridge £120.44 (plus VAT).

DD131*

As DD130 but semi-automatic. Price: with Shure M75/ED II cartridge £130.00 (plus VAT), without cartridge £113.44 (plus VAT).

DD132*

As DD130 but fully automatic. Price: with Shure M75/ED II cartridge £136.00 (plus VAT), without cartridge £126.00 (plus VAT).

■ HARMAN/KARDON

Harman UK,
St. John's Road, Tyler's Green,
High Wycombe, Bucks HP10 8HR.
Tel: Penn (049 481) 5221.

Rabco ST8

Straight-line tracking turntable. Details on application. Price: £443.56 (plus VAT).

■ HITACHI

Hitachi Sales (UK) Ltd,
Hitachi house, Station Road, Hayes.
Tel: 01-848 8787.

HT 354

Deck fitted with tone arm. Speeds: 33 1/3, 45 rpm. W and F: 0.03%. Rumble DIN B: —73dB.

*Garrard SP25 Mk II**Garrard DT 130**Garrard DT 131*

Semi-automatic turntable. Direct drive. Unitorque motor. Static balance pickup. Price: on application.

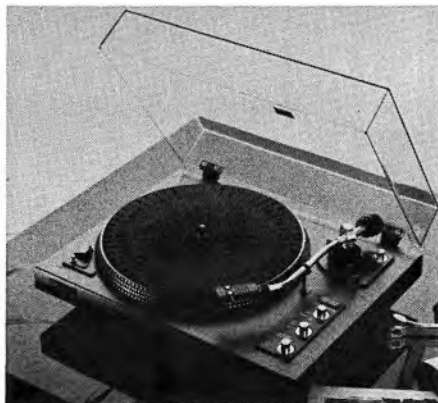
HT 356

As above, but: Rumble DIN B: —75dB. Unitorque motor. Quartz PLL 240V. Price on application.

*Indicates entry is illustrated

HT 324

Deck fitted with tone arm. Speeds: $33\frac{1}{3}$, 45 rpm. W and F: 0.06%. Rumble DIN B: -65dB. Semi-auto turntable. Belt drive. Motor: 4-pole synchronous 240V. Static balance pickup. Price: on application.



Garrard DT 132

HT 660*

Deck fitted with tone arm. Speeds: $33\frac{1}{3}$, 45 rpm. W and F: 0.06%. Rumble DIN B: -75dB. Auto turntable. Direct drive. Unitorque motor, quartz PLL 240V. Static balance pickup. Price: on application.



Hitachi HT 660

HT 550

Deck fitted with tone arm. Speeds: $33\frac{1}{3}$, 45 rpm. W and F: 0.025%. Rumble DIN B: -74dB. Semi-auto turntable. Direct drive. Motor: unitorque, quartz PLL 240V. Static balance pickup. Price: on application.

HT 463

Deck fitted with tone arm. Speeds: $33\frac{1}{3}$, 45 rpm. W and F: 0.03%. Rumble DIN B: -73dB. Auto turntable. Direct drive. Motor: unitorque, quartz PLL 240V. Static balance pickup. Price: on application.

■ ITT

ITT Consumer Products (UK) Ltd,
Chester Hall Lane,
Basildon, Essex SS14 3BW.
Tel: Basildon (0268) 3040.

8011*

Complete record playing unit with plinth and cover, arm, cartridge. Speeds: $33\frac{1}{3}$, 45 rpm. W and F: 0.1% DIN. Rumble: -65dB. Turntable of aluminium alloy die-casting. 31cm dia. Direct drive, DC servo 12-pole motor. Static balance pickup arm, effective length 215mm, stylus force 0-3g, cartridge mass 4.5-11g. Semi-auto operation. Price: £126.00 (inc VAT).



ITT 8011

8012*

As above except: Rumble: -70dB. Turntable dia: 32cm. Length of PU arm: 227mm. Separate speed controls, fully auto. Price: £144.00 (inc VAT).



ITT 8012

8014

Complete record playing system with plinth, arm, cartridge, cover. Speeds: $33\frac{1}{3}$, 45 rpm $\pm 6\%$. W and F: 0.06, 0.1% DIN. Rumble DIN B: -65dB. Turntable: 302mm dia. made of die-cast aluminium. Belt drive. Motor: DCFG servo. Pickup arm: S-shaped, statically balanced tubular arm with gimbal suspension

using lateral ball races, decoupled counterweight, bias compensation, viscous cue. Finish: dark silver grey. Features: tinted counter-balanced dust cover. Price: £93.95 (inc VAT).

■ JVC

JVC (UK) Ltd, Eldonwell Trading Estate, Staples Corner, 6-8 Priestly Way, London NW2 7AF.
Tel: 01-450 2621.

JL-A20

Automatic return belt drive. 4-pole synchronous drive motor. W and F: 0.08%. Platter: 30cm dia. Aluminium die-cast. Statically-balanced tone arm. Price: £72.00 (plus VAT).

QL-10

Quartz-locked turntable. Motor: core-less DC servo motgr. W and F: 0.04% DIN. Price: £683.00 (plus VAT).

QL-7

Quartz-locked turntable. DC servo motor. W and F: 0.045%. Price: £239.00 (plus VAT).

LA-11

Record deck with plinth and arm. Speeds: 33½, 45 rpm. W and F: less than 0.06%. Turntable: 12in dia. Belt drive. Motor: synchronous 240V. Pickup arm: statically balanced S-shaped. Finish: silver/grey. Price: on application.

QLF-16

Plinth and arm. Speeds: 33½, 45 rpm. W and F: less than 0.025%. Turntable: 12in dia. Direct drive. Motor: quartz lock. Pickup arm: gimbal support, oil damped, S-shaped. Price: on application.

QL-A2*

Quartz-locked auto return turntable. Details on application. Price: £125.00 (inc VAT).

QL-A7*

Quartz-locked with Photokinetic stop. Details on application. Price: £299.00 (inc VAT).

QL-F4*

Quartz-locked fully auto turntable. Details on application. Price: £159.00 (inc VAT).

Other models

AL-70 £209.00; QL5 £219.00 (all inc VAT). Details on application.



JVC QL-A2



JVC QL-A7



JVC QL-F4



Lux PD131

*Indicates entry is illustrated

■ LUX

Howland-West, 3-5 Eden Grove,
London N7 8EQ.

Tel: 01-609 0293.

PD 131*

No arm supplied, but bayonet fitting to take SME arm. Fitting available for other arms. Mounted rosewood base and cover. Speeds: $33\frac{1}{3}$, 45 rpm. W and F: 0.03%. Rumble: -70dB. Turntable: 30cm dia, of aluminium die-cast. Direct drive. Brushless DC servo motor. Features: mirror system stroboscope. Price: £280.00 (plus VAT).

PD 272*

Deck fitted with straight type tone arm, plinth. Speeds: $33\frac{1}{3}$, 45 rpm. W and F: no more than 0.03%. Turntable: 30cm dia, weighing 1.8kg, made of die-cast aluminium. Direct drive. Motor: DC servo brushless and slotless. Pickup arm: static balanced. Finish: brushed aluminium and rosewood plinth. Height adjustable insulators, mirror reflex type, stroboscope. Price: £190.00 (plus VAT).

PD 441*

As PD 272, but with no tone arm fitted. Motor: crystal control, load-free spindle system, flat brushless DC servo motor. Quartz-locked turntable. Detachable pickup arm base. Price: £425.00 (plus VAT).

PD 444

Spec as for £441, but with provision for two PU arms. Price: £455.00 (plus VAT).

■ LYRICHORD

N. Miers & Co Ltd, Piercing Hill,
Theydon Bois, Epping, Essex CM16 7LE.

Tel: 01-849 2611/2.

182*

Single player with S-shaped pickup arm, mounted on afrormosia veneered plinth with lift off dust cover. Speeds: $33\frac{1}{3}$, 45 rpm. W: less than 0.3%. F: less than 0.08%. Rumble: -29dB. Turntable with $10\frac{1}{2}$ in dia platter of pressed aluminium. Pulley drive. Two-pole motor. Features: fine counterbalance, cue lever, satin black mainplate with brushed aluminium trims. Price: £62.40 (plus VAT).

141*

Autochanger mounted on afrormosia veneered plinth with lift off dust cover. Speeds: $33\frac{1}{3}$, 45, 78rpm. W: 0.2%. F: 0.06%. Turntable of pressed steel, 11in. dia. Pulley drive. Two-pole motor. Features: low mass tubular arm, cue lever, arm, lock, satin black mainplate. Price: £56.67 (plus VAT).



Luxman PD 272



Luxman PD441



Luxman PD444



Lyrichord 182

129

Autochanger mounted on plinth with dust cover. Speeds: 33 1/4, 45, 78rpm. W: 0.35%. F: 0.08%. Turntable: 11in. platter. Pulley drive. 2-pole motor. Tubular arm, pressure indicator, satin black mainplate. Price: £53.16 (plus VAT).

174

Record deck with umbrella spindle enabling six records to be stacked and allowing them to be removed without disengaging the spindle itself. Stub single provided for single play. Speeds: 33 1/4, 45, 78rpm. W: better than 0.2%. F: better than 0.06%. Rumble: better than -29dB relative to 1kHz at 1.2cm/sec. Turntable: 11in. dia. weighing 1kg and made of pressed steel. Pulley drive. Motor: dynamically balanced 4-pole 240V. Pickup arm: decoupled counter-balanced 4-pole 240V. Pickup arm: decoupled counterbalance, lightweight headshell, tracking 0.4g. Finish: satin black main plate, brushed aluminium trims. Feature: tone arm is of extruded aluminium mounted on a cast pickup hinge. Price: £76.00 (plus VAT).

200

Two speed auto player mounted on plinth with dust cover. Speeds: 33 1/4, 45, 78rpm. Turntable: 11in. made of steel and aluminium. Belt drive. Motor: dynamically balanced 4-pole 240V. Pickup arm, S-shaped tubular tone arm, fully counterbalanced, Gimball mountings. Features: viscous damped cueing lever, bias compensator for elliptical or spherical styli. Finish: satin black mainplate with brushed aluminium trims, hevelled edge turntable with castelatted mat. Price: £82.00 (plus VAT).



Lyrichord 141

■ McLAREN AUDIO

GR International Electronics Ltd,
Almondbank, Perthshire, Scotland.
Tel: Almondbank 441.

L613A*/L614A*

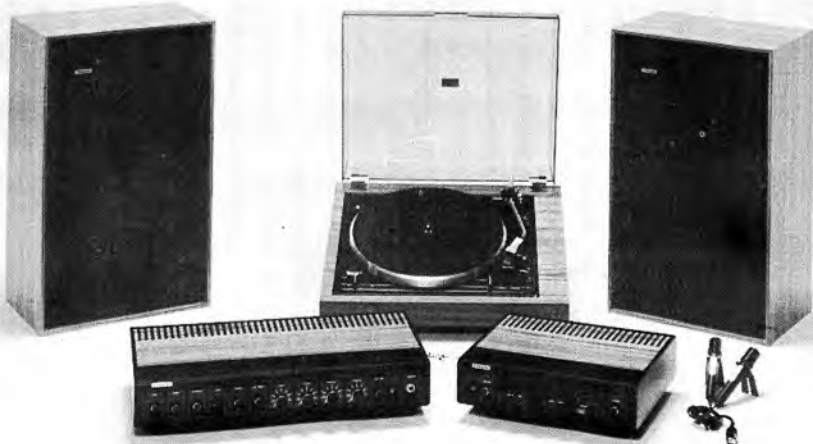
Deck with plinth and pickup arm. Speeds: 33 1/4, 45rpm. Belt drive. Basic Garrard SP25 Mk VI. Price: £61.63 (plus VAT).

■ MARANTZ

Audio UK Ltd, Debarc House,
203 London Road, Staines, Middlesex.
Tel: Staines (81) 50132.

6025*

Automatic turntable complete with pickup arm, plinth and cover. Speeds: 33 1/4, 45rpm. W:



McLaren audio range

***Indices entry is illustrated**

0.07%. Rumble: -65dB. Belt drive. Synchro motor. Semi-auto turntable. Price: £62.13 (plus VAT).

6170*

Automatic turntable complete with pickup arm, plinth and cover. Speeds: 33 1/3, 45rpm. W: 0.03%. Rumble: -70dB. Turntable: 310mm. dia. Direct drive. DC servo control motor. Pickup arm: see 6025. Features: semi auto, speed variable by ±3%. Price: £88.80 (plus VAT).

6270Q

Automatic turntable complete with pickup arm, plinth and cover. Speeds: 33 1/3, 45rpm. Wow: 0.02%. Rumble: -75dB. Turntable: 320mm. Direct drive. Motor: quartz locked DC servo. Pickup arm: see 6025. Features: quartz locked. Price: £137.00 (plus VAT).

6370Q*

Automatic turntable complete with pickup arm, plinth and cover. Speeds: 33 1/3, 45rpm. W: 0.02%. Rumble: -75dB. Turntable: 320mm. dia. Direct drive. Quartz locked DC servo motor. Pickup arm: see 6025, plus oil damped tone-arm for maximum cartridge trackability. Finish: Walnut. Features: speed variable by ±6%. Price: £208.80 (plus VAT).

■ MICRO SEIKI

Harman UK, St. John's Road,
Tyler's Green, High Wycombe,
Bucks. HP10 8HR.
Tel: Penn (049 481) 5331.

MR-10

Belt-drive manual record deck. Speeds: 33 1/3, 45rpm. W and F: less than 0.06%. S/N ratio: more than 50dB. Belt drive with 4 pole synchronous motor. Static balance tone arm with effective length of 222mm and overhang of 15mm. Oil-damped cueing, anti-skating device. Price: £76.56 (plus VAT).

DQX-500

Quartz-locked PLL direct drive record player system incorporating MA-707 tonearm. Speeds: 33 1/3, 45rpm. W and F: less than 0.02%. Turntable 35cm dia. aluminium diecast. Dynamic balance tone arm with effective length of 237mm, overhang 15mm. Price: £265.80 (plus VAT).

Other models

MB14 belt drive auto-return £84.44; DD24 direct drive auto return £114.67; DQ50 direct drive manual with quartz lock and MA505



Marantz 6025



Marantz 6170



Marantz 6370Q

tonearm £328.00; DQX1000 direct drive with quartz lock less arm but up to three tonearms may be mounted £416.89; DQL120 direct drive with quartz lock less tonearm £443.56. All plus VAT. Details on application.

■ MONITOR AUDIO LTD

347 Cherry Hinton Road, Cambridge CB1 4DJ.
Tel: Cambridge (0223) 42898/46344.

ET 500

Direct drive with platter mounted to motor shaft. Arm extra, various mountings available. Speeds: 33 1/3, 45rpm. W and F: 0.55%. Rumble: -65dB. Turntable with special lead

laminated base. 18V direct drive motor. Wood finish in teak/walnut/rosewood or black. Price without arm: £149.50 (plus VAT).

■ OPTONICA

Sharp Electronics (UK) Ltd,
107 Hulme Hall Lane,
Manchester M10 8HL.
Tel: 061-205 7321.

RP2727C

Fully auto direct drive record deck. Speeds: 33, 45rpm. W and F: 0.045% DIN. Rumble: 65dB DIN 'B'. Turntable measures 31cm. Motor: DC coreless unitorque, FG servo. Static balanced S-shaped arm. Finish: black. Price: £133.24 (plus VAT).

RP5100N

Fully auto direct drive record deck. Speeds: 33½, 45rpm. W and F: 0.06%. Rumble: 68dB DIN "B". Turntable: 30cm. dia. Motor: DC coreless FG servo. Static balanced pickup arm S-shaped. Features: front panel operation, glass lid, second motor for arm. Price: on application.

■ PANASONIC

National Panasonic (UK) Ltd,
107-109 Whitby Road, Slough,
Berks SL1 3DR.
Tel: Slough (75) 27516.

SL 19*

Record deck with plinth cover, tone arm and cartridge. Speeds: 33½, 45rpm. W and F: 0.05%. Rumble: —65dB DIN "B". Turntable: 12in. dia. made of die-cast aluminium. Belt drive. DC servo controlled motor. Pickup arm: S-shaped with universal headshell and anti-skating device. Finish: silver. Features: auto return tone arm. Price: on application.

■ PHILIPS

Philips Electrical Ltd,
City House, London Road, Croydon.
Tel: 01-689 2166.

AF 777*

Electronic auto record deck. Speeds: 33½, 45rpm. W and F: 0.05% or 0.08% DIN. Rumble: —43dB DIN 'A', —65dB DIN 'B'. Low mass tubular aluminium tone arm, effective length 215mm. Turntable of aluminium 308mm dia. DC direct control belt drive motor GP401 Mk II Super M Cartridge. Price: £88.00 approx.



Panasonic SL19



Philips AF 777



Philips AF 877



Philips AF 677

*Indicates entry is illustrated

AF 877*

Electronic semi-auto record deck. Speeds: 33 1/3, 45rpm. W and F: 0.03%, or 0.05% DIN. Rumble: -50dB DIN 'A', -70dB DIN 'B'. Tubular aluminium tone arm, low mass. Effective arm length: 215mm. GP401 Super Mk II cartridge. Turntable: die cast aluminium with odourless rubber mat, dia 310mm, DC direct control belt drive motor. Price: £119.70 approx.

AF 677*

Semi-auto with speeds of 33 1/3, 45rpm. W and F: 0.08% DIN or 0.05%. Rumble: -43dB DIN 'A', -65dB DIN 'B'. GP 400 Super M Mk II cartridge. Pressed aluminium turntable, dia 308mm. DC/direct control belt drive. Price: £71.40 approx.

■ PICKERING

Sound Source, Station Approach,
Rickmansworth, Herts.
Tel: Rickmansworth (87) 75242.

FA330*

Complete module on plinth with Pickering XSV/3000 cartridge. Anti-gravity Gyropoise platter suspension with single pivot point. Unipoise arm. FR: 10Hz-30kHz. Output: 4.4mV. Channel separation: 35dB. Stylus tip: stereohedron. Tracking force with brush: 2g, without brush 1g. Price: A (semi-auto) £308.00 (plus VAT); M (manual) £269.00 (plus VAT).

FA300 Series

FA300M £207.00 (plus VAT); FA300A £244.00 (plus VAT).

■ PIONEER

Shriro (UK) Ltd, Shriro House,
The Ridgeway, Iver, Bucks SLO 9JL.
Tel: Iver (0753) 652222/7.

PL200X

Record deck, plinth with cover and fitted tone arm. Speeds: 33 1/3, 45rpm. W and F: 0.05%. S/N ratio: 75dB DIN 'B'. Turntable: 310mm weighing 0.9kg made of die-cast alloy. Direct drive. Motor: coreless DC-Hall. Pickup arm: Static balanced S-shaped auto return. Features: Co-axial suspension, stroboscope, resin panel. Price: on application.

PL 300X

Record deck, plinth with cover and fitted tone arm. Speeds: 33 1/3, 45rpm. W and F: 0.02%. S/N ratio: 78dB DIN 'B'. Turntable: 310mm weighing 1.1kg made of die-cast alloy. Direct drive. Motor: quartz PLL Hall. Pickup arm:



Pickering FA330A



Pioneer PL512



Pioneer PLC530

Static balanced S-shaped, auto return. Features: Coaxial suspension, stroboscope, resin panel. Price: on application.

PL 400X

Similar to 300X.

PL 500X

Similar to 300X but with turntable diameter 330mm.

PL 600X

Similar to 500X.

PL-L-100

Record deck, plinth with cover and fitted tone arm (linear tracking). Speeds: 33 1/3, 45rpm. W and F: 0.013%. S/N ratio: 78dB DIN 'B'. Turntable: 320mm weighing 380kg made of die cast alloy. Motor: SHR quartz direct drive Hall motor. Pickup arm: linear tracking tone arm. Features: solid particle board plinth. Price: on application.

PL 512X*

Record deck, plinth with cover, fitted tone arm. Speeds: 33 1/3, 45rpm W and F: 0.055%. S/N ratio: more than 65dB DIN 'B'. Turntable: 30cm. made of alloy die cast. Belt drive. Motor: 4-pole synchronous. Pickup arm: S-shaped static balance, manual operation. Features: solid particle board construction plinth. Finish: sunrise grey. Price: on application.

PL-C 590*

Record deck and Plinth with cover. Speeds: 33 1/3, 45rpm. W and F $\pm 0.035\%$. S/N ratio: 75dB DIN 'B'. Turntable: 320mm weighing 350kg made of die-cast alloy. Quartz direct drive. Quartz PLL hall-motor. Pickup arm: armless but supplied with three arm mounting for panels, suitable for PA 1000, SME3009, STT and universal board. Features: die-cast plinth, pitch indicator, quick stop. Price: on application.

■ PYE

Pye Ltd, 137 Ditton Walk,
Cambridge CB5 8QD.

Tel: Teversham (022 05) 2781.

5673*

Integrated turntable, fully automatic. Speeds: 33 1/3, 45rpm. W and F: 0.15% DIN, 0.09% WRMS. Rumble: $> -40\text{dB}$ DIN 'A', $> -60\text{dB}$ DIN 'B'. Turntable: 277mm. Belt drive. Motor: DC servo. Pickup arm: straight tubular aluminium. Features: floating sub-chassis, Philips GP400 Mk II cartridge, variable pitch



Pye 5684



Pye 5673

control, stroboscope on platter. Detachable rim headshell. Price: £60.00 (plus VAT).

5684*

Fully automatic integrated turntable on a floating sub-chassis. Speeds: 33 1/3, 45rpm. W and F: $< 0.09\%$ DIN, $< 0.055\%$ WRMS. Rumble: $> -42\text{dB}$ DIN 'A', $> -65\text{dB}$ DIN 'B'. Turntable: 277mm, made of die-cast aluminium with stroboscope engraved on rim. Belt drive. Motor: DC servo. Pickup arm: straight, tubular aluminium with detachable headshell and Philips GP401 Super M Mk II cartridge fitted. Variable pitch control, illuminated stroboscope, black plinth with detachable smoked acrylic cover. Price: to be announced.

5674

As 5673. Black plinth with detachable smoked acrylic cover. Price: £60.00 (plus VAT).

5887

Semi-automatic integrated turntable on floating sub chassis. Speeds: 33 1/3, 45rpm. W and F:

*Indicates entry is illustrated

0.05% DIN, 0.025% WRMS. Rumble: —50dB DIN 'A', —73dB DIN 'B'. Turntable: 310mm, die-cast aluminium. Belt drive with quartz phase lock loop direct control speed system. DC motor. Features: straight tubular aluminium pickup arm with detachable headshell, Philips GP 401 Super M Mk II cartridge. Features: direct stylus force readout. Black plinth with detachable smoked acrylic cover. Price: £130.71 (plus VAT).

■ REALISTIC

Tandy Corporation (Branch UK),
Bilston Road, Holyhead Road,
Wednesbury, Staffs WS10 7JN.
Tel: 021-556 6101/2.

LAB 250*

Record deck complete with pickup, cartridge, plinth and cover. Speeds: 33½, 45rpm. Turntable made of aluminium alloy. Belt drive. Motor: 4-pole synchronous. Pickup arm: low mass S-shaped. Finish: walnut veneer plinth with hinged dust cover. Price: £79.95 (inc. VAT).

LAB 400

Record deck complete with pickup, cartridge, plinth and cover. Speeds: 33½, 45rpm. W: less than 0.03%. Turntable: 31cm weighing 1.4kg made of aluminium alloy. Direct drive. Motor: 16-pole brushless DC servo. Pickup arm: tubular S-shaped static balance type. Finish: walnut veneer base with hinged dust cover. Neon strobe indicator. Price: £129.95 (inc. VAT).

■ REGA

Rega Research Ltd,
Swaines Industrial Estate,
Ashington Road, Rochford, Essex.
Tel: Southend 546674.

Planar 2

Complete integral unit with arm. Speeds: 33½, 45rpm. Turntable: 12in. glass. Belt drive. Motor: 24 pole synch dynamically suspended. Pickup arm suitable for most cartridges. Finish: Hardwood/black. Price £86.00 (plus VAT).



Rega Planar 3



Realistic LAB250



Revox B790

Planar 3*

As Planar 2 in black finish. Price: £120.43 (plus VAT).

■ REVOX

F.W.O. Bauch Ltd, 49 Theobald Street,
Borehamwood, Herts WD6 4RZ.
Tel: 01-953 0091.

B790*

Complete in plinth, cover, with pickup arm. Speeds: 33½, 45rpm and variable ±7%. W and F: 0.05%. Turntable: 313mm dia. Direct drive. Tangential tracking, ultra short servo driven. Price: £385.00 with Ortofon VMS 20E, £395.00 with Ortofon M20E, £399.00 with AKG P8ESR (plus VAT).

■ SABA

Saba Radio & Television Ltd,
10-12 Cornbrook Park Road,
Manchester M15 4EE.
Tel: 061-872 7661.

PSP 900*

Record deck with pickup arm, Shure M956 cartridge, plinth and cover. Speeds: 33 $\frac{1}{3}$, 45rpm. W and F: <0.08% DIN. Rumble: -64dB. Turntable: 30cm. Direct drive. DC servomotor. Pickup arm: S-shape, detachable head shell, adjustable bias. Finish: metallic grey. Price: £128.89 (plus VAT).



Saba PSP900

■ SAKAI

Wren Electronics Ltd, Dawson Road,
Mount Farm Estate, Milton Keynes,
Bucks.
Tel: Milton Keynes 71611.

RP3040*

Record deck complete with pickup arm, plinth and cover. Speeds: 33 $\frac{1}{3}$, 45rpm. W and F: <0.045%. Rumble: 65dB. Turntable: 31cm weighing 1.2kg. Direct drive. DC motor. Pickup arm: S-shape. All front controls. No rec. retail price.



Sakai RP3040

■ SANSUI

Sansui Audio Europe NV,
Unit 10A, Lyon Industrial Estate,
Rockware Avenue, Greenford, Middlesex.

FR-Q5, FR-D4, FR-D3, FR-D3S, SRB-200 SRB-200S

Record deck. Speeds: 33 $\frac{1}{3}$, 45rpm. W: less than 0.07%, F: less than 0.07%. Rumble: better than 65dB. Turntable: 300mm made of aluminium alloy. Belt drive. Motor: 4-pole synchronous. Pickup arm: statically balanced S-shaped, length 210mm. Finish: available in black or silver. Price: £60.00 approx.

SR 222 Mk II

Record deck with arm, plinth and cover. Speeds: 33 $\frac{1}{3}$, 45rpm. W: less than 0.045%. F: less than 0.045%. Rumble: better than 68dB. Turntable: 330mm made of aluminium alloy. Belt drive. Motor: 4-pole synchronous. Pickup arm: statically balanced S-shaped with anti-skating, gold-plated connectors. Finish: black. Price: £56.50 (plus VAT).



Sharp RP2727

■ SHARP

Sharp Electronics (UK) Ltd,
Sharp House, 107 Hulme Hall Lane,
Manchester M10 8HL.
Tel: 061-205 7321.

RP 2727*

Fully automatic, direct drive, plug-in headshell. Speeds: 33 $\frac{1}{3}$, 45rpm. W: \pm 0.45%. F: 0.03%. Rumble: better than 65dB. Aluminium die cast turntable with stroboscope marks, measuring

*Indicates entry is illustrated



Sony TTS 8000 and RS 8000 plinth

31cm dia. DC coreless motor with frequency generator, servo control mechanism. S shaped pickup arm fully automatic, static balance, oil damped cue. Effective length: 210mm. Two independent pitch controls. Price: £149.90 (inc. VAT).

■ SONY

Sony (UK) Ltd,
Consumer Information Showroom,
134 Regent Street, London W1R 6DJ.
Tel: 01-439 3874.

TTS-8000*

Supplied without plinth or arm. Optional plinth RS 8000 available. Speeds: 33 1/3, 45rpm. W and F: less than 0.02%. Rumble: S/N ratio 70dB DIN. Turntable: 32cm diecast aluminium. Direct drive, crystal lock system. Brushless, slotless motor with DC servo system. Features: fluid filled platter mat, touch sensitive start/stop switch. Price: on application.

PST1*

Record deck with pickup arm, plinth and XL15 cartridge. Speeds: 33 1/3, 45rpm. W and F: 0.04%. Rumble: 68dB DIN. Direct drive. Motor: linear BSL. Pickup arm: 300mm overall arm length. Finish: grey. Features: semi-automatic operation. Price: on application.

PS X40*

As above but W and F: 0.025%. Rumble: 73dB.

PX X60*

Record deck with plinth, pickup arm, and cover. Speeds: 33 1/3, 45rpm. W and F: 0.025%.



Sony PS-X60



Sony PX-X70



Sony PS-T1

Rumble: 75dB. Direct drive. Motor: linear BSL. Pickup arm: static balance type, 330mm long, weighing 11g. Price: on application.

PX X70*

As above.

■ STD

C.W. and J. Walker,
Brentwood, Red Lane, Frodsham,
Warrington WA6 6RH.
Tel: Warrington 33326.

305D*

Record deck, plinth mounted but without arm. Speeds: 33½, 45, 78rpm, variable. W: 0.06% DIN. Rumble: -70dB DIN 'B'. Turntable: 12in. dia, made of aluminium. Belt drive. Motor: brushed DC motor with tachogenerator. Finish: extruded aluminium, anodised. Features: digital speed readout, touch plate control. Price: £230.00 (plus VAT).

305M

Record deck, plinth mounted but without arm. Speeds: 33½, 45rpm. W: 0.06% DIN. Rumble: -70dB DIN 'B'. turntable: 12in. dia made of aluminium. Belt drive. Motor: 16-pole synchronous. Finish: anodised, extruded aluminium plinth. Price: £173.33 (plus VAT).

■ TEAC

Harman UK, St. John's Road,
Tyler's Green, High Wycombe HP10 8HR.
Tel: Penn (049 481) 5331.

TS Range

Details on application. Prices: TS-F15 belt drive manual £84.44; TS-F30 belt drive auto-return £102.22; TS-F50 direct drive auto £176.89 (plus VAT).

■ TECHNICS

National Panasonic (UK) Ltd,
308 Bath Road, Slough,
Berkshire SL3 6JB.
Tel: Slough (75) 34522.

SL 230*

Record deck complete with arm and mounting. Speeds: 33½, 45rpm, electronic change, 6% adjustment range. W and F: 0.045%. Rumble: -70dB 'B'. Belt drive, FG servo-controlled DC motor. Pickup arm: S-shaped gimbal suspension with 7mg force in both vertical and lateral directions. Technics EPC-270C moving



Sony PX-X40



STD 305D



Technics SL-200

*Indicates entry is illustrated

magnet cartridge. Features: memo-repeat, anti-skate, viscous-damped cueing, illuminated strobe, front-panel controls. Price: £99.95 (inc. VAT).

SL220*

Record deck complete with arm and mounting. Speeds: 33 $\frac{1}{3}$, 45rpm, electronic change, 6% adjustment range. W and F: 0.045%. Rumble: -70dB DIN 'B'. Belt drive semi-automatic, FG servo DC motor. Pickup arm: S-shaped gimbal suspension with 7mg force in both vertical and lateral directions. Technics EPC-270C moving magnet cartridge. Features: anti-skate, viscous-damped cueing, illuminated strobe, front-panel controls. Price: on application.

SL 200*

Record deck. Speeds: 33 $\frac{1}{3}$, 45rpm. W and F: 0.05%. Rumble: -65dB DIN 'B'. Belt drive. Motor: DC servo. Pickup arm: S-shaped, static balance, length 230mm. Price: on application.

SL-5300*

Record deck with quartz phase-locked control of direct drive system. High torque brushless DC motor. Strobe speed checks. Low-mass type arm with gimbal suspension. Anti-skating controls, viscous damped cueing, hinged detachable dustcovers. SL 5300 is fully automatic and features a memo-repeat system allowing user to repeat a record up to six times or indefinitely. Finish: silver. Price: £189.95 (inc. VAT).

SL-5200*

Semi-automatic version of above. Price: £174.95 (inc. VAT).

Other Models

SL-3300, SL-230, SL-3200, SL-220, SL-150 Mk2, SP-10 MkII, SL-1310 Mk2, SL-1410Mk2, SL-1510 Mk2, SL-1300 Mk2, SL-1400 Mk2, SL-1500 Mk2, SL-1000 Mk2, SL-150. Details on application.

■ TENSAI

Wren Electronics Ltd, Dawson Road, Mount Farm Estate, Milton Keynes, Bucks.

Tel: Milton Keynes (0908) 71611.

TD 855D*

Record deck complete with plinth, arm, cover. Speeds: 33 $\frac{1}{3}$, 45rpm. W and F: 0.06%. Turntable: 310mm weighing 1.4kg made of cast alloy. Direct drive. Motor: DC and AC-16 pole. Pickup arm: 'S' shaped. Features: fully automatic. No rec. retail price.

Join us in a small celebration.

Here's a Hi-Fidelity system that'll really give you cause to celebrate.

It's the Technics concise components series. Each component is literally only 2" high by 12" wide. The cassette deck, a mere 4" high.

They're small enough to stack in your shallowest bookshelf and their performance totally defies their size.

Without straining the SE-CO1 stereo DC power amplifier will give you 50 watts a channel with no more than 0.03% total harmonic distortion from 20Hz to 20,000Hz.

The SU-CO1 stereo amplifier has a built in moving coil preamplifier. The SN ratio is 88dB and distortion an amazing low of 0.005%.

A subsonic filter of -12dB/oct cuts off unwanted noise below 30Hz.

In the FM/AM stereo tuner, the ST-CO1, an active servo-lock gives utterly precise tuning and there are many ingenious design factors which contribute to virtually distortion free FM stereo reception.

The RS-MO2 Dolby Direct-Drive front loading cassette deck is a miniature masterpiece. It has performance figures that would be the envy of many full size decks. A wow and flutter figure of just 0.04% WRMS. An SN ratio of 68dB. And with the new Metal Tape you achieve a frequency response of 20-20,000Hz.

The complete system can be heard through our SB F1 2-way linear phase speakers.

A mere 8" high, they can handle up to 60 watts and the frequency response is excellent at 50 to 20,000Hz.

Our turntables have not yet succumbed to miniaturisation. With the concise components series the fully automatic SL 1600 MkII Direct Drive Turntable will complete a stereo system second to none.

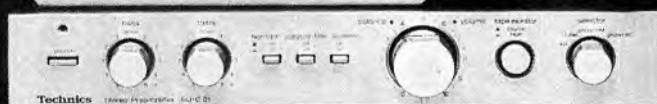
The rotational accuracy is superb. Wow and flutter read 0.025% WRMS. Rumble -78dB (DINB).

It all adds up to a must for those of you who want your Hi-Fi heard but not seen.

Technics

Concise Components series.

107/109 Whitby Road, Slough, Berks SL1 3DR.



Indicates entry is illustrated



Technics SL-220



Technics SL-230



Technics SL-5300



Technics SL-5200

■ THORENS

Metrosound Audio Products Ltd,
Treedex House, 4-10 North Road,
London N7 9HN.
Tel: 01-607 8141.

26 III C*

belt drive transcription turntable with fully



Tensai TD 855D



Thorens TD 160 BCII transcription

electronic cover. Speeds: $33\frac{1}{3}$, 45rpm. W and F: $\pm 0.05\%$. Rumble: better than -72dB DIN 'B'. Zinc alloy turntable measuring 30cm dia. DC motor with 72-pole tachogenerator. Pickup arm: effective mass 7.5g, bearing friction $< 15\text{mg}$, magnetic skating compensation. Price: £315.00 (inc. VAT).

TD 126 III BC

As above without pickup arm. Price: £258.75 (inc. VAT).

TD 110*

Belt drive transcription turntable fitted with pickup arm, hinged cover and plinth. Speeds: $33\frac{1}{3}$, 45rpm, switched electronically with load-compensating automatic pitch control. W and F: $\pm 0.05\%$. Rumble: better than -68dB DIN 'B'. Turntable measuring 30cm dia. DC motor governed by 72-pole tachogenerator. Pickup arm: length 222mm, effective mass 7.5g bearing friction $< 15\text{mg}$. Magnetic skating compensation. Features: four-point "orthoinertial" suspension damped in all directions. Price: £151.88 (inc. VAT).

TD 115

As above with velocity sensing electronic shut-off and lift-off. Price: £174.38 (inc. VAT).

TD 104/TD 105*

Record deck supplied complete with arm, base and cover. Semi-automatic with friction-free velocity sensing electronic shut-off which lifts and returns the tonearm and stops the motor. TD 104 is the manual version. Speeds: $33\frac{1}{3}$, 45rpm. W and F: <0.05% DIN. Rumble: -48dB unweighted, -65dB weighted. Turntable: 30cm weighing 1.3kg and made of zinc alloy, dynamically balanced. Belt drive. Motor: DC and 72-pole tachogenerator. Pickup arm: TP22, effective mass 7.5g. Price: TD104 £100.00, TD105 £120.00 (plus VAT).

TD 160CII*

Transcription turntable supplied with base and cover only, enabling the fitting of a wide choice of pickup arm. Speeds: $33\frac{1}{3}$, 45rpm. W and F: <0.06% DIN. Rumble: -45dB weighted, -65dB unweighted. Turntable: 30cm weighing 3.2kg made of zinc alloy, dynamically balanced. Belt drive. Motor: 16-pole two-phase synchronous with slip clutch for instantaneous start. Price: £102.00 (plus VAT).

*Thorens TD105**Toshiba SR-A230**Thorens TD110**Toshiba SR-F225**Toshiba SR-F325*

Even if the room temperature changes the speed doesn't.



The Pye 5877 record deck. With a speed control so sensitive it can compensate for record cleaning arm drag or changes in stylus force. Even for minute changes of room temperature.

Platter speed is continuously monitored by a tacho-generator and speed automatically corrected to give wow and flutter better than 0.03%.

In addition the playing-speed selector responds to a mere touch, and LED display indicates pitch at a glance, and a meter allows accurate

checking and setting of stylus tracking force.

The Pye 5877 complete with Philips GP401 Super M Mk II cartridge, is exceptional value for money.

And it is just one of twenty units in the Pye Hi-Fi Sound Project Range, to be seen and heard at your local dealer.

THE PYE HI-FI SOUND PROJECT.

You can rely on Pye



Pye Limited, 137 Ditton Walk, Cambridge CB5 8QD.

■ TOSHIBA (UK) LTD

Toshiba House, Frimley Road,
Frimley, Camberley, Surrey.
Tel: Camberley (0276) 62222.

SRF-530

Plinth mounted with arm. Speeds: 33 1/3, 45rpm.
W: 0.35%. Turntable measuring: 29.6cm.
Direct drive fully auto, DC servo motor.
S-shaped static balance. Features: auto repeat
with memory counter. Price: £106.22 (plus
VAT).

SR-A230*

Semi-automatic turntable. Speeds: 33 1/3,
45rpm. W and F: 0.06%. Turntable: 31cm
aluminium diecast. S/N ratio: 50dB. Pickup:
S-shaped arm. Features: cueing facility, anti-
skating device. Motor: 4-pole synchronous.
Price: £61.77 (plus VAT).

SR-F225*

Fully automatic turntable. Speeds: 33 1/3,
45rpm. W and F: 0.08%. S/N ratio: 60dB.
Turntable: 31cm. dia, die-cast aluminium. Belt
drive. Motor: AC 4-pole synchronous. Pickup:
S-shape, static balance, spring adjusted bias
compensation, direct reading tacking weight
adjuster, cueing lever. Price: £79.56 (plus
VAT).

SR-F325*

Record deck. Speeds: 33 1/3, 45rpm $\pm 2\%$
variable. W and F: 0.05%. S/N ratio: 65dB.
Turntable: 31cm. diameter, die-cast aluminium
with stroboscope. Belt drive. Motor: PLL DC
servo controlled. Pickup: S-shape, static
balance, anti-skating mechanism, direct reading
track weight-adjuster, cueing lever. Price:
£88.44 (plus VAT).

■ TRIO

B. H. Morris and Co Ltd,
Precision Centre, Heather Park Drive,
Wembley, Middlesex.
Tel: 01-902 9422.

KD 2055

Belt drive turntable, plinth mounted, supplied
with S-type pickup arm. Speeds: 33 1/3, 45rpm.
W and F: less than 0.06%. Rumble: -65dB
(DIN). Cast aluminium turntable 30cm dia.,
weight 1.05kg. Synchronous 4-pole motor.
Pickup arm: S-type with independent variable
speed, auto/return/cut mechanism. Finish:
stone look ARCB. Price: £84.00 (plus VAT).

KD 1033B

Fitted with PU arms plinth. Speeds: 33 1/3,



Trio KD-1500

45rpm. W and F: 0.06%. Rumble: -65dB.
Turntable 30cm dia. Belt drive. Synchronous
240V AC motor. Medium mass S-type pickup
arm, pulley weight, bias. Matt black finish.
Price: £56.00.

KD 750

Pickup arm, plinth. Speeds: 33 1/3, 45rpm. W
and F: 0.022%. Rumble: -74dB. Turntable:
33cm. Direct drive, quartz lock. Brushless DC
servo motor. Pickup arm of magnesium alloy.
'S' type. Finish: walnut high gloss veneer. Price:
£444.44 (plus VAT).

KD 650

Record player with pickup arm, plinth. Speeds:
33 1/3, 45rpm. W and F: less than 0.025%.
Rumble: better than -75dB. Turntable: 33cm,
weighing 2.6kg made of aluminium alloy die-
cast. Direct drive. Motor: 20-pole 30 slot
brushless DC servo motor. Pickup arm: static
balanced type, 'S' shaped pipe arm. Features:
quartz, phase locked loop circuit. ARCB plinth
has feel and looks of granite. Price: on
application.

KD 600

As above but without Pickup arm.

KD 1500*

Record deck with pickup and plinth. W and F:
less than 0.005%. Speeds: 33 1/3, 45rpm.
Rumble: better than -65dB. Turntable: 30cm
dia. weighing 0.55kg made of aluminium alloy
die-cast. Belt drive. Motor: 4-pole synchronous.
Pickup arm: static balance type 'S' shape.
Features: auto-cut mechanism. Price: on
application.

APPOLO

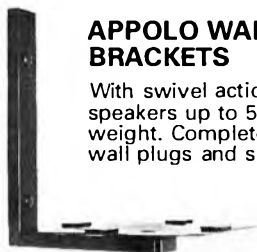


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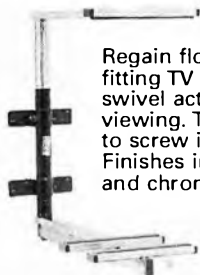


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With swivel action for
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Regain floor space by
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swivel action for easy
viewing. There is no need
to screw into TV cabinet.
Finishes in black nylon
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APPOLO W/B3

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TELEPHONE 01-660 4780
TELEX 943763

APPOLO III



APPOLO IV

APPOLO II



SABRE II

Speaker Accessories

*Indicates entry is illustrated

Abbreviations used in this section are given on page 5.

■ ADASTRA

Adastra Electronics Ltd,
Unit 22, Cricklewood Trading Estate,
Claremont Road, London NW2 1TU.
Tel: 01-452 6288/9.

M135 Loudspeaker Stand

Strong, all purpose designed stand in chromed tubular metal with four legs, each fitted with non-slip rubber ferrules. The circular steel plate is already drilled with holes to facilitate fitting to underside of loudspeaker cabinets, audio systems and TV. Height: 12in. Price: £11.40 (plus VAT).

L65/L66/L67

Range of metal cased 2-way LC networks with cross-over frequency of 3kHz. L65 for 3 ohm systems, L66 — 8 ohms; L67 15 ohms. Price: £2.10 (plus VAT).

L68

3-way LC network with cross-over points 1kHz and 5kHz. Imp: 8 ohms. Price: £4.00 (plus VAT).

■ RICHARD ALLAN

Richard Allan Radio Ltd, Bradford Road,
Gomersal, Cleckheaton, Yorks BD19 4AZ.
Tel: Cleckheaton 87442.

CN54 Crossover Unit

Two-way quarter section. Recommended for use with CR5 bass unit and CB4 tweeter. Crossover frequency: 5kHz. Imp: 8 or 15 ohms. Price: (twin) £3.65; (triple) £3.75. All plus VAT.

CN104 Crossover Unit

A two-way half-section parallel network. Cross-over frequency: 5kHz. Imp: 8 or 15 ohms. Price: £7.90. (plus VAT).

CN1284 Crossover Unit

A three-way crossover with main crossover

operating from half-wave parallel network and subsidiary crossover capacity led. Crossover frequencies: 1.1kHz and 5kHz. Imp: 8 or 15 ohms. Price: £10.85 (plus VAT).

CN1220 Crossover Unit

Three-way half-section. Crossover frequencies: 700Hz and 7kHz. Price: £14.50 (plus VAT).

CN820 Two-way Crossover

Frequency 3.5kHz. Low pass 12dB/oct. High pass 18dB/oct. Nominal imp: 8 ohms. Price: £3.65 (plus VAT).

CN8280 Three-way Crossover

Frequencies: 250Hz, 3.5kHz. Low pass 6dB/oct, band pass 12dB/oct and 18dB/oct. High pass 24dB/oct. Nominal imp 8 ohms. Price: £23.00 (plus VAT).

CN54M Two-way Crossover

Frequency 6kHz. Low pass 6dB/oct. High pass 12dB/oct. Nominal imp 8 ohms. Price: £3.90 (plus VAT).

CN1230 Three-way Crossover

Frequencies 1,200 + 6kHz. Low pass 12dB/oct. Band pass 6dB/oct. High pass 12dB/oct. Nominal imp 8 ohms. Price: £6.70 (plus VAT).

CN35L

18dB/oct low pass filter at 3.5kHz. Price: £9.95 (plus VAT).

CN35H

24dB/oct high pass filter at 3.5kHz. Price: £3.90 (plus VAT).

■ ARMSTRONG

Armstrong Audio Ltd,
Wartlers Road, London N7 0RZ.
Tel: 01-607 3213.

J2 Loudspeaker Stand*

Designed primarily for Armstrong 602 speakers but will take any other kind. Made from heavy



Armstrong J2 Stand

*Indicates entry is illustrated

duty spun steel coated in black nylon. Round bass measures 34cm and is 31cm high. Price per pair: £22.50 (inc VAT).

■ AUDIO PACKS

Tape Recorder Spares Ltd,
206-210 Ilderton Road, London SE15 1NS.
Tel: 01-639 7844.

Sound Selector Units

A range of five units for routing signals to phones, speakers and amplifiers. Four of the units provide for the selection of up to three pairs of stereo headphones or up to three pairs of speakers. The fifth unit, model HZ793, provides facilities for connecting any three signal sources to any three amplifiers. Particularly suitable for demonstration purposes in show-rooms and for comparative tests. Price: on request.

Loudspeaker Leads

Comprehensive range of loudspeaker leads covering 2 pin DIN, phono, jack and spade terminal connections. Free trade catalogue on request. Nominal charge to public.

■ BADGER SOUND SERVICES

Badger Sound Services, 46 Wood Street,
Lytham St. Annes, Lancs FY8 1QG.
Tel: St. Annes (0253) 729247.

CN1 Crossover

Equivalent to Cambridge Audio R50. Combines B139, B110, T27 and STC4001G. A very high quality network produced to meet the needs of the builders of 'Hi-Fi Answers' transmission line design. Components are hand tested and selected for accuracy. High power-handling capacity — well suited to modern amplifiers of up to 75 watts rms per channel.

CN 114 Crossover

B139, B110, T27, HF2000. Specification as for CN 1 but using the Celestion HF2000 super tweeter in place of the 4001G. Used in the American 'Audio Amateur' magazine design.

CN 30 Crossover

Equivalent to KEF DN 12. Combines B139, B110 and T27. Crossover frequencies 400 and 3500Hz.

CN 31 Crossover

Equivalent to KEF DN 13 (SP 1015) but higher power handling. Combines B200 and T27. Crossover frequency 3500Hz.

CN 32 Crossover

Equivalent to KEF DN 13 (SP 1017). Combines B110 and T27. Crossover frequency 3500Hz.

CN 68 Crossover

B200/Peerless KO 10 DT Network to combine this well known bass/midrange unit with the Peerless 'soft dome' tweeter. Can be supplied modified for DT 10 HFC.

CN 104 Crossover

B200/Isophon KK8. As CN 68 but enabling the B200 to be combined with the Isophon KK8.

CN 109 Crossover

B200/Audax HD 12 9D25. A variation of CN 104 enabling the use of the very analytical Audax dome tweeter.

CN 73 Crossover

B139/B110/T27 High Power network. A high power version of CN 30 suitable for use with amplifiers rated at up to 75 watts rms per channel.

CN 106 Crossover

B139/Peerless K040MRF/Audax HD12-9D25 or Isophon KK8 or SEAS (D86H). Network for the 'Practical Hi-Fi and Audio' PRO 9TL design (C. J. Rogers, October 1976).

CN 107 Crossover

Two Peerless KP 100WF/ K040MRF/KO10DT for disco or domestic use. Network to construct a high efficiency (2.5W for 96dB at 1 metre (high power (100W) high quality system equally suitable for disco or domestic use. Uses two bass units in parallel. Imp: 4 ohms.

CN 95 Crossover

Daline 3-way crossover network — improved version. A network for the 'Hi-Fi News' 3-way Daline (R. Fris, October 1975). For KO10DT tweeter.

CN 80 Crossover

Daline 2-way network B110/T27 — improved version. As CN 95 but intended for 2-way version..

CN 91 Crossover

Daline 2-way network B110/KO10DT version. (Hi-Fi News, Oct. 75). Additional network published in the above issue enabling a 2-way version using the Peerless tweeter.

CN 105 Crossover

B139/B110/Two HF1300/4001K. Network for the Hi-Fi News 'State of the Art' design (April 1976) by P. Atkinson.

CN 120 Crossover

Sonaudax HD17B25H/HD12-9D25. For systems A and E in our suggested enclosures.

CN 121 Crossover

Sonaudax HD20B25(H)-4 (or J version)/HD12-9D25. For systems B and C in our suggested enclosures. System C has been published as the Hi-Fi News & Record Review 'Tabor' (Sept. 1977) and this is the specified network.

CN 119 Crossover

Peerless KP825 WF/K010DT. For system G in our suggested enclosures. A very good performer offering high efficiency and therefore well suited to budget amplifiers of low power.

CN 118 Crossover

Peerless KO825 WF/MT24. For system H in our suggested enclosures. Combines good performance with high efficiency. As with system G this design is well suited to low power budget amplifiers but offers a lower cost than system G.

CN 122 Crossover

Sonaudax HD24S45/HD17B25H/HD 12-9D25. For system D in our suggested enclosures. A modern large 3-way system producing surprisingly good results from a 10in bass unit.

CN 123 Crossover

Peerless KP100WF/K040MRF/K010DT. A variation on our CN 107 network produced in response to requests for a smaller 8 ohm version. Use only one KP100WF in an enclosure of 2 cu ft (60 ltr.). Suitable for amplifiers up to 75 watts per channel and quite efficient.

CN 140 Crossover Network

Sonaudax HD24S45C/Peerless K040MRF/Iso-phon KK8. For System J in our suggested enclosures and now published as the 'Hi Fi Answers' Compact. Bass and midrange units in this design are modified.

CN 138 Crossover Network

Peerless K050WG/K010DT (or MT24CT). For System K in our suggested enclosures.

CN 139 Crossover Network

Two Peerless K050WG/one K010DT (or MT24CT). For System L in our suggested enclosures.

CN 148 Crossover Network

Monitor quality network for the B110/T27, similar in all essential respects to the LS3/5A.

EC 141 Electronic Centre Bass Crossover

Electronic network operating at 120Hz for combining bass signals to feed a centre bass system. Requires 18-30 volts DC supply.

PP 142 Power Supply Module

Circuit board carrying rectifying and smoothing components to provide DC power for EC 141 electronic crossover. Will also power PA145 power amplifier module. Mains transformers available.

PA 145 Power Amplifier Module

Power amplifier stage complete with heatsink for adding to the EC 141 electronic centre bass system. Removes the need for an external amplifier to feed the bass speaker. High quality component conservatively rated at 35 watts/8 ohms or 50 watts/4 ohms.

■ DECCA

Decca Special Products, Ingate Place, Queenstown Road, London SW8 3NT.
Tel: 01-622 6677.

Acoustic Lens

Device for obtaining optimum dispersion of the higher audio frequencies produced by the Decca Mk II ribbon speaker or the Decca DK30 ribbon speaker. Price: £3.30 (plus VAT).

■ EAGLE

Eagle International, Precision Centre, Heather Park Drive, Wembley HA0 1SU.
Tel: 01-902 8832.

CXN 220

Two-way crossover, 6dB/octave. Nominal impedance: 8 ohms. Nominal capacity: 30 watts rms. Crossover frequency: 3.0kHz (nominal). Price: £3.50 each.

CXN 240

Two-way crossover, 12dB/octave. Nominal impedance: 8 ohms. Nominal capacity: 50 watts rms. Crossover frequency: 5.0kHz (nominal). Price: £4.95 each.

CXN 360

Three-way crossover, 12dB/octave. Nominal impedance: 8 ohms. Nominal capacity: 60 watts rms. Crossover frequencies: 1kHz and 6kHz (nominal). Price: £12.50 each.

*Indicates entry is illustrated

■ FIDELITY FASTENINGS

Fidelity Fastenings, The Ridgeway,
Iver, Bucks.
Tel: Iver (0753) 654222.

FF1 Wall Mounting kit for Hi-Fi Speakers

Vibration damped wall fastening for speakers up to 50lb weight each. It allows easy adjustment of speaker angle and rubber mounting prevents accidental movement.

■ GOODMANS

Goodmans Loudspeakers Ltd,
Downley Road, Havant,
Hampshire PO9 2NL.
Tel: Havant 486344.

Loudspeakers Stand Type CS4

Packed in pairs, suitable for all floor standing speakers with a face area of from 26mm. Fitted with four castors for easy access and cleaning. Price: to be announced.

■ HARMAN

Harman UK, St. John's Road,
Tyler's Green, High Wycombe,
Bucks HP10 8HR.
Tel: Penn (049 481) 5221.

HS1*

Standard speaker stand with base 12 × 10.5in. Speaker platform 12 × 10.5in. Overall height inc. castors 9.1in. Price: £19.90 (inc. VAT).

HS2*

Telescopic speaker stand. Base 10.7in. expanding to 16.5 × 10.25in. Speaker platform 10.75in. expanding to 16.5 × 10.25in. Overall height inc. castors 9.25in. Price: £22.90 (inc. VAT).

HS3*

Tilting model. Base 14.5 × 12in. Speaker platform 9.8 × 9.2in. Overall height inc. castors 6in. tilting to over 10deg. Price: £26.90 (inc. VAT).

■ KEF

KEF Electronics Ltd, Tovil, Maidstone,
Kent ME15 6QP.
Tel: Maidstone (0622) 672261.

Crossover networks

DN12 (SP1004) combines B139, B110 and T27. DN13 (SP1017) combines B110 and T27. DN13 (SP1015) combines B200 and T27. DN22 (SP1065) modification kit to update Model 104 to Model 104aB specification. No recommended retail price.

■ KEITH MONKS

Keith Monks (Audio) Ltd,
26-28 Reading Road South, Fleet,
nr. Aldershot, Hants.
Tel: Fleet (12514) 20568, 20569.

Loudspeaker Accessories

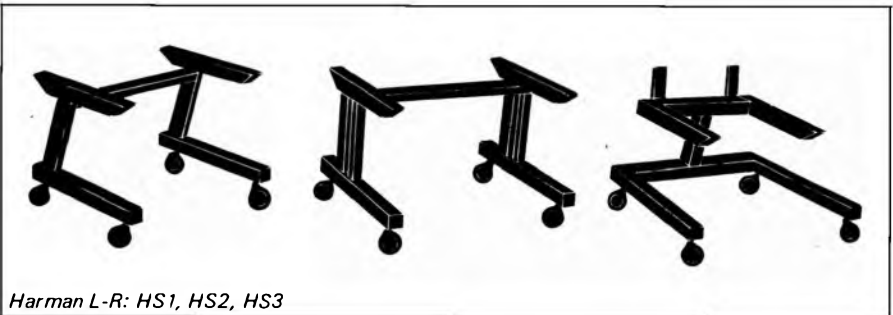
SS/2 loudspeaker stand with three solid legs, available in three fixed heights: 9in (SS/2A) srp £16.50 (plus VAT); 18in (SS/2B) srp £17.50 (plus VAT); 36in (SS/2C) srp £19.00 (plus VAT).

■ QAS

Quality Audio Supplies, Wollaton Road,
Beeston, Northampton NH9 2PB.
Tel: Nottingham (0602) 265141.

Accessories

Wide range of audio accessories including phono plugs, DIN plugs and sockets, 4mm and wander plugs, couplers, screw terminals, slider switches, connecting leads with all types of terminations, audio switching units, headphones, mics, cassettes.



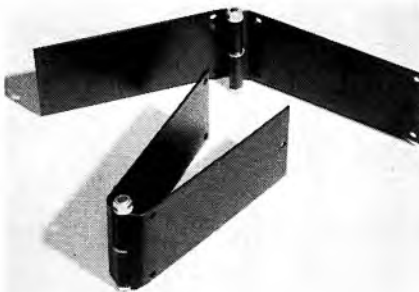
Harman L-R: HS1, HS2, HS3



QED 2/2



QED 16/1



QED 7/1 brackets

■ QED

QED Audio Products Ltd,
112 Windmill Road, Sunbury-on-Thames,
Middlesex TW16 7HD.
Tel: Sunbury (76) 87344/5.

Type 16/1 Amplifier Switching Unit*

A unit for switching two amplifiers or receivers into one pair of speakers. Price: £7.32 (plus VAT).

Type 8 Speaker Control Console

Provides control over two pairs of headphones and up to four pairs of speakers, any combination of which can be selected without the risk of damaging an expensive amplifier. Price: £14.76 (plus VAT).

Type 2/2 Two-way Speaker Switching Unit*

Designed to allow an extra pair of speakers to be connected to amplifiers not having that facility, or to expand on existing facilities. Price: £6.20 (plus VAT).

Type 7/1 Speaker Mounting Bracket*

For mounting lightweight speakers, these brackets can be locked in the correct position after fitting. Horizontal movement up to 130deg. Maximum loading 7kg. Price: £5.76 (plus VAT).

Type 4/3 Speaker Volume Control*

Designed to provide 'in-room' control over volume of additional pair of speakers remote from main amplifier. Particularly suitable for persons requiring speakers in several rooms, whilst still being able to control each pair individually. It is also possible to turn off this control without affecting any others. Price: £15.80 (plus VAT).

Type 4/4 Speaker Volume Control

Similar to 4/3 except suitable for 4 ohm speakers. Price: £15.80 (plus VAT).

Type 4/2 Speaker Volume Control

Also similar to type 4/3 but only suitable for low power high efficiency speakers of between 4-16 ohms. Price: £8.84 (plus VAT).

Type 24/1 and 24/2 Speaker Control Centre

Connecting simply to the loudspeaker output

*Indicates entry is illustrated

terminals of a stereo amplifier, this unit provides switching facilities for up to two pairs of speakers. Price: £14.19 (plus VAT).

Type 13/6 42 Strand Speaker Cable*

Use this low loss speaker cable to ensure that a good connection is made between your amplifier and loudspeakers. The cable is manufactured using 42 strands (per conductor) of high purity copper, moulded in a white twin PVC sleeve with a 'rib' along one side for easy identification. Current rating 6 amps. DG resistance 25 milli ohms/metre. Price: 27p/metre.

Type 13/8 79 Strand Speaker Cable

Similar to type 13/6 but with a current rating of 20 amps. DC resistance 7.9 milli ohms/metre. Price: 41p/metre (plus VAT).

■ **ROGERS**

Swisstone Electronics Ltd,
4-14 Barmeston Road, London SE6 3BN.
Tel: 01-697 8511.

Export or Compact Monitor Trolleys

Black finish complete with deluxe castors. Price per pair £19.95 (plus VAT).

Loudspeaker Stands

Adjustable tripods, black organosol finish. Price per pair: £29.95 (plus VAT).

■ **SELMOR**

Selmor Engineering Industries Ltd,
24 Mulberry Street, Tower Hamlets,
London E1 1EH.
Tel: 01-247 3344.

LM 15 Adjustable Loudspeaker Stand

Foamed tape inside bracket grips speaker without scratching and absorbs speaker vibration. Width adjustable 23-35.5cm. Five height positions from 23-35.5cm. Incline of brackets directs sound from speaker to any ideal listening level. Steel construction in black or silver epoxy powder. Price: £10.00 per pair (plus VAT).

Player Stand and Storage Unit*

Teak or black ash effect wooden top, adjustable cassette rack slanted for easy title reading holding 36 cassettes. Up to 100 LPs, or magazines can be stored between the sliding dividers. Castors for easy movement. Size: 35 × 16½ × 3¼in. Price: £14.00 (plus VAT).

Double Top*

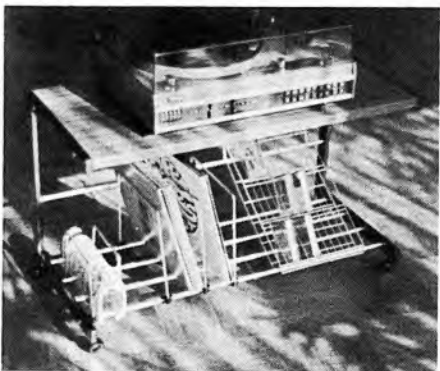
As above but with double shelf. Price: £19.60 (plus VAT).



QED 4/3 speaker volume control



QED 13/6 speaker cables



Selmor player stand and storage

TV or Hi-Fi Stands

Supplied with or without castors. Triangular knob on crossbar selects required width, serrated black edging on angle brackets grips and holds the equipment. Side frames finished in silver epoxy powder to simulate brushed aluminium, crossbar in black epoxy powder. Packed in knock-down form. Size: Merlin S 35cm-61cm, Merlin L 46cm-76cm. Price: Merlin S £5.80, Merlin L £6.10 (plus VAT). Castors extra.

X6

Strong TV stand with telescopic crossbar for width adjustment. Finished in silver to simulate brushed aluminium. Price: £5.50 (plus VAT). Castors extra.

RPL

Adjustable TV, Hi-Fi and record player stand. Width adjustable. Finished in silver to simulate brushed aluminium. Telescopic crossbar locks at required width. Price: from £5.00 (plus VAT).

■ SMC LOUDSPEAKERS

76 Bedford Road, Kempston, Beds.
Tel: Bedford 854133.

112 Trolley

New version soon available. Details and price to be advised.

■ SOLUS

Solus Products, 37 Churchill Way,
Fleckney, Leicester LE8 0UD.
Tel: Leicester (0533) 403332.

Wall Brackets

Range includes BEK 100, for speakers up to 5kg, Minor 5.

VE 2521 Loudspeaker Stands

Designed to put speakers approximately 6in above floor level and to give adjustment facility so that sound is not absorbed by carpets, giving choice of the right angle for listening. Height: 15cm, platform: 26cm × 21cm. Colour: matt black.

BEK 100 Universal Bracket for Speaker Boxes*

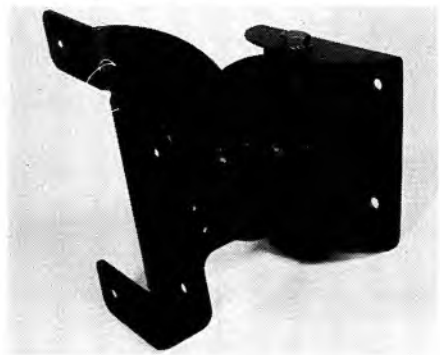
A means of fitting speakers to the wall in a simple and reliable manner. The box will adjust to any direction both horizontally and vertically. Dimensions: 16 × 11 × 12cm.

Minor 5*

Wall fixing brackets for speakers of 5kg max. Dimensions: 5 × 5 × 10cm.



Selmor double top audio rack



Solus BEK 100

*Indicates entry is illustrated

■ **SONY**

Sony (UK) Ltd, London Showroom,
Consumer Information, 134 Regent Street,
London.

Loudspeaker Stands*

Details upon application.

RK5S*

A 5m Litz wire (bare wires both ends) for
connecting top quality amps and speakers. Imp 8.5
ohms, resistance 0.015 ohms/m.

RK510

10m version of RK5S.

■ **THAMES VALLEY AUDIO ACCESSORIES**

Malkville Ltd, Unit C,
Rainbow Industrial Estate, Park Lane,
Finchampstead, Wokingham, Berks.
Tel: Wokingham (0734) 732508.

Dual Axis Speaker Mountings

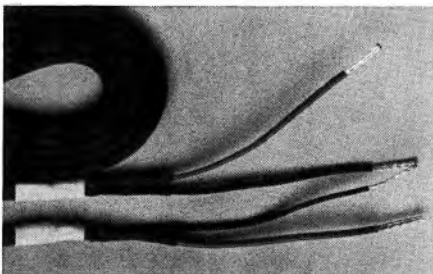
Multi-directional wall mounting for speakers
designed to facilitate accurate stereo alignment.
Mounting is concealed by attachment to the rear
face of the speaker enclosure enabling move-
ment both vertically and horizontally. Comple-
te with fittings for wall and speaker. Finished
in black stove enamel. Price per pair: £9.00 (inc.
VAT).

Speaker Stand*

Spun aluminium speaker stand. Overall height
of 9½in is sufficient to avail normal acoustic



Solus minor 5 bracket



Sony RK 5S/10S Litz cables



Sony speaker stands

obstructions, thus improving sound reception. Speaker is held in position and insulated from stand by adhesive felt pads. Price per pair: £20.25 (inc. VAT).

Music Centre Stand*

Price: £33.00 each (inc. VAT).

Imp Varitilt

Stand 1 £17.50; stand 2 £18.50; stand 3 £22.50.

■ TRISTAN

Danil Engineering Co, Old Teme Bridge,
Lower Wick, Worcester WR2 4BY.
Tel: Worcester(0905) 425595.

Tristan 12

Speaker stand suitable for larger bookshelf type speakers where it is required to have them floor mounted. All steel, finished in semi-matt black enamel. To suit speaker 7-10in (178-245mm) deep by 10in (254mm) wide. Holds speaker 8in (203mm) above floor. Price: £9.60 per pair (plus VAT).

Tristan 15

Speaker stand suitable for small and medium floor standing units up to 12in (305mm) wide by 12in (305mm) deep. All steel, finished in semi-matt black enamel. Holds speaker 8½in (216mm) above floor. Price: £11.68 per pair (plus VAT).

Tristan 15T

Speaker stand. Details as Tristan 15 but holds speaker 10½in (267mm) above floor. Price: £12.00 per pair (plus VA1).

Tristan 22C*

Speaker stand. All steel, finished in semi-matt black enamel. Adjustable for width. With castors. Suitable for monitor type loudspeakers with a depth of 10in (254mm) or more and a width between 12in (305mm) and 17in (422mm). Holds speaker 9⅞in (244mm) above floor. Price: £20.00 per pair (plus VA1).

■ WOOLLETT

Woollett Audiostatics,
Anerley Station Road, London SE20 8PY.
Tel: 01-699 5296.

XS1

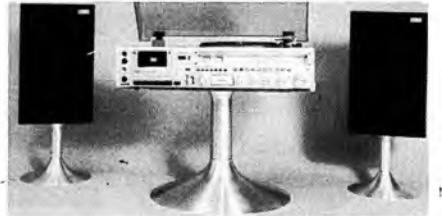
Speaker matching transformer, 35W 40Hz upwards. Converts 16 ohms to 8 ohms, and 8 ohms to 4 ohms. Bifilar wound. Grain orientated laminations. Ratio 1:0.707 auto. FR: 16Hz-30kHz ±0.6dB. Price: £6.84 plus £1.50 p & p for one (inc. VAT).

XS2

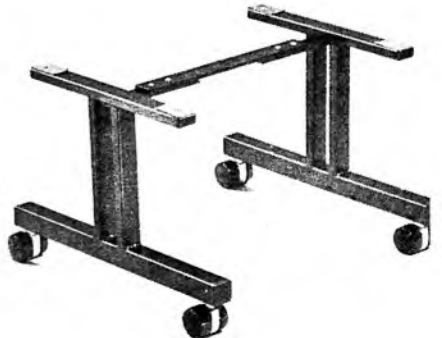
Speaker isolating and matching transformer, 2-25W 40Hz upwards. Matches 16 ohms to 4 ohms and Bifilar wound. Grain orientated laminations. Ratio 1:1 double wound (2:1 auto). FR: 16Hz-100kHz ±0.6dB. May be used to attenuate -6dB and -12dB while maintaining heavy damping on speaker and offering correct load to amplifier. Suitable for operating stereo system comprising two high frequency, or full range, speakers with common bass speaker. *Note:* Not suitable for mains isolation in live chassis equipment.



TVA music centre stands



TVA speaker stands



Tristan 22C



For the very best in Speakers



ALECA SA.

Manufacturers of Hi Fi Speakers Crossovers, Attenuators,
Terminal Connector Boxes, Baffle Pins etc.

Sole Distributors:- **COMBERTON MANUFACTURING CO. LTD.**,
Oldington Trading Estate, Kidderminster DY11 7QR
Telephone (0562) 62154 Telex 337260

Speaker Drive Units

*Indicates entry is illustrated

Abbreviations used in this section are given on page 5.

■ ADASTRA

Adastra Electronics Ltd, Unit N22,
Cricklewood Trading Estate,
Claremont Road, London NW2 1TU.
Tel: 01-452 62889.

Peak 100

Heavy-duty full-range speaker unit. 15in nominal diameter. Fibre cone. Voice coil diameter: 2in. Voice coil material: aluminium. Imp: 8 or 16 ohms. Gap flux: 15,000 lines. HC: 50W (peak 100W), FR: 20Hz-15kHz. Ceramic magnet. Price: £36.00 (plus VAT).

Hi-Ten*

Full-range 10in loudspeaker. Voice coil dia: 1in. Imp: 8 or 15/16 ohms. FR: 40Hz-13kHz. Bass resonance: 70Hz. Power handling: 10W. Flux density: 10,000 lines. Price: £4.15 (plus VAT).

Top 30

Heavy-duty 12in unit for electronic music, guitars, etc. Cast chassis, ceramic magnet. FR: 25Hz-13kHz. Bass resonance: 45Hz. Imp: 8 or 15/16 ohms. Power handling: 25W (40W peak). Flux density: 12,000 lines. Voice coil dia. 1½in. Weight: 4½lb. Price: £18.00 (plus VAT).

L.51 Horn Tweeter

3in pressure-driven tweeter with 10W rating. FR: 1.5Hz-16kHz. Crossover frequency: 3kHz. Sensitivity: -104dB. Imp: 8 or 15/16 ohms. Price: £4.20 (plus VAT).

L.52/Foster FHT6 Horn Tweeter

Ceramic magnet horn tweeter with 20W handling capacity. FR: 5Hz-20kHz. Sensitivity: -102dB. Flux density: 10,000 lines. Imp: 8 ohms. Price: £7.20 (plus VAT).

L.55 Cone Tweeter

3W, compact HF unit with foam cone. FR: 3Hz-15kHz. Sensitivity: -95dB. Flux density: 8,000 lines. Imp: 8 ohms. Price: £2.52 (plus VAT).

L.56 Trumpet Tweeter

All metal cast horn tweeter with centre diffuser and 20W rating. FR: 2.5Hz-20kHz. Crossover frequency: 3kHz. Sensitivity: -105dB. Flux density: 12,000 lines. Imp: 8 ohms. Price: £8.40 (plus VAT).

L.57 Dome Tweeter

Slimline dome tweeter for front mounting. Heavy-duty ceramic magnet. 10W power. FR: 1.5Hz-20kHz. Crossover frequency: 3kHz. Sensitivity: -98dB. Flux Density: 14,000 lines. Imp: 8 ohms. Price: £7.20 (plus VAT).

L.108 'System 3'

3-way system consisting of an 8in bass woofer, 5in mid-range unit and 2½in HF reproducer. Teak cabinet with cushioned fascia and glass-wool lined interior. Dimensions: 21 × 10 × 9¼in. 20W handling capacity. FR: 40Hz-20kHz. Imp: 8 ohms. Weight: 11lb. Price: £54.00 (plus VAT).

■ RICHARD ALLAN

Richard Allan Radio Ltd, Bradford Road,
Gomersal, Cleckheaton, Yorks BD19 4AZ.
Tel: Cleckheaton (0274) 872442.

CB4

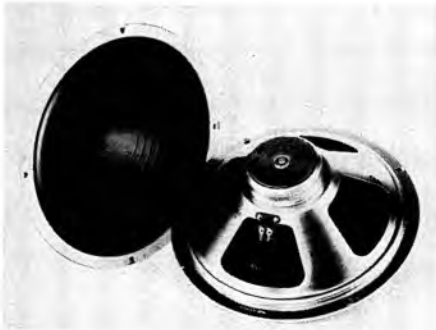
4in tweeter. Paper cone. Doped cambric surround. Ceramic magnet. Voice coil ¾in. Gap flux 0.8 Tesla. HC: in systems up to 30W, vc: 8 or 15 ohms. FR: 2kHz-17kHz. rcf: 5kHz. Price: £3.65 (plus VAT).

DT20

20mm dome tweeter. Low mass, plastic foil dome. Ceramic magnet. Voice coil 20mm. Gap flux 1.2 Tesla. FR: 3kHz-25kHz. HC: in systems up to 100W. vc: 8 or 15 ohms. rcf: 7kHz. Price: £7.75 (plus VAT).

B5 MID

5in mid-range unit. Coated paper cone with



Adastra Hi Ten

*Indicates entry is illustrated

PVC surround. Ceramic magnet. Voice coil 1in. Gap flux 1.2 Tesla. HC: in systems up to 30W. FR: 250Hz-15kHz. vci: 8 or 15 ohms. Price: £7.75 (plus VAT).

CR5

5in bass/mid-range unit. Paper cone with PVC surround. Ceramic magnet. Voice coil 1in. Gap flux 1.4 Tesla. HC: 15W. vci: 8 or 15 ohms. FR: 30Hz-8kHz. Specially designed for use in small volume infinite baffle enclosure. Price: £9.00 (plus VAT).

B8 Bass

8in paper cone. Doped cambric surround. Ceramic magnet. Voice coil 1in. Gap flux 1.2 Tesla. HC: 20W. vci: 8 or 15 ohms. FR: 45Hz-10kHz. Price: £10.25 (plus VAT).

B8T

8in paper cone plus tweeter inner. Doped cambric surround. Ceramic magnet. Voice coil 1in. Gap flux 1.2 Tesla. HC: 20W. vci: 8 or 15 ohms. FR: 45Hz-17kHz. Price: £8.50 (plus VAT).

CG8

8in paper cone. Doped cambric surround. Ceramic magnet. Voice coil 1in. Gap flux 1.4 Tesla. HC: 20W. vci: 8 or 15 ohms. FR: 45Hz-10kHz. Price: £10.25 (plus VAT).

CG8T

8in paper cone with tweeter inner. Doped cambric surround. Ceramic magnet. Voice coil 1in. Gap flux 1.4 Tesla. HC: 20W. vci: 8 or 15 ohms. FR: 45Hz-17kHz. Price: £10.85 (plus VAT).



Richard Allan HP12B

CG10

10in paper cone. Doped cambric surround. Ceramic magnet. Voice coil 1½in. Gap flux 1.3 Tesla. HC: 30W. vci: 8 or 15 ohms. FR: 35Hz-10kHz. Price: £16.65 (plus VAT).

CG10T

10in paper cone with tweeter inner. Doped cambric surround. Ceramic magnet. Voice coil 1½in. Gap flux 14,000 gauss. Total flux: 105,000 maxwells. HC: 30W. vci: 8 or 15 ohms. FR: 35Hz-15kHz. Price: £17.25 (plus VAT).

CG12

12in paper cone. Doped cambric surround. Ceramic magnet. Voice coil 1½in. Gap flux 1.3 Tesla. HC: 30W. vci: 8 or 15 ohms. FR: 25Hz-9kHz. Price: £17.75 (plus VAT).

CG12T

12in paper cone with tweeter inner. Doped cambric surround. Ceramic magnet. Voice coil 1½in. Gap flux 1.3 Tesla. HC: 30W. vci: 8 or 15 ohms. FR: 25Hz-15kHz. Price: £18.35 (plus VAT).

CG12 Super

12in paper cone. Doped cambric surround. Ceramic magnet. Voice coil 2in. Gap flux 11.3 Tesla. HC: 75W. vci: 8 or 15 ohms. FR: 25Hz-5kHz. Price: £23.75 (plus VAT).

CG15

15in paper cone. Doped cambric surround. Ceramic magnet. Voice coil 2in. Gap flux 11.39 Tesla. HC: 75W. vci: 8 or 15 ohms. FR: 20Hz-5kHz. Price: £41.00 (plus VAT).

Richard Allan full-range speaker modules are included in Speaker Enclosure section. Twin Assembly, Triple-8 Assembly speaker kits are in the Constructional Kits section.

LP8B

8in Bextrene. PVC roll surround. Ceramic magnet. Voice coil 25mm. Flux density: 1.2 Tesla. HC: 20W. vci: 8 or 15 ohms. FR: 40Hz-5.5kHz. Price: £11.25 (plus VAT).

HP8B

8in Bextrene cone. PVC roll surround. Ceramic magnet. Voice coil 38mm high temperature winding. Flux density: 1.3 Tesla. HC: 45W. vci: 8 or 15 ohms. FR: 25Hz-4.5kHz. Price: £16.80 (plus VAT).

HP12B*

12in Bextrene cone. PVC roll surround. Ceramic magnet. Voice coil 50mm high temperature winding. Flux density: 1.3 Tesla. HC:

75W. vci: 8 or 15 ohms. FR: 25Hz-1kHz. Price: £27.25 (plus VAT).

DT30

Soft dome tweeter, moving coil. Nominal cone dia: 2.5cm. Voice coil dia: 2.5cm. Nominal impedance: 8 or 15 ohms. Gap flux 1.2 Tesla. Nominal capacity: 10W RMS. FR: 2kHz-20kHz ± 3 dB. Recommended crossover frequency: 2.5kHz min. Price: £8.50 (plus VAT).

FB8

Moving coil bass/mid-range. Nominal cone dia: 20cm. Voice coil diameter: 2.5cm. Nominal impedance: 8 or 15 ohms. Gap flux 1.2 Tesla. Nominal capacity: 20W RMS. FR: 30Hz-8kHz. Rec. crossover frequency: 6kHz Max. Price: £8.50 (plus VAT).

CG12C

Moving coil bass. Nominal cone dia: 30cm. Voice coil dia: 4cm. Nominal impedance: 8 or 15 ohms. Gap flux 1.2 Tesla. Nominal capacity: 30W RMS. FR: 25Hz-5kHz. Rec. crossover frequency: 2kHz. Price: £17.75 (plus VAT).

AB8

Auxiliary bass radiator. Nominal cone dia: 20cm. Treated polystyrene cone with polyurethane surround. Free air resonance 10Hz. Price: £5.10 (plus VAT).

HP12B Super

As HP12B but with 1.7 Tesla magnet. Price: £32.25 (plus VAT).

■ ATC

Acoustic Transducer Co Ltd,
Pier House Laundry,
Strand-on-the-Green, London W4.
Tel: 01-995 3654.

SM 72-150 Soft Dome Midrange

Studio monitor, midrange driver. Nominal cone diameter: 7.5cm. Voice coil diameter: 7.5cm. Imp: 75cm. Imp: 8 ohms. Gap flux: 16,500 gauss. Nominal cap: 75W nominal maximum input power 150W. FR: 200Hz-4.5kHz. Recommended crossover frequency: 250Hz-3.5kHz. Features: soft dome-dual suspension edgewise wound. Ribbon wire voice coil. Price: £125.00 (plus VAT).

PA 75-234 STD

Full range paper cone, paper edge. Nominal cone diameter: 19cm. Voice coil diameter: 7.5cm. Nominal imp: 8, 16 ohms. Gap flux: 12,500 gauss. Nominal cap: 75W maximum input power 125W. FR: Resonance 100Hz nom.



ATC

free air, usable up to 6kHz. Recommended crossover frequency: 300-2kHz PA system mid-range. Features: edgewise wound ribbon wire voice coil. Price: £80.00 (plus VAT).

PA 75-234 STD-LS

Full range—paper cone—line surround. Details as above. Price: £80.00 (plus VAT).

PA 75-234 Bass-LC

Bass driver, paper cone, linen edge. Nominal cone diameter: 19cm. Voice coil diameter: 7.5cm. Nominal imp: 8, 12 ohms. Gap flux: 11,500 gauss. Nominal cap: 75W, maximum recommended input power 150W. FR: Resonance (nom. free air) 45Hz usable up to 1.5kHz. Recommended crossover frequency: 300-750Hz. Features: edgewise wound ribbon wire voice coil. Price: £80.00 (plus VAT).

SB 75-234 Studio Bass

Bass driver, plasticised paper cone. Rubber surround. As above except FR: 22Hz-1.5kHz. Price: £80.00 (plus VAT).

PA 75-314 STD

Full range, paper cone, paper edge, edgewise wound copper ribbon, wire voice coil. Nominal cone diameter: 26cm. Voice coil diameter: 7.5cm. Nominal imp: 8, 12 ohms. Gap flux: 12,500 gauss. Nominal cap: 75W, maximum input power 125W. FR: 75Hz-6kHz. Recommended crossover frequency: 300Hz-1.6kHz PA system midrange. Price: £90.00 (plus VAT).

*Indicates entry is illustrated

PA 75-314 STD-LS

Full range, paper cone, linen surround. As above except FR: 45Hz-6kHz. Price: £98.00 (plus VAT).

P 75-314 Bass-LC

Bass driver, paper cone, linen surround. Nominal cone diameter: 26cm. Voice coil diameter: 7.5cm. Nominal imp: 8, 12 ohms. Gap flux: 11,000 gauss. Nominal capacity: 75W, maximum input power 150W. FR: 40Hz-3kHz. Recommended crossover frequency: 200Hz-500Hz. Features: Edgewise wound ribbon wire voice coil. Price: £90.00 (plus VAT).

SB 75-314 Studio Bass

Bass driver, plasticised paper cone, rubber surround. Details as above. Price: £90.00 (plus VAT).

PA 100-375 STD

Full range bass driver, paper cone, paper edge. Nominal cone diameter: 32.5cm. Voice coil diameter: 10cm. Nominal imp: 8, 16 ohms. Gap flux: 14,500 gauss. Nominal capacity: 100W, maximum 150W recommended input power. FR: 55Hz-5kHz. Features: Edgewise wound ribbon wire voice coil. Price: £165.00 (plus VAT).

PA 100-375 STD-LS

Full range bass driver, paper cone, linen edge. Details as above except FR: 40Hz-5kHz. Price: £165.00 (plus VAT).

PA 100-375 Bass-LC

Bass driver, paper cone, linen surround. Nominal cone diameter: 32.5cm. Voice coil diameter: 10cm. Nominal imp: 8, 12 ohms. Gap flux: 13,000 gauss. Nominal capacity: 100W, maximum recommended input power 200W. FR: 35Hz-2.5kHz. Recommended crossover frequency 300-500Hz. Features: Edgewise wound ribbon wire voice coil. Price: £165.00 (plus VAT).

■ BAKER

Baker Loudspeakers Ltd,
337 Whitehouse Road,
Croydon, Surrey.
Tel: 01-684 1665.

Major*

Full range 12in speaker with built-in tweeter cone. 14,000 gauss magnetic gap. FR: 30Hz-14.5kHz. HC: 25W. vci: 3, 8 or 15 ohms. Cast aluminium chassis. Weight: 6lb. Price: £15.00.



Baker 12in Major



Baker Superb Twelve

Deluxe Mk II

Full range 12in cone speaker. 15W. Bass resonance: 30Hz. Gap flux: 14,000 gauss. Copper voice coil: 1½in diameter. vci: 8 or 15 ohms. Paper cone with foam plastic surround. Built-in tweeter cone. FR: 25Hz-16kHz. Cast aluminium chassis. Depth: 6in. Weight: 6lb. Price: £17.00.

Superb Twelve*

Full range 12in speaker with built-in tweeter cone. Foam plastic surround. Coil diameter: 1½in. vci: 8 or 15 ohms. Gap flux: 16,500 gauss. HC: 25W. FR: 20Hz-17kHz. Bass resonance: 25Hz. Copper speech coil. Diecast aluminium chassis. Weight: 10lb. Price: £22.00.

Auditorium 12

Full range 12in cone speaker suitable for bass unit multi-speaker system. HC: 35W. Bass resonance: 35Hz. Gap flux: 15,000 gauss. Copper voice coil: 1½in. diameter. vci: 8 or 15 ohms. FR: 25Hz-16kHz. Paper cone with roll surround. Cast aluminium chassis. Depth: 7in. Weight: 10lb. Price: £24.00.

Auditorium 15

High power 15in speaker suitable for bass unit in multi-speaker system. HC: 35W. Bass resonance: 35Hz. Gap flux: 15,000 gauss. Copper voice coil: 1½in. dia. vci: 8 or 15 ohms.

FR: 25Hz-16kHz. Paper cone with roll surround. Cast aluminium chassis. Depth: 7in. Weight: 10lb. Price: £32.00.

Group 40

12in. cone speaker with heavy duty suspension for electronic music, guitars, etc. HC: 40W. vci: 3, 8 or 15 ohms. Bass resonance: 55Hz. FR: 30Hz-13kHz. Gap flux: 14,000 gauss. Voice coil: 1½in. Depth: 6¼in. Weight: 6lb. Price: £14.00.

Group 100

15in cone speaker with heavy duty suspension for electronic music, guitars, etc. HC: 75W. vci: 8 or 15 ohms. Bass resonance: 45Hz. FR: 30Hz-13kHz. Gap flux: 17,000 gauss. Voice coil: 2in. Depth: 8in. Weight: 15lb. Price: £34.00.

Group 75

12in. cone speaker with heavy duty suspension for electronic music, guitars, etc. vci: 8 or 15 ohms. Max. power: 60 ohms. Max. power: 60W. Bass resonance: 55Hz. Flux: 15,000 gauss. FR: 30H-16kHz. Voice coil: 1½in. Depth: 4¾in. Weight: 10lb. Price: £21.00.

■ CASTLE ACOUSTICS LTD

Shortbank Road, Skipton, N. Yorks.
Tel: Skipton (0756) 53333.

8 RS DD

Full range. Cone diameter 20cm. Coil diameter 2.5cm. Imp: 8 ohms. Flux: 54,000 maxwells. Gap flux: 15 watts. Peak cap: 25 watts. FR: 50-20,000Hz ±6dB. Resonant Frequency: 37Hz. Price: £14.00.

■ CORAL

Videotone, 98 Crofton Park Road,
London SE4.
Tel: 01-690 1914/5.

Speaker Units

Including Woofers, Tweeters, all accessories.
Details on application.

■ DECCA SPECIAL PRODUCTS

Decca Special Products, Ingate Place,
Queenstown Road, London SW8 3NT.
Tel: 01-622 6677.

DK30 Ribbon*

Horn-loaded high frequency ribbon speaker sold complete with acoustic lens. Size: 6½ × 3½ × 2in. Aluminium ribbon element. Imp: 8 ohms constant. HC: 30W maximum. FR: 2.5kHz-25kHz. ref: 2.5kHz. Price: £31.22 (plus VAT).



Decca DK30 Ribbon



Decca London Ribbon speaker

London Ribbon*

Horn-loaded high frequency ribbon speaker. Size: 9½ × 4½ × 7½in. Aluminium ribbon element. Imp: 8 ohms constant. HC: 30W maximum. FR: 1kHz-25kHz. Rec. crossover: 1kHz. Price: £47.80 (plus VAT).

Decca Acoustic lens

Device for obtaining optimum dispersion of higher audio frequencies produced by Decca Mk II ribbon speaker of the Decca DK30 ribbon speaker. Price: £3.30 (plus VAT).

■ DECCA

Decca Radio and Television, Neachells Lane,
Willenhall, Staffs WV13 3RW.
Tel: Willenhall (0902) 67367.

DB161

160mm bass unit with squared profile chassis, finished in matt black to assist heat dissipation. Squared profile also gives greater mechanical strength. Voice coil windings are insulated with Amide Imide, giving high electrical and thermal breakdown characteristics, and are bonded to the aluminium former with a special high-technology adhesive. Cone is treated with visco-elastic damping material to prevent unwanted resonances, producing a smooth, uncoloured response. Free air resonance is 50Hz.

*Indicates entry is illustrated

DB201

Bass unit of similar construction to the DB161. Free air resonance: 40Hz.

DTC61

High efficiency cone tweeter with diaphragm moulded in cellulose acetate butyrate bonded to 19mm voice coil. This material has been specially chosen because it combines lightness and strength with an absence of inherent resonances, to produce an uncoloured sound.

■ **EAGLE INTERNATIONAL**

Precision Centre, Heather Park Drive, Wembley, Middlesex HA0 1SU.
Tel: 01-902 8832.

DF406

Full range 10cm dia. Nom. imp: 8 ohms. Gap flux: 11,000 gauss. Nom. cap: 6W. FR: 80-15,000Hz. Price: £8.95 (plus VAT).

DF615

Full range 16.5cm dia. Nom. imp: 8 ohms. Gap flux: 9,000 gauss. Nom. capacity: 15W. FR: 50-15,000Hz. Price: £13.45 (plus VAT).

DF820

Full range 20cm. Nom. imp: 8 ohms. Gap flux: 9,000 gauss. Nom. cap: 20W. FR: 45-15,000Hz. Price: £15.75 (plus VAT).

DB130

Woofers 20cm. Nom. imp: 8 ohms. Gap flux: 11,000 gauss. Nom. capacity: 30W. FR: 35-4,500Hz. Price: £17.90 (plus VAT).

DB250

Woofers 30cm. Nom. imp: 8 ohms. Gap flux: 11,000 gauss. Nom. cap: 50W. FR: 30-3,000Hz. Price: £39.90 (plus VAT).

DG500

Full range group 30cm. dia. Nom. imp: 8 ohms. Gap flux: 9,000 gauss. Nom. cap: 50W. Price: £33.40 (plus VAT).

DG750

Full range group 38cm dia. Nom. imp: 8 ohms. Gap flux: 10,500 gauss. Nom. cap: 75W. Price: £45.40 (plus VAT).

DTC 50

Cone tweeter 6cm dia. Nom. imp: 8 ohms. Gap flux: 7,800 gauss. Nom. cap: 30W. FR: 3,000-20,000Hz. Price: £2.95 (plus VAT).

DTC 70

Cone tweeter 9cm dia. Nom. imp: 8 ohms. Gap

flux: 9,000 gauss. Nom. cap: 30W. FR: 4,000-20,000Hz. Price: £3.95 (plus VAT).

DTH 110

Horn tweeter 9cm × 5.5cm. Nom. imp: 8 ohms. Gap flux: 9,000 gauss. Nom. cap: 20W. FR: 4,000-20,000Hz. Price: £9.85 (plus VAT).

DTH 200

Horn tweeter 5.5cm dia. Nom. imp: 8 ohms. Gap flux: 9,000 gauss. Nom. cap: 20W. FR: 5,000-20,000Hz. Price: £7.95 (plus VAT).

DTS 250

Dome tweeter 9.5cm dia. Nom. imp: 8 ohms. Gap flux: 11,000 gauss. FR: 1,500-18,000Hz. Price: £9.60 (plus VAT).

DTS 280

Dome tweeter 11cm dia. Nom. imp: 8 ohms. Gap flux: 11,000 gauss. Nom. cap: 40W. FR: 2,000-20,000Hz. Price: £10.95 (plus VAT).

DMC 60

Cone midrange 13cm dia. Nom. imp: 8 ohms. Gap flux: 8,000 gauss. Nom. cap: 30W. FR: 800-9,000Hz. Price: £4.75 (plus VAT).

DMC 100

Cone midrange 16.5cm dia. Nom. imp: 8 ohms. Gap flux: 8,500 gauss. Nom. cap: 60W. FR: 800-5,000Hz. Price: £13.75 (plus VAT).

DMS 170

Dome midrange 13cm dia. Nom. imp: 8 ohms. Gap flux: 9,500 gauss. Nom. cap: 30W. FR: 1,000-10,000Hz. Price: £10.65 (plus VAT).

DMS 260

Dome midrange 16.5cm dia. Nom. imp: 8 ohms. Gap flux: 9,100 gauss. Nom. cap: 50W. FR: 800-8,500Hz. Price: £15.85 (plus VAT).

■ **GOODMANS**

Goodmans Loudspeakers Ltd,
Downley Road, Havant, Hants PO9 2NL.
Tel: Havant (48) 6344.

Twin Axiom 8*

8in. full-range twin-cone driver. Paper cone. Rubber surround. Voice coil: 1in. diameter copper wound. Imp: 8 or 5 ohms. Gap flux: 13,500 gauss. Total flux: 53,000 maxwells. HC: 15W (DIN). FR: 40Hz-18kHz. No rec. retail price.

Audiom 8PA

8in. heavy duty. 20cm cone diameter. Paper cone material. Paper surround. Nominal imp: 8



Goodmans Twin Axiom 8

or 15 ohms. Capacity: 15 watts. FR: 50-9000Hz. Resonant frequency: 85Hz. No rec. retail price.

Audiom 12P

12in. heavy duty. HC: 50W. Imp: 8 or 15 ohms. No rec. retail price.

Audiom 12P-G

12in. heavy duty. HC: 60W. Imp: 8 or 15 ohms. No rec. retail price.

Audiom 12P-D

12in. heavy duty twin-cone. HC: 60W. Imp: 8 or 15 ohms. No rec. retail price.

Audiom 12AX

Bass drive unit. Nominal diameter: 12in. (312mm). Nominal imp: 8 ohms. Nominal power handling: 100W. Resonance frequency: 70Hz. Sensitivity (96dB at 1m): 0.12W. 10cm diameter voice coil. No rec. retail price.

Audiomax 15AX

Bass drive unit, Nominal diameter: 15in. (395mm). Nominal imp: 8 ohms. Nominal power handling: 100W. Resonance frequency: 60Hz. Sensitivity (96dB at 1m): 0.25W. 10cm diameter voice coil. No rec. retail price.

Audiom 18P

18in. Voice coil diameter: 3in. vci: 8 ohms. HC: 100W. Fundamental resonance: 45Hz. Flux density: 13,500 gauss. Baffle hole diameter: 16¼in. Depth: 8¼in. Weight: 26lb. Recommended sealed enclosure (per speaker): 7000cu in. No rec. retail price.

Hifax 50HX*

High power HF horn unit with built-in filter network. FR: 1.4kHz-12kHz. Nom. cap: designed for systems rated at 50W. Nom. imp: 8 or 15 ohms. No rec. retail price.



Jordan-Watts speaker drive module



KEF B139 SP1044

Pro Power 12

High power bass. Nominal cone diameter: 30cm. Voice coil diameter: 4.5cm. Nominal Impedance: 8 or 15 ohms. Nominal capacity: 65W. FR: 80Hz-4kHz. Recommended cross-over frequency: 1.4kHz. Price: to announced.

Pro Power Di-12

As above but nominal capacity: 75W and FR: 85Hz-10kHz. Feature: twin cone.

Pro Power Gr-12

High power bass unit. Nominal cone diameter: 30cm. Voice coil diameter: 4.5cm. Nominal impedance: 8 or 15 ohms. Nominal capacity: 75W. FR: 90Hz-4.5kHz. Recommended cross-over frequency: 1.4kHz. Feature: metal dust cap. Price: to be announced.

■ JORDAN-WATTS

Benlow Works, Silverdale Road,
Hayes UB3 3BW.
Tel: 01-573 6928.

Module Mk II*

Full range with nominal cone 10.2cm dia. Voice coil 3.8cm dia. Nominal imp: 4, 8 or 16 ohms. Gap flux: 11,500 gauss. Nominal capacity: 20W. FR: 40Hz-20,000Hz. Price: £22.00 (plus VAT).

*Indicates entry is illustrated

■ **KEF**

KEF Electronics Ltd, Tovil, Maidstone,
Kent ME15 6QP.
Tel: Maidstone (0672) 672261.

B139 SP1044*

11.82 × 8.25in. 8lb. HC: 50W. Resonance:
23Hz. Imp: 8 ohms. FR: 20-1,000Hz. No rec.
retail price.

B200 SP1014

8¾in. dia. × 4in. 3¼lb. HC: 25W. Resonance:
25Hz. Imp: 8 ohms. FR: 25-3,500Hz. No rec.
retail price.

B110 SP1003

5½in. dia. × 3-1/8in. 3.6lb. HC: 20W.
Resonance: 30Hz. Imp: 8 ohms. FR:
55-5,000Hz. No rec. retail price.

T27 SP1032

4¼in. dia. × 1-3/8in. 1.4lb. HC: 8W.
Resonance: 900Hz. Imp: 8 ohms. FR:
3,500-40,000Hz. No rec. retail price.

■ **LEGEND**

Legend Electronics Ltd,
25 East Street, Bromley, Kent BR1 1QE.
Tel: 01-460 3313.

XLA 10

Single element crossover. Price: 77p (plus
VAT).

XAL 20

2-way crossover. Price: £1.09 (plus VAT).

XLA 30

3-way crossover. Price: £1.17 (plus VAT).

■ **MOTOROLA**

Pulsar Developments Ltd,
Sracklen House, Dukes Place,
Marlow, Bucks. SL7 2QH.
Tel: Marlow (062 84) 73555.

Models available:

KSN 6001A, 6005A, 6010A, 6016A, 6020A,
6023A, 6025A. Full details on application.

■ **PEERLESS**

Ross Electronics,
32 Rathbone Place, London W1P 1AD.
Tel: 01-580 7112.

All units are 8 ohms impedance

MT 20 HFC

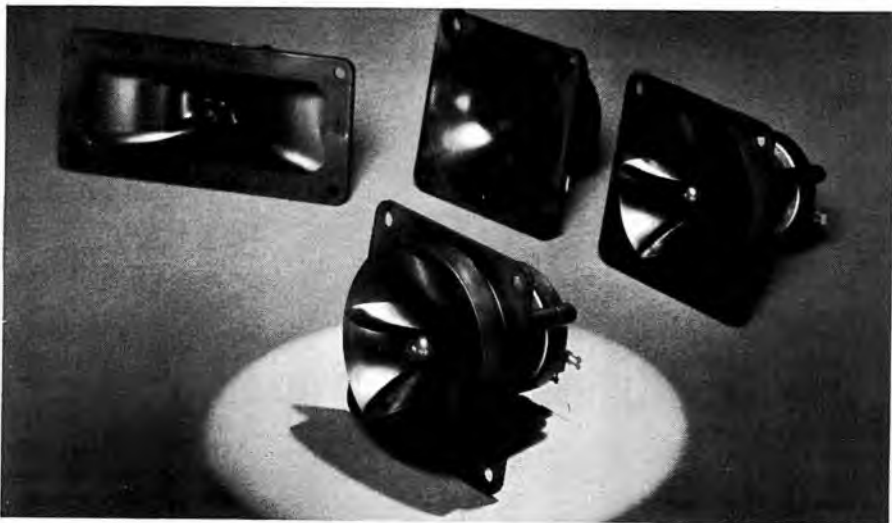
Cone tweeter. 51 × 51mm. HC (System Max.):
50W. FR: 3000-18,000Hz. Imp: 8 ohms. Price:
£3.75 (plus VAT).

MT 225 HFC*

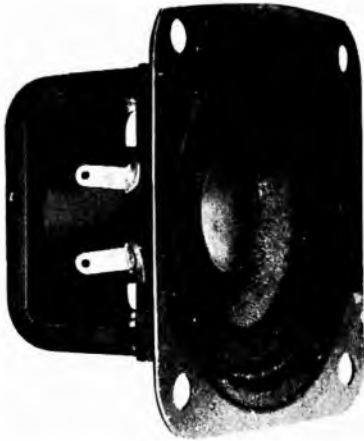
Cone tweeter. 58 × 58mm. HC (System Max.):
50W. FR: 1500-20,000Hz. Imp: 8 ohms. Price:
£3.90 (plus VAT).

MT 25 HFC

Cone tweeter. 68 × 68mm. HC (System Max.):
50W. FR: 2000-18,000Hz. Imp: 8 ohms. Price:
£3.90 (plus VAT).



Piezo range



Peerless MT 225 HFC



Peerless KP 100 WF



Peerless MT 24 CT

DT 10 HFC

Dome tweeter, 75 × 115mm. HC (System Max.): 50W. Cone resonance: 1000Hz. FR: 1,500-20,000Hz. Imp: 8 ohms. Price: £11.16 (plus VAT).

KO 10 DT

Dome tweeter, 80 × 115mm. HC (System Max.): 50W. Cone resonance: 1000Hz. FR: 1,500-20,000Hz. Imp: 8 ohms. Price: £10.17 (plus VAT).

KO 40 MRF

Enclosed Midrange, 122 × 122 × 110mm. deep. HC (System Max.): 50W. Cone resonance: 230Hz. Rec. FR: 500-5,000Hz. Imp: 8 ohms. Price: £13.29 (plus VAT).

KO 65 WG

Woofer, rubber roll surround, 165mm. dia. × 84mm. deep. HC: 20W. Cone resonance: 35Hz. Upper freq. limit: 4,000Hz. Imp: 8 ohms. Price: £11.00 (plus VAT).

MT 24 CT*

Cone tweeter, 55 × 55mm. HC (system max.): 50W. FR: 1000 to 20,000Hz. Price: £4.28 (plus VAT).

KU 45 MR

Cone midrange, 110 × 110mm. HC (system max.): 50W. Cone resonance: 230Hz. FR: 250 to 10,000Hz. Price: £8.04 (plus VAT).

KO 50 WG

Woofer, foam roll surround, 130 × 130mm. HC: 20W. Cone resonance: 45Hz. Upper freq. limit: 4000Hz. Price: £10.56 (plus VAT).

KO 825 WF

Woofer, foam roll surround, 210mm diameter. HC: 50W. Cone resonance: 36Hz. Upper freq. limit: 5000Hz. Price: £11.76 (plus VAT).

KP 825 WF

Woofer, foam roll surround, 210mm diameter. HC: 70W. Cone resonance: 32Hz. Upper freq. limit: 5000Hz. Price: £17.64 (plus VAT).

KP 100 WF*

Woofer, foam roll surround, 250mm diameter. HC: 70W. Cone resonance: 26Hz. Upper freq. limit: 5000Hz. Price: £17.94 (plus VAT).

*Indicates entry is illustrated

■ PIEZO

Pulsar Developments Ltd,
Spracklen House, Dukes Place, Marlow,
Bucks.

Tel: Marlow (062 84) 73555.

KSN Series*

Direct Radiator and Exponential Horn. Drive units: 50mm upwards. Crossover frequency: 2kHz upwards. Frequency range: 1500Hz-100kHz. Imp: 50-300 ohms. Recommended amplifier output: 30-50W. Dimensions: 2in dia to 3 × 7in. Features: Piezo electric. Price per pair: from £6.00 to £25.00 (plus VAT).



Sonaudax HD 35 S 66

■ SONAUDAX LOUDSPEAKERS

Sonaudax Loudspeakers Ltd,
Woodside Avenue, Eastleigh,
Hampshire SO5 4YD.

Tel: (0703) 611444.

HD 12.9D 25

Soft dome tweeter. Voice coil dia: 25mm. Nom. imp: 8 ohms. Gap flux: 15,000 gauss. Nom. cap: 80 watt system. FR: 1kHz-20kHz. Rec. crossover freq: 5kHz at 12dB/octave. Linear frequency response curve. Excellent protection grille available to manufacturers. Price: £7.65.



Sonaudax HD 80 D MK

HD 80 D 19 MK*

Poly carbonate dome tweeter. Voice coil dia: 19mm. Nom. imp: 8 ohms. Gap flux: 15,400 gauss. Nom. cap: 30 watts system. FR: 1kHz-20kHz. Rec. crossover freq: 4kHz at 12dB/octave. Linear frequency response curve. Available 6.5cm square front plate. Price: £5.75.

HD13 D 34H

Midrange dome tweeter. Voice coil dia: 34mm. Nom. imp: 8 ohms. Gap flux: 16,000 gauss. Nom. cap: 60 watts system. FR: 7,000Hz-20kHz. Rec. crossover frequency: 2.5kHz at 12dB/octave. Aluminium former. Linear frequency response curve. Price: £12.33.



Sonaudax 13 B 25H

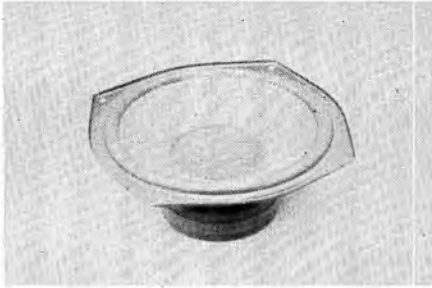
HD 13 B 25 (JorH)*

Base to midrange unit. Nom. cone dia: 13cm. Voice coil dia: 25mm. Nom. imp: 8 ohms. Gap flux: J = 11,000 gauss; H = 14,000 gauss. Nom. cap: 30 watts. FR: 50Hz-8kHz. Rec. crossover freq: 4-5kHz at 12dB/octave. Bextrene cone. Available in 2 and 4 layer voice coil. Price: J = £10.68 & £10.90; H = £12.93 & £13.21.

flux: J = 11,000 gauss; H = 14,000 gauss. Nom. cap: 30 watts. FR: 50Hz-7kHz. Rec. crossover freq: 40kHz at 12dB/octave. Pressed steel chassis & bextrene cone. Price: H = £11.46; H = £14.52.

HD 17 B (JorH)

Base to midrange unit. Nom. cone dia: 17cm. Voice coil dia: 25mm. Nom imp: 8 ohms. Gap



Volt B250

HD 17 B 37

Base to midrange unit. Nom. cone dia: 17cm. Voice coil dia: 37mm. Nom. imp: 8 ohms. Gap flux: 12,000 gauss. Nom. cap: 40 watts. FR: 40Hz-5kHz. Rec. crossover freq: 5kHz at 12dB/octave. Aluminium die-cast chassis. Bextrene cone & PVC surround. Price: £21.24.

HD 20 B 25 (JorH)

Base to midrange unit. Nom. cone. dia: 20cm. Voice coil dia: 25mm. Nom. imp: 8 ohms. Gap flux: J = 11,000 gauss; H = 14,000 gauss. Nom. cap: 30-35 watts. FR: 40Hz-5kHz. Rec. crossover freq: 4.5kHz. at 12dB/octave. Bextrene

cone with Plastiflex® both sides. Price: J = £12.33; H = £15.33.

HD 35 S 66*

Bass unit. Nom. cone dia: 35cm. Voice coil dia: 66mm. Nom imp: 8 ohms. Gap flux: 11,500 gauss. Nom. cap: 100 watts. FR: 30Hz-2.5kHz. Rec. crossover freq: 350Hz at 12dB/octave. Low bass resonance: 17Hz. 4 layer coil, aluminium former. Price: £100.08.

■ **VOLT**

Volt Loudspeakers Ltd,
Westwood House, Great West Trading Estate,
Brentford, London.

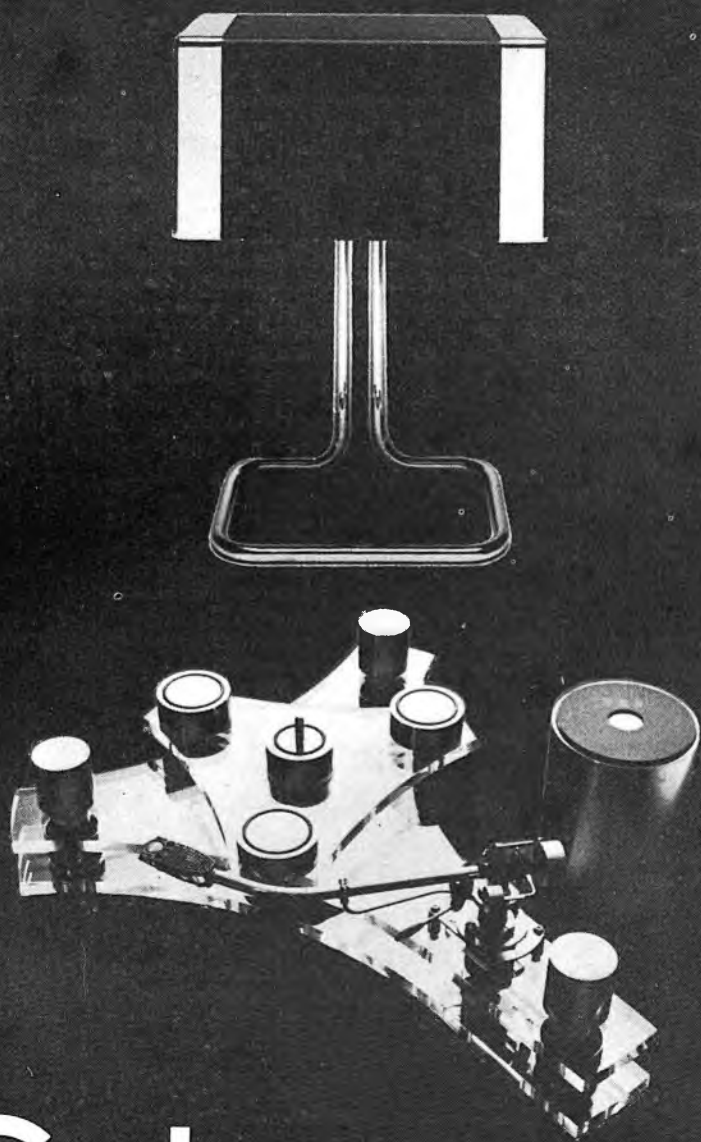
B250*

High quality bass unit. Nominal diameter: 25cm. Voice coil diameter: 3.9cm. Nominal imp: 8 ohms. Gap flux: 10,000 gauss. Resonance frequency: 20Hz. FR: 20Hz-1kHz. Recommended crossover frequency. 500Hz and below. Features: optimised purely for bass frequencies. Price: £28.50 (plus VAT).

ABR 250

Auxilliary bass radiator. Resonance frequency: 8Hz. Price: £11.75 (plus VAT).

The ultimate
draws a little closer



Gale

Speaker Enclosures

*Indicates entry is illustrated.

Abbreviations used in this section are given on page 5.

■ ACOUSTAT

Trasonic Imports (Acoustical) Ltd. Brooks Court, Stamford, Lincs.

Acoustat-X

Full range electrostatic speaker with 3 panels. Built-in power amplifiers with valve output stages. FR: 30Hz-20kHz. Dimensions: 48 × 28 × 19½in. Price: £1,750 (plus VAT).

Acoustat Monitor

As above but 4-panel. Dimensions: 60 × 38 × 20in. Price: on application.

■ AIWA

Aiwa Sales and Service (UK) Ltd, 30 and 32 Concord Road, Westwood Park Trading Estate, London W3 0TH. Tel: 993 1672.

SC 51

Two-way bass reflex speaker with 15cm and 5cm drive units. Crossover frequency: 4kHz. FR: 50Hz-18kHz. Imp: 8 ohms. Rec. amplifier output: 25W. Dimensions: 21 × 24 × 33cm. Price per pair: £66.58 (plus VAT).

■ RICHARD ALLAN

Richard Allan Ltd, Bradford Road, Gomersal, Cleckheaton, West Yorkshire BD19 4AZ. Tel: Cleckheaton (0274) 872442.

RA8

Compact enclosure designed to fit on bookshelves and room dividers. Imp: 8 ohms. FR: 50Hz-20kHz. Crossover: 3.5kHz. Handling capacity: 20W. Finish: teak or walnut. Size: 395 × 266 × 247mm. Price: £80.00 per pair (plus VAT).

RA82L

Floor standing constricted labyrinth enclosure.

Electrically the same as RA82. FR: 40Hz-20kHz ±3dB. Size: 724 × 345 × 292mm. Finish: teak or walnut. Price: £150.00 (plus VAT).

RA828LP*

Floor standing labyrinth enclosure. Crossover frequencies: 250Hz, 3.5kHz. Handling capacity: 45W. Size: 749 × 381 × 292mm. Finish: teak or walnut. Price: £250.00 per pair (plus VAT).

Tango

Infinite baffle speaker with dome treble and 200mm bass/mid. Crossover frequency: 60kHz. FR: 90Hz-20kHz ±3dB. Imp: 8 ohms. Rec. amplifier output: max 30W RMS. Dimensions: 40 × 35 × 29cm. Finish: teak or walnut. Other features: acoustic foam front. Price per pair: £74.00 (plus VAT).

Maramba

Auxiliary bass radiator. Drive units: 25mm dome treble, 200mm bass/mid, 200mm ABR. Crossover frequency: 6kHz electric, 120Hz acoustic. FR: 80Hz-20kHz ±3dB. Imp: 8 ohms. Rec. amplifier output: max 30W RMS. Dimensions: 60 × 25 × 22cm. Finish: teak or walnut. Other features: acoustic foam front. Price: per pair: £100.00 (plus VAT).

Charisma

Reflex speaker. Drive Units: 300mm bass, 200mm mid, 25mm dome treble. Crossover frequency: 1.2kHz + 6kHz. FR: 40Hz-20kHz ±3dB. Imp: 8 or 15 ohms. Rec. amplifier output: max 45W RMS. Dimensions: 67 × 39 × 30cm. Finish: teak or walnut. Other features: acoustic foam front. Price: per pair £170.00 (plus VAT).



Richard Allan RA828LP

*Indicates entry is illustrated



Allison Three

Studio Monitor

Bass reflex speaker. Drive Units: 30 × 20cm Bextrene 2.5cm dome, 1.9cm dome. Crossover frequency: 250Hz-3.5kHz; 12kHz. FR: 20Hz-20kHz ±3dB. Imp: 8 ohms. Rec. amplifier output. 30-150W. Dimensions: 45 × 38 × 100cm. Finish: teak or walnut. Features: independent control of mid and treble. Price: to be announced.

■ ALLISON

Audio Pro (HiFi) Ltd, CASL House, Sandy Lane, Moston Road, Sandbach, Cheshire CW11 9HT.

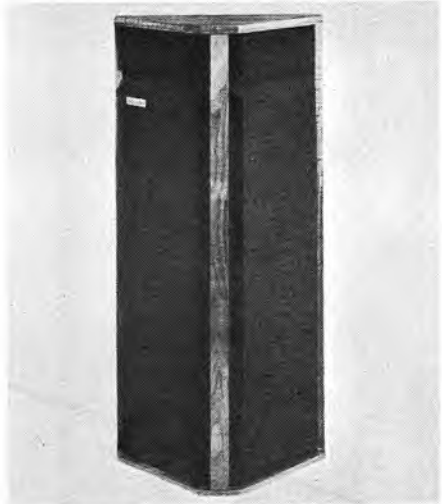
Tel: Sandbach (093 67) 7520.

Allison One*

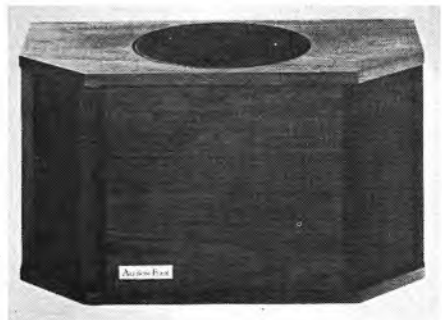
Room matched loudspeaker system. Drive units: 2 × 10in. woofers, 2 × 3½ in. convex diaphragm mid-range, 2 × 1in. convex diaphragm tweeters. Crossover frequencies: 350 and 3,750Hz. Full frequency range with 70W peak input. Impedance: 8 ohms. Dimensions: 40 × 10-2/3 × 19in. Price per pair: £621.00 (plus VAT).

Allison Three*

Flat bass power output for room corners. Drive Units: 10in. woofer, 3½ in. convex diaphragm mid-range, 1in. tweeter. Crossover frequencies: 350 and 3,750Hz. Full frequency range with 70W peak input. Impedance: 4 ohms. Dimensions: 40 × 15¼ × 10in. Price: £480.00 (plus VAT).



*Allison One-speaker system**



Allison Four

Allison Four*

Moderate size bookshelf system with stabilised radiation loading. Drive Units: 8in woofer, 2 × 1in. convex diaphragm tweeters. Crossover frequency: 2kHz. Dimensions: 11 × 19-3/8 × 10in. Price: £284.00 (plus VAT).

■ AMSTRAD

Amstrad Consumer Electronics Ltd, 1-7 Garman Road, London N17 0UF. Tel: 01-801 4431.

2500*

Fully sealed speaker enclosure. 303mm bass unit and 85.7 mid-range/treble. Crossover frequency: 1,200Hz. FR: 35Hz-17kHz. Imp: 8 ohms. HC: 25W. Dimensions: 25.7 × 24.1 × 48.9cm. Weight: 9.1kg. Finish: teak effect veneered cabinet, black fabric front. Price: approx. £51.09 per pair (plus VAT).

EX 350*

Fully sealed speaker enclosure. Drive units: 203, 114, 87mm. Crossover frequency: 900Hz + 5kHz. FR: 30Hz-20kHz. Imp: 8 ohms. Rec. amplifier output: 10-35W. Dimensions: 27 × 26 × 50cm. Finish: teak effect cabinet and transparent black gauze front. Features: variable mid-range control. Price: £77.93 (per pair).

EX 250

Infinite baffle speaker. Drive Units: 200mm bass, 70mm tweeter. FR: 60Hz-20kHz. Impedance: 6-8 ohms. Recommended amplifier output: 5-25W. Dimensions: 27.2 × 24 × 37.5cm. Finish: teak/black. Features: chrome domes and rings. Price per pair: £53.66 (plus VAT).

EX 450

Infinite baffle speaker. Drive units: 250mm bass, 120mm mid, 70mm tweeter. Frequency range: 35Hz-20kHz. Imp: 6-8 ohms. Recommended amplifier output: 10-45W. Dimensions: 33.5 × 29.5 × 56.5cm. Finish: teak/black. Features: chrome domes. Price: per pair: £99.56 (plus VAT).

■ AR

Teledyne Acoustic Research,
High Street, Houghton Regis,
Dunstable, Beds LU5 5QJ.
Tel: Dunstable 603151.

AR 10 Pi

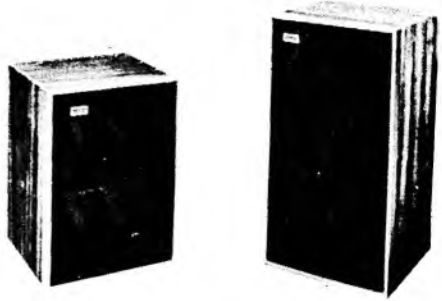
Infinite baffle speaker with 303mm acoustic suspension woofer, 38mm hemispherical dome/midrange, 19mm hemispherical dome highrange. Crossover frequency: 525Hz 5000Hz. FR: 27Hz-30kHz. Imp: 4-8 ohms nominal. Amplifier: 25-150W. Dimensions: 35.4 × 63.5 × 27.3cm. Weight: 24.9kg. Walnut-finish. Price per pair: £554.00.

AR 11*

Infinite baffle speaker with 300mm acoustic suspension woofer, 38mm hemispherical dome midrange, 19mm hemispherical dome high range. Crossover frequency: 525Hz-5,000Hz. FR: 27Hz-30kHz. Imp: 4 ohms nominal. Amplifier requirements: min 25-150W per channel. Dimensions: 35.4 × 63.5 × 27.3cm. Weight: 24.9kg. Teak or walnut finish. Price per pair: £407.00.

AR 12*

Infinite baffle speaker 250mm acoustic suspension woofer, 56mm midrange with integral rear loading cavity and magnetic fluid suspension, 19mm hemispherical dome highrange.

*Amstrad Acoustra 2500**Amstrad EX 350**AR 9*

*Indicates entry is illustrated

Crossover frequency: 700Hz, 4,000Hz. FR: 36Hz-30kHz. Imp: 8 ohms nominal. Amplifier requirements: Min. 25-150W per channel. Dimensions: 35.4 × 63.5 × 27.3cm. Weight: 15.9kg. Walnut or teak finish. Price: £316 per pair (plus VAT).

AR 14

Infinite baffle speaker with 250mm acoustic suspension woofer, 25mm hemispherical dome highrange. Crossover frequency: 1,300Hz. FR: 36Hz-25kHz. Imp: 8 ohms nominal. Amplifier requirements: Min. 15-100W. Dimensions: 35.4 × 63.5 × 27.3cm. Teak or walnut finish. Price per pair: £227.00 (plus VAT).

AR 17

Infinite baffle speaker. Drive units: 200mm woofer, 32mm tweeter. Crossover frequency: 2000Hz. FR: 43-25kHz. (DIN). Imp: 8 ohms. Recommended amplifier output: 25-100W. Dimensions: 25.4 × 47.3 × 22.2cm. Finish: teak or walnut grain. Magnetic fluid for power handling injected into tweeter voice coil gap. Price per pair: £119.90 (plus VAT).

AR 15*

Acoustic suspension speaker with drive units: 200mm woofer, 25mm dome highrange. Crossover frequency: 1,700Hz. FR: 40Hz-25kHz. Imp: 8 ohms. Recommended amplifier output: 25-100W per channel. Dimensions: 29.8 × 19.7 × 54.4cm. Walnut finish. Price per pair: £159.90 (plus VAT).

AR 9*

Acoustic suspension transmission line. Drive units: 2 × 300mm acoustic suspension woofers, 200mm midrange, 38mm dome upper midrange, 19mm tweeter. Crossover frequency: 200Hz, 1,200Hz, 7,000Hz. FR: 18Hz-30kHz. Imp: 4 ohms. Recommended amplifier output: 50W min. per channel. Dimensions: 38.1 × 40.2 × 134cm. Walnut veneer finish. Features: three, three-position switches for lower midrange, upper midrange and high range level control. Price per pair: £845.00 (plus VAT).

AR 18

Similar to AR17 except Dimensions: 24.4 × 41.9 × 15.9cm. Price per pair: £81.90 (plus VAT).

■ ARMSTRONG

Armstrong Audio Ltd,
Walters Road, London N7 0R.
Tel: 01-607 3213.

602

Ported enclosure with drive units: 25mm, AR15



AR11



AR12



30mm, 200mm. Crossover frequency: 2.3kHz, 7.5kHz. Frequency range: 55Hz-20kHz \pm 2dB. Imp: 8 ohms. Dimensions: 60 \times 27 \times 28cm. Finish: teak or rosewood. Price: per pair: £220.00 (plus VAT).

■ A.T.C.

Acoustic Transducer Co Ltd,
Pierhouse Laundry, Strand-on-the-Green,
London W4.
Tel: 01-995 3654.

S50*

Studio control monitor with 1 1/4in soft dome, 3in soft dome and 9in. bass driver. Nominal imp: 8 ohms. Nominal capacity: 300W. FR: 40Hz-20kHz. Price: per pair: £1,500 (plus VAT).

S85*

Infinite baffle studio control monitor with 1 1/4in. soft dome, 3in. soft dome and 2 \times 9in. bass drivers. Nominal imp: 8 ohms. Nominal capacity: 300W. FR: 30Hz-20kHz. Dimensions: 86 \times 46.1 \times 47.6cm. Price: £1,660 per pair (plus VAT).

■ AUDIO KRAFT

Audio Kraft (Alarms) Ltd, Mael House,
Armstrong Road, Manor Trading Estate,
Benfleet, Essex.
Tel: South Benfleet 58944.

Steel Satellite 1*

Infinite baffle enclosure with drive units: 120mm bass, 60mm treble. Crossover frequency: 2.5kHz. FR: 60Hz-20kHz. Imp: 4 or 8 ohms. Recommended amplifier output: 100W. Dimensions: 30 \times 20 \times 60cm. Black painted steel cabinet. Optional inbuilt 50W amplifier. Price: per pair: £125.00 (plus VAT).

Central Bass 1

Infinite baffle enclosure with 325 \times 200mm drive units. Crossover frequency: up to 100Hz. FR: 20Hz-100Hz. Imp: 4 or 8 ohms. Recommended amplifier output: 100W. Dimensions: 60 \times 40 \times 30cm. Wood and metal finish. Price: £180.00 (plus VAT).

■ AUDIOMASTER

Audiomaster Ltd, 33 Bridle Path,
Watford, Herts WD2 4BZ.
Tel: Watford(92) 33010.

I.S3/5A*

Closed box speaker. Drive units: 102mm bass, 19mm treble. Crossover frequency: 3.5kHz. FR: 80Hz-20kHz \pm 3dB. Imp: 15 ohms nominal. Recommended amplifier output: 25-50W.



ATC S50-S85



Audio Kraft Steel Satellite 1

*Indicates entry is illustrated.

Dimensions: 30.8 × 19.3 × 16cm. Finish: teak or walnut. Features: designed by the BBC and built under licence from them. Price: per pair: £150.00 (plus VAT).

MLS 1*

Closed bar with drive units: 165mm bass, 25mm treble. Crossover frequency: 3kHz. FR: 60Hz-20kHz ±4dB. Imp: 8 ohms. Rec. amplifier output: 15-60W. Dimensions: 23 × 19.2 × 37.2cm. Finish: teak or walnut. Price: £88.80 (plus VAT).

MLS 2

Closed box speaker with drive units 200mm treble, 25mm bass. Crossover frequency: 3kHz. FR: 50Hz-20kHz ±4dB. Imp: 8 ohms. Rec. amplifier output: 12-75W. Dimensions: 28.7 × 23.1 × 46.3cm. Finish: teak or walnut. Price: £115.47 (plus VAT).

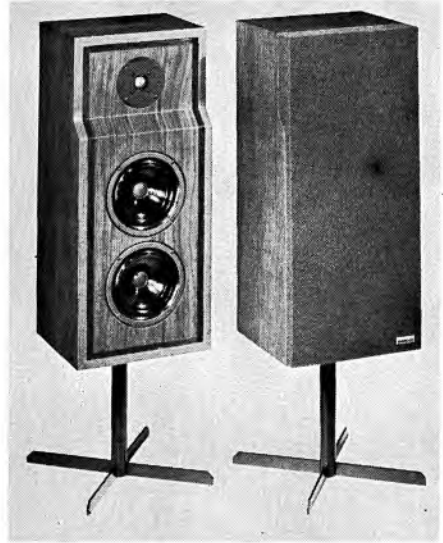
MLS 4

Ported reflex cabinet. Drive units: 200mm, 25mm. Crossover frequency: 3kHz. FR: 50Hz-20kHz ±3dB. Imp: 8 ohms. Recommended amplifier output: 12-75W. Dimensions: 27.5 × 31.2 × 62.5cm. Finish: walnut. Price per pair: £165.00 (plus VAT).

MLS 5*

Closed box cabinet. Drive units: 2 × 165mm, 25mm. Crossover frequency: 1.8kHz. FR:

50Hz-20kHz ±3dB. Imp: 6 ohms. Recommended amplifier output: 10-75W. Dimensions: 27.5 × 25 × 62.5cm. Finish: teak or walnut. Features: time delay, compensated drive unit placement. Price: £195.00 (plus VAT).



Audiomaster MLS 5



Audiomaster LS3/5A



Audiomaster MLS 1

■ AUDIO-PRO

Audio-Pro (Hi-Fi) Ltd,
Casl House, Sandy Lane,
Moston Road, Sandbach, Cheshire.
Tel: Sandbach (093 67) 7520.

5-40

Infinite baffle enclosure with drive units: 2 × 8cm piezo tweeter, 12.7cm mid, 2 × 20.3cm bass. Crossover frequency: 1,500Hz and 4,000Hz. FR: 28Hz-20kHz. Imp: 4 ohms. Recommended amplifier output: 10-90W. 40 litre cabinet. Finish: black ash. Price per pair: £209.56 (plus VAT).

4-40

Acoustic dipole with drive units: 2 × 8.9cm piezo tweeter, 2 × 20.3cm bass/mid. Crossover frequency: 3,000Hz. FR: 30Hz-20kHz. Imp: 4 ohms. Recommended amplifier output: 10-90W. Finish: black ash or walnut. Price per pair: £216.18 walnut. £206.18 black (plus VAT).

3-35

Infinite baffle enclosure with drive units: 8.9cm piezo tweeter, 20.3cm, bass/mid, 20.3cm, ABR. Crossover frequency: 3,000Hz. FR: 40Hz-20kHz. Imp: 4 ohms. Recommended amplifier output: 10-35W. Finish: black ash or walnut. Price per pair: £145.20 walnut, £135.20 black ash (plus VAT).

■ BEOVOX

Bang & Olufsen (UK) Ltd, Eastbrook Road,
Gloucester GL4 7DE.
Tel: Gloucester (0452) 21591.

Beovox S25

Uni-phase pressure chamber with 2.5cm treble and 16.5cm bass units. Crossover frequency: 3kHz. FR: 60Hz-18kHz +4 —8dB. Imp: 4-8 ohms. Amplifier requirements: 25 Watts maximum. Dimensions: 22 × 14 × 41cm. Weight: 4kg. White or oak finish to special order. Standard in teak or rosewood. Price per pair: approx. £80.00 (plus VAT).

Beovox S35

Pressure chamber enclosure with 2.5cm treble and 20cm bass drive units. Crossover frequency: 3kHz. FR: 49-20,000Hz. Imp: 4-8 ohms. Amplifier requirements: 35W max. Dimensions: 26 × 18 × 48cm. Teak or rosewood. Price: per pair: approx. £125.00 (plus VAT).

Beovox P30

Phase linear pressure chamber with 2.5cm treble and 16.5cm bass drive units. Crossover

frequency: 3kHz. FR: 49-20,000Hz. Imp: 4-8 ohms. Amplifier requirements: 30W max. Dimensions: 30 × 9 × 54cm. Weight: 5kg. White or oak to special order, but standard finish in teak or rosewood. Price per pair: approx. £115.00 (plus VAT).

Beovox P45/2

Phase linear pressure chamber with 2.5cm treble, phase link 9cm, 2 × 12.5cm bass. Crossover frequency: 2kHz. FR: 40-20,000Hz. Imp: 4-8 ohms. Amplifier requirements: 45W max. Dimensions: 35 × 14 × 65cm. Weight: 8kg. White or oak, teak or rosewood finish. Price: per pair: approx. £170.00 (plus VAT).

S45/2

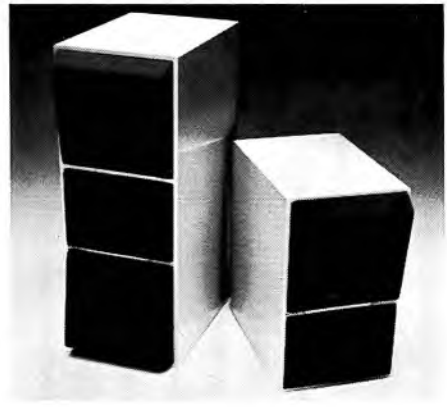
Phase linear with 2.5cm treble, phase link 9cm, 20cm bass drive units. Crossover frequency: 2,000Hz. FR: 38-20,000Hz. Imp: 4-8 ohms. Amplifier requirements: 45W max. Dimensions: 26 × 16 × 48cm. Weight: 7kg; Standard teak or rosewood finish with white or oak to special order. Price per pair: £170.00 (plus VAT).

S75

Phase linear speaker with 2.5cm treble, 5cm mid, phase link 12.5cm, 25cm bass. Crossover frequency: 700Hz, 4kHz. Imp: 4-8 ohms. FR: 36Hz-20,000Hz. Amplifier requirements: 75W max. Dimensions: 32 × 20 × 59cm. Weight: 11kg. Standard teak or rosewood finish with white or oak to special order. Price: per pair: approx. £225.00 (plus VAT).

M 100/2

Phase linear with bass reflex. Drive units: 1½in. tweeter, ¾in. super tweeter, 2½in. midrange, 4½in. phase-linear, 12in. woofer. FR:



Beovox Uni-phase C75 and C40

*Indicates entry is illustrated

27-22,000Hz. Imp: 4-8 ohms. Recommended amplifier output: 100W, up to 500W RMS with protection circuits plus LED display if protection circuit operative. Dimensions: 35 × 29 × 70cm. Finish: teak/rosewood. Adjustable stand included in price. Price per pair: £535.00 (plus VAT).

M 75

Pressure chamber with drive units: 2.5cm treble, 6cm mid, 12.5cm phase link, 25cm bass. Crossover frequency: 500Hz-4,500Hz. FR: 27Hz-20kHz. Imp: 4-8 ohms. Recommended amplifier output: 75W. Dimensions: 35 × 27 × 65cm. Teak, rosewood finish. Protection circuits with LED display if operative. Price: £345.00 (plus VAT).

C40*

Bookshelf speaker, logarithmic line transmission principle. Drive units: 10cm woofer, 2.5cm tweeter. Crossover frequency: 2,500Hz. FR: 80Hz-20kHz. Imp: 6 ohms. Recommended amplifier output: 40W. Dimensions: 11 × 20 × 20cm. Finish: black anodised or brushed aluminium. Price: per pair: £120.00 (plus VAT).

C75*

As above but FR: 50Hz-20kHz. Amplifier output: 75W. Dimensions: 11 × 20 × 35cm. Price: £170.00 (plus VAT).

■ B·I·C VENTURI

B·I·C. Avnet, 60-61 Leslie Park Road, Croydon, Surrey CR0 6TP.
Tel: 01-656 2631/2.

B11*

Reflex enclosure. Drive units: 200mm dia. bass, tweeter. Crossover frequency: 2.5kHz. FR: 70Hz-15kHz. Imp: 8 ohms. Recommended amplifier output: up to 45W. Dimensions: 28 × 23 × 47cm. Finish: walnut vinyl. Features: tonal balance control, drive units individually fused. Price: on application.

B22*

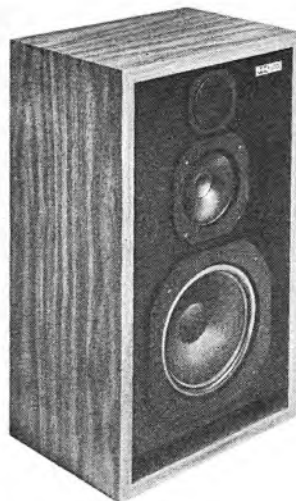
Reflex enclosure. Drive units: 200mm dia. bass, 127mm mid, tweeter. Crossover frequency: 400Hz, 10kHz. FR: 60Hz-20kHz. Imp: 6 ohms. Recommended amplifier output: up to 60W. Dimensions: 33 × 25 × 56cm. Finish: walnut vinyl. Features: tonal balance control, drive units individually fused. Price: on application.

B44*

Reflex enclosure. Drive units: 255mm bass, 127mm mid, tweeter. Crossover frequency:



B·I·C Venturi B11



B·I·C Venturi B22

400Hz, 10kHz. FR: 50Hz-20kHz. Imp: 6 ohms. Recommended amplifier output: up to 75W. Dimensions: 37 × 27 × 65cm. Price: on application.

B66*

Reflex enclosure. Drive units: 300mm bass, 127mm mid, two tweeters. Crossover frequency: 400Hz, 10kHz. FR: 40Hz-20kHz. Imp: 6 ohms. Recommended amplifier output: up to 100W. Dimensions: 40 × 34 × 67cm. Finish: walnut wood veneer. Features: tonal balance control, drive units individually fused. Price: on application.

■ **BOLIVAR**

Harman UK, St. John's Road,
Tyler's Green, High Wycombe, Bucks.
Tel: High Wycombe (049-481) 5331.

64

Ducted port enclosure with drive units: 25cm, 13cm, 5cm. Crossover frequency: 800Hz, 3kHz. Level controls: mid and high frequency. Imp: 4 ohms. Sensitivity: 89dB. Recommended amplifier output: 10-125W. Dimensions: 35 x 30.9 x 66.3cm. Finish: Tennessee hickory with chocolate brown grille. Price: on application.

18

Ducted port enclosure with drive units: 20cm, 13cm, 5cm. Crossover frequency: 1kHz, 3kHz. Recommended amplifier output: 10-100W. Dimensions: 31.3 x 27.5 x 57.5cm. Finish: Tennessee hickory with chocolate brown grille. Price: on application.

125

Ducted port with drivers: 20cm and 5cm. Crossover frequency: 2kHz. Imp: 4 ohms. Recommended amplifier output: 10-80W. Dimensions: 31.3 x 27.5 x 57.5cm. Finish: Tennessee hickory with chocolate brown grille. Price: on application.

■ **BOOTHROYD STUART MERIDIAN**

Boothroyd Stuart Ltd,
13 Clifton Road, Huntingdon,
Cams. PE18 7EJ.
Tel: Huntingdon (0480) 57339.

M1*

Active loudspeaker with three drive units. Output: 108dB. S/N ratio: 20dB. FR: 26Hz-25kHz ±2dB. Crossover: 1.8dB. Dimensions: 99 x 49.5 x 34.5cm. Price: £1,400.00 (inc. VAT) in Black Ash, £1,500.00 (inc. VAT) in Rosewood.

■ **BOSE**

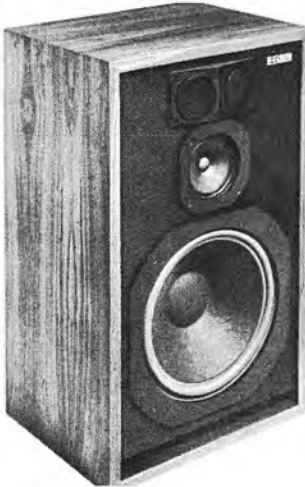
Bose (UK) Ltd, Trinity Trading Estate,
Milton Regis, Sittingbourne, Kent.
Tel: Sittingbourne (0795) 75341.

Bose 301*

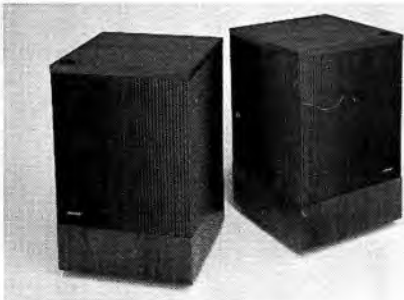
Direct reflecting enclosure plus variable high frequency deflection 'sound paddle'. One 8in. bass unit and one 3in. tweeter. Crossover frequencies: 1kHz and 3kHz. Imp: 8 ohms. Amplifier requirements: 10W. HC: 60W RMS. Dimensions: 17 x 10½ x 9½in. Weight: 17lb each. Finish: walnut effect veneer with foam grille coverings. Asymmetrical direct/reflect.



B-I-C Venturi B44



B-I-C Venturi B66



Bose 501 III

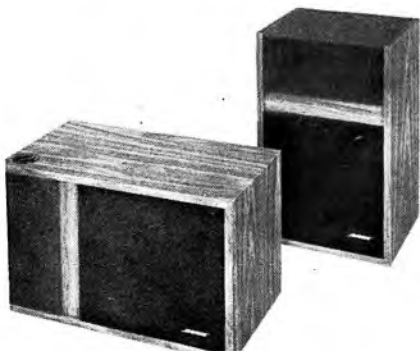
*Indicates entry is illustrated



Boothroyd Stuart Meridian M1



Bose 901



Bose 301

Bookshelf speaker. Sold in matched pairs. Price: £160.00 per pair (plus VAT).

601*

Direct reflecting enclosure. Drive units: (six in total) 2 × 8in. bass, 4 × 3in. tweeter. Crossover frequency: 2kHz. FR: within 20Hz-20kHz. Imp: 8 ohms. Rec. amplifier output: 20-100W into 8 ohms. Dimensions: 15 × 13 × 25½in. Finish: walnut veneer. Features: two position symmetry switch; asymmetric — side directed tweeters receive greater high frequency excitation. Symmetric: all tweeters equally excited — for speaker placement without adjacent reflecting walls. Price: £395.00 per mirror image pair (plus VAT).

501 III*

Direct reflecting speaker. Infinite baffle enclosure, assymetrical design, one 10in. bass unit, 2 × 3in. tweeters, one tweeter with direct energy control to adjust for room acoustics. FR: 20Hz-10kHz. Imp: 4 ohms. Dual frequency crossover network, 100W RMS, 20W min. Dimensions: 14½ × 14½ × 24in. Finish: walnut effect veneer. Price: per pair £290.00 (plus VAT).

901 IV*

Direct reflecting speaker. Acoustic matrix multi-cell enclosure, drive units: 9 full range 4½in. dia. drive units, utilising aluminium voice coils. FR: 20Hz-20kHz. Imp: 8 ohms. Min. power, 10W to any power amplifier. No max power rating. 8 drive units on rear panels. 1 only on front panel. Sold in matched pairs with equalizer to adjust room acoustics and to ensure 'flat power response'. Dimensions: 21 × 13 × 12 5/8in. Walnut veneer finish. Price: per pair £605.00 (plus VAT).

■ B & W

B & W Loudspeakers, Meadow Road, Worthing, Sussex BN11 2RX. Tel: Worthing (0903) 205611.

DM4*

Three-unit monitor speaker system suitable for bass/mid-range driver with Bextrene cone, one Celestion HF1300 upper mid-frequency unit. One ¼in. low-mass plastic dome tweeter. FR: 30Hz-25kHz (±5dB 80Hz-20kHz). HC: 30W. Imp: 8 ohms at 400Hz. Size: 53 × 25.5 × 25.6cm. Finish: teak, rosewood, satin white, black ash or walnut. Every model individually tested and calibration certificate supplied. Price: per pair £158.46 (plus VAT). Rosewood £176.32 (plus VAT).

Castle Speaker Systems

Give your ears the full range.

The Castle Range.

Designed to give the critical ear the full range of quality sound, over the entire variety of musical selection.

Also designed to give the critical eye the beauty of fine workmanship, of fine furniture.

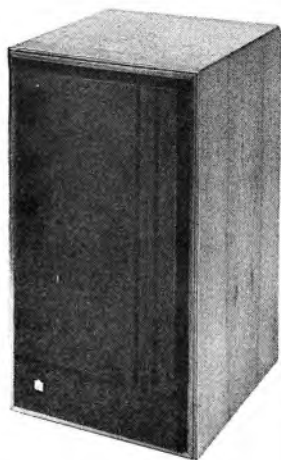
The range comprises from compact, two unit bookshelf models to a floor mounted five drive unit system.



Richmond II
Efficient two-way
speakers system
For use with amplifier
power ranging between
8-30 watts per channel
Incorporating
3.5-20 kHz treble unit
and a 15 cm
55-3500 Hz
bass/mid-range unit



Kendal II
Efficient two-way
speaker system.
For use with amplifier
power ranging between
8-40 watts per channel
Incorporating
3.5-20 kHz treble unit
and a 20 cm
48-3500 Hz bass
mid-range unit



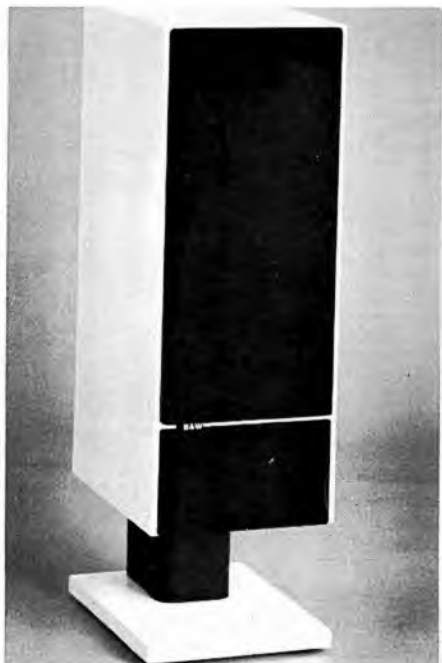
Conway II
Floor standing
three-way system
For use with medium
power amplifiers
between 25-100 watts
per channel
Incorporating 4-
22 kHz treble unit,
750-1000 Hz mid-
range unit and heavy
duty 21 cm 55-750 Hz
bass unit.
Available in standard
or period design.



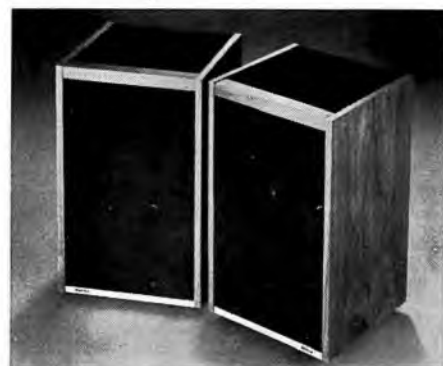
Castle
Acoustics
Limited

Shortbank Road,
Skipton, North Yorkshire
Tel: Skipton (0756) 5333

*Indicates entry is illustrated



B&W DM2/11 with grille



Bose 601



B&W DM4

DM6*

Monitor loudspeaker with 224mm bass unit, 131mm midrange, 19mm high frequency unit. Both bass and midrange units are loaded into independent irregularly-shaped totally sealed enclosures. FR: 50-20,000Hz. Sensitivity: 7.6W into nominal imp (i.e. 7.8 volts) for pink noise sound pressure of 95dB at 1 metre (anechoic conditions). Power handling: suitable for amplifiers between 25 and 350W RMS under normal domestic conditions. Crossover frequencies: 500Hz, 5kHz. Imp: 8 ohms. Dimensions: 93.1 × 41 × 38cm. Satin white, teak veneer, walnut, black ash or rosewood finish. Price: per pair £444.00 (plus VAT). Rosewood £486.00 (plus VAT).

DM5

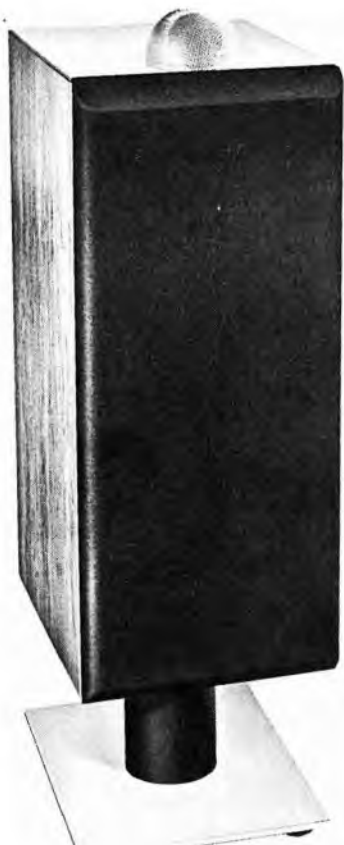
Infinite baffle speaker with drive units: 140mm cone dia, 26mm voice coil, 19mm. Crossover frequency: 4.5kHz. FR: 100Hz-20kHz ±5dB. Imp: 8 ohms. Recommended amplifier output: 10-25W. Dimensions: 22.7 × 24.1 × 45.5cm. Teak, walnut, black ash, rosewood or satin white. Calibration certificate supplied. Price per pair: £106.74 (plus VAT). Rosewood £121.04 (plus VAT).

DM7*

Monitor speaker with drive unit: 150mm aromatic polyamide fibre cone, acoustic drive low frequency radiator and externally mounted treble unit. Crossover frequency: 3kHz. FR: 30Hz-25kHz, 70Hz-20kHz on measuring axis -3dB at 50Hz. Imp: 8 ohms. Recommended amplifier output: 50-200W. Dimensions: 27 × 36.7 × 90.3cm. Teak, walnut, black ash, rosewood or satin white finish. Calibration certificate supplied. Price per pair: £355.36 (plus VAT). Rosewood £376.80 (plus VAT).

DM2/11*

Bass reflex enclosure. Drive units: 200mm bass, 160 mid, 25mm treble. Crossover frequency: 410Hz, 3kHz. FR: 50Hz-18kHz ±3dB. Imp: 8 ohms. Recommended amplifier output:



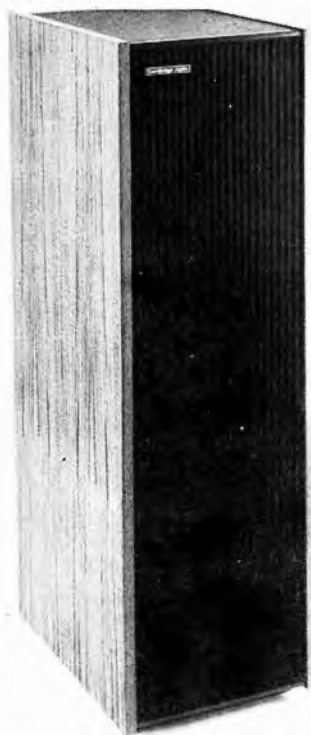
B&W DM7



Cambridge Audio L30F



B&W DM6



Cambridge Audio TL200

*Indicates entry is illustrated

25-200W. Dimensions: 27 × 33 × 89cm. Finish: teak, walnut, black ash, satin white, rosewood. Features: plinth available as alternative to stand. Speakers individually tested-calibration cartridge supplied. Price per pair: £265.33 (plus VAT). Rosewood £276.33 (plus VAT).

■ CAMBRIDGE AUDIO

Cambridge Audio Ltd,
105-109 Oyster Lane,
Byfleet, Surrey.
Tel: Byfleet (91) 51051.

L30F*

Multi-port speaker with bass/midrange 200mm and HF 25mm. Crossover frequency: 3.8kHz. Imp: 8 ohms. Amplifier output: 50W. Dimensions: 28 × 25 × 49cm. Grey fabric/charcoal grille, mustard fabric/green grille; brown fabric/dark brown grille. Price per pair: £129.90 (plus VAT).

L30W

Similar to C30F but with finish in polished walnut/dark brown grille. Price per pair: £139.90. Polished rosewood/charcoal grille £149.90. Teak/green grille £139.90.

TL200*

Transmission line with bass 30 × 30cm, mid-range 13 × 7.5, med HF 11 × 2 UHF 3cm dia. Crossover frequency: 400Hz, 3kHz, 10kHz. FR: 20Hz-25kHz. Imp: 8 ohms. Rec. amplifier output: 50W nominal. Dimensions: 33.02 × 44.8 × 105.4cm. Teak finish, other finishes to order. Price per pair: £380.00 (plus VAT).

TL100*

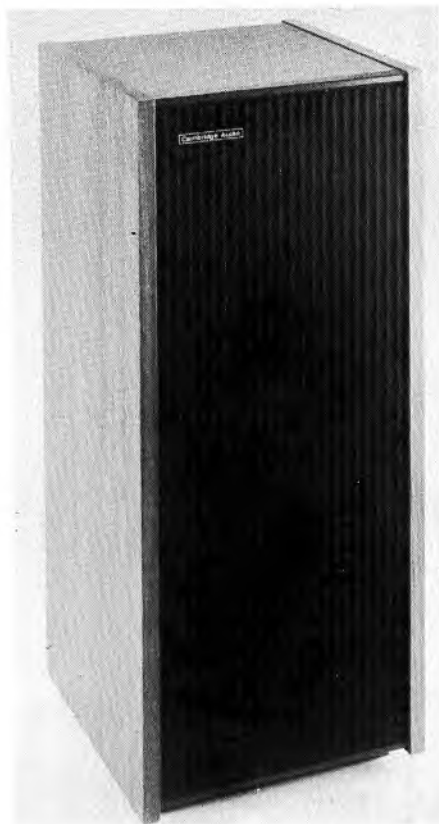
Transmission line with bass 30 × 20cm, mid-range 13 × 7.5, HF 11 × 3cm. Crossover frequency: 400Hz, 3kHz. FR: 25Hz-20kHz. Imp: 8 ohms. Rec. amplifier output: 40W. Dimensions: 33.02 × 32.04 × 79.4cm. Teak finish, other finishes to order. Price per pair: £278.00 (plus VAT).

■ CASTLE

Castle Acoustics Ltd,
Shortbank Road, Skipton, Yorks.
Tel: Skipton (0756) 5333.

Richmond II*

Drive units; 30mm tweeter, 15cm bass/mid-range, reflex loaded. Crossover frequency: 3.5kHz. FR: 55-20,000Hz. Imp: 4-8 ohms. Amplifier required: 8-30W. Size: 41.5 × 23 × 25cm. Finish: teak, walnut, oak, mahogany and



Cambridge Audio TL100



Castle Acoustics Richmond II

KEF
REFERENCE
SERIES
LOUDSPEAKERS

AN AMAZING STANDARD
OF BEAUTY
CLARITY AND PURITY
OF REPRODUCTION

KEF Electronics Ltd.
Tovil, Maidstone, Kent ME15 6QP.
Telephone: 0622 672261



studio monitor loudspeakers by spendor



BC1 A standard monitor loudspeaker in sound broadcasting studios throughout the U.K.; also used in recording studios where the requirement is for accurate reproduction rather than an "impressive" sound. The BC1 is a three-unit bass reflex design using a Spendor 200mm cone driver for bass/midrange. Power handling is 55W.

Stands fitted with castors are available for both BC1 and BCIII loudspeakers.

SA1 Specifically designed for small control rooms, the SA1 "mini monitor" uses a Spendor 150mm bass/midrange unit with a Son Audax tweeter in an infinite baffle enclosure handling 40W.

BCIII Spendor 300mm and 200mm cone drivers are used for bass and midrange in this four unit bass reflex loudspeaker which can handle 70W programme.

PHILIPS Hi-Fi



Not bad, for a light bulb maker.

A light bulb maker who also spends £450 m a year on research in every field of electronics.

Who is also the first name in more electronic fields than any other company in the world—from advanced guidance systems

for aircraft to compact recording cassettes.

On form alone, Philips Hi-Fi is just what you'd expect: an example to the world in its quality, in its forward thinking, and in its very good value for money.

PHILIPS

Simply years ahead



'hear no evil'





Castle Acoustics Kendal II

rosewood. Price: £94.00 per pair teak. £96.00 per pair walnut, oak or mahogany. £116.00 per pair rosewood (all plus VAT).

Kendal II*

Drive units; 30mm tweeter, 21cm bass/mid-range, reflex loaded. Crossover frequency: 3.5kHz. FR: 48-20,000Hz. Imp: 4-8 ohms. Amplifier required: 8-40W. Size: 52.5 × 29 × 28cm. Finish: teak, walnut, oak, mahogany and rosewood. Price: £135.00 per pair teak. £139.00 per pair in walnut, oak or mahogany. £163.00 per pair in rosewood (all plus VAT).

Conway II*

Drive units; 30mm tweeter, 80mm midrange, 21cm bass, reflex loaded. Crossover frequency: 750Hz and 4,000Hz. FR: 35-22,000Hz. Imp: 4-8 ohms. Amplifier required: 25-100W. Size: 63.5 × 35 × 37cm. Finish: teak, walnut, oak, mahogany and rosewood. Price: £225.00 per pair teak. £232.00 per pair walnut, oak or mahogany. £260.00 per pair rosewood (all plus VAT).

■ **CELEF**

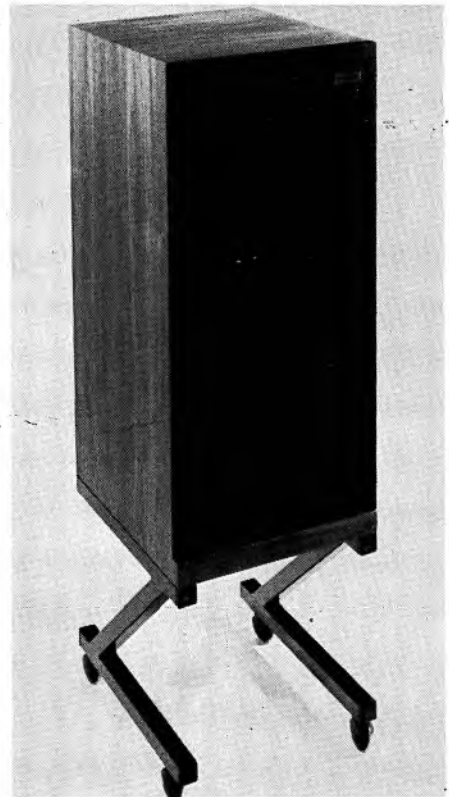
Celef Audio, 130 Thirsk Road,
Borehamwood, Herts.
Tel: 01-207 1150./01-953 8933.

Celef Monitor Improved

Resistively loaded reflex port. FR: 70Hz-20kHz



Castle Acoustics Conway II



Celef PE1

*Indicates entry is illustrated

±2dB. Imp: 8 ohms. Power handling capacity: 80W. 2 drivers. Distortion: less than 1% for 90dB SPL. Size: 20½ × 11 × 9½ in. Weight: 24lb. Finish: teak, walnut or white. Price: on application.

PE1*

Resistive reflex with special 1in. solid birch ply back. Cabinet structure of high density with 18mm chipboard with heavy damping. Drive units: hybrid system, 8in. bass/mid. 1in. lower treble and direct radiating piezo unit. Crossover frequency: 2.9kHz, 11kHz. Frequency range: 30Hz-30kHz. Imp: 8 ohms. Rec. amplifier output: 25-100W per channel. Dimensions: 25 × 11 × 12in. Finish: teak, walnut, rosewood, white. Features: extremely rigid cabinet and piezo electric super tweeter. Price: on application.

Domestic II Super*

120mm bass mid unit, with 1in. soft dome tweeter. Crossover frequency: 3kHz. Bass unit loaded by reflex port made of rigid plastic. Frequency response is 40-23kHz. Imp: 8 ohms. Power handling 60W. Dimensions: 16 × 9½ × 8in. Price: on application.

Domestic I Improved

Totally enclosed 8in. bass mid and 1in. soft

dome treble unit. Crossover 3kHz. Frequency response 40-20kHz. Imp: 8 ohms. Recommended output amplifiers 10-100W. Features: high efficiency, high power handling. Price: on application.

Minipro HE

Features new 210mm high efficiency bextrene cone with special dust cap and surround. Bass unit loaded by a phase inverter crossing over at 3kHz to 1in. soft dome tweeter. Frequency response 35-23kHz. Imp: 8 ohms. Amplifier output 100W per channel. Dimensions: 23 × 12 × 11in. High efficiency. Low distortion. Price: on application.

PE2

Size: 30 × 14 × 15in. Specially damped bass chamber with Studio quality 9in. bass driver, reflex loaded. 8in. mid-range unit in special mid-range enclosure. Tweeter and piezo electric super tweeter. FR: 20Hz-30kHz. Crossover frequencies: 200Hz, 3kHz-11kHz. Distortion less than 1% for 96dB. Power handling: 200W. Weight 90 pounds. Price: on application.

■ CELESTION

Rola-Celestion Ltd,
Ditton Works, Foxhall Road,
Ipswich, Suffolk IP3 8JP.
Tel: Ipswich (0473) 73131.

Ditton 44*

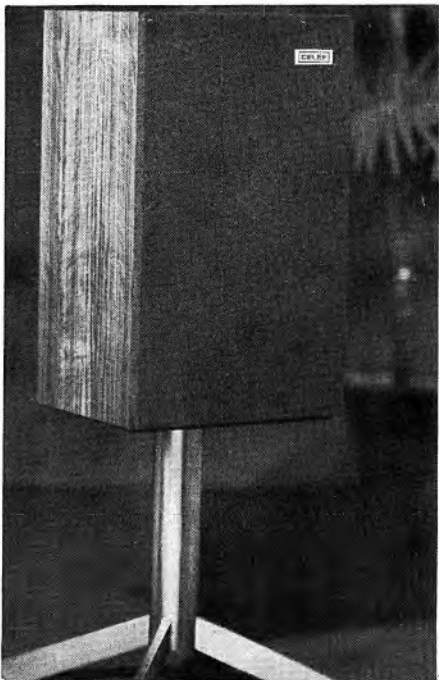
Infinite baffle speaker with drive units: 26mm, 154mm, 308mm. Crossover frequency: 500Hz-5kHz. FR: 25Hz-40kHz. Imp: 4-8 ohms. Recommended amplifier output: 10-100W. Dimensions: 37 × 25 × 76cm. Teak/walnut finish. Price per pair: £253.00 (plus VAT).

Ditton 25

ABR enclosure with drive units: 26mm 34mm (2), 308mm, 308mm ABR. Crossover frequency: 2kHz, 9kHz. FR: 20Hz-40kHz. Imp: 4-8 ohms. Recommended amplifier output: 10-120W. Dimensions: 36 × 28 × 81cm. Teak/walnut finish. Price: £292.46 (plus VAT).

Ditton 22*

Infinite baffle speaker with drive units: 26mm, 130mm, 205mm. Crossover frequency: 500Hz, 3kHz. FR: 30Hz-28kHz. Imp: 4-8 ohms. Recommended amplifier output: 10-80W. Dimensions: 33 × 37 × 51cm. Teak/walnut. New bookshelf type. Price per pair: £165.00 (plus VAT).



Celef Domestic II Super



Celestion Ditton 662

Ditton 33*

Infinite baffle speaker with drive units: 26mm, 130mm, 256mm. Crossover frequency: 500Hz, 5kHz. FR: 25Hz-28kHz. Imp: 4-8 ohms. Recommended amplifier output: 10-80W. Dimensions: 35 × 26 × 21cm. Teak/walnut finish. Price per pair: £214.08 (plus VAT).

UL 8*

ABR enclosure with drive units: 26mm, 205mm, 205mm ABR. Crossover frequency: 30Hz-28kHz. Imp: 4-8 ohms. Recommended amplifier output: 15-100W. Dimensions: 28 × 23 × 58cm. Teak/walnut finish. Price per pair: £160.84 (plus VAT).

Hadleigh Mk II

Infinite baffle speaker with drive units: 204mm, 26mm. Crossover frequency: 2.5kHz. FR: 50Hz-20kHz. Imp: 4-8 ohms. Recommended amplifier output: 10-20W. Dimensions: 34 × 25.5 × 24cm. Teak/walnut finish. Small bookshelf or music centre unit. Price per pair: £60.28 (plus VAT).

Ditton 66

ABR enclosure with drive units: 26mm, 52mm, 308mm, 308mm ABR. Crossover frequency: 500Hz, 5kHz. FR: 18Hz-40kHz. Imp: 4-8 ohms. Recommended amplifier output: 10-160W. Dimensions: 38 × 29 × 100cm. Teak/walnut finish. Price per pair: £439.00 (plus VAT).



Celestion Ditton 442



Celestion Ditton 551

UL 6*

ABR enclosure with drive units: 26mm, 154mm, 154mm ABR. Crossover frequency: 2.5kHz. FR: 35Hz-28kHz. Imp: 4-8 ohms. Recommended amplifier output: 20-80W. Dimensions: 41 × 22 × 29cm. Teak/walnut finish. Bookshelf ABR. Price per pair: £130.45 (plus VAT).

Ditton 15XR*

ABR enclosure with drive units: 26mm, 205mm, 205mm ABR. Crossover frequency: 2.4Hz. FR: 30Hz-28kHz. Imp: 8 ohms. Recommended

*Indicates entry is illustrated

amplifier output: 10-60W. Dimensions: 25 × 24 × 56cm. Teak/walnut finish. ABR unit, bookshelf. Price per pair: £120.37 (plus VAT).

Ditton 551*

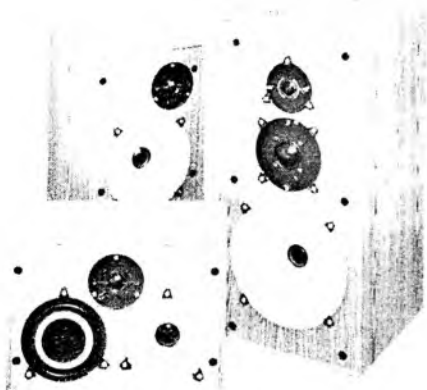
Vented box speaker with drive units: 197mm, 183mm, 290mm. Crossover frequency: 600Hz, 4.5kHz. FR: 38Hz-20kHz ±3dB. Imp: 8 ohms. Recommended amplifier output: 20-140W. Dimensions: 72 × 39.5 × 32.8cm. Finish: oiled American walnut, elm, black ash. Price per pair: £401.78 (inc. VAT).

Ditton 442*

Infinite baffle speaker with drive units: 19.7mm, 130mm, 330mm. Crossover frequency: 600Hz, 4.5kHz. FR: 45Hz-20kHz ±3dB. Imp: 8 ohms. Recommended amplifier output: 20-120W. Dimensions: 76.2 × 39 × 29cm. Finish: oiled American walnut, elm, black ash. Price per pair: £340.20 (inc. VAT).

Ditton 662*

ABR enclosure with drive units: 19.7mm, 183mm, 330mm, 330mm. Crossover frequency:



Celestion UL6, 8



Celestion Ditton 33



Celestion Ditton 22



Celestion Ditton 44

700Hz, 4.5kHz. FR: 38Hz-20kHz \pm 3dB. Imp: 8 ohms. Recommended amplifier output: 20-160W. Dimensions: 105.7 \times 40 \times 30cm. Finish: oiled American walnut, elm. Price per pair: £584.92 (inc. VAT).

■ **CEOL**

Ceol Products Ltd,
Swanville Place, Rathmines,
Dublin 6, Ireland.
Tel: Dublin 981690.

PSL 5:15*

Two-way speaker system with drive units: 110mm bass and 10mm high frequency. Full details only available on request. Dimensions: 22.2 \times 14.6 \times 10.6cm. Price per pair: £189.00 (inc. VAT). Stands extra £25.00 per pair.

■ **CERWIN-VEGA**

C. E. Hammond & Co. Ltd,
105-109 Oyster Lane, Byfleet, Surrey.
Tel: Byfleet (91) 51051.

R 10 Receiver Saver

Reflex speaker with drive units: 254mm LF and 25mm HF. Crossover frequency: 1,200Hz. FR: 38Hz-20kHz \pm 4dB. Imp: 8 ohms. Recommended amplifier output: 40W, 80W with bass excavator. Dimensions: 33 \times 29 \times 60.95cm. Walnut finish. Price per pair: £189.00 (plus VAT).

R 12 Receiver Saver

Reflex speaker with drive units: 305mm LF and D horn (25.4mm VC) HF. Crossover frequency: 2,000Hz. FR: 38Hz-20kHz \pm 4dB. Imp: 8 ohms. Recommended amplifier output: 50W, 100W

with bass excavator. Dimensions: 36.80 \times 29.20 \times 63.50cm. Walnut finish. Price per pair: £239.00 (plus VAT).

R 123 Receiver Saver

Reflex enclosure with drive units: 305mm LF, 152mm Mid, D horn (25.4mm VC) HF. Crossover frequency: 500Hz, 5,000Hz. FR: 38Hz-29kHz \pm 4dB. Imp: 8 ohms. Recommended amplifier output: 50W, 100 with bass excavator. Dimensions: 36.80 \times 29.20 \times 63.50cm. Walnut finish. Price per pair: £314.00 (plus VAT).

Hardrock 212

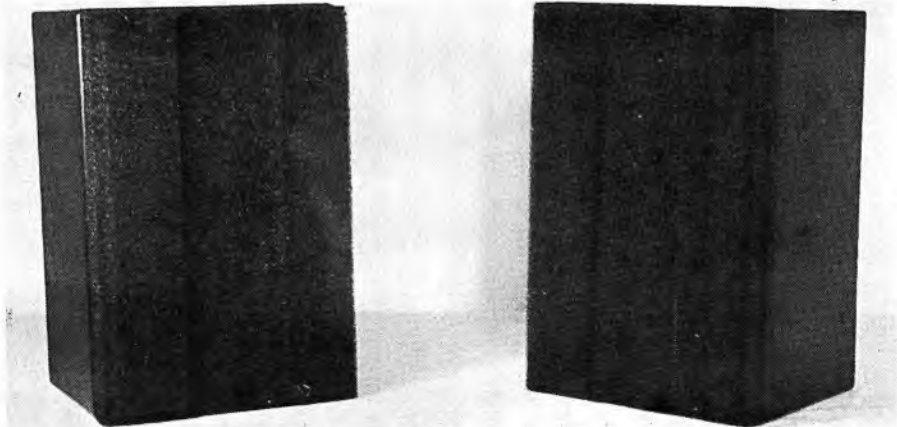
Reflex enclosure with drive units: 305mm LF, horn HF. Crossover frequency: 2,000Hz. FR: 35Hz-17kHz. Imp: 8 ohms. Recommended amplifier output: 100W, 200W with bass excavator. Dimensions: 40 \times 40 \times 60cm. Walnut finish. Price per pair: £329.00 (plus VAT).

Hardrock 312

Reflex enclosure with drive units: 305mm LF, 152mm mid, horn HF. Crossover frequency: 300Hz, 3,500Hz. FR: 35Hz-17kHz \pm 4dB. Imp: 8 ohms. Recommended amplifier output: 150W, 300W with bass excavator. Dimensions: 40 \times 40 \times 66cm. Walnut finish. Price per pair: £385.00 (plus VAT).

Hardrock 317

Reflex enclosure with drive units: 380mm LF, 152mm mid, horn HF. Crossover frequency: 300Hz, 3,500Hz, 12,000Hz. FR: 30Hz-17kHz \pm 4dB. Imp: 8 ohms. Recommended amplifier output: 200W, 400W with bass excavator. Dimensions: 46.35 \times 45 \times 74.95cm. Walnut finish. Price per pair: £523.00 (plus VAT).



Ceol PSL 5:15

*Indicates entry is illustrated

Loudspeaker S-1

Reflex enclosure with 305mm LF, 152mm Mid, D horn (25.4mm VC) HF. Crossover frequency: 300Hz, 4,000Hz. FR: 28Hz-20kHz \pm 4dB. Imp: 8 ohms. Dimensions: 36.8 \times 35.5 \times 63.5cm. Walnut finish. Thermo vapour suspension. Price per pair: £419.00 (plus VAT).

Loudspeaker S-2

Reflex enclosure with drive units: 380mm LF, 152mm mid, horn HF. Crossover frequency: 200Hz, 4,000Hz. FR: 28Hz-17kHz \pm 3dB. Imp: 8 ohms. Recommended amplifier output: 250W. Dimensions: 46.3 \times 45 \times 74.95cm. Walnut finish. Thermo vapour suspension. Price per pair: £739.00 (plus VAT).

12 TR

Direct radiating/reflecting with rear bass duct. Drive units: 305mm LF, 152mm mid, D horn (25.4mm VC) HF. Crossover frequency: 35Hz-20kHz \pm 3½dB. Imp: 8 ohms. Recommended amplifier output: 100W. Dimensions: 34.30 \times 34.30 \times 101.50cm. Oiled walnut or black grille finish. Ultra-high efficiency. High power floor facing woofer for improved loading. Price per pair: £459.00 (plus VAT).

H 10

Vent-tuned high energy design with drive units: 254mm Steel LF, D Horn (25.4mm VC) HF. Crossover frequency: 2,000Hz. FR: 38Hz-20kHz \pm 4dB. Imp: 8 ohms. Recommended amplifier output: 25W, 50W with bass excavator. Beige/brown finish. Price per pair: £139.00 (plus VAT).

W 10

Vent-tuned high energy design. Drive units: 254mm cast aluminium LF, D horn (25.4mm VC) HF. Crossover frequency: 2,000Hz. FR: 38Hz-20kHz \pm 4dB. Imp: 8 ohms. Recommended amplifier output: 40W, 80W with bass excavator. Walnut and ebony facing. Price per pair: £159.00 (plus VAT).

H 12

Vent-tuned high energy design with drive units: 305mm cast aluminium LF, D horn (25.4mm VC) HF. Crossover frequency: 2,000Hz. FR: 38Hz-20kHz \pm 4dB. Imp: 8 ohms. Recommended amplifier output: 50W, 100W with bass excavator. Beige/brown finish. Price per pair: £159.00 (plus VAT).

W 12

As above but with Walnut and ebony facing. Price per pair: £195.00 (plus VAT).

H 15

Vent-tuned high energy design with drive units: 380mm LF, horn (2). Crossover frequency: 2,000Hz. FR: 32Hz-16kHz \pm 5dB. Imp: 8 ohms. Recommended amplifier output: 100W, 200W with bass excavator. Beige/brown finish. Price per pair: £289.00 (plus VAT).

DB 10 Bass Excavator

Designed to take advantage of extra bass capability of Cerwin-Vega speakers. It restores buried or rolled-off bass in records and tapes. Eliminates distortion and woofer damage due to subsonic noise. Extends the useful response of many speaker systems up to a full octave. Housed in steel enclosure in standard RCA inputs and outputs. Price: £29.00.

■ CHARTWELL

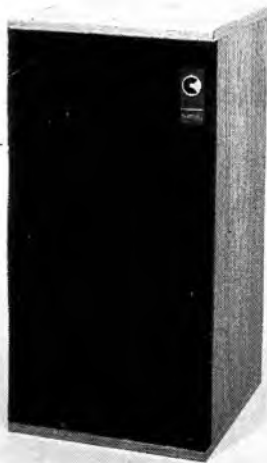
Swisstone Electronics Ltd,
4-14 Barmeston Road,
London SE6 3BN.
Tel: 01-697 8511.

PM 110*

Reflex speaker with Chartwell CEA165 and 25 drive units. Crossover frequency: 3.5kHz. FR: 50Hz-20kHz \pm 3dB. Imp: 8 ohms. Rec. amplifier output: 40W. Dimensions: 24 \times 20 \times 46cm. Sculptured foam grille. Finish: black/teak/walnut. Price: to be announced.

PM 210*

Reflex speaker with Chartwell CEA205PP and Sonaudax .25mm drive units. Crossover frequency: 3.5kHz. FR: 30Hz-30kHz. Imp: 8



Chartwell PM110

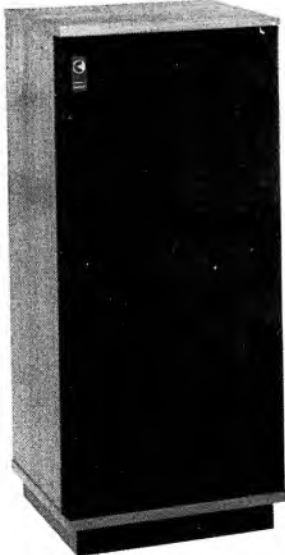


Chartwell PM 450

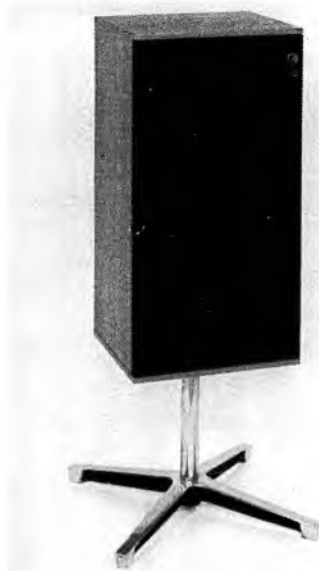
ohms. Amplifier output: 50W. Dimensions: 34.3 × 26.6 × 66cm. Sculptured foam grille. Finish: black/teak/walnut. Price: to be announced.

PM 410*

Reflex speaker with Chartwell CEA305PP,



Chartwell PM 410



Chartwell PM 210

Chartwell CEA145PP, Sonandax 25mm drive units. Crossover frequency: 500Hz, 3.5kHz. FR: 30Hz-30kHz. Imp: 8 ohms. Rec. amplifier output: 100W. Dimensions: 38.1 × 33 × 86.4cm. Sculptured foam grille. Finish: black/teak/walnut. Price: to be announced.

PM 450*

Reflex speaker with Chartwell CEA305PP and Sonandax 34mm drive units. Crossover frequency: 1.8kHz. FR: 45Hz-20kHz ±3dB. Imp: 8 ohms. Recommended amplifier output: 300W. Dimensions: 76 × 46 × 41.2cm. Teak, black and walnut finish. Price: to be announced.

BBC Monitor LS3/5*

Infinite baffle enclosure. FR: 70Hz-20KHz ±3dB. VCI: 15 ohms. Dimensions: 30 × 18.5 × 16cm. Two drive units. Crossover: 3kHz. Finish: teak, walnut, rosewood or black. Price: £159.50 per pair or £174.50 per pair rosewood.

■ **CLARK**

Clark Speakers, 122 Hull Road, Anlaby, North Humberside HU10 6UV. Tel: Hull (0482) 656706.

A1-31H*

Critically damped three triangle transmission line enclosure. Drive units: bass 207mm Richard Allan HP8B 122mm Peerless K040 mid-range, 19mm KEF T27 tweeter. Crossover frequency: 450Hz and 3.3kHz. FR: 28Hz-30kHz. Imp: 8

*Indicates entry is illustrated

ohms. Amplifier requirements: suitable for 15-135W RMS per channel amplifiers. Dimensions: 78 × 39 × 35cm. Weight: 34kg. Finish: walnut or teak. Mounted on castors. Price: on application.

A1-35/2*

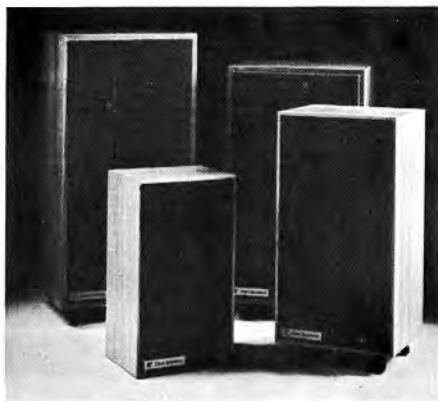
Critically damped, three triangle, transmission line enclosure. Drive units: 300 × 210 KEF B139 bass, 210mm KEF B200 mid-range in 7.7 litre isolated enclosure. 19mm KEF T27 tweeter. Undamped line length: 2.71m. Crossover frequencies: 450Hz, 3.3kHz. FR: 25Hz-30kHz. Imp: 8 ohms. Amplifier requirements: suitable for 25-125W RMS per channel amplifiers. Dimensions: 89 × 45 × 35cm. Weight: 41kg. Finish: walnut or teak. Optimum perspective control. Mounted on castors. Price per pair: £313.00 (plus VAT).

TS22*

IB enclosure. Drive units: 19mm KEF T27 tweeter, 210mm KEF B200 bass/mid. Crossover frequency: 3.3kHz. FR: 35Hz-30kHz. Imp: 8 ohms. Recommended amplifier output: 25-100W. Dimensions: 56 × 30 × 25cm. Finish: teak or walnut. Price: on application.

X27*

ABR enclosure. Drive units: 19mm KEF T27 tweeter, 210mm KEF B200 base mid range, 254mm. ABR sub-bass. Crossover frequency:

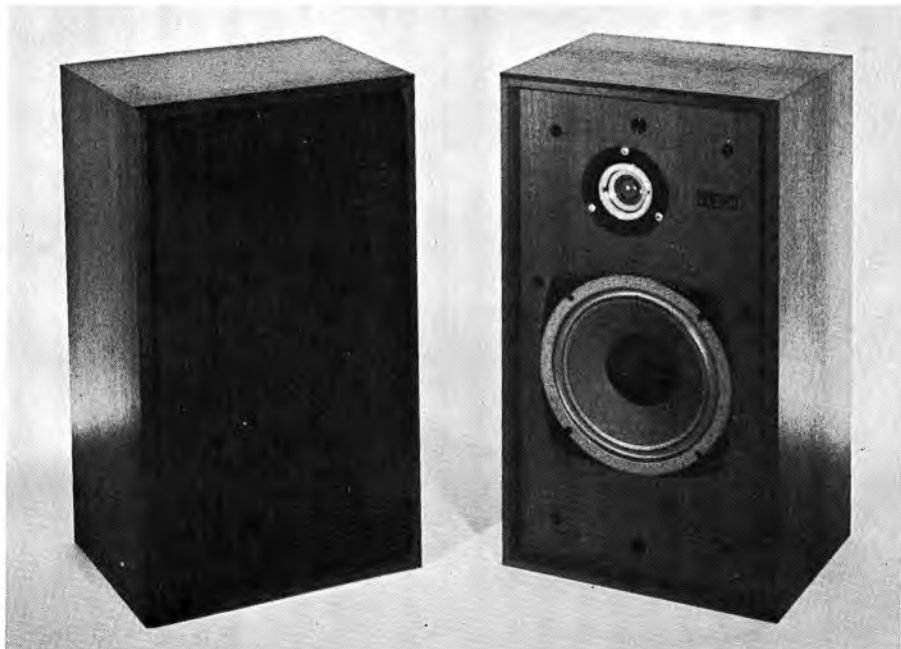


Clark Speakers

450 and 3.3kHz. Frequency range: 30Hz-30kHz. Imp: 8 ohms. Recommended amplifier output: 25-125W. Dimensions: 68 × 34 × 30cm. Finish: teak or walnut. Mounted on castors. Price: on application.

■ DECCA

Decca Radio and Television,
Neachells Lane, Willenhall,
Staffs WV13 3RW.
Tel: Willenhall (0902) 67367.



Decca LA4012 enclosures

SPEAKER ENCLOSURES

LA4011

Two-way speaker system. Output: 40W. Drive units: 160mm bass, 60mm tweeter. Sensitivity: 96dB. Imp: 8 ohms. FR: 80Hz-18kHz — 3dB. 60Hz-20kHz DIN. Crossover frequency: 4kHz. Finish: teak veneers on sides and front baffle. Brown reticulated foam front grille. Size: 42 × 23.9 × 16.5cm. Price: on application.

LA4012*

Two-way enclosure. Output: 40W. Drive units: 200mm bass, 60mm tweeter. Sensitivity: 96dB. Imp: 8 ohms. FR: 65Hz-18kHz — 3dB. 45Hz-20kHz DIN. Crossover frequency: 4kHz. Finish: teak veneers on sides and front baffle. Brown reticulated foam front grille. Dimensions: 50.5 × 29 × 23.2cm. Price: on application.

■ DAHLQUIST

Hayden Laboratories Ltd, Churchfield Road, Chalfont St. Peter, Bucks SL9 9EW. Tel: Gerrards Cross (49) 88447.

DQ-10*

Will handle 200W programme material. Power requirements: 60W. Imp: 8 ohms. Number of drivers: 5. Crossover points: 400Hz; 1kHz; 6kHz; 12.5kHz. FR: 35Hz-27kHz. Dimensions: 30½ × 31½ × 9in. Finish: rich black cloth with American walnut side trim and legs. Enclosure rear surfaces black leatherette lamination. Price: £610.00 per pair (plus VAT).

DQ-1W*

High definition add on woofer system. Walnut

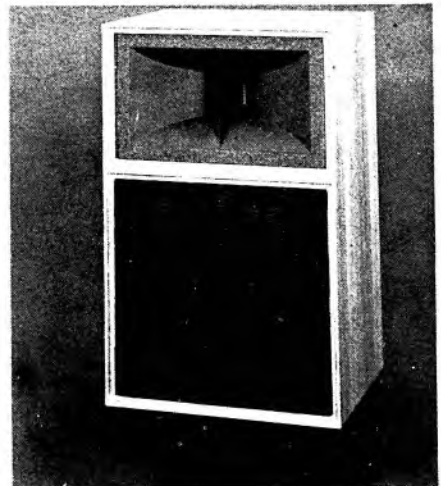
cabinet with black grille assembly. Price: £226.00 per pair (plus VAT).

■ DECCA SPECIAL PRODUCTS

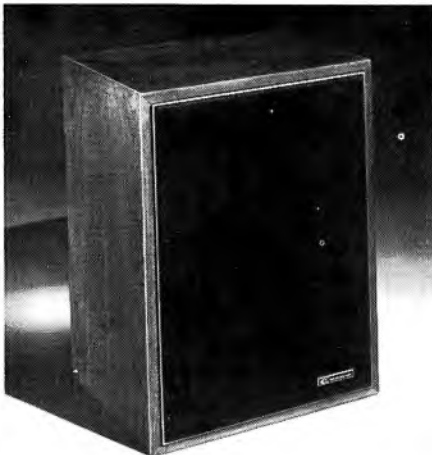
Ingate Place, Queenstown Road, London SW8 3NT. Tel: 01-622 6677.

London Enclosure*

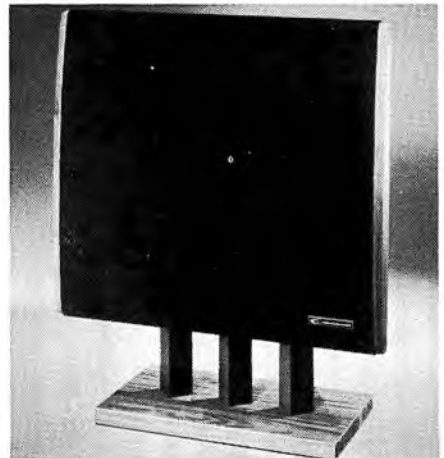
Infinite baffle speaker. Drive units: ribbon (London), high flux 203mm bass. Crossover frequency: 1.6kHz. FR: 50-25,000Hz. Imp: 8 ohms. Amplifier requirements: 25W nominal. Dimensions: 35.4 × 28.1 × 58.5cm. Weight: 19kg. White, rosewood, or walnut. Price: £220.00 per pair (plus VAT).



Decca London enclosure



Dahlquist DQ-1W



Dahlquist DQ-10

*Indicates entry is illustrated

■ DYNATRON

Dynatron Radio Ltd, Ditton Walk,
Cambridge CB5 8QD.

Tel: Teversham (022 05) 2781.

LS 3238*

Floor standing bass reflex. Drive unit: 8in. bass, 5in. mid, 1in. HF. Power handling: 50W into 8 ohms. Crossover frequency: 1,500Hz, 6kHz. FR: 25Hz-20kHz. Sculptured grill. Finished in rosewood. Dimensions: 35.5 × 27 × 69cm. Price: on application.

LS 1428

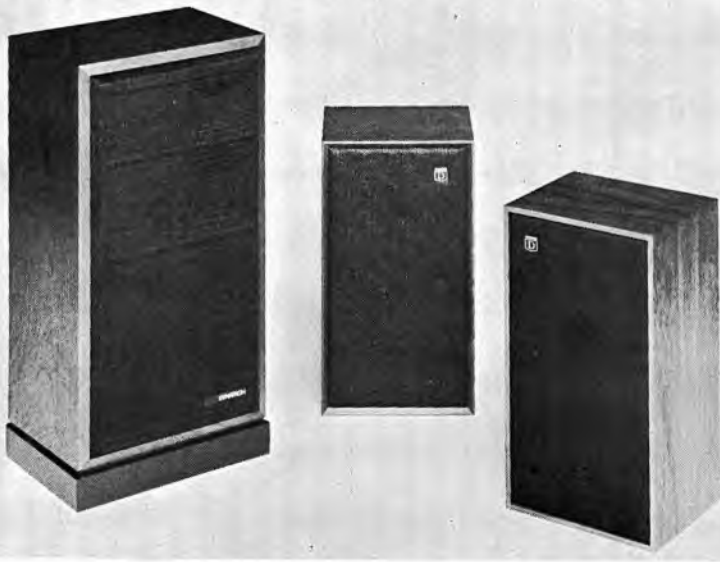
IB enclosure with drive units: 8in. bass, 2in. HF. Power handling: 50W. Finish: teak, rosewood veneer. Dimensions: 44.4 × 23.6 × 17.8cm. Price: on application.

LS1128CR

Floor standing or shelf mounting IB enclosure. Drive units: 6½in. bass, 3 1/8in. HF. Power handling: 10W. Finish: rosewood. Dimensions: 42 × 25.9 × 21.6cm. Price: on application.



Dynatron L-R: LS5328PW, LS5428PM, LS5528PK



Dynatron LS 3238CR

LS5328PW*/LS5428PM*/LS5528PK*

IB period speakers matching the Burling, Kensington and Argyll music centres. Drive units: 8in. bass, 2in. HF. Power handling: 50W. Finish: walnut hurr, cured mahogany, oak respectively. Price: on application.

■ EAGLE

Eagle International Precision Centre,
Heather Park Drive, Wembley HA0 1SU.
Tel: 01-902 8832.

I.4200*

IB enclosure. Crossover frequency: 3.8kHz. FR: 100Hz-14kHz ± 3 dB. Imp: 8 ohms. Recommended amplifier output: 5-20W. Dimensions: 23.5 \times 18 \times 38cm. Finish: walnut/brown grille. Price per pair: £118.00 (inc. VAT).

I.4400

IB enclosure. Crossover frequency: 3.6kHz. FR: 70Hz-16kHz ± 2.5 dB. Imp: 8 ohms. Recommended amplifier output: 10-40W. Dimensions: 32 \times 26 \times 57.5cm. Finish: walnut/brown grille. Price per pair: £165.50 (inc. VAT).

I.7600

IB enclosure. Crossover frequency: 3.0kHz. FR: 70Hz-17kHz ± 2.5 dB. Imp: 8 ohms. Recommended amplifier output: 10-50W. Dimensions: 32 \times 26 \times 57.5cm. Finish: walnut/brown grille. Price per pair: £212.00 (inc. VAT).

I.7800

IB speaker. Crossover frequency: 600Hz, 3.0kHz. FR: 60Hz-15kHz ± 2.5 dB. Imp: 8 ohms. Recommended amplifier output: 20-70W. Dimensions: 33 \times 30.5 \times 62cm. Finish: walnut/brown grille. Price per pair: £264.00 (inc. VAT).

■ EMPEROR

M.M.G. Associates, 19 St Andrews Road,
Great Malvern, Worcs WR14 3PR.
Tel: Malvern (068 45) 63555.

Mk II Series

Infinite baffle speaker enclosure. 13 \times 8in. elliptical driver with coaxially mounted high frequency unit. Crossover frequency: adjustable. FR: 50Hz-16kHz ± 3 dB. Imp: 8 or 16 ohms. Amplifier requirements: 20W. Adjustable high frequency balance. Dimensions: 79 \times

*Eagle range*

43 \times 23cm. Finish: teak effect in Melamine. Price per pair: £130.00 (inc. VAT).

Studio Monitors

Specifications and prices on request.

■ ENVIRONMENTAL SOUND

Environmental Sound,
High Street, Northallerton,
North Yorks. DL7 8EE.
Tel: Northallerton (0609) 5434/5.

Table 15*

Infinite baffle completely disguised as an elegant Victorian table. Drive units: 203mm, 150mm, 25mm. Crossover frequency: 800 and 5,000Hz. FR: 35-18,500Hz. Imp: 8 ohms. Amplifier output: 10-50W. Dimensions: 45.7 \times 38.1cm. The structure of the table is covered in a variety of shades of beige and the whole object enveloped in a lace tablecloth which is acoustically transparent. These are omni-directional units designed to blend with the decor of the home while reproducing pure uncoloured sound, giving flexibility of positioning. Price: £189.44 (plus VAT).

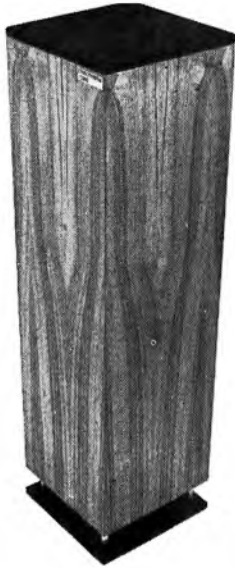
Table 24

Infinite baffle disguised as an elegant Victorian table. Drive units: 25.4mm, 100mm, 25mm. Crossover frequency: 800, 5,000Hz. FR: 18.5kHz. Imp: 8 ohms. Designed to operate with amplifiers from 10-100W RMS. Dimensions: 56 \times 61cm. The structure of the table is covered in a variety of shades of beige and the whole object enveloped in a lace tablecloth which is acoustically transparent. These are omni-directional units designed to blend with the decor of the home while reproducing pure uncoloured sound, giving flexibility of positioning. Price: £286.00 (plus VAT).

*Indicates entry is illustrated



Environmental Sound VT15



Environmental Sound column

Rondo

Rigid cylinder with acoustical transparent top. Infinite baffle. Drive units: 203mm, 56mm. Crossover frequency: 3,000Hz. FR: 40-20,000Hz. Imp: 8 ohms. Designed to operate with amplifiers from 10-50W RMS. Dimensions: 38.1 × 25.4cm. Finish: white, dark brown. Periantric loudspeakers. Price per pair: £80.56 (plus VAT).

Tower

Infinite baffle made in high density veneered chipboard. Drive units: 203mm, 25mm dome.



Environmental Sound FF range

Crossover frequency: 3,000Hz. FR: 35Hz-18.5kHz. Imp: 8 ohms. Dimensions 48.3 × 27.3 × 27.3cm. Teak, black or walnut finish. Features: Periantric loudspeakers. Price per pair: £104.74 (plus VAT).

Column*

Infinite baffle speaker. Drive units: 203mm, 25mm dome. Crossover frequency: 800 and 5,000Hz. FR: 35Hz-18.5kHz. Imp: 8 ohms. Amplifier output: 10-50W. Dimensions: 22.2 × 22.2 × 76.2cm. Teak, black or walnut finish. Periantric loudspeaker allowing maximum number of locations in the home. Price per pair: £150.46 (plus VAT).

FF1 Mk II

Infinite baffle device of moderate dimensions yet capable of producing real bass. Drive units: 165mm, 25mm. Crossover frequency: 5,000Hz. FR: 48Hz-18.5kHz. Imp: 8 ohms. Recommended amplifier output: 15-50W. Dimensions: 35.6 × 22.9 × 25cm. Finish: teak, walnut or black. Price per pair: £70.01 (plus VAT).

FF2 Mk II*

Bass reflex devices with tuned ports designed to optimise performance of low frequency drivers. Drive units: 165mm, 25mm. Crossover frequency: 5,000Hz. FR: 39Hz-18.5kHz. Imp: 8 ohms. Recommended amplifier output: 15-45W. Dimensions: 55.8 × 25.4 × 23.8cm. Finish: teak, walnut or black. Price per pair: £93.31 (plus VAT).

FF3 Mk II*

Bass reflex enclosure. Drive units: 20.3mm, 25mm. Crossover frequency: 5,000Hz. FR: 32Hz-18.5kHz. Imp: 8 ohms. Output: 10-65W. Dimensions: 68.6 × 27.3 × 29.8cm. Finish: walnut, teak, black. Price per pair: £121.66 (plus VAT).

FF4, FF5, FF6

Natural developments of the 1, 2 and 3. An additional 'super tweeter' is employed and range of the mid-range tweeter extended slightly

downwards. The additional unit has necessitated a more complex filter network with two crossover points — still outside the critical areas.

FF4

Three-way bookshelf monitor for the discerning listener limited for space. Despite its small size FF4 will reproduce 40Hz. and below the necessity of bass boost. Dimensions: 35.6 × 22.9 × 25cm. FR: 48-24,000Hz. Recommended amp. output 15-50W.

FF5

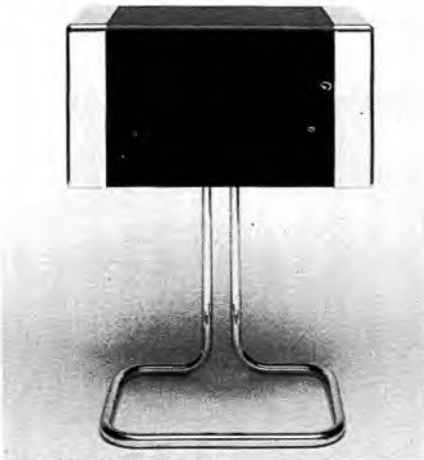
By utilising extra cabinet volume it has been possible to produce a compact reflex monitor system to augment the low bass and not increase distortion due to excessive cone movement. Mid-range and treble units carry the sound smoothly to beyond audible range. Dimensions: 55.8 × 25.4 × 23.8cm. FR: 39-24,000. Recommended amp. output: 15-45W RMS.

FF6

A larger bass driver incorporated into a reflex cabinet of sufficient size to enable the unit to function correctly, coupled with the dome mid-range and dome treble units. The cabinet is braced internally to suppress cabinet resonance. Dimensions: 75 × 27.3 × 29.8cm. FR: 32-24,000. Recommended amp. output: 10-65W RMS.



Gale GS401C



Gale GS401A on stand

■ **GALE**

Gale Electronics, 23 Bruton Place
London W1.
Tel: 01-499 9966.

GS401A*

Infinite baffle enclosure consisting of 2 bass drivers, midrange & tweeter. Crossovers: 475 and 5000Hz. FR: 55Hz-20,000Hz in anechoic chamber, 35Hz-20,000Hz normal room. Output: 40-200W. Imp: 4-8 ohms. Fuse protected; balance controls for midband and treble. Compact speaker designed for use as bookshelf unit or can be placed on Gale speaker stands. Dimensions: 33 × 27 × 60.5cm. Seven year guarantee. Finish: matt black and chrome. Features: Matching chrome stands £66.00 per pair (plus VAT). Price: £215.00 each (plus VAT).

GS401C*

Identical specifications to GS401A but with walnut cabinet. Price: £215.00 each (plus VAT). Matching black stand: £55.00 (plus VAT).

**Good sounding looks
from Goodmans**



The Achromat range of hi-fi loudspeakers

Goodmans

Over 50 years of sound experience

Goodmans Loudspeakers Ltd.,
Downley Road, Havant,
Hampshire PO9 2NL England.

Achromat
Beta Kappa Sigma



SPEAKER ENCLOSURES

■ GOODMAN'S

Goodmans Loudspeakers Ltd,
Downley Road, Havant,
Hampshire PO9 2NL.
Tel: Havant 486344.

RB 35*

Closed box with 260mm bass, 85mm midrange and 26mm HF dome. Crossover frequency: 1kHz and 6kHz. FR: (DIN): 40Hz-20kHz. Imp: for amps of 4 or 8 ohms. Amplifier output: 10-60W. Dimensions: 32 x 25 x 62cm. Teak or

walnut effect. Supplied with 7m of lead with DIN plugs. No rec. retail price.

RB 20*

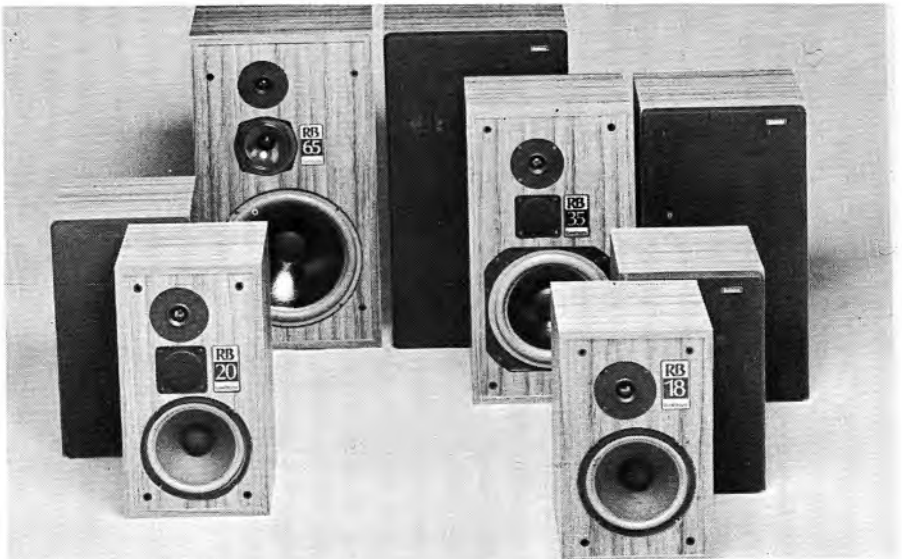
Closed box with 200mm bass, 85mm midrange, 26mm dome HF. Crossover frequency: 1kHz and 6kHz. FR: (DIN) 50Hz-20kHz. Imp: 4 or 8 ohms. Amplifier output: 10-50W. Dimensions: 26 x 25 x 48cm. Teak or walnut effect finish. Supplied with 7m lead fitted with DIN plugs. No rec. retail price.



Goodmans dB 50 Discoteque System



Goodmans RB 65



Goodmans L-R: RB 20, RB 65, RB 35, RB 18

*Indicates entry is illustrated

RB 18*

Closed box with 200mm bass, 26mm dome HF. Crossover frequency: 2,000Hz. FR: 60Hz-20kHz. Imp: 4 or 8 ohms. Amplifier output: 10-40W. Dimensions: 26 × 25 × 43cm. Teak or walnut effect. 7m of lead supplied fitted with DIN plugs. No rec. retail price.

dB 50*

Reflex system for discotheque use. 310mm bass, horn HF unit. Crossover frequency: 2,000Hz. FR: 80Hz-18kHz. Imp: 4 or 8 ohms. Amplifier output: 2-75W. Dimensions: 38 × 30.5 × 62cm. Teak or walnut effect. High sensitivity: DIN 0.4W, wide dispersion. No rec. retail price.

Achromat Beta*

Closed box with 165mm bass, 25mm dome HF. Crossover frequency: 3kHz. FR: 65Hz-23kHz. Imp: 8 ohms. Amplifier output: 18-70W. Dimensions: 35 × 22 × 22cm. Finish: leather look with hardwood nosing. Price: £145.38 per pair.

Achromat Kappa*

Closed box with 205mm bass, 25mm dome HF. Crossover frequency: 2.4kHz. FR: 45Hz-23kHz. Imp: 8 ohms. Amplifier output: 20-95W. Dimensions: 54 × 27 × 27cm. Finish: leather look with hardwood nosing. Price: £191.11 per pair.

Achromat Sigma*

Reflex cabinet ABR loaded. Drive units:

205mm bass, 25mm dome HF, 260mm ABR. Crossover frequency: 2.4kHz. FR: 35Hz-23kHz. Imp: 8 ohms. Amplifier output: 20-100W. Dimensions: 69 × 33 × 28cm. Finish: leather look with hardwood nosing. Use with Goodmans CS4 stand. Price £145.07 per pair.

RB 65*

Infinite baffle speaker with drive units: 300mm bass, 130mm mid, 25mm dome HF. Crossover frequency: 1kHz, 6kHz. FR: 40Hz-20kHz. Imp: 4-8 ohms. Recommended amplifier output: 10-75W. Dimensions: 70 × 38 × 31cm. Teak or walnut effect finish. Supplied with 7 metre lead and connections. No rec. retail price.

■ GRIFFIN

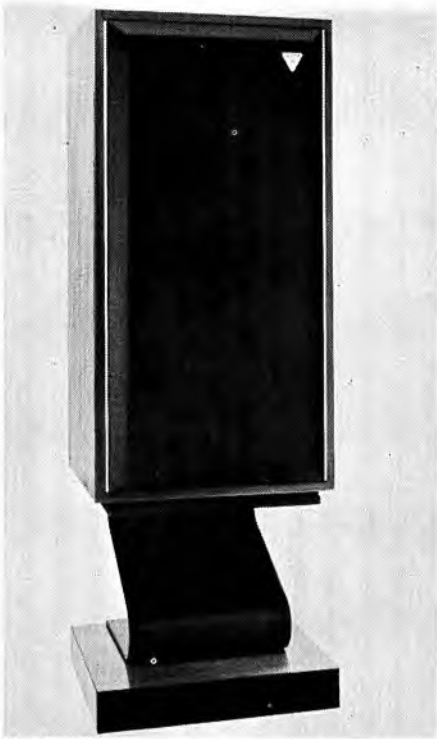
H.K. Griffin & Co (Electronics),
Siddons Factory Estate,
Howard Street, West Bromwich,
West Midlands B70 0SU.
Tel: 021-556 6823.

Alpha Two Model 15

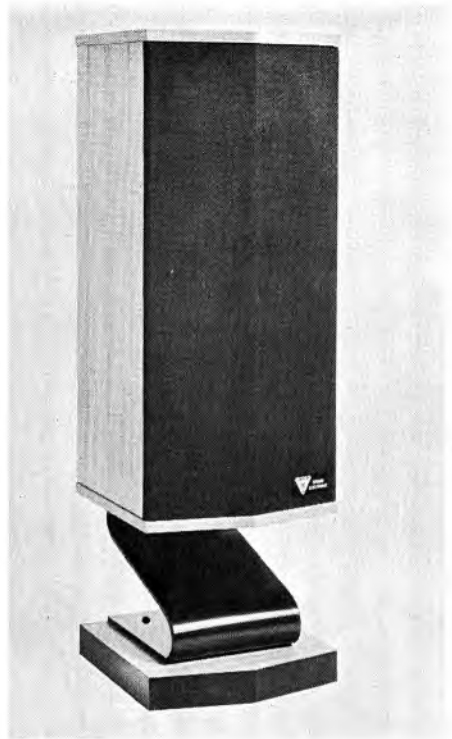
Aperiodic reflex enclosure with KEF B110 bass and Coles 3000 mid-range/tweeter. FR: 30Hz-22kHz. Imp: 8 ohms. Recommended amplifier output: 5-60W. Dimensions: 22.9 × 21.6 × 40.6cm. Finish: teak or walnut. Features: supplied in mirror paired to optimise stereo placement. Price per pair: £93.00 (plus VAT).



Goodmans Achromat range: Kappa, Beta, Sigma



Griffin 27 Aperiodic



Griffin Studio Electronic 85

Aperiodic Model 27*

Aperiodic reflex enclosure with KEF B200 bass, KEF T52 dome mid/treble, and Coles STC 4001K tweeter. FR: 30Hz-25kHz ± 2.5 dB. Lower frequency limit depends on room size and speaker positioning. Imp: 8 ohms. Recommended amplifier output: 15-100W. Dimensions: 29.8 \times 27.9 \times 59cm. Finish: teak or walnut. Features: available with stand made of spring steel, tuned to the mass of the speaker to absorb and neutralise bass freq. and colouration from the cabinet. Price per pair: £238.00 (plus VAT). Stand £44.00 (plus VAT).

Omega Three Model 25

Friction reflex enclosure with KEF B200 bass, KEF T52 dome mid/treble and Coles 3000 tweeter. FR: 20Hz-25kHz. Imp: 8 ohms. Recommended amplifier output: 15-100W. Dimensions: 26.4 \times 24.1 \times 47.6cm. Finish: teak or walnut. Features: speakers supplied in mirror paired to optimise stereo placement. Price per pair: £165.00 (plus VAT).

Omega Two Model 25

Friction reflex enclosure with KEF B200 bass

and Coles 3000 mid-range/tweeter. FR: 20Hz-25kHz. Imp: 8 ohms. Recommended amplifier output: 15-100W. Dimensions: 26.4 \times 24.1 \times 47.6cm. Finish: teak or walnut. Features: speakers supplied in mirror paired to optimise stereo placement. Price per pair: £125.00 (plus VAT).

Studio Electronic 85*

Tandem-line with infra bass drive unit system. Drive units: re-coned KEF B200 bass, KEF B139, Radford MD6/1, two STC 4001G tweeters. FR: 22Hz-30kHz -4 dB $+2$ dB. Recommended amplifier output: tri-amp system equivalent to a single power amp with more than 500W power. Dimensions: 33 \times 33 \times 111.7cm (including stand). Finish: teak or walnut. Features: active crossover with plug in tri-amplifiers. The two super tweeters reduce vertical dispersion and hence ceiling reflections. Input is suitable for most conventional pre-amps 0.3V into 3.3K or 0.8V into 10K. Price per pair: £756.00 (plus VAT). Price includes stand.

*Indicates entry is illustrated

■ GRUNDIG

Grundig International Ltd,
Newlands Park,
London SE26 5NQ.
Tel: 01-659 2468.

System 5000*

Infinite baffle enclosure with units and cross-over. Two bass/mid-range units and two treble. FR: 45Hz-20kHz. Imp: 4 ohms. HC: 35W. Finish: white globe with satin silver stand. No rec. retail price.

System 8000

IB enclosure with 4 drive units. Crossover frequency: 2,200Hz. FR: 45Hz-26,000Hz. Imp: 4 ohms. Recommended amplifier output: 50W. Diameter: 32cm. Anthracite/chrome finish. No rec. retail price.

Box 250

IB enclosure with 2 drive units. Crossover frequency: 3,000Hz. FR: 50Hz-20,000Hz. Imp: 4 ohms. Rec. amplifier output: 25W. Dimensions: 14 × 25 × 13cm. Finish: dark anthracite. No rec. retail price.

Box 550*

IB enclosure with 2 drive units inc. dome tweeter. Crossover frequency: 1,500Hz. FR: 40Hz-26,000Hz. Imp: 4 ohms. Recommended amplifier output: 35W. Dimensions: 23 × 39 × 21cm. Finish: anthracite and teak foil. No rec. retail price.

Box 650

IB enclosure with 3 drive units inc. dome mid and treble. Crossover frequency: 1,000Hz, 4,500Hz. FR: 40Hz-26,000Hz. Imp: 4 ohms. Rec. amplifier output: 40W. Dimensions: 23 × 39 × 21cm. Finish: anthracite and teak foil. No rec. retail price.

Box 850

IB enclosure with 3 drive units inc. dome mid and treble. Crossover frequency: 900Hz, 4,000Hz. FR: 35Hz-26,000Hz. Imp: 4 ohms. Rec. amplifier output: 50W. Dimensions: 28 × 45 × 24cm. Finish: anthracite. No rec. retail price.

Box 1500

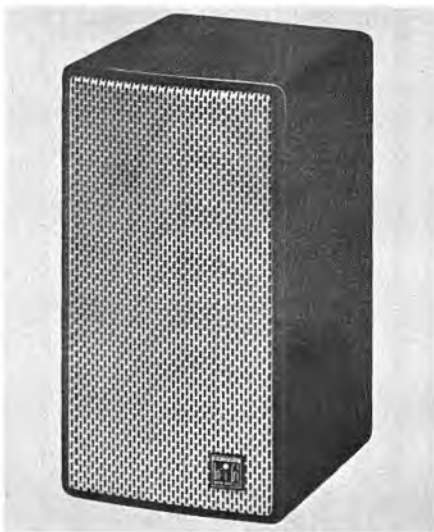
IB enclosure with 3 drive units inc. dome mid and treble. Crossover frequency: 900Hz, 4,000Hz. FR: 32Hz-26,000Hz. Imp: 4 ohms. Rec. amplifier output: 60W. Dimensions: 30 × 48 × 27cm. Finish: anthracite and teak foil. No rec. retail price.

Box 2500

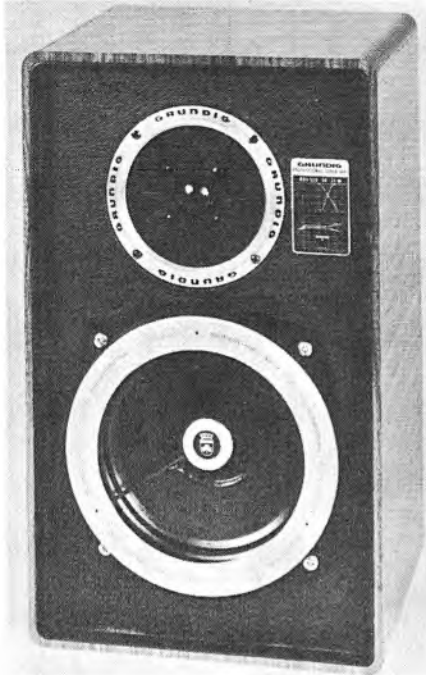
IB enclosure with 4 drive units inc. dome mid and treble. FR: 25Hz-26,000Hz. Imp: 4 ohms. Rec. amplifier output: 80W. Dimensions: 36 × 61 × 30cm. Finish: anthracite. No rec. retail price.



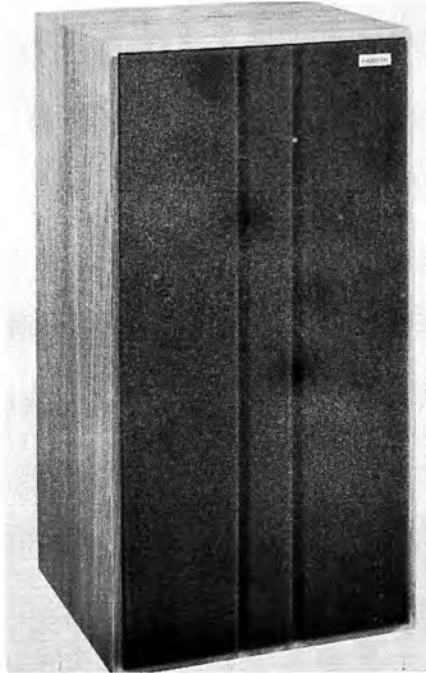
Grunaig Auditorama 5000



Grunaig Micro Box 320 Hi-Fi



Grunaig Box 550



Harbeth HL

■ **HARBETH**

Harbeth Acoustics, 2a Nova Road,
West Croydon, Surrey CR0 2TL.
Tel: 01-681 7876.

HL*

Reflex enclosure with 203mm and 25mm drive units. Crossover frequency: 2kHz. FR: 45Hz-25kHz. Imp: 8 ohms. Rec. amplifier output: 100W. Dimensions: 33 × 30.5 × 63.5cm. Finish: teak, black oak, rosewood, walnut. Features: new polypropylene copolymer bass/mid frequency unit. Price per pair: £304.00 teak and black oak. £306.00 walnut. £334.00 rosewood.

■ **HAYDEN ISOPHON**

Hayden Laboratories Ltd,
Hayden House, Churchfield Road,
Chalfont St. Peter SL9 9EW.
Tel: Gerrards Cross (49) 88447.

HI TL

Transmission line. Drive units: 245mm, 50mm, 25mm. Crossover frequency: 600Hz, 4kHz. FR: 40Hz-18kHz ±2dB. Imp: 8 ohms. Recommended amplifier output: 20-150W. Dimensions: 38 × 50 × 92cm. Finish: American black walnut, Burmese teak, matt black. Price per pair: £298.00 (plus VAT).

HI 40

IB enclosure with drive units: 150mm, 25mm. Crossover frequency: 3.5kHz. FR: 80Hz-18kHz ±2dB. Imp: 8 ohms. Recommended amplifier output: 10-30W. Finish: American black walnut, Burmese teak, matt black. Price per pair: £99.00 (plus VAT).

HI 100

IB enclosure with drive units: 230mm, 50mm, 25mm. Crossover frequency: 800Hz, 5kHz. FR: 55Hz-18kHz ±2dB. Imp: 8 ohms. Recommended amplifier output: 20-150W. Dimensions: 36 × 26 × 55cm. Finish: American black walnut, Burmese teak, matt black. Price per pair: £190.00 (plus VAT).

■ **HITACHI**

Hitachi Sales (UK) Ltd,
Hitachi House, Station Road,
Hayes UB3 4DR.
Tel: 01-848 8787.

HS 330*

IB enclosure with drive units: 6.5mm, 4cm, 25cm. FR: 40Hz-20kHz. Crossover frequency: 900Hz, 2,500Hz and 700Hz, 3,200Hz. Imp: 6

*Indicates entry is illustrated



Hitachi HS 530

ohms. Max. power input: 100W. Dimensions: 31.5 × 57.5 × 30.5cm. Finish: simulated walnut. Price: £129.00 each (inc. VAT).

SS 8500*

1B enclosure with drive units: 25mm, and twin 205mm woofers. FR: 45Hz-22kHz. Imp: 8 ohms. Maximum power input: 150W. Dimensions: 32.1 × 62.2 × 25.2cm. Finish: simulated walnut. Price: £169.00 each (inc. VAT).

HS 530*

1B speaker with drive units: 5.5, 2.2, 25cm. FR: 40Hz-20kHz. Imp: 6 ohms. Maximum power input: 120W. Dimensions: 35.5 × 63 × 27.5cm. Price: £169.00 each (inc. VAT).

■ IMF ELECTRONICS

IMF Electronics Ltd, Westbourne Street,
High Wycombe, Bucks.

Tel: High Wycombe (0494) 35576.

Super Compact II*

Reflex enclosure with units and crossover. 20.5cm bextrene bass unit and 10cm bextrene mid-range unit with domed tweeter. Crossover: electrical three way at 375Hz and 3.5kHz. FR: 30Hz-20kHz. Imp: 4-8 ohms. Efficiency: 100dB via pink noise at 1m on axis for 40W. Amplifier requirements: 20-50W. Dimensions: 46 × 28 × 30cm. Finish: walnut woodgrain. Price per pair: £189.00 (inc. VAT).



Hitachi HS 330



Hitachi SS 8500

Studio ALS 40 II*

Active line loudspeaker with units and crossover. 20.5cm bextrene bass unit, 20.5cm bextrene sub-bass unit and 10cm bextrene mid-range unit with domed tweeter. Cross-over: electrical four way at 150Hz, 375Hz and 3kHz. FR: 28Hz-20kHz. Imp: 4-8 ohms. Efficiency: 98dB via pink noise at 1m on axis for 40W. Amplifier requirements: 25-60W. Dimensions: 35 × 35 × 68cm. Finish: walnut. Price per pair: £351.00 (inc. VAT).

Studio TLS 50 II*

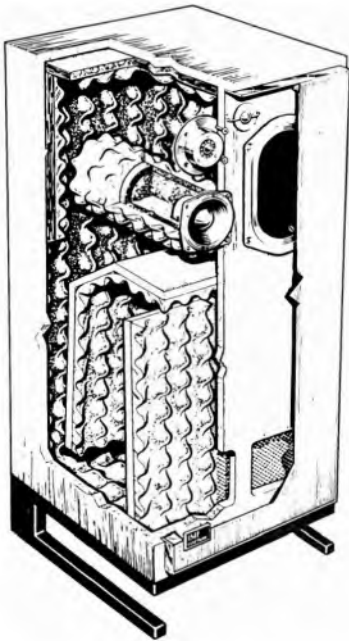
Transmission line loudspeaker with units and crossover. 20.5cm bextrene bass unit, 10cm



IMF Super Compact II

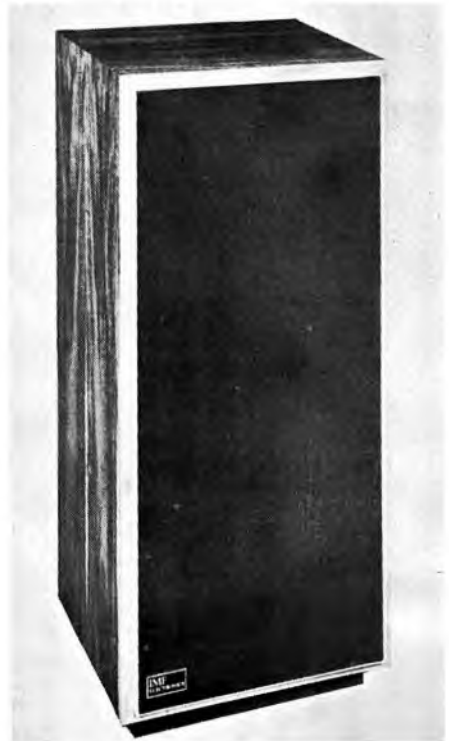


IMF Studio ALS 40 11



IMF Monitor TLS 80 11

bextrene mid-range unit with domed tweeter and super tweeter. Crossover: electrical four way at 375Hz, 3kHz and 15kHz. FR: 23Hz to beyond audibility. Imp: 4-8 ohms. Efficiency: 97dB via pink noise at 1m on axis for 40W. Amplifier requirements: 30-70W. Dimensions: 36 x 38 x 92cm. Finish: walnut. Price per pair: £423.00 (inc. VAT).



IMF TLS 50 11

*Indicates entry is illustrated

Monitor TLS 80 II*

Transmission line loudspeaker with units and crossover. Bass unit 30 × 21cm flat polystyrene diaphragm loaded by transmission line, mid-range 15.2cm plastic cone in separate line, 4.5cm tweeter and 2cm chemical dome super tweeter. Crossover: electrical four way at approximately 350Hz, 3kHz and 13kHz. FR: 20Hz to beyond audibility. Imp: 4-8 ohms. Efficiency: 98dB via pink noise at 1m on axis for 40W. Amplifier requirements: 40-100W. Dimensions: 46 × 41 × 98cm, allow height of 107cm on stand. Finish: walnut. Supplied in matched 'mirror image' pairs. Price per pair £720.00 (inc. VAT).

Reference Standard Professional Monitor Mk IV

Transmission line loudspeakers with unit and crossover. Bass unit 30 × 21cm flat polystyrene diaphragm loaded by transmission line, mid-range 15cm plastic cone in separate line, 4.5cm tweeter and 2cm chemical dome super tweeter. Crossover: electrical four way at 350Hz, 3kHz and 13kHz. Controls for filter, tilt and slope. Imp: 4-8 ohms. Efficiency: 96-98dB dependent on control settings via pink noise at 1m on axis for 40W. Amplifier requirements 50-150W. Dimensions: 101 × 43 × 50cm, allow height of 117cm on stand. Finish: walnut. Supplied in matched 'mirror image' pairs. Price per pair: £1,026.00 (inc. VAT).

■ INFINITY

Infinity Systems (UK) Ltd,
PO Box 14, 17 St. Martin's Street,
Wallingford, Oxon OX10 0EB.
Tel: Wallingford (0491) 37353.

Qe*

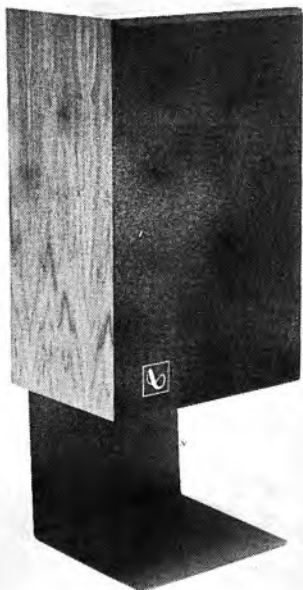
Bookshelf enclosure with 20cm. woofer and electromagnetic induction tweeter. FR: 47Hz-32kHz ±3dB. Amplifier output: up to 100W per channel. Crossover frequency: 2,500Hz. Dimensions: 46 × 30 × 25cm. Finish: birch-grain vinyl on particle board with removable grille. Price per pair: £149.00 (inc. VAT).

Qa

Floor standing speaker with drive units: 25cm. woofer and electromagnetic induction tweeter. FR: 42Hz-32kHz ±3dB. Amplifier output: up to 150W per channel. Imp: 4 ohms. Crossover frequency: 2.5kHz. Dimensions: 63 × 37 × 30cm. Finish: birch grain vinyl on particle board with removable grille. Price per pair: £199.00 (inc. VAT).

Qb

State-of-the-art floor standing speaker with three drive units: 10in. woofer, 4in. mid and electromagnetic induction tweeter. FR: 42Hz-32kHz ±3dB. Amplifier output: up to 150W per channel. Imp: 4 ohms. Crossover frequencies: 600 & 4,000Hz. Dimensions: 63 × 37 × 30cm.



Infinity Qe

SPEAKER ENCLOSURES



Infinity Jr

Finish: birch-grain vinyl on particle board with removable grille. Price per pair: £249.00 (inc. VAT).

Q Jr*

Available with optional pedestal. Drivers: 12in. woofer, 1½in. mid, electromagnetic induction tweeter. FR: 40Hz-32kHz \pm 3dB. Amplifier output: up to 200W per channel. Imp: 4 ohms. Crossover frequencies: 600 and 4,000Hz. Dimensions: 63 × 37 × 30cm. Finish: oiled walnut veneer with removable grille. Price per pair: £299.00 (inc. VAT).

Quantum Series

Quantum 5, price per pair: £475.00 (inc. VAT);
Quantum 3, price per pair: £735.00 (inc. VAT);
Quantum 2, price per pair: £999.00 (inc. VAT);
Details on application.



Infini Tesmal speaker

Infini Tesmal R.S.O.1*

Portable speaker that can be used in the home, car, boat or van. Drive units: electromagnetic induction tweeter and 12cm Infinity/Watkins dual-drive woofer with polypropene cone. FR: 65Hz-32kHz \pm 2dB. Crossover frequency: 3kHz. Amplifier power: up to 65W per channel. Imp: 4 ohms. Dimensions: 28 × 16 × 13cm. Finish: black anodized aluminium and solid oak with perforated aluminium grille. Black metal bracket is included. Price per pair: £224.00 (inc. VAT).

Reference Standard RS 4.5*

Pair of speakers and control unit. Details on application. Price complete £1,899.00 (inc. VAT).



Infinity Reference Standard RS 4.5

■ ISOPHON-WERKE

Hayden Laboratories Ltd, Hayden House, Churchfield Road, Chalfont St. Peter, SL9 9EW. Tel: Gerrards Cross (49) 88447.

■ ITT

ITT Consumer Products (UK) Ltd, Chester Hall Lane, Basildon, Essex SS14 3BW.

8073

Reflex enclosure with drive units: 250mm, 37mm and 25mm. FR: 50Hz-20kHz. Imp: 4, 8 ohms. Recommended amplifier output: 5-130W. Real teak or walnut veneer finish. Features: arrival time compensation, treble control, mid-range control. Price per pair: £234.00 (inc. VAT).

*Indicates entry is illustrated

8071

Reflex enclosure with drive unit: 137mm and 25mm dome. FR: 50Hz-20kHz. Imp: 4, 8 ohms. Recommended amplifier output: 13-90W. Real teak of walnut veneer finish. Features: arrival time compensation, treble control. Price per pair: £127.00 (inc. VAT).

8072

Reflex enclosure with drive units: 200mm, 34mm, 25mm. FR: 50Hz-20kHz. Imp: 4, 8 ohms. Recommended amplifier output: 12.6-90W. Real teak or walnut veneer finish. Arrival time compensation, treble and mid-range control. Price per pair: £185.00 (inc. VAT).

8070

Reflex speaker with drive units: 125mm bass, 25mm dome tweeter. Crossover frequency: 4kHz. FR: 50Hz-20kHz (DIN). Imp: 4-8 ohms. Recommended amplifier output: 12.6-70W into 4 ohms, 6.3-35W into 8 ohms. Dimensions: 23 × 20 × 32cm. Finish: teak or walnut real wood veneer. Features: seven-element crossover network with high performance components. Price per pair: £89.95 (inc. VAT).

■ **JBL**

St. John's Road, Tyler's Green,
High Wycombe Bucks.
Tel: High Wycombe (049 481) 5331.

L300

Three-way floor-standing loudspeaker system. Home version of JBL's full size professional studio monitor. Drive units: HF slot-loaded ring radiator, midrange compression driver/horn/slant-plate lens, 380mm low frequency speaker. Imp: 8 ohms. Recommended amplifier output: 300W. Sensitivity: 93dB. Dimensions: 80.3 × 58.4 × 57.2cm. Finish: black, blue, brown, camel. Price: £888.44 (plus VAT) each.

L19

Two-way bookshelf speaker. Drive units: 40mm, 200mm. Imp: 8 ohms. Sensitivity: 87dB. Dimensions: 53.3 × 33 × 25.4cm. Recommended amplifier output: 60W. Finish: black, brown. Price: £110.67 (plus VAT) each.

L40

Two-way bookshelf or floor standing speaker. Drive units: 25mm, 250mm. Imp: 8 ohms. Sensitivity: 88dB. Recommended amplifier output: 70W. Dimensions: 58.4 × 38.1 × 30.2cm. Finish: brown, rust, tan. Price: £146.25 (plus VAT) each.

L50

Three-way bookshelf or floor standing enclosure. Drive units: 40mm, 130mm, 250mm. Imp: 8 ohms. Recommended amplifier output: 70W. Sensitivity: 88dB. Dimensions: 62.2 × 36.2 × 31.4cm. Finish: blue, brown, rust. Price: £221.78 (plus VAT) each.

L110

Three-way bookshelf or floor standing enclosure. Drive units: 25mm, 130mm, 250mm. Imp: 8 ohms. Recommended amplifier output: 200W. Sensitivity: 89dB. Dimensions: 59.7 × 36.2 × 28.6cm. Finish: black. Price: £288.44 (plus VAT) each.

L166

Three-way bookshelf or floor standing enclosure. Drive units: 25mm, 130mm, 300mm. Imp: 8 ohms. Sensitivity: 89dB. Recommended amplifier output: 200W. Dimensions: 36.2 × 59.7 × 33cm. Price: £346.22 (plus VAT) each.

L65

Three-way floor standing enclosure. Drive units: 130mm, 300mm high frequency loaded ring radiator. Imp: 8 ohms. Sensitivity: 89dB. Recommended amplifier output: 200W. Dimensions: 62.2 × 4.5 × 33.3cm. Finish: blue, brown, red. Price: £395.11 (plus VAT) each.

L212

Three-way floor standing speaker system incorporating ultra-bass unit. Drivers: 25mm dome radiator, 130mm midrange, 200mm low frequency, 30mm very low frequency. Imp: 8 ohms. Sensitivity: 91dB. Recommended amplifier output: 200W. Dimensions: 98.1 × 43.2 × 33cm. Finish: black, brown. Price: £1,465.78 (plus VAT) each.

L220

Three-way floor standing loudspeaker system incorporating 15in. ABR. Details on application. Price: £710.67 (plus VAT) each.

■ **JOHNSON BRODY**

National Sound Reproducers Ltd,
Parr Road, Stanmore, Middlesex.
Tel: 01-951 0222/5.

Specialist Cabinet

Loudspeaker built to customers' requirements.

SPEAKER ENCLOSURES

■ JORDAN-WATTS

Jordan-Watts Ltd, Benlow Works,
Silverdale Road, Hayes UB3 3BW.
Tel: 01-573 6928.

GT

Reflex enclosure. One Jordan-Watts module and HF dome tweeter. Treble control fitted. Size: 68 × 32 × 17cm. FR: 30Hz-22kHz. Imp: 4, 8, 16 ohms. Output: 10-40W. Finish: teak or walnut. Price per pair: £128.00 (plus VAT).

Jodrell

Reflex enclosure. Twin Jordan-Watts module. Treble control fitted. FR: 30Hz-22kHz. Imp: 4, 8, 16 ohms. Output: 10-80W. Size: 76 × 35 × 22cm. Finish: teak or walnut. Price per pair: £178.00 (plus VAT).

Double Qubique

Reflex enclosure, decorative anti-resonant ceramic panels in solid wood. Twin Jordan-Watts modules, treble control fitted. FR: 30Hz-22kHz. Imp: 8 ohms. Dimensions: 30 × 30 × 60cm. Output: 10-80W. Finish: oak or walnut. Price per pair: £240.00.

Jupiter TLS/ABR

Transmission line speaker system. Output: 15-80W. Imp: 4, 8, 18 ohms. Forward-facing. Incorporates two Jordan-Watts modular units. Treble control incorporated. Enclosure lined with sheet lead. FR: 35Hz-22kHz. Size: 88 × 38 × 27cm. Finish: teak or walnut. Price per pair: £218.00 (plus VAT).

Jericho

Infinite baffle 3-unit high power system. 10in. bass with Jordan-Watts module and treble control. Crossover at 300Hz and 2,000Hz. Output: 20-100W. Imp: 8 ohms. Dimensions: 42 × 30 × 62cm. Price per pair: £206.00 (plus VAT).

Qubique*

Cuboid reflex 30cm with massive ceramic decorative panels for overall stiffness. Solid wood frame. Output: 20W RMS. FR: 35Hz-20kHz. Price per pair: £110.00 (plus VAT).

Jumbo

Infinite baffle with 15cm power handling 20W RMS. Forward facing. Shelf or wall mounting. Incorporates one Jordan-Watts modular unit. FR: 70Hz-20kHz. Imp: 4, 8, 16 ohms. Output: 20-40W. Dimensions: 42 × 20 × 9cm. Finish: teak, walnut or white. Price per pair: £75.20 (plus VAT).

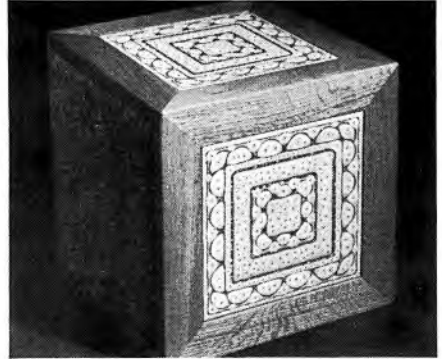
Janet

Infinite baffle. FR: 70Hz-20kHz. Imp: 4, 8, 16

ohms. Output: 20-40W. Compact shelf-mounting full range speaker system. Finish: teak or walnut with green Vynair. Size: 30 × 20 × 15cm. Price per pair: £75.20 (plus VAT).

Juno*

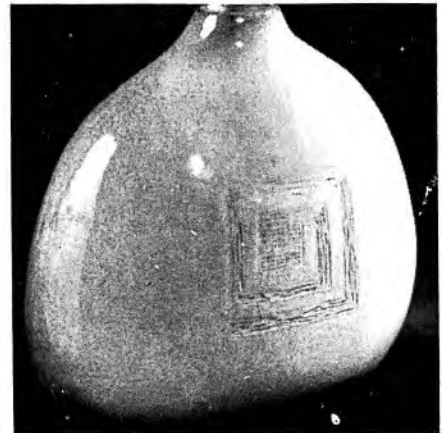
Reflex enclosure with full range drive unit.



Jordan Watts Qubique



Jordan Watts Juno



Jordan Watts Flagon

*Indicates entry is illustrated

Forward facing. Imp: 4, 8, 16 ohms. Output: 20-40W. Forward facing. FR: 40Hz-20kHz. Output: 10-30W. Size: 61 × 30 × 16cm. Finish: teak or walnut. Price per pair: £98.00 (plus VAT).

Juliet

Reflex cabinet with 15cm drive unit. FR: 40Hz-20kHz. Imp: 4, 8, 16 ohms. Output: 10-30W. Compact shelf-mounting full range speaker system. Finish: teak or walnut with green Vynair. Size: 40 × 25 × 23cm. Price per pair: £98.00 (plus VAT).

Flagon*

Ceramic loudspeaker. 55Hz-20kHz. HC: 20W. Exclusive decorative pottery enclosure. Size: 36cm diameter. Weight: 10kg. Price per pair: £104.00 (plus VAT).

■ JR

JR Loudspeakers Ltd,
114 Ashley Road, St. Albans, Herts AL1 5JR.
Tel: St. Albans 64337/9.

JR149*

Heavy gauge aluminium in a near cylindrical shape with discs at each end held under tension by a steel rod. 13cm bass unit, 2cm treble unit. Crossover frequency: 3kHz. Frequency range: 70Hz-20kHz ±3dB, 55Hz-20kHz ±4dB. Imp: nominally 15 ohms, minimum 8 ohms. Size: 37cm high, 23cm dia. Weight: 5.5kg. Declon foam circular grille capped top and bottom with decorative discs. Enclosure virtually non-resonant. Price per pair: 145.00. Wall brackets £10.00. Floor stand in black £26.00. Floor stand in Chrome £39.00. (All plus VAT).

JR Super Woofer*

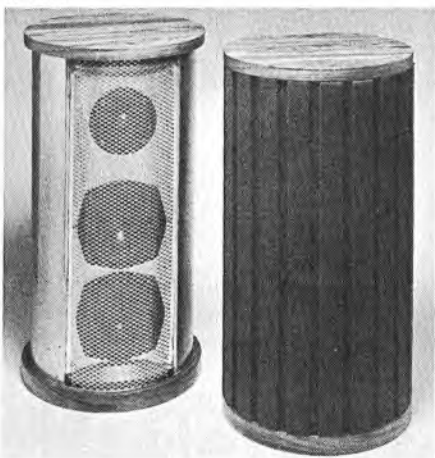
Highly damped reflex drive unit 254mm with electro magnetic damping. Frequency extending down to 30Hz. Imp: 8 ohms. Recommended amplifier output 30-60W. Dimensions: 47cm high × 50cm diameter. Declon acoustic foam grille. Capped top and bottom in a variety of finishes. Price: £110.00 (plus VAT).

JR LPA Unit (Low Pass Filter with Amplifier

Option electronic equipment for super woofer. Input sensitivity (adjustable) max 3 volts RMS for 25W output. Power sensitivity (adjustable) max 3 volts RMS for 25W output. Power output RMS 25W into 8 ohms. Power output music 30W into 8 ohms. Low pass butterworth filter response 18dB per octave. Total response of filter: 1dB at 20Hz, 3dB at 72Hz. Sub total response: 45dB at 2Hz. Distortion: Typically 0.25% or better for 25W into 8 ohms.



JR 149



JR 150

Dimensions: 25.4 × 22.9 × 8.9cm. Suitable for JR Super Woofer or other woofers of min. 8 ohms impedance. Price: £70.00 (plus VAT).

JR 150*

Heavy gauge aluminium in near cylindrical shape with the ends of the tube terminated by concave aluminium spinings of extreme rigidity. The vertical standing wave is therefore considerably reduced. Two 13cm long throw voice coils with doped cones. One 2.5cm soft dome tweeter. Crossover frequency: 2.2kHz, 24dB per octave. FR: 45Hz-20kHz. Imp: 8



JR Super Woofer

ohms. Output: 100W programme. Dimensions: 55cm high × 28cm diameter. Sensitivity: 87dB, ref. 1W into 8 ohms. System resonance: 65Hz critically damped. Declon acoustic foam grille. Capped top and bottom in a variety of finishes. Price: £225.00 per pair. Floor stand £26.00 per pair, black. £39.00 per pair, chrome. (All plus VAT).

■ **JVC**

JVC (UK) Ltd, Eldonwell Trading Estate, Staples Corner, 6-8 Priestly Way, London NW2 7AF. Tel: 01-450 2621.

SK-44

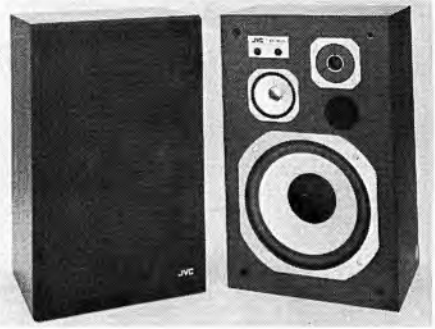
3-speaker acoustic suspension system. Drive units: 20cm woofer, 9cm mid, 6cm tweeter. FR: 40Hz-20kHz. Power handling capacity: 70W. Dimensions: 49.3 × 27.3 × 21cm. Price: £99.00 (inc. VAT).

SK-33

2-speaker acoustic suspension system. Drive units: 20cm woofer, 5cm tweeter. FR: 40Hz-20kHz. Power handling capacity: 50W. Dimensions: 45.6 × 25.3 × 20.5cm. Price: £65.00 (inc. VAT).

GB-1E Mark III

8-speaker omni-direction speaker system. Drive units: 13cm woofer, 7cm tweeter (4). FR: 35Hz-20kHz. Power handling capacity: 100W. Dimensions: 34.3cm dia. Price: £165.00 (inc. VAT).



JVC SK-1000



JVC SK-500



JVC SK-700

SK-1000*

Reflex speaker. Crossover frequency: 100Hz, 10,000Hz. FR: 30Hz-20kHz. Imp: 8 ohms. Dimensions: 65 × 40 × 32.5cm. Finish: wood. Price per pair: £162.75 (inc. VAT).

SK700*

Reflex speaker. Crossover frequency: 1,000Hz, 10,000Hz. FR: 35Hz-20kHz. Imp: 8 ohms. Dimensions: 56.4 × 34.1 × 31.3cm. Wood finish. Price per pair: £99.00 (inc. VAT).

SK-500*

Reflex speaker. Crossover frequency: 2,000Hz.

*Indicates entry is illustrated

FR: 40Hz-20kHz. Imp: 8 ohms. Dimensions: 49.7 x 31.5 x 28.6cm. Finish: wood. Price: £119.00 per pair (inc. VAT).

■ KEF

KEF Electronics Ltd, Tovil,
Maidstone, Kent ME15 6QP
Tel: Maidstone (0622) 672261.

Cantata

Free standing, supplied in mirror image pairs. Elliptical low frequency, 110mm mid frequency, 52mm high frequency. Crossover frequency: 250 and 3000Hz. Imp: 8 ohms. 15-150W. Size: 34 x 39 x 81cm. Teak or walnut finish. Switchable controls for mid and high frequency. No rec. retail price.

Calinda

Free standing. Mechanical reflex. 200mm low frequency, 27mm high frequency, elliptical bass radiator. Crossover frequency: 45Hz acoustically coupled and 3,500Hz. Frequency range: 40-30,000Hz. Imp: 8 ohms. 15-100W. Size: 28 x 35 x 70cm. Teak or Walnut finish. Computer developed filter section. No rec. retail price.

Corelli

Compact, 1B shelf enclosure. 200mm low frequency 27mm high frequency. Crossover frequency: 3,500Hz. Frequency range: 50-30,000Hz. Imp: 8 ohms. 25-50W. Size: 28 x 22 x 47cm. Teak or walnut finish. Supplied in matched pairs. No rec. retail price.

Reference Series Model 104ab*

Compact, floorstanding mechanical reflex. 200mm low frequency, 27mm high frequency. Elliptical bass radiator. Crossover frequency: 45Hz acoustically coupled and 3,000Hz. Frequency Range: 30-40,000Hz. Imp: 8 ohms. 15-100W. Size: 33 x 26 x 63cm. Weight: 16kg. Teak or walnut finish. No rec. retail price.

105*

Infinite baffle enclosure with drive units: 300mm LF, 110mm mid, 52mm HF. Crossover frequency: 400Hz, 2,500Hz. FR: 30Hz-25,000Hz. Imp: 8 ohms Recommended amplifier output: 40W. Dimensions: 41.5 x 45.5 x 96.5cm. Walnut finish. Variable geometry MF/HF section adjustable for rotation and elevation. LED indicator for correct orientation of head—also indicates peak level input. No rec. retail price.

Concord III

Free standing system with drive units: 2 x 200mm bass and 25mm soft dome HF unit.



KEF 105



KEF 105



KEF Concord III

Crossover frequency is novel in that it allows both bass drive units to operate in parallel at low frequencies, whilst in the middle frequencies the input to lower unit is progressively attenuated so that only one 200mm unit is radiating at the upper crossover frequency. FR: 60Hz—20kHz \pm 3dB. Imp: 8 ohms. Minimum amplifier requirements: 10W. Dimensions: 68 x 28 x 31.5cm. Finish: black grille fabric on satin black plinth. No rec. retail price.

Celeste III*

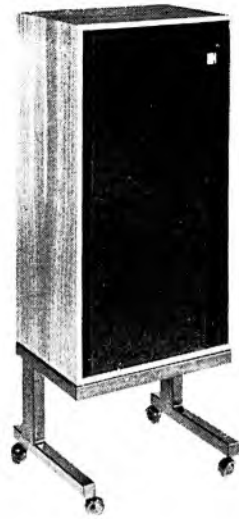
Compact system with drive units: 200mm bass and 25mm soft dome HF unit. FR: 70Hz-20kHz \pm 2dB. Imp: 8 ohms. Minimum amplifier requirements: 10W. Dimensions: 50.8 x 26.5 x 23cm. No rec. retail price.

■ **KLH**

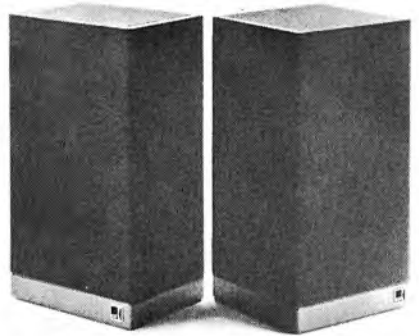
Webland Group of Companies, Unit 4,
129 Waltham Green Court,
Moore Park Road, London SW6.
Tel: 01-385 9478.

KLH 331*

Size: 16 x 12 x 8.75in. Weight: 21lb. Impedance: 8 ohms. Recommended amplifier output: 10-45W. 8in. woofer, 2.25in. cone tweeter. Frequency: 50-18,000Hz. Price: £117.00 per pair (inc. VAT).



KEF 104



KEF Celeste III

KLH 317*

Drive units: 10in. woofer, 1in. tweeter. Size: 23 x 12 x 9.75in. Weight: 30lb. Impedance: 8 ohms. Recommended amplifier output: 15-60W short duration. 10in. woofer, 2.25in. cone tweeter. Frequency: 45-18,000Hz. Price: £167.000 per pair (inc. VAT).

KLH 300

IB speaker. Drive units: 210mm, 55mm. Cross-over frequency: 2.2kHz. FR: 75Hz-20kHz. Imp: 8 ohms. Recommended amplifier output: 25W. Dimensions: 44 x 27 x 18cm. Finish: birch or walnut. Price per pair: £79.96 (plus VAT).

The new Celestion Ditton 332



From the home of advanced loudspeaker technology... something exceptional for yours

A few minutes in the company of the new Ditton 332 will convince you that you're listening to, and looking at, something outstanding in loudspeaker systems.

Whether the programme be heavy rock, James Last, or Beethoven's 'Pastoral', the Ditton 332 gives you astonishing clarity of detail, firm, extended bass that's 'there' with complete freedom from the 'boom' that makes for fatiguing listening, and a stable stereo image that brings the performers into your room.

Kind to amplifiers—it's easy to drive—with excellent system balance and integration, the Ditton 332 is outstanding!

Specification:—

Dimensions: 650 x 356 x 285mm **Amplifier Requirements:** 20 to 100 watts **Frequency Response:** 50 Hz to 20kHz \pm 3dB, corrected into 2 steradians (half space) **Maximum Rated Power:** 100 watts programme **Sensitivity:** 2.8 watts pink noise for 90 dB at 1 metre on axis.

celestion
international



Rola Celestion Limited, Ditton Works, Foxhall Road,
Ipswich, Suffolk IP3 8JP. Tel: Ipswich (0437) 73131.
Cable: Ipswich. Telex: 88285



KLH 317

KLH 327

1B speaker with drive units: 250mm, 100mm, 60mm. Crossover frequency: 900Hz, 2.2kHz. FR: 45Hz-20kHz. Imp: 8 ohms. Recommended amplifier output: 50W. Dimensions: 59.1 x 35.6 x 27.3cm. Finish: birch or walnut. Features: midrange and treble controls. Price per pair: £264.000 (plus VAT).

LEAK

Rank Audio Visual PO Box 70,
Great West Road, Brentford,
Middlesex TW8 9HR.
Tel: 01-568 9222.

***3020**

Reflex enclosure. Drive units: 1 x 130mm. Crossover frequency: 3kHz. FR: 62Hz-22kHz -3dB. Imp: 8 ohms. Amplifier output: 25W. Dimensions: 21 x 27 x 44cm. Teak or walnut finish. Time delay compensation. Price per pair: £139.00 (plus VAT).

3030

1B enclosure. Drive units: 2 x 130mm. Crossover frequency: 4kHz. FR: 60Hz-22kHz -3dB. Imp: 8 ohms. Amplifier output: 35W. Dimensions: 25 x 28.3 x 52cm. Teak or walnut finish. Price: per pair: £185.10 (plus VAT).

3050*

1B enclosure. Drive units: 2 x 170mm. Crossover frequency: 4kHz. FR: 48Hz-22kHz -3dB. Imp: 8 ohms. Rec. amplifier output: 50W. Dimensions: 30 x 34 x 64cm. Teak or walnut finish. Price per pair: £262.62 (plus VAT).

3080

1B enclosure. Drive units: bass 1 x 250mm, mid 1 x 170mm. Crossover frequency: 3.5kHz,



KLH 337

450Hz. FR: 38Hz-22kHz -3dB. Imp: 8 ohms. Amplifier output: 80W. Dimensions: 34 x 43.8 x 84.5cm. Teak or walnut finish. Price per pair: £401.22 (plus VAT).

3090

Transmission line with 375mm woofer, 175mm lower mid, 100mm upper mid, 50 x 25 treble.



Leak 3020



Leak 3050

*Indicates entry is illustrated

Crossover frequency: 350, 7kHz, 2kHz. FR: 35Hz-26kHz \pm 3dB. Imp: 6 ohms. Rec. amplifier output: 10-120W. Dimensions: 50 \times 37.5 \times 119cm. Finish: walnut. Features; environmental controls for low mid range, high mid range and the tweeter. Price per pair: £518.22 (plus VAT).

■ LENTEK AUDIO

Lentek Audio Ltd,
Edison Road Industrial Estate,
St. Ives, Huntingdon, Cambs PE17 4LF.
Tel: St. Ives 62225.

Monitor

Transmission line with 1 \times 11.82/8.25in. bass driver, 1 \times 5.5in. mid, 1 \times 20mm high plus super tweeter. Crossover frequencies: 400Hz, 3.5kHz, 10kHz. FR: 30Hz-30kHz. Imp: 8 ohms. Power handling: 50W per channel. Dimensions: 107.3 \times 40.6 \times 39.4cm. Price per pair: £351.11 (plus VAT).

S4*

Two-way system with 200mm bass/mid and 25mm hemispherical dome tweeter. Crossover frequency: 18dB/octave at 2.5kHz. FR: 45Hz-20kHz. Imp: 8 ohms. Dimensions: 49.5 \times 25 \times 25.5cm. Finish: walnut with dark brown grille, cabinets supplied in matched pairs and veneered on all surfaces. Amplifier requirement: 25W to 75W. Price per pair: £200.00 (plus VAT). Optional stand available on request.

Monitor X

Damped with drive units: 300 \times 200mm, 130mm, 20mm. Crossover frequency: 400Hz, 3.5kHz. FR: 30Hz-20kHz. Imp: 8 ohms. Recommended amplifier output: 25-100W. Dimensions: 107.3 \times 40.6 \times 39.4cm. Finish: walnut or teak. Price per pair: £440.00 (plus VAT).

■ LNB

LNB Audio Ltd,
Duke Street, Loughborough, Leics.
Tel: Loughborough (0509) 61229.

LAB-6

Labyrinth system employing 165mm long throw bass unit plus T27/SP1032 via 2-way crossover. FR: 45Hz-25kHz. Imp: 8 ohms. Recommended amplifier output: 15-30W per channel into 8 ohms. Dimensions: 47 \times 22.8 \times 26.00cm. Finish: teak or walnut with complimentary baffle and trim. Price: £106.97 (inc. VAT).

LAB-8*

Labyrinth system employing B200/SP1063 bass



Lentek Loudspeaker System S4



LNB LAB-8

unit plus T27/SP1032 via 2-way crossover. FR: 40Hz-26kHz. Imp: 8 ohms. Recommended amplifier output: 20-40W per channel into 8 ohms. Dimensions: 59.7 x 28 x 28.5cm. Finish: teak or walnut with complimentary baffle and trim. Price: £157.50 (inc. VAT).

LAB-20

Labyrinth system employing B200/SP1022 bass KEF T27/SP1032 via 2-way crossover. FR: 30Hz-25kHz. Imp: 8 ohms. Recommended amplifier output: 20-50W per channel into 8 ohms. Dimensions: 78.8 x 28 x 28.5cm. Finish: teak or walnut with complimentary baffle and trim. Price: £208.12 (inc. VAT).

Stands

For all above £20.25 (inc. VAT).

■ **McLAREN AUDIO**

GR International Electronics Ltd,
Almondbank, Perthshire.
Tel: Almondbank (073 883) 441.

L912

1B speaker. Drive units: 200mm. FR: 200mm. FR: 60Hz-18kHz. Imp: 8 ohms. Recommended amplifier output: 30W. Dimensions: 29 x 23 x 51cm. Finish: teak wood veneer. Price: per pair: £74.56 (plus VAT).

■ **MARANTZ**

Audio UK Ltd, Debmarc House,
203 London Road, Staines, Middlesex.
Tel: Staines 50132.

4G

1B two-way bookshelf. Drive units: 200mm, 45mm. Crossover frequency: 3.6kHz. Rec. amp output: 10-30W. FR: 60Hz-18kHz. FR: 40Hz-18kHz. Imp: 8 ohms. Size: 28.6 x 21.6 x 48.6cm. Finish: walnut. Price: per pair: £60.00 (plus VAT).

4G3

1B three-way bookshelf speaker. Drive units: 200mm, 75mm, 75mm. Crossover frequency: 2kHz, 8kHz. FR: 50Hz-18kHz. Imp: 8 ohms. Recommended amplifier output: 10-35W. Dimensions: 28.5 x 21.5 x 48cm. Finish: walnut. Price per pair: £71.00 (plus VAT).

4 Mk II*

1B two-way bookshelf speaker. Drive units: 200mm, 45mm. Crossover frequency: 3.5kHz. FR: 50Hz-18kHz. Imp: 8 ohms. Recommended amplifier output: 10-40W. Dimensions: 28.6 x 21 x 48.6cm. Finish: walnut. Price per pair: £66.50 (plus VAT).



Marantz 4 Mk II



Marantz 7 Mk II



Marantz HD 440

5 Mk II

1B two-way bookshelf speaker. Drive units: 200mm, 45mm. Crossover frequency: 2.5kHz. FR: 40Hz-18kHz. Imp: 8 ohms. Recommended amplifier output: 15-45W. Dimensions: 30.5 x 24.1 x 58.4cm. Finish: walnut. Features: tweeter level control. Price per pair: £106.50 (plus VAT).

*Indicates entry is illustrated



Marantz 900, 520, 940, 930 system

6 Mk II

Ported two-way speaker. Drive units: 255mm, 45mm, 2.5kHz. Crossover frequency: 2.5kHz. FR: 35Hz-20kHz. Imp: 8 ohms. Recommended amplifier output: 25-80W. Dimensions: 37.5 × 29.2 × 64.8cm. Finish: walnut. Features: tweeter level control. Price per pair: £142.00 (plus VAT).

7 Mk II*

1B three-way speaker. Drive units: 305mm, 125mm, 45mm. Crossover frequency: 35Hz-20kHz. Imp: 8 ohms. Recommended amplifier output: 30-125W. Dimensions: 37.5 × 29.2 × 64.8cm. Finish: walnut. Features: tweeter and mid range level controls. Price: £177.50 (plus VAT).

HD 440*

1B three-way speaker. Drive units: 200mm, 90mm, 90mm. Crossover frequency: 2kHz-8kHz. FR: 40Hz-18kHz. Imp: 8 ohms. Recommended amplifier output: 15-40W. Dimensions: 28.6 × 21.6 × 48.6cm. Finish: walnut. Price per pair: £88.80 (plus VAT).

HD 550

1B or ported speaker. Drive units: 200mm, 130mm, 40mm. Crossover frequency: 800Hz-3kHz. FR: 35Hz-20kHz. Imp: 8 ohms. Recommended amplifier output: 15-50W. Dimensions: 32.4 × 24.1 × 57.1cm. Finish:



Marantz HD 660

walnut. Features: Vari-Q a simple control which changes system from tuned port reflex to infinite baffle. Price per pair: £177.70 (plus VAT).

HD 660*

1B or ported. Drive units: 255mm, 130mm, 40mm. Crossover frequency: 750Hz-2.5kHz. FR: 35Hz-20kHz. Imp: 8 ohms. Recommended amplifier output: 25-80W. Dimensions: 37.1 × 29.2 × 61.6cm. Finish: walnut. Features: simple control changes system from tuned port reflex to infinite baffle. Price per pair: £222.00 (plus VAT).

HD 770

1B or ported speaker. Drive units: 305mm, 130mm, 40mm, 30mm. Crossover frequency:

750Hz, 2.3kHz, 5kHz. FR: 33Hz-22kHz. Imp: 8 ohms. Recommended amplifier output: 30-125W. Dimensions: 38.1 × 29.8 × 67.3cm. Finish: walnut. Features: super tweeter, tweeter and mid range controls. Simple control changes system from tuned port reflex to infinite baffle. Price per pair: £311.00 (plus VAT).

HD 880

IB or ported speaker. Drive units: 305mm, 130mm, 40mm, 30mm. Crossover frequency: 750Hz, 2.3kHz, 5kHz. FR: 30Hz-22kHz. Imp: 8 ohms. Recommended amplifier output: 40-150W. Dimensions: 40.6 × 30.5 × 102.2cm. Finish: walnut. Features: as HD 770. Price: £444.00 (plus VAT).

DS 900*

IB or ported. Drive units: 255mm, 130mm, 40mm. Crossover frequency: 750Hz, 2.5kHz. FR: 35Hz-20kHz. Imp: 8 ohms. Recommended amplifier output: 25-80W. Dimensions: 38.1 × 30.5 × 71.8cm. Finish: walnut. Features: tweeter and mid range level controls. Vari-Q-see HD550. Price per pair: £455.00 (plus VAT).

DS 920*

IB or ported speaker. Drive units: 305mm, 130mm, 40mm. Crossover frequency: 33Hz, 20kHz. Imp: 8 ohms. Recommended amplifier output: 25-125W. Dimensions: 38.1 × 30.5 × 97.2cm. Finish: walnut. Features: same as DS900. Price per pair: £531.00 (plus VAT).

DS 930*

IB or ported speaker. Drive units: 305mm, 120mm, 40mm, 30mm. Crossover frequency: 750Hz-2.3kHz, 5kHz. FR: 33Hz-22kHz. Imp: 8 ohms. Recommended amplifier output: 30-125W. Dimensions: 38.1 × 30.5 × 71.8cm. Finish: walnut. Features: same as HD880. Price per pair: £503.00 (plus VAT).

DS 940*

Similar to DS 930 except: FR: 30Hz-22kHz. Price per pair: £586.00 (plus VAT).

MISSION ELECTRONICS

Mission Electronics Ltd,
PO Box 65, London SW7 1PP.
Tel: 01-589 0048.

710*

2-way infinite baffle enclosure. Drive units: 210mm cone woofer, 25mm soft dome tweeter. FR: 40Hz-30kHz. Imp: 8 ohms. Output: 80W programme, 120W peak. Dimensions: 52 × 29 × 26cm. Teak/walnut or rosewood/white finish. Price per pair: £145.00 (plus VAT).



Mission 710



Mission 720



Mission 770

Harvey Turnbull chooses Monitor Audio

Harvey Turnbull is directing the Ethnomusicological Audio Visual Archive at Cambridge University Music Faculty.

He needs first-class equipment for accurate sound reproduction that's why he chooses Monitor Audio Loudspeakers and Hi-Fi Equipment.

The Archive has records of music from all over the world from Korea to The Gambia.

When listening to ethnic instruments being played in the traditional style of the country of origin

Harvey Turnbull says that

'Monitor Audio equipment gives me the high performance in sound reproduction I must have'.



MA2 Domestic Reference is the latest addition to the Monitor Audio 'Series 80' range of loudspeakers.

Also included in this range:

MA4 Series II

MA6 Improved

MA9 Compact Bookshelf Model

Mini Monitor Compact Reference

MA10 Studio Professional

For further information on the new 'Series 80' range of loudspeakers write to or telephone Monitor Audio. If you prefer you can also go and see your nearest Monitor Audio dealer.

 **Monitor
Audio Ltd**



The Big Name in Hi-Fi
347 Cherry Hinton Road
Cambridge England
Telephone (0223)46344
and 42898



MA2 Domestic Reference

720*

3-way infinite baffle enclosure. Drive units: 250mm plastiflex cone woofer, 105mm damped cone mid, 25mm soft dome tweeter. FR: 30Hz-30kHz. Imp: 8 ohms. Output: 100W programme, 150W peak. Dimensions: 67 × 32 × 32cm. Wood, walnut or teak finish: Price per pair: £270.00 (plus VAT).

730

3-way infinite baffle enclosure. Drive units: 250mm plastiflex cone woofer, 105mm damped cone mid, 25mm soft dome tweeter, 25mm nomex hard dome super tweeter. FR: 20Hz-40kHz. Imp: 8 ohms. Output: 135W programme, 200W peak. Dimensions: 90 × 32 × 32cm. Walnut or teak finish. Price per pair: £375.00 (plus VAT).

770*

Two-way reflex broadcast monitor speaker. Imp: 8 ohms. FR: 40Hz-20kHz ±2.5dB. Recommended amplifier power: 35W-125W per channel. Crossover frequency: 2.7kHz. Drive units: 206mm polypropylene cone, 25mm soft plastic dome. Stands incorporated with 7 deg V-tilt. Dimensions: 59 × 30 × 30.7cm. Finish: black or walnut. Price per pair: £375.00 (inc. VAT).

■ MONITOR AUDIO

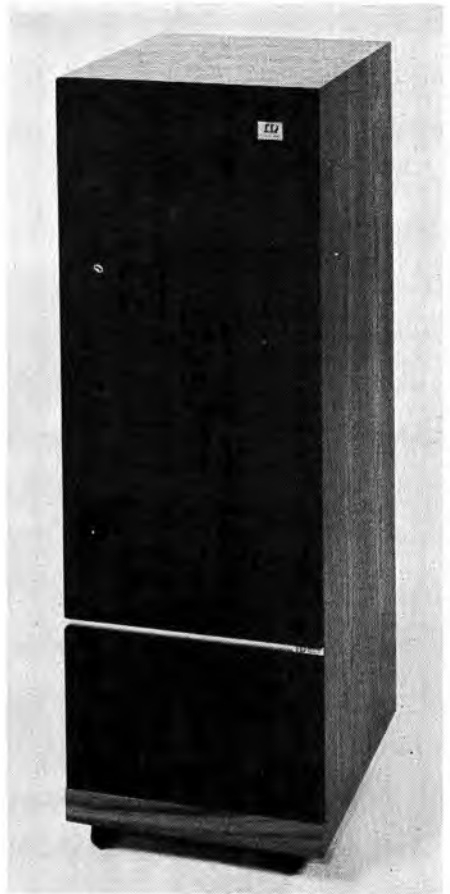
347 Cherry Hinton Road,
Cambridge CB1 4DJ.
Tel: Cambridge (0223) 42898.

MA 1 series II

Reflex enclosure with units and crossover. One 13 × 9in. reinforced polystyrene wedge bass driver, one 7in. plastic cone mid-range, one synthetic dome, 1in. tweeter. Crossover frequencies: 400Hz and 2.9kHz. FR: 45Hz-19kHz ±3.5dB. HC: 80W programme. Min. power: 20W. Imp: 8 ohms. Size: 30 × 13.5 × 15in. Weight: 60lb. Stand: 10in. high, steel frame with castors. Price per pair: £343.86 (plus VAT). Stand extra.

MA 3 series II

Reflex enclosure with units and crossover. One 13.5 × 9.2in. bass driver, one 7in. plastic cone mid-range driver, one damped mylar dome 1in. tweeter. Crossover frequencies: 400Hz and 3.5kHz. FR: 45Hz-18kHz ±3dB. HC: 125W programme, Imp: 8 ohms. Size: 27¼ × 13¼ × 12½in. Highly damped enclosure with above average translation efficiency. Price per pair: £451.96 (plus VAT). Stand available.

*Monitor MA 2**Monitor Audio MA 5 series II*

*Indicates entry is illustrated



Monitor MA6



Monitor MA4 Series II

MA 5 series II*

Infinite baffle enclosure with units and crossover. One plastic cone bass/mid-range driver 8in. in diameter, one synthetic dome tweeter 1in. Crossover: 2.9kHz. FR: 55Hz-19kHz ± 3 dB. HC: 50W programme. Min. power: 15W. Imp: 8 ohms. Size: 22 x 12 x 10in. Weight: 26lb. Price per pair: £172.50 (plus VAT). Stand available.

MA 10 Studio Professional

Reflex enclosure with drive units: 305mm LF, 110mm mid, 38mm HF. Crossover frequency:

250Hz, 3kHz. FR: 50Hz-20kHz on axis at 35Hz and 25kHz. 40Hz-18kHz at 15 deg. vertical, 40Hz-16kHz at 30 deg. lateral. Dimensions: 38 x 38 x 80cm. Teak, walnut or rosewood finish. Price per pair: £541.00 (plus VAT).

MA 2 domestic reference loudspeaker*

Construction involves no compromise; enclosure employs internal bracing in diagonal circumferential form, with a large section of the cabinet allocated to the mid range sub-enclosure. A sealed box design, the cabinet walls are heavily damped to minimise colouration, and thick, top quality multiply is used for the vital front panel which is permanently locked into the main structure. Amp. power: 100W per channel. Distortion: less than 1.5%. FR: 60Hz-20kHz. Finish: teak, walnut, black, white and rosewood to special order. Dimensions: 85 x 30 x 35cm. Price per pair: £299.00 (plus VAT).

MA6*

Budget model. FR: 45Hz-19kHz ± 3 dB. Max. amplifier power: 50W per channel. Sensitivity: 10W for 96dB. Imp: 8 ohms. Drive units: 220mm and 25mm. Dimensions: 58 x 30 x 28.5cm. Price per pair: £160.00 (plus VAT).

MA4 Series II*

Compact stand-mounted enclosure. FR: 55Hz-20kHz. Max amplifier power: 100W per channel. Distortion: less than 1%. Imp: 8 ohms. Crossover point: 2.2kHz. Dimensions: 69.4 x 31.6 x 27.8cm. Price per pair: £222.00 (plus VAT).

MA9

Supersedes the MA7. Compact bookshelf model. Size: 16 x 9 x 8in. Weight: 15lb. Crossover 3kHz. Frequency response 60Hz-22kHz. Price per pair: £99.00 (plus VAT).

■ MORDAUNT-SHORT

Mordaunt-Short Ltd, Durford Mill, Petersfield, Hampshire GU13 5AZ. Tel: Rogate (073 080) 721/2.

Carnival Series 2*

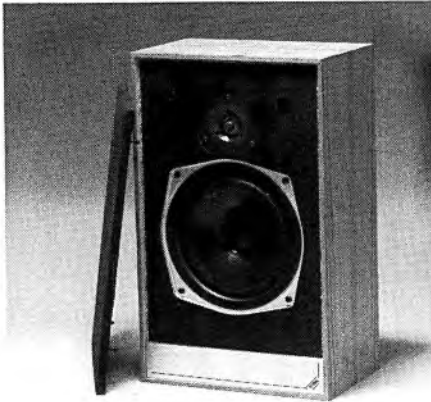
Infinite baffle. Bookshelf enclosure. Drive units: 208mm DSB 208 bass/mid frequency unit: 68mm cone high frequency unit. Crossover frequency: 3,500Hz. Frequency range: 45-20,000Hz, 85-17,000Hz ± 3 dB. Imp: 8 ohms. 10-80W per channel. Size: 24.1 x 14.5 x 40cm. Weight: 5.9kg. Teak or walnut veneer. Dual DIN/push-lock connectors. Connecting plugs and leads supplied. Price per pair: £88.00 (plus VAT).



Mordaunt-Short Carnival Series 2



Mordaunt-Short Signifier



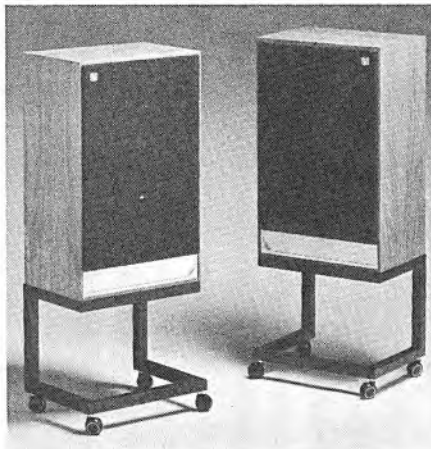
Morduant-Short Festival Series 2

Festival Series 2*

Infinite baffle. Bookshelf enclosure. Drive units: 208mm DSB 208 bass/mid, 19mm dome high frequency unit. Crossover frequency: 3,500Hz. Frequency range: 32-25,000Hz, 75-20,000Hz ± 3 dB. Imp: 8 ohms. 10-90W per channel. Size: 27.9 \times 18.5 \times 45.4cm. Weight: 7.2kg. Teak or walnut veneer. Dual DIN/push-lock connector. Connecting plugs and leads supplied. Price per pair: £117.50 (plus VAT).

Pageant Series 2*

Reflex enclosure. Drive units 208mm DSB 208 bass/mid 25mm dome high frequency unit. Crossover frequency: 3,500Hz. Frequency range: 25-25,000Hz. 65-20,000Hz ± 3 dB. Imp: 8 ohms. 15-100W per channel. Size: 33 \times 23 \times 43.3cm. Weight: 10.1kg. Teak or walnut veneer. Mid and upper frequency ranges controlled by separate switches. Dual DIN/push-lock connectors. Connecting plugs and leads supplied. Price per pair: £176.00 (plus VAT). Matching stand: Black finish fitted with castors. Size: 33 \times 25 \times 30.5cm. Price per pair: £25.00 (plus VAT).



Mordaunt-Short Pageant Series 2

Signifier*

Reflex enclosure, stand-mounted. Drive units: 300mm bass, 135mm mid range, 25mm dome high-frequency unit. Crossover frequency: 500Hz, 4kHz. FR: 20Hz-25kHz, 38Hz-20kHz ± 2 dB. Imp: 8 ohms. Recommended amplifier output: 25-250W per channel. Dimensions: 38.5 \times 32.5 \times 81cm. Finish: teak or walnut veneer. Features: acoustic environment balance control adjusts mid and high frequencies. System fused, connecting leads supplied. Price per pair:

*Indicates entry is illustrated

£480.00 (plus VAT). Matching stand: Black finish, fitted with castors. Size: 38.5 × 35 × 23cm. Price per pair: £35.00 (plus VAT).

■ NAMCO

Shadow Audio, Lumen Road,
Royston, Herts SG8 6EL.
Tel: Royston (0763) 46631.

NSQ-551

Acoustic air suspension type enclosure with drive units: 30cm woofer, 13cm mid and 8cm dome tweeter. Crossover frequency: 900Hz, 9kHz. FR: 30Hz-23kHz. Imp: 8 ohms. Recommended amplifier output: 160W. Dimensions: 36.2 × 64 × 29.7cm. Finish: simulated walnut, detachable black grille. Price per pair: £209.95 (inc. VAT).

NSQ-331

Acoustic air suspension enclosure with drive units: 25cm woofer, 13cm mid and 8cm dome tweeter. Crossover frequency: 900Hz, 9kHz. FR: 35Hz-23kHz. Imp: 8 ohms. Recommended amplifier output: 120W. Dimensions: 32 × 56 × 29.7cm. Finish: simulated walnut, detachable black grille. Price per pair: £159.95 (inc. VAT).

NSQ-221

Acoustic air suspension enclosure with drive units: 20cm woofer, 10cm mid, 8cm dome tweeter. Crossover frequency: 2,000Hz, 9,000Hz. FR: 40Hz-23kHz. Imp: 8 ohms. Recommended amplifier output: 70W. Dimensions: 25 × 49 × 24.9cm. Finish: simulated walnut grain with detachable black grille. Price per pair: £109.95 (inc. VAT).

NSZ-555

Acoustic air suspension enclosure with drive units: 30cm woofer, 13cm mid, 5cm cone tweeter. Crossover frequency: 1,800Hz and 8,200Hz. FR: 28Hz-22kHz. Imp: 8 ohms. Recommended amplifier output: 130W. Dimensions: 36.2 × 64 × 29.7cm. Finish: simulated walnut with brown detachable grille. Price per pair: £199.95 (inc. VAT).

HSZ-333

Acoustic air suspension enclosure with drive units: 25cm woofer, 13cm mid and 5cm dome tweeter. Crossover frequency: 2,200Hz and 8,200Hz. FR: 33Hz-22kHz. Imp: 8 ohms. Recommended amplifier output: 90W. Dimensions: 32 × 56 × 29.7cm. Finish: simulated walnut grain with detachable brown grille. Price per pair: £149.95 (inc. VAT).

NSZ-222

Acoustic air suspension enclosure with drive units: 20cm woofer, 5cm cone tweeter. Crossover frequency: 4,600Hz. FR: 40Hz-22kHz. Imp: 8 ohms. Recommended amplifier output: 60W. Dimensions: 25 × 49 × 24.9cm. Finish: simulated walnut with detachable brown grille. Price per pair: £99.95 (inc. VAT).

■ NEAL FERROGRAPH

North East Audio Ltd,
Simonside Works, South Shields,
Tyne & Wear NE34 9NX.
Tel: South Shields (0632) 566321.

The range of Neal-Ferrograph loudspeakers has a uniformity of sound achieved by the use of common drive units for bass/mid range and also high frequencies, mounted in similarly designed cabinets. In addition to their uniformly simple styling, this makes them ideal for use in quadrasonic applications as well as giving common sound in different rooms.

S22

Bookshelf enclosure with 2 units, crossover and ducted port. Units: one bass/mid range 130mm long throw roll surround, one tweeter 25mm soft dome. FR: 80Hz-18kHz ±4dB. Power handling: 20W RMS. Sensitivity: 1W produces 90dB SPL at 1 metre. Impedance: 8 ohm (minimum 6 ohm). Cabinet: high density particle board, teak or walnut veneer. Grille: soft crimplene, brown. Size: 332 × 181 × 215mm (13-1/8 × 7-1/8 × 8 1/2 in) h x w x d. Weight: 4.6kg (10lb). Connections: 'banana' plugs and DIN plug—5 metre connecting lead (0.75sq. mm) with plug and socket (2in DIN) supplied. Price per pair: £75.55 (plus VAT).

S23

Larger bookshelf enclosure with 3 units, crossover and acoustic labyrinth. Units: two bass and mid range 130mm long throw roll surround, one tweeter 25mm soft dome. FR: 65Hz-20kHz ±4dB. Power handling: 35W RMS. Sensitivity: 1W produces 90dB SPL at 1 metre. Impedance: 8 ohm (minimum 6 ohm). Cabinet: High density particle board, teak or walnut veneer. Grille: soft crimplene, brown. Size: 440 × 190 × 280mm (17-3/8 × 7 1/2 × 11in) h x w x d. Weight: 8.8kg (19 1/2 lb). Connections: 'banana' plugs and DIN plug—5 metre lead (0.75sq.mm) with plug and socket. (2-pin DIN) supplied. Price per pair: £120.00 (plus VAT).

*Nightingale NM1*■ **NIGHTINGALE**

Nightingale Acoustics, 60a Green Street,
Eastbourne, Sussex.

Tel: Eastbourne (0323) 30405.

NM1*

Labyrinth enclosure with 280 × 204mm bass, 102mm mid and 25.4mm top units. Crossover frequency: 525, 3,550Hz. Imp: 8 ohms. Output: 25-100W. Dimensions: 40.6 × 28.6 × 85.6cm. Most finishes. Price per pair: £386.66 (plus VAT).

Point Five

Reflex speaker. Drive units: 200mm, 102mm, 25mm. Crossover frequency: 500Hz, 3kHz. Imp: 8 ohms. Recommended amplifier output: 25-75 ohms. Dimensions: 26.7 × 37 × 80cm. Most finishes. Linear phase. Price per pair: £284.00 (plus VAT).

■ **OPTONICA**

Sharp Electronics (UK) Ltd,
107 Hulme Hall Lane,
Manchester M10 8HL.

Tel: 061-205 7321.

CP2525*

Infinite baffle enclosure with drive units 250mm, 40mm 24mm. Crossover frequency: 600Hz, 5kHz. FR: 45Hz-20kHz. Imp: 8 ohms. Recommended amplifier output: 20-60W. Dimensions: 32 × 32 × 58cm. Finish: rosewood. Price per pair: £213.24 (plus VAT).

■ **PANASONIC**

National Panasonic (UK) Ltd,
107-109 Whitby Road, Slough,
Berks SL1 3DR.

SB50 UK

IB two-way speaker. Drive units: 200mm bass, 27mm soft dome tweeter. Imp: 4 ohms. Recommended amplifier output: 18-50W. Dimensions: 26.5 × 24 × 47cm. Finish: simulated rosewood, black grille. Features: DIN or screw connection. Price per pair: £84.40 (plus VAT).

■ **PHILIPS**

Philips Electrical Ltd,
Audio Div, City House, 420 London Road,
Croydon, Surrey.

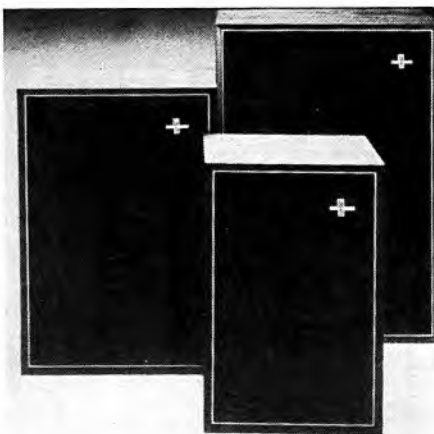
Tel: 01-689 2166.

RH545

Infinite baffle enclosure with 12in. woofer, 2in. dome squawker, 1in. dome tweeter. Crossover frequencies: 500, 3,000Hz. FR: 20Hz-20kHz. Imp: 10K (balanced) 100K ohms (asymmetrical). Integral power amplifiers requiring only pre-amp. Dimensions: 55.5 × 42.2 × 76.2cm. Black ash finish. Motional feedback enclosure with extensive filters. 3 integral power amplifiers totalling 100W. Price: on application.

AH485*

Loudspeaker with 8in. woofer and 1in. tweeter. Power handling capacity: 35W. Imp: 4 ohms. FR: 45Hz-20kHz. Crossover frequency: 1,300Hz. Walnut veneer with dark brown cloth front. Dimensions: 26.5 × 41.5 × 21cm. Price: £36.00 each (plus VAT).



Philips L-R AH486, AH485, AH487

*Indicates entry is illustrated



Optonica CP2525



Pioneer HPM 150

AH486*

Loudspeaker with 8in. woofer, 2in. dome squawker, 11in. dome tweeter. Imp: 4 ohms. Power handling: 60W. FR: 35Hz-20kHz. Crossover frequency: 900Hz, 3,000Hz. Finish in walnut veneer with dark brown cloth front. Dimensions: 33 × 49.5 × 22.5cm. Price: £51.00 each (plus VAT).

AH487*

Loudspeaker with 8in. woofer, 8in. ABR, 2in dome squawker, 1in. dome tweeter. Power handling capacity: 70W. FR: 30Hz-20kHz. Crossover frequency: 900Hz, 3,000Hz. Walnut veneer with dark brown cloth front. Dimensions: 39 × 59 × 22.5cm. Price: £63.60 each (plus VAT).

AH484

Reflex speaker. Drive units: 200mm bass, 127mm squawker, 25mm tweeter. Crossover frequency: 4kHz, 9kHz. FR: 40Hz-20kHz. Imp: 4 ohms. Recommended amplifier output: 25-50W. Dimensions: 33 × 20 × 51.5cm.

Finish: walnut effect foil. Features: natural crossover. Price per pair: £78.96 approx.

AH483

Reflex speaker. Drive units: 200mm bass, 25mm tweeter. Crossover frequency: 3,800Hz. FR: 42Hz-20kHz. Imp: 4 ohms. Recommended amplifier output: 20-40W. Dimensions: 28.5 × 18 × 44cm. Finish: walnut effect foil. Features: natural crossover. Price: on application.

■ PIONEER

Shriro (UK) Ltd, Shriro House,
The Ridgeway, Iver,
Buckinghamshire SL0 9JL.
Tel: Iver 652222/7.

HPM 60

Base reflex. Woofer 25cm, mid-range 10cm, tweeter 4.5cm. Super tweeter high polymer type. Crossover frequency: 1,200Hz, 4,000Hz, 12,000Hz. Frequency range: 35Hz to 25kHz. Sensitivity: 92.5dB/W (at 1m). Imp: 8 ohms. Maximum input power: 60 watts. Dimensions: 35 × 32.1 × 61cm. Weight: 17.5kg. Walnut finish. Features: mid/high attenuation blended woofer. Price: on application.

HPM 40

Base reflex. Woofer 25cm, tweeter 4.5cm. Super tweeter—high polymer type. Cross-over frequency: 4,000/10,000Hz. Frequency range: 35Hz-25kHz. Sensitivity: 91dB/W (at 1m). Imp: 8 ohms. Maximum input: 40 watts. Dimensions: 32.5 × 31.7 × 57cm. Weight: 13kg. Walnut finish. Base and mid-range speakers use carbon fibre drive units. Price: on application.

HPM 100

Base reflex enclosure with 30cm woofer, 10cm mid-range, 4.5cm tweeter and high polymer super tweeter. Crossover frequency: 1,200, 4,000, 12,000Hz. FR: 30Hz-25kHz. Maximum input power: 100 watts. Imp: 8 ohms. Dimensions: 39 × 39.3 × 67cm. Weight: 26.7kg. Walnut finish. Features: mid/high attenuation, carbon fibre, blended woofer. Price: on application.

HPM 150

Base reflex enclosure with 40cm woofer, 11cm mid-range, 4.5cm tweeter and high polymer super tweeter. FR: 25Hz to 40kHz. Sensitivity: 92.5dB/W (at 1m). Imp: 8 ohms. Nominal input power 125 watts. Dimensions: 45 × 45 × 98.4cm. Walnut finish. Weight: 37.3kg. Features: mid/high attenuation, horn loaded high polymer film super tweeter. Price: on application.

■ PYE

Pye Ltd, 137 Ditton Walk,
Cambridge CB5 8QD.
Tel: Feversham 2781.

5775*

IB speaker with drive units: 200mm, 85mm, 85mm. FR: 50Hz-20kHz. Imp: 8 ohms. Recommended amplifier output: 30W max. Dimensions: 30 × 50 × 23cm. Finish: real teak veneers. Features: detachable grille. Price per pair: £88.00 (plus VAT).

5777*

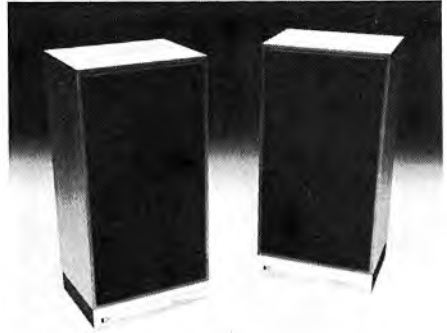
IB speaker with drive units: 250mm, 38mm, 25mm. Crossover frequency: eleven element 1kHz, 8.5kHz. FR: 48Hz-22kHz ±3.5dB. Imp: 8 ohms. Recommended amplifier output: 60W. Dimensions: 30 × 60 × 30cm. Finish: real teak veneers, brushed aluminium trims on all drive units, and at base of unit. Feature: detachable black cloth grille. Price per pair: £200.00 (plus VAT).

■ QUAD

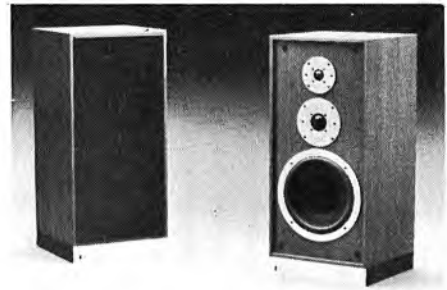
The Acoustical Manufacturing Co Ltd,
St Peters Road, Huntingdon PE18 7DB.
Tel: Huntingdon (0480) 52561.

Quad Electrostatic*

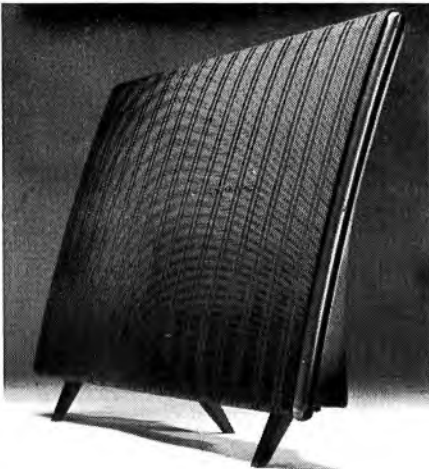
Full range electrostatic loudspeaker. FR: 45Hz-18kHz. Imp: 15 ohms. Amplifier requirements: 15W min, 33 peak volts max. Dimensions: 88 × 27 × 79cm. Weight: 18kg. Finish: black or bronze anodised grille. Price per pair: £506.00 (plus VAT).



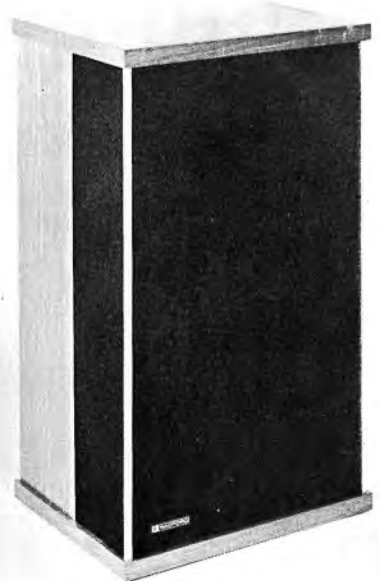
Pye 5775



Pye 5777

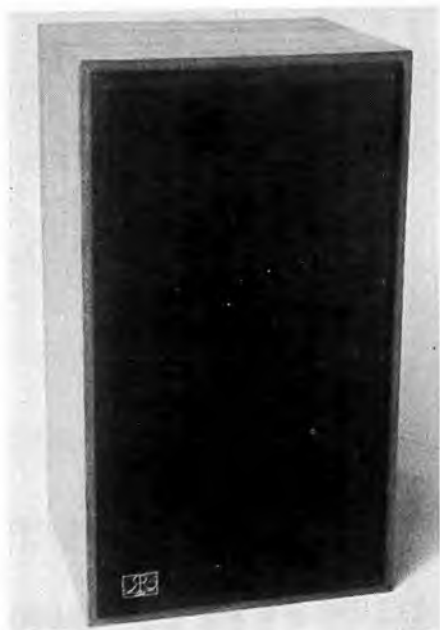


Quad Electrostatic



Tristar 90

*Indicates entry is illustrated



Ram 100



Ram 150



Ram Compact



Ram Bookshelf Mk II



Ram 200

■ RADFORD

Radford Electronics Ltd,
4 High Street, Nailsea, Bristol BS19 1BW.
Tel: Bristol 6636.

T90 Tristar*

Bookshelf speaker. Drive units: bass, dome mid, dome treble. FR: 55Hz-20kHz. Imp: 8 ohms. Power handling capacity: 50W. Dimensions: 53 × 32 × 24cm. Weight: 15kg. Price: £135.00 each (plus VAT).

■ RAM

Ram Audio Marketing Ltd, Clarke Road,
Mount Farm, Milton Keynes, Bucks.
Tel: Milton Keynes 75764.

100*

Drive units: 1 × 200mm plastic cone plastiflex-doped, high loss PVA surround; 1 × 25mm dome HF radiator. Suggested amplified matching: 15-65W per channel. Nominal Imp: 4-8 ohms. FR: 55Hz-22kHz ±2dB. Dimensions: 19½ × 10 × 11in. Price: £176.50 per pair (inc. VAT).

Bookshelf Mk II*

Drive units: 1 × 200mm plastic cone, plastiflex-doped, high loss PVA surround; 1 × 25mm dome HF radiator. Suggested amplified matching: 12-50W per channel. Imp: 4-8 ohms. FR: 70Hz-22kHz ±2dB. Dimensions: 16 × 9 × 10in. Price: £139.00 per pair (inc. VAT).

200*

Drive units: 1 × 25mm cambric dome HF unit; 1 × 200mm Bextrene MR/IF driver 1 × 250mm Bextrene passive radiator. Suggested amplifier matching: 15-75W per channel. Imp: 8 ohms. FR: 45Hz-22kHz ±2dB. Dimensions: 26 × 10½ × 12½in. Price: £276.50 per pair (inc. VAT).

Mini Bookshelf*

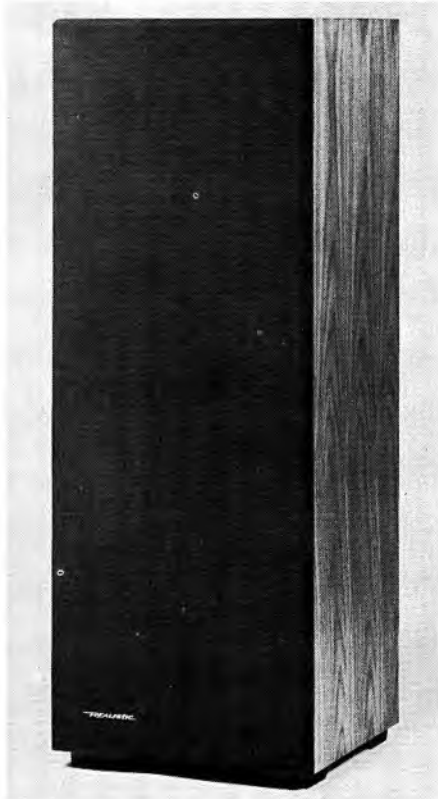
Acoustic suspension speaker with drive units: 162.5mm, 25mm. FR: 70Hz-22kHz. Imp: 4-8 ohms. Recommended amplifier output: 15-35W. Dimensions: 9 × 7 × 13in. Teak or walnut finish. Price per pair: £121.00 (inc. VAT).

150*

Mechanical reflex speaker with drive units: 200mm, 25mm, 200mm. FR: 50Hz-22kHz ±2dB. Imp: 4-8 ohms. Recommended amplifier output: 15-70W. Dimensions: 11½ × 10 × 23in. Teak or walnut finish. Price per pair: £221.00 (inc. VAT).



Ram Mini Bookshelf



Realistic Optimus T200

*Indicates entry is illustrated

Compact*

Acoustic suspension. Drive units: 165mm, 22mm, HF. Imp: 4-8 ohms. Recommended amplifier output: 8-35W. Dimensions: 9 × 7¼ × 13in. Finish: walnut. Price per pair: £79.08 (plus VAT).

■ REALISTIC

Tandy Corporation (Branch UK),
Bilston Road, Wednesbury,
West Midlands WS10 7JN.
Tel: 021-556 6101.

T200*

Acoustic suspension. Drive units: 2 × 250mm, 160mm, 50mm. Crossover frequency: 800Hz, 6kHz. FR: 50Hz-20kHz. Imp: 8 ohms. Recommended amplifier output: 150W. Dimensions: 32 × 31.5 × 88cm. Finish: oiled walnut veneer. Features: removable grille, frequency control hi and mid. Price per pair: £259.90 (inc. VAT).

Optimus

Range of other speakers varying in price from £99.00-£259.00. Details on application.

■ REVOX

F. W. O Bauch Ltd, 49 Theobald Street,
Borehamwood, Herts WD6 4RZ.
Tel: 01-953 0091.

BX 4100*

Infinite baffle with drive units: 8 × 122mm, 175mm, 199mm. Crossover frequencies: 600Hz, 4,000Hz. FR: 35Hz-25kHz. Imp: 4 ohms. Recommended amplifier output: 20-200W. Dimensions: 45 × 43.3 × 79cm. Walnut finish. Features: mid-range adjustable ±2dB. Treble adjustment ±2dB. Price per pair: £890.00 (plus VAT).

BX 230*

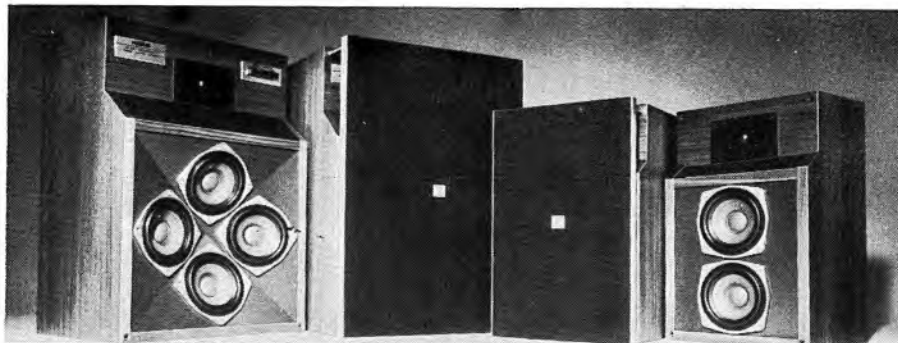
Infinite baffle with drive units: 2 × 122mm, 25mm. Crossover frequencies: 3,500Hz. FR: 40Hz-20kHz. Imp: 4 ohms. Recommended amplifier output: 10-40W. Dimensions: 24.5 × 22.2 × 40.5cm. Walnut finish. Price: per pair: £198.00 (plus VAT).

BX 350*

Infinite baffle with drive units: 4 × 122mm, 25mm. Crossover frequency: 3,200Hz. FR: 30Hz-20kHz. Imp: 4 ohms. Recommended amplifier output: 10-80W. Dimensions: 35 ×



Revox BX 4100



Revox BX 230 & BX 350

SPEAKER ENCLOSURES

29.5 × 52cm. Walnut finish. Features: treble adjustable ±2dB. Price per pair: £336.00 (plus VAT).

BR 320

Tuned port with drive units: 200mm, 25mm. Crossover frequency: 2,800Hz. FR: 36Hz-22kHz. Imp: 4 ohms. Recommended amplifier output: 20-50W. Dimensions: 26.5 × 27.5 × 47.5cm. Finish: beige nextel. Price per pair: £210.00 (plus VAT).

BR 430

Tuned port with drive units: 245mm, 38mm, 19mm. Crossover frequency: 850Hz, 4,200Hz. FR: 30Hz, 25kHz. Imp: 4 ohms. Recommended amplifier output: 20-80W. Dimensions: 34 × 31.5 × 56cm. Finish: beige nextel. Price per pair: £260.00 (plus VAT).

■ ROGERS

Swisstone Electronics Ltd,
4-14 Barmeston Road, London SE6 3BN.
Tel: 01-697 8511.

Export Monitor*

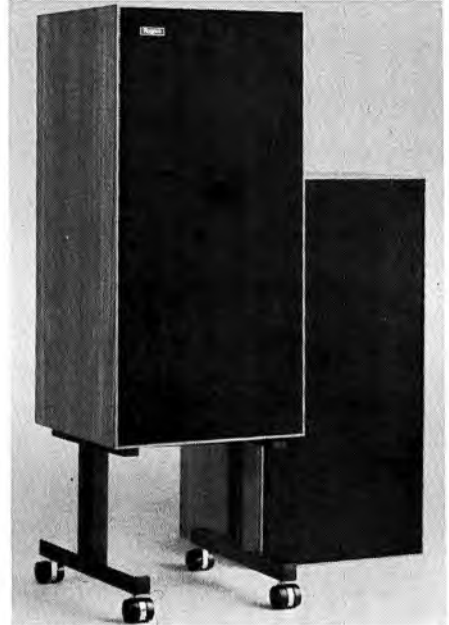
Three drive unit. Crossover with air-cored inductors and precision low loss capacitors. Imp: 8 ohms. Size: 30 × 30 × 63cm. Height with stand: approx. 93cm. Teak or walnut finish. Power handling: 50W RMS 100W speech and music. Price: £249.50 per pair (plus VAT).



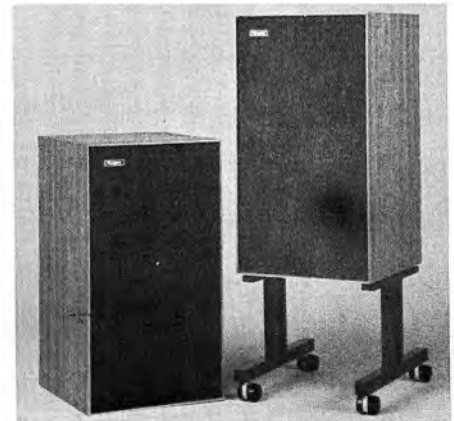
Rogers LS3/5A Monitors

BBC Monitor LS3/5A*

Infinite baffle enclosure. FR: 70Hz-20kHz ±3dB. VCI: 15 ohms. Size: 300mm × 185 × 160mm. Weight: 5.5kg. Two drive units. Crossover 3kHz. Finish: teak, walnut, rosewood or black. Price: £159.50 per pair (plus VAT). Rosewood £174.00 (plus VAT).



Rogers Export Monitor



Rogers Compact Monitor

*Indicates entry is illustrated

Compact Monitor*

IB two drive unit enclosure using exclusive Rogers 205mm bass drive units and 25mm fabric dometweeter. Power handling 40W RMS 80W speech and music. Finish: teak or walnut. Size: 27 × 27 × 56cm. Price: £174.50 per pair (plus VAT).

■ SANSUI

Sansui Audio Europe NV,
Unit 10A, Lyon Industrial Estate,
Rockware Avenue, Greenford, Middlesex.

**ES-209, ES-207, ESP-305, ESP-303, ESP-301,
SPX-8700, SPX-7700, SPX-6700, J-11.**

Details on application.

■ SEAS

Seas Fabrikker A.S.,
High Haven, Chapel Lane, Charsfield,
Woodbridge, Suffolk.
Tel: 047-337 345.

DD-Tower*

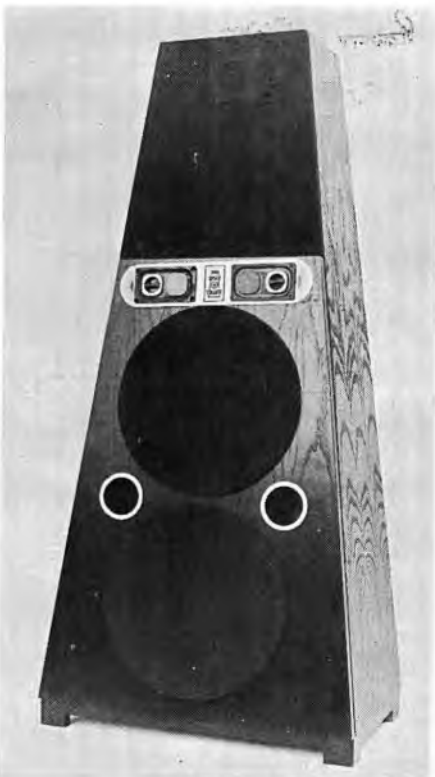
Four-way loudspeaker system. Each system of two separate cabinets with one mounted on top of the other. The 33cm driver is operating in its own chamber which is reflexed to the bottom of the cabinet. The driver incorporates the Seas patented dynamic damping principle which eliminates the normal problems of transient distortion in bass reflex systems and gives the driver a built in electromagnetic brake which controls the woofer at high excursions when being driven by high power levels. The other three drivers are mounted in a separate dual chamber enclosure. With the speakers mounted in line the front angle of the combined cabinets and the distance between the drivers has been calculated so that the acoustical centres of the drivers are on a vertical line to enhance the sound picture at the listener. The DD-tower is styled in rosewood with a trim of black acoustic transparent foam. FR: 28Hz-25kHz. Crossover frequency: 180Hz, 600Hz, 4000Hz. Power: 120W (nominal) 200W (music). Sensitivity: 90dB. Imp: 8 ohms. Recommended amplifier output: 30W-200W. Dimensions: 119.5 × 45.1 × 35cm. Price per pair: £791.00 (plus VAT).

Disc Tower*

Designed to reproduce really high sound-pressure. Power handling capacity is 160W (music power) and sensitivity 100dB at 1m with power input of 1W. Mixture of 2 woofers, 2 midrange, and 3 tweeters. on a horn loaded tweeter all in a ported cabinet, gives aggressive and open sound in the mid-tweeter area, and



Seas DD-Tower



Seas Disco Tower

tremendous attack in the bass area. On the front panel are mounted separate level controls for the midrange and tweeter units. The sound level can be raised and lowered 1.5dB in order to achieve an optimal adjustment to the listening room. On the same panel are also mounted indicator lights for the automatic midrange/tweeter protection circuit. At extremely high power inputs the protection circuit will be activated and the lamps will light up. Disco Tower is supplied in black lacquered ash. The frame is covered in black stretch cloth. FR: 40Hz-20kHz. Crossover frequency: 900Hz, 2500Hz, 6000Hz. Power: 120W (nominal) 160W (music). Sensitivity: 100dB. Imp: 8 ohms. Recommended amplifier output: 6W-160W. Dimensions: 125 × 58 × 34.8cm. Price per pair: £643.00 (plus VAT).

■ SKANTIC

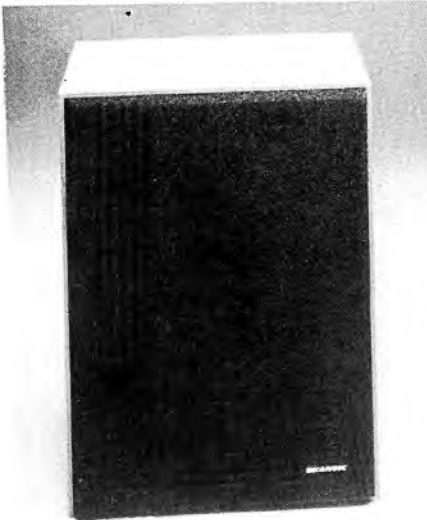
Skantic (UK) Ltd, Station Road,
Edenbridge, Kent TN8 6EY.
Tel: Edenbridge (073 271) 5231.

4061*

Bass reflex cabinet with drive units: 165mm, 10cm, 25cm. Crossover frequency: 1,000 and 5,000Hz. FR: 30Hz-20kHz. Imp: 4 ohms. Recommended amplifier output: 40W. Dimensions: 33 × 46 × 22cm. Teak, walnut, rosewood, white lacquer. Price: on application.

3561

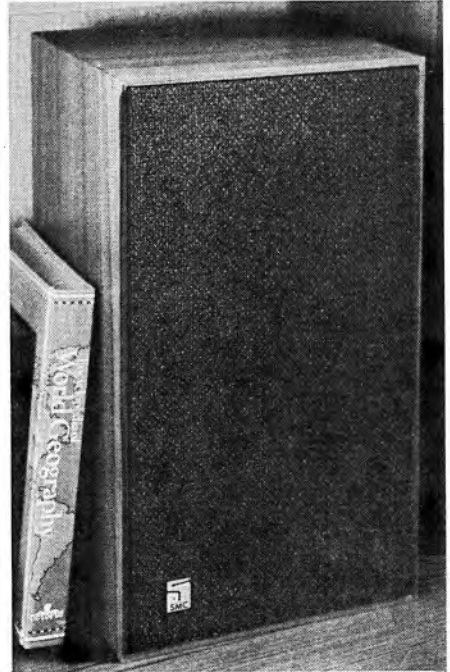
Bass reflex speaker with drive units: 165mm



Skantic 4061



SMC AS40



SMC Super Saturn

*Indicates entry is illustrated

midrange, 25mm dome tweeter. Crossover frequency: 2,000Hz. FR: 40Hz-20kHz. Imp: 4 ohms. Recommended amplifier output: 35W. Dimensions: 30 × 42 × 20cm. Finish: simulated veneer rosewood, walnut, teak, stained oak, white lacquer. Features: removable foam front. Price: on application.

8071

Transmission line system 25cm base unit 20cm medium range. Drive units: 250mm bass, 100mm mid, 25mm dome tweeter. Crossover frequency: 1,000Hz, 5,000Hz. FR: 20Hz-20kHz. Imp: 4 ohms. Recommended amplifier output: 80W. Dimensions: 45 × 79 × 34cm. Finish: genuine veneer, rosewood, walnut, stained oak. Features: removable foam front, adjustable high frequency and medium range for better room adaptability. Price: on application.

■ SMC

SMC Loudspeakers, 76 Bedford Road, Kempston, Beds.
Tel: Bedford (0273) 854133.

Super Saturn*

IB enclosure with drive units 210mm LF and 25mm HF. Crossover frequency: 3.5kHz. FR: 45Hz-25kHz DIN 55Hz-20kHz ±3dB. Imp: 8 ohms. Output: 12-50W. Dimensions: 25 × 24 × 46cm. Teak or walnut finish. 9 element crossover. Price per pair: £130.53 (plus VAT).

AS40*

IB enclosure with MR in its own line. Drive units: 250mm low, 115mm mid, 25mm high. Crossover frequency: 500Hz, 4kHz. FR: 35Hz-25kHz. DIN, 45Hz-20kHz ±3dB. Imp: 8 ohms. Output: 25-100W. Dimensions: 32 × 36 × 64cm. Teak or walnut finish. Price per pair: £233.60 (plus VAT).

Supernova*

IB with 250mm Bextrene cone LF, 25mm Audax soft dome HF. Crossover frequency 2.8kHz. FR: 35Hz-25kHz DIN, 50-20kHz ±3dB. Imp: 8 ohms. Output: 20-70W. Dimensions: 29 × 30 × 60cm. Finish in teak or walnut. Price: £191.11 (plus VAT). SN trolleys £23.81 (plus VAT).

AL50*

Acoustic labyrinth with drive units: 300 × 210mm low, 120mm mid and 25mm high. Crossover frequency: 500Hz, 4kHz. FR: 25Hz-25kHz (DIN) 35Hz-20kHz ±3dB. Imp: 8 ohms. Output: 15-120W. Dimensions: 38 × 43 × 73cm. Price per pair: £494.00 (plus VAT) including T50 trolleys.



SMC Supernova



SMC AL50

SPEAKER ENCLOSURES

■ SONY

Sony (UK) Ltd, Consumer Information,
Sony Showroom, 134 Regent Street,
London W1R 6DJ.
Tel: 01-439 3879.

SS 1050

IB enclosure with 160mm bass and 50mm treble.
Crossover frequency: 5kHz. FR: 50Hz-20kHz.
Imp: 8 ohms. Dimensions: 25 × 13 × 44cm.
Teak or walnut finish. 2-way 2-speaker system
with wall suspension possible. No rec. retail
price.

SS 2030

IB enclosure with 200mm bass, 100mm mid and
50mm tweeter. Crossover frequency: 2,000Hz
(6dB/oct), 5kHz (6dB/oct). FR: 45Hz-20kHz.
Imp: 8 ohms. Dimensions: 28 × 23 × 50cm.
Teak or walnut finish. Removable front. No
rec. retail price.

SS 2050

Dimensions: 29 × 23 × 54cm. Other details as
SS 2030, except tweeter 5.25mm dome. FR:
45Hz-22,000Hz.

SS 2070

IB enclosure with 250mm bass, 100mm mid,
25mm tweeter. Crossover frequency: 800Hz,
4,000Hz. FR: 35Hz-22kHz. Imp: 8 ohms.

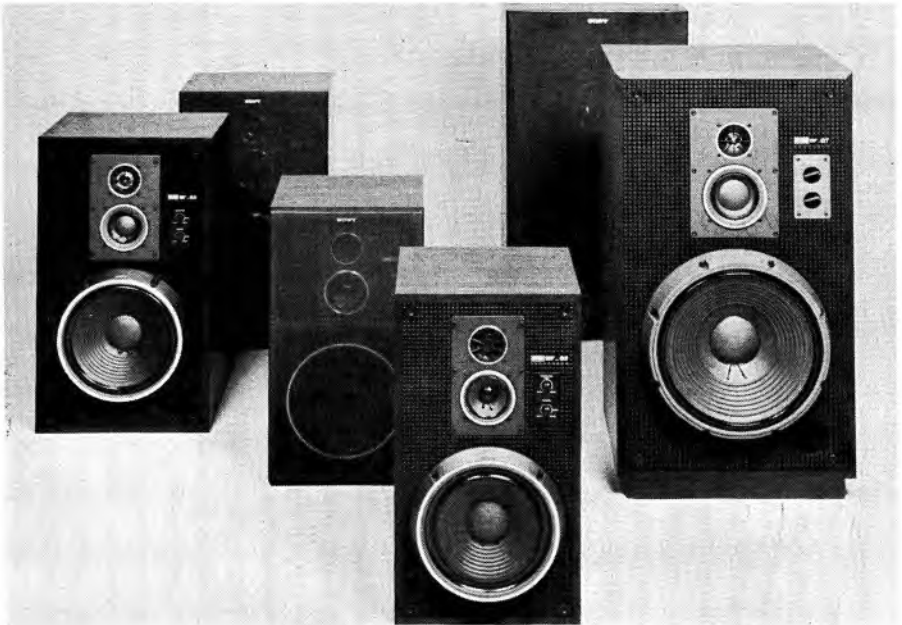
Output: 50W. Dimensions: 31 × 27 × 54cm.
Teak or walnut finish. Removable front. No
rec. retail price.

SS-G3*

Infinite baffle enclosure with 250mm woofer,
80mm mid-range and 50mm tweeter. Crossover



Sony SS-G1



Sony SS-G7, SS-G5, SS-G3

*Indicates entry is illustrated

frequency: 900Hz. 5kHz. FR: 40Hz-20,000Hz. Imp: 8 ohms. Rec. amplifier output: 60W nominal handling power. Dimensions: 34.5 × 34 × 61.5cm. Finish: walnut. Features: mid-range and tweeter attenuators. No rec. retail price.

SS-G5*

Bass reflex speaker with 300mm woofer, 80mm mid-range and 25mm tweeter. Crossover frequency: 600Hz, 5.5kHz. FR: 35Hz-20,000Hz. Imp: 8 ohms. Output: 80W. Dimensions: 41.5 × 35 × 72cm. Finish: walnut. Features: mid-range and tweeter attenuators. No rec. retail price.

SS-G7*

Bass reflex speaker with 380mm cone type woofer, 100mm mid-range and 35mm tweeter. Crossover frequency: 550Hz, 4.5kHz at 12dB/oct. FR: 30Hz-20,000Hz. Imp: 8 ohms. Output: 100W. Dimensions: 51 × 44.5 × 94. Finish: walnut. Features: mid-range and tweeter attenuators. No. rec. retail price.

SS-G1*

1B speaker with drive units: 250mm, 80mm, 25mm. Crossover frequency: 800Hz, 4kHz. FR: 35Hz-20kHz. Imp: 8 ohms. Recommended amplifier output: 55W. Dimensions: 34 × 59.5 × 30cm. Finish: walnut. Price: on application.

■ SOUND SEATING SYSTEMS

Tape City Ltd, 13 The Market,
Wrythe Lane, Carshalton,
Surrey SM5 1AG.
Tel: 01 644 4455.

Nova Chair*

Binaudio chair designed to reproduce full range of human hearing without acoustic problems encountered in conventional room surroundings. A complete listening environment comprising a chair of glass reinforced plastic, fully upholstered with removable cushions incorporating full range, high compliance speakers with high energy magnets allowing large excursions. Output: 60W. Price: £1,269 (inc. VAT). Footstool £70.00 extra. Alternative fabrics at slightly different prices.

■ STUDIOCRAFT

Bose (UK) Ltd, Trinity Trading Estate,
Milton Regis, Sittingbourne, Kent.
Tel: Sittingbourne (0795) 75341.

Model 110

Ported reflex enclosure with two drive units. Imp: 4 ohms. Amplifier requirements: 5W. Dimensions: 9 × 7½ × 14in. Weight: 13lb each. HC: 40W RMS. Sold in matched pairs. Finish: walnut grained effect veneer. Price per pair. £85.00 (plus VAT).

Model 220

Ported reflex enclosure with two drive units. One 8in. bass and one 1¼in. tweeter. Imp: 8 ohms. Amplifier requirements: 8-10W. Dimensions: 12 × 8 × 20in. Weight: 16lb each. Finish: walnut grained effect veneer. HC: 50W RMS. Sold in matched pairs. Price per pair: £112.00 (plus VAT).

Model 330

Ported reflex enclosure with three drive units. One 8in. bass and two 1¼in. tweeter in convex array. Imp: 8 ohms. Amplifier requirements: 10W. Dimensions: 13½ × 9 × 21½in. Weight: 20lb each. Finish: walnut grained effect veneer. HC: 60W RMS. Sold in matched pairs. Price: £146.00 (plus VAT).

Model 440

Infinite baffle enclosure with three units. One 10in. bass and two 3in. tweeters in convex array. Imp: 4 ohms. Amplifier requirements: 15W. Dimensions: 15½ × 11½ × 25½in. Weight: 24lb each. Finish: walnut grained effect veneer. HC: 100W RMS. Sold in matched pairs. Price: £199.50 (plus VAT). All models covered by a 5-year parts and labour guarantee.



Nova Binaudio chair

■ **SES**

Sussex Electronic Services,
Unit 15, Highfield Industrial Estate,
Eastbourne, Sussex.
Tel: Horam Road (043 53) 2647.

SES-120*

Acoustic labyrinth enclosure. Drive units: 304.8mm, 127mm, 38.1mm, 19.05mm. Crossover frequency: 375Hz-3kHz-10kHz. FR: 20Hz-45kHz. Imp: 8 ohms. Recommended amplifier output: 25-200W. Dimensions: 34.29 × 40.64 × 31.75cm. Finish: fig, teak, walnut, mahogany, or others to order. Features: three-tuned ports, contour controls, choice of various grill board colours. Price per pair: £528.00 (plus VAT).

■ **SWALLOW**

Swallow Acoustics, 35 Coppins Close,
Sawtry, Cambridgeshire.
Tel: 05827 5925.

CM 70

1B speaker with drive units: 200mm, 20mm. Crossover frequency: 4.5kHz. Frequency range: 60Hz-20kHz. Imp: 8 ohms. Recommended amplifier output: 30-50W. Dimensions: 24 × 23 × 36cm. Finish: teak, walnut. Price per pair: £154.00 (plus VAT).

RM200

1B speaker with drive units: 200mm, 160mm, 30mm, 20mm. Crossover frequency: 500Hz,



SES speaker

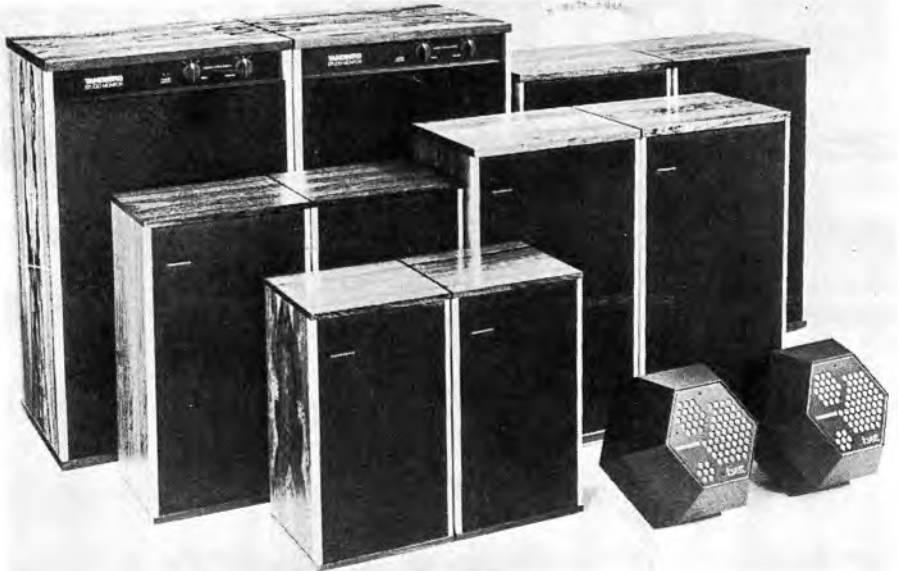
2.5kHz, 7kHz. FR: 45-20kHz. Imp: 8 ohms. Recommended amplifier output: 30-100W. Dimensions: 32 × 30 × 64cm. Finish: teak, walnut. Features: 4-unit. Price per pair: £305.00 (plus VAT).

■ **TANDBERG**

Tandberg (UK) Ltd, Farnell House,
81 Kirkstall Road, Leeds, LS3 1HR.
Tel: Leeds (0532) 35111.

TL3520*

Closed cabinet. Drive units: 10, 3-3/8, 1in. dome. FR: 40-20,000Hz. Imp: 8 ohms. Max



Tandberg range

*Indicates entry is illustrated

power: 50W. Size: 35 × 20 × 50.5cm. Black and rosewood finish. Price per pair: black £216.00. Rosewood £235.56 (plus VAT).

TL2520*

Closed cabinet. Drive units: 8, 3-3/8, 2in. FR: 45-20,000Hz. Imp: 8 ohms. Max power: 40W. Size: 26 × 18 × 46.2cm. Black and rosewood finish. Price: black £152.86. Rosewood £171.56 (plus VAT).

Studio Monitors*

Closed cabinet. 12in., 2in. dome, tweeter 2 × 1in. dome. Crossover frequency: 600, 35,000Hz. FR: 25-20,000Hz. Imp: 8 ohms. Max driving power: 100W. Black or rosewood finish. Price per pair: £257.25. Rosewood £594.67 (plus VAT).

TL5020*

Closed cabinet. 12in., 5in., 2 × 1in. drive units. FR: 35-20,000Hz. Imp: 8 ohms. Max driving power: 60W. Size: 31 × 22.2 × 58cm. Black and rosewood finish. Price per pair: black £235.00. Rosewood £317.34 (plus VAT).

Fasett*

Closed cabinet. 5in. woofer 2½ in. tweeter. FR: 50-20,000Hz. Imp: 4 ohms. Max driving power: 25W. Size: 22 × 18 × 24cm. Orange, black or white finish. Price per pair: £86.22 (plus VAT).

TL1520*

Closed cabinet. 7in. woofer, 2in. tweeter. FR: 50-20,000Hz. Imp: 4 ohms. Max driving power: 30W. Size: 22 × 18 × 35cm. Black and rosewood finish. Price per pair: black £110.22. Rosewood £120.00 (plus VAT).

■ TANGENT

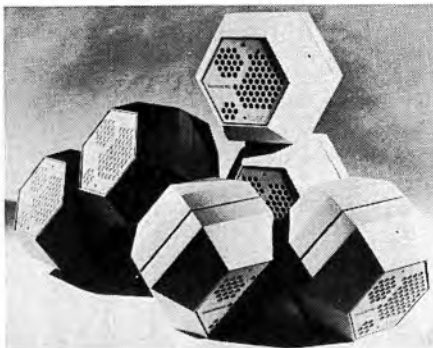
Tangent Acoustics Ltd,
4 Viking Way, Bar Hill,
Cambridgeshire CB3 8EL.
Tel: Crafts Hill (0954) 81377.

Monitor TM3*

Compact 1B bookshelf system. Drive units: 19mm tweeter, 140mm plastic cone mid/bass. Crossover frequency: 18dB/octave. Imp: 8 ohms. Output: 45W per channel into 8 ohms. FR: 55Hz-30kHz ±3dB. Dimensions: 25.5 × 37 × 28.5cm. Finish in teak or walnut veneer with brown Vynair grille. Other finishes to order. Price per pair: £97.32 (plus VAT).

Monitor TM1*

Low-distortion reflex system. Drive units: 19mm tweeter, 140mm plastic cone mid/bass. Crossover frequency: 18dB/oct. Imp: 8 ohms.



Tandberg Fasett



Tandberg Studio Monitor



Tangent TM3

Output: 50W per channel into 8 ohms. FR: 40Hz-30kHz ± 3 dB. Dimensions: 30.5 \times 63 \times 31.8cm. Finish: teak or walnut veneer with grey Vynair grille. Other finishes to order. Price per pair: £147.95 (plus VAT).

Reference RS2

1B bookshelf system for studio and domestic use. Drive units: 19mm dome tweeter, 140mm bextrene cone/mid/bass. Imp: 8 ohms. Output: 60W per channel into 8 ohms. FR: 52Hz-30kHz ± 3 dB. Dimensions: 25.5 \times 37 \times 28.5cm. Finish: teak or walnut veneer with brown Vynair grille. Other finishes to order. Price per pair: £150.00 (plus VAT).

Reference RS4*

Reflex system with cabinet braced and lined with acoustically absorbent plastic foam providing virtually anechoic conditions at critical mid-band frequencies. Drive units: 19mm dome tweeter, 140mm bextrene cone mid/bass. Imp: 8 ohms. Output: 80W per channel into 8 ohms. FR: 39Hz-30kHz ± 3 dB. Dimensions: 30.5 \times 63 \times 31.5cm. Finish: teak or walnut veneer with brown Vynair grille. Other finishes to order. Price per pair: £217.98 (plus VAT).

Reference RS6

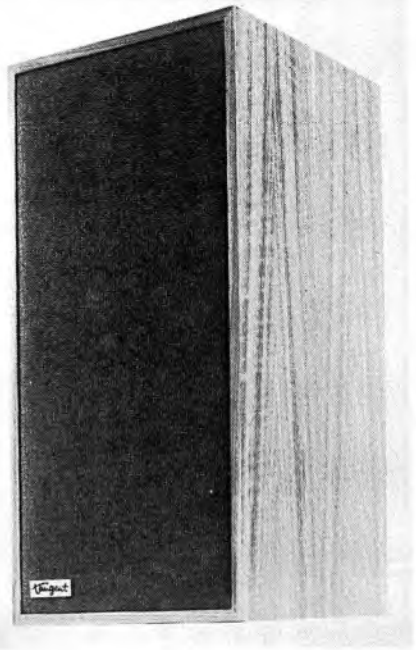
Three-unit bass reflex system. Drive units: 19mm tweeter, 140mm bextrene cone mid, 140mm bextrene cone bass. Imp: 8 ohms. Output: 100W per channel. FR: 35Hz-30kHz ± 3 dB. Dimensions: 30.5 \times 81 \times 31.5cm. Finish: teak or walnut veneer with brown Vynair grille. Other finishes to order. Price per pair: £306.76 (plus VAT).

SPL 1

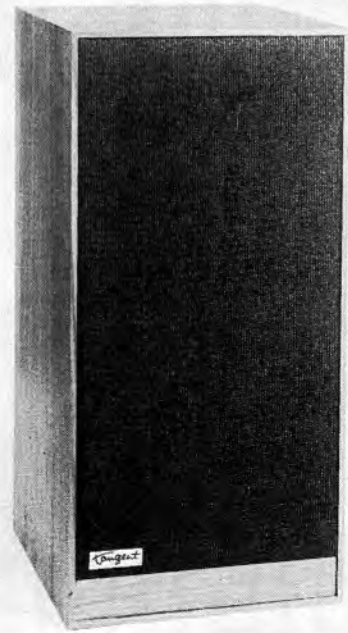
Infinite baffle enclosure with 25.4mm dome tweeter and 110mm bass/mid unit. Crossover frequency: 12dB/oct. FR: 95Hz-25,000Hz ± 3 dB. Imp: 8 ohms. Output: 50W per channel. Dimensions: 17.9 \times 19.7 \times 27.5cm. Finish: teak or walnut, others to order. Features: an efficient wide-range system with high power handling capacity and excellent dispersion characteristics. Price per pair: £61.80 (plus VAT).

TM1

Monitor speaker with drive units: 14cm mid/bass and 19mm dome tweeter. Imp: 8 ohms. Output: 50W per channel into 8 ohms. FR: 40Hz-30kHz ± 3 dB. Finish: teak, walnut with grey Vynair grille. Other finishes to order. Dimensions: 30.5 \times 63 \times 31.5cm. Price per pair: £164.43 (inc. VAT).



Tangent TM1



Tangent RS4

*Indicates entry is illustrated

TM3

Monitor speaker with drive units: 14cm bass/mid and 19mm dome tweeter. Imp: 8 ohms. Output: 45W per channel into 8 ohms. FR: 55Hz-30kHz ± 3 dB. Finish: as TM1. Dimensions: 25.5 x 37 x 28.5cm. Price per pair: £109.48 (inc. VAT).

RS2

1B bookshelf speaker with drive units: 19mm dome tweeter, 140mm cone mid/bass. Imp: 8 ohms. Output: 60W per channel into 8 ohms. FR: 52Hz-30kHz ± 3 dB. Finish: teak or walnut veneer, others to order. Dimensions: 25.5 x 37 x 28.5cm. Price per pair: £166.73 (inc. VAT).

RS4

Reflex system with drive units: 19mm dome tweeter, 140mm cone mid/bass. Imp: 8 ohms. Output: 80W per channel into 8 ohms. FR: 39Hz-30kHz ± 3 dB. Finish: teak or walnut, others to order. Dimensions: 30.5 x 63 x 31.5cm. Price per pair: £245.23 (inc. VAT).

RS6

Reflex system with three drive units: 19mm dome tweeter, 140mm cone mid, and 140mm cone bass. Imp: 8 ohms. Output: 100W per channel into 8 ohms. FR: 35Hz-30kHz ± 3 dB. Finish: teak or walnut, others to order. Size: 30.5 x 81 x 31.5cm. Price per pair: £345.10 (inc. VAT).

SPL1

Bookshelf speaker with two drive units: 25.4mm dome tweeter and 110mm mid/bass. Imp: 8 ohms. FR: 95Hz-25kHz ± 3 dB. Output: 50W per channel into 8 ohms. Finish: walnut or teak, others to order. Dimensions: 17.9 x 27.5 x 19.7cm. Price per pair: £69.53 (inc. VAT).

Stands

For TM1, RS4, RS6. Price per pair: £28.75 (inc. VAT).

RS8*

Three-way acoustic suspension system with drive units: 25mm tweeter, 102mm midrange and 254mm bass. Imp: 8 ohms. FR: 32-25,000Hz ± 3 dB. Finish: rosewood with brown grille. Dimensions: 100.3 x 40.6 x 38.1cm. Price per pair: £625.00 (inc. VAT).

Reference RS8

Three-way acoustic suspension system. Drive units: 25mm tweeter, 102mm midrange and 254mm bass, arranged in stepped pattern for phase coherence. The cabinet design places the midrange in a separate chamber and assures better sound dispersion in the critical middle



Tangent RS8

and upper frequencies. Imp: 8 ohms. FR: 32-25,000Hz ± 3 dB. Dimensions: 100.3 x 40.6 x 38.1cm. Finish: rosewood veneer with brown grille. Price per pair: £556.56 (plus VAT).

■ TANNOY

Harman UK,
St. John's Road, Tyler's Green,
High Wycombe, Bucks.
Tel: High Wycombe (049-481) 5331.

Ascot T145

Utilises a new 10in bass driver unique to Tannoy. It uses a massive cast frame and mass-decoupling copolymer cone. Power handling: 60W. Sensitivity: 90dB. Dimensions: 48.5 x 34 x 24.8. Price: on application.

Chester T165

As above but dimensions: 52.4 x 35 x 26.8cm.

Dorset T185

Dual concentric drive system as in T145 and T165 but with different form of acoustic loading. Instead of bass reflex ports, a passive bass radiator is fitted into larger enclosures. Other specs as T145. Dimensions: 67 x 37 x 28.8cm. Price: on application.

Mayfair T225

As T185 except dimensions: 71.4 × 37 × 29cm.

Berkely

15in dual concentric speaker. Power handling: 85W. Sensitivity: 91dB. Dimensions: 84.6 × 63.6 × 30.8cm. Price: on application.

Arden

Similar to Berkeley.

Windsor

Power handling: 100W. Sensitivity: 92dB. Dimensions: 81.5 × 58 × 40cm. Price: on application.

Buckingham

As above but power handling of 200W.

Oxford T125

Designed for smaller rooms. Power handling: 50W. Sensitivity: 90dB. Dimensions: 56 × 33 × 27cm. Price: on application.

■ TECHNICS

National Panasonic (UK) Ltd,
101-109 Whitby Road Trading Estate,
Slough SL1 3DR.

Tel: Slough (75) 34522.

SB-R1*

Bookshelf two-way linear-phase speaker system. Drive units: 16cm woofer, radial horn tweeter. Imp: 8 ohms. Recommended amplifier output: 86.5W. Crossover frequency: 3,500Hz. FR: 55Hz-22kHz. Dimensions: 19.8 × 34 × 23.3cm. Price: on application.

SB-R2*

Three-way linear-phase bookshelf speaker system. Drive units: 16cm woofer, 10cm cone mid-range, radial horn tweeter. Imp: 8 ohms. Recommended amplifier output: 86.5W. Crossover frequencies: 1,900 and 4,000Hz. FR: 45Hz-22kHz. Dimensions: 20.8 × 39.2 × 24.3cm. Price: on application.

SB-3500

Two-way two-speaker bass reflex system. Drive units: 16cm, 6cm. Imp: 8 ohms. Input power: 60W music. Output level: 89dB/W. Crossover frequency: 2,500Hz. FR: 50Hz-20kHz. Dimensions: 23 × 47.9 × 22cm. Price: on application.

SB-4000

Two-way linear-phase speaker system. Drive units: 20cm, 6cm. Imp: 8 ohms. Input power: 75W music. Output level: 91dB/W. Crossover frequency: 2,500Hz. FR: 46Hz-20kHz. Dimensions: 28 × 56.1 × 24.8cm. Price: on application.



Technics SB-R1



Technics SB-R2

SB-E100

Three-way Horn type linear-phase speaker system. Drive units: 30cm, Horn type midrange, horn type tweeter. Imp: 8 ohms. Input power: 150W music. Output level: 95dB/W. Crossover frequencies: 1,500Hz, 6,500Hz. Dimensions: 52.5 × 84.6 × 42.4cm. Price: on application.

SB-F1/F2/F3

Two-way compact linear-phase speaker systems. Details on application.

SB-X1, X3, X5

Linear-phase bookshelf speaker systems. Details on application.

■ TOSHIBA

Toshiba (UK) Ltd, Toshiba House,
Frimley Road, Frimley,
Camberley, Surrey.

Tel: Camberley (0276) 62222.

SS-320

2-way system bass reflex. Drive units: 250mm free edge cone, 70mm. Power rating: 25W

Hi-Fi that costs over £35,000,000.

That's the price Toshiba puts on research,
testing, re-testing and quality control each year.
A lot of ears say it sounds right.

TOSHIBA

TOSHIBA (UK) LTD., TOSHIBA HOUSE, FRIMLEY ROAD, FRIMLEY, CAMBERLEY, SURREY GU16 5JJ.

continuous. Crossover frequency: 2kHz. FR: 30Hz-20kHz ± 2 dB. Imp: 6 ohms. Dimensions: 34 x 33 x 55cm. Finish: dark grey vinyl. Level control on high frequency driver. Price per pair: £160.00 (plus VAT).

SS-520

3-way system bass reflex. Drive units: 250mm free edge concave, 100mm free edge cone. 25mm carbon dome. Power rating: 30W continuous. Crossover frequency: 800Hz, 5kHz. FR: 30Hz-29kHz—2dB. Imp: 6 ohms. Level control on high frequency driver plus midrange. Sold in matched pairs left and right units. Price: £240.00 (plus VAT).

SS-230*

2-way infinite baffle. Drive units: Sonaudax 220mm dia, bass, 25mm dia aluminium voice coil plus Sonaudax 19mm polycarbonate dome, high frequency speaker. Power rating: 35 watts continuous. FR: 50Hz-20kHz. Crossover frequency: 5kHz via 4 element network. Imp: 8 ohms. Efficiency: 10 watts for 96dB. Front grille removable. Dimensions: W x H x D, 284 x 500 x 218mm. Finish: simulated walnut. Price: £66.22 (plus VAT).

SS-45GB

2-way, infinite baffle speakers. Drive units: Sonaudax 220mm dia bass speaker with 25mm aluminium voice coil Sonaudax 25mm soft dome high frequency speaker. Power rating: 45 watts continuous. FR: 48Hz to 22kHz. Crossover frequency: 3kHz via 7 element network. Imp: 8 ohms. Efficiency: 6.5 watts for 96dB. Front grille removable. Dimensions: W x H x D, 286 x 536 x 287mm. Finish: simulated walnut. Price: £97.33 (plus VAT).

SS-65GB

Type: 2-way infinite baffle. Volume: 36.5 litres. Drive units: Sonaudax 251mm dia bass speaker with 34.6mm aluminium voice coil. Sonaudax 34mm soft dome mid range to high frequency speaker. Power rating: 65 watts continuous. FR: 48Hz to 22kHz. Crossover frequency: 2.87kHz via a 7 element network. Resonance: 70Hz. Imp: 8 ohms nominal. Efficiency: 6.5 watts for 96dB. Front grille removable. Dimensions: W x H x D, 340 x 576 x 287mm. Finish: simulated walnut. Price: £132.89 (plus VAT).

SS-100GB*

3-way infinite baffle speaker. Drive units: Sonaudax 251mm dia bass speaker with 46.3mm aluminium 4 layer voice coil. Sonaudax 130mm mid range speaker with a 25.5mm aluminium voice coil and specially treated cone.



Toshiba SS-100-GB



Toshiba SS-230 system

Sonaudax 25mm soft dome HF speaker. Power rating: 100 watts continuous. FR: 48Hz to 22kHz. Crossover frequency: 680Hz and 5.5Hz. Resonance: 43Hz. Imp: 8 ohms nominal. Efficiency: 8.2 watts for 9.6dB. Front grille removable. Dimensions: W x H x D 338 x 636 x 287mm. Finish: simulated walnut. Price: £168.44 (plus VAT).

■ TRIO

B. H. Morris & Co Ltd, Precision Centre, Heather Park Drive, Wembley, Middlesex HA0 1SU. Tel: 01-902 9422.

LS 1900*

Reflex speaker with drive units: 330mm bass, 130mm mid, diffraction horn type HF. Crossover frequency: 500Hz, 600Hz. FR: 30Hz-21kHz. Imp: 8 ohms. Recommended amplifier output: 60-170W. Dimensions: 56 x 45 x 105.5cm. Finish: walnut veneer. Features: step down attenuator level controls for mid and high frequencies. Price: on application.

“Despite many different types of material being auditioned, at no time did we ever hear less than very good reproduction from these speakers...”

ANGUS MCKENZIE

When Angus McKenzie tested our speakers for us, he left no sound untried.

Orchestral music, chamber music instrumental music—including special tracks with organ and chorus, light music and speech.

Even Golders Green tube trains, the sounds of fireworks and many recordings of music and sound effects made in an an-echoic chamber.

And to make the tests really competitive, the Trio speakers were compared with well-known and well-liked speakers costing almost twice as much.

The Trio LS 1200 speakers came through remarkably well. In fact, as Angus McKenzie noted at the time... ‘in general, colouration of the Trio speakers was audibly much lower than that noticed on the large majority of competitive products, and this was shown particularly by the very good reproduction of speech.’

Praise indeed, from one of hi-fi's sternest critics. And why not.

After all, the LS 1200s have excellent sound quality, despite their modest price. Thanks to the very latest

digital computer technology and laser-beam holography:

Digital computer technology was particularly useful in the development of these new speakers, because it provided instant information on proposed designs, and given the limitations of size and cost, designed the best system possible.

A system which incorporates the revolutionary linear response, new, natural wood pulp cone, special edge support system and futuristic homogenised baffle boards.

But the final word on the Trio LS 1200s must belong to Angus

McKenzie... “Clearly the Trio LS 1200s are amongst the finest Japanese designed loudspeakers, and we feel highly justified in recommending them.”



If they're good enough for Angus McKenzie, they're good enough for me. Please send me details of the LS 1200 speakers.

Name _____

Address _____

HFYB80

To: B. H. Morris & Co. (Radio) Ltd,
Dept C, Precision Centre, Heather Park Drive,
Wembley HA0 1SU. Agents in Eire: Peat Wholesale, Dublin.



LS 1600*

Reflex speaker with drive units: 330mm bass, 130mm mid and diffraction horn high frequency. Crossover frequency: 900Hz, 5,000Hz. FR: 32Hz-20kHz. Imp: 8 ohms. Recommended amplifier output: 50-120W. Dimensions: 39 × 32.3 × 71cm. Finish: walnut veneer. Features: step down attenuator level controls for mid and high frequencies. Price: on application.

*Trio LS 1200***LS 1200***

Reflex speaker with drive units: 250mm bass, 100mm mid, 40mm high. Crossover frequency: 1,000Hz, 6,000Hz. FR: 35Hz-20kHz. Imp: 8 ohms. Recommended amplifier output: 40-100W. Dimensions: 35 × 32.7 × 65cm. Finish: simulated walnut. Features: step-down attenuator level controls for mid and high frequencies. Price: on application.

LSK 400

Air suspension system. Drive units: 225mm bass, 111mm mid, 45mm high. Crossover frequency: 3,300Hz, 6,600Hz. FR: 50Hz-20kHz. Imp: 8 ohms. Recommended amplifier output: 30-80W. Dimensions: 35.6 × 28 × 61.1cm. Finish: simulated walnut. Price: on application.

*Trio LS 1600***LSK 200**

Air suspension system. Drive units: 204mm bass, 45mm high. Crossover frequency: 2,500Hz. FR: 65Hz-20kHz. Imp: 8 ohms. Recommended amplifier output: 15-40W. Dimensions: 30 × 22.3 × 45.5cm. Finish: simulated walnut. Price: on application.

■ VIDEOTONE

Videotone, 98 Crofton Park Road, London SE4. Tel: 01-690 1914.

Minimax 2 (D132E)

Infinite baffle loudspeaker enclosure. Drive units: one 130mm woofer, one 100mm tweeter. Crossover frequency: 3.2kHz. FR: 50Hz-20kHz. Imp: 8 ohms. Amplifier requirements: up to 50W. Dimensions: 15 × 22 × 26cm. Weight: 4.3kg. Finish: teak, walnut. Output: 10-40W. Price: £55.00 per pair (plus VAT).

GB 2

Reflex port loaded speaker with drive units: 130mm woofer. 2.5 dBme. Crossover frequency: 3kHz. FR: 40Hz-20kHz. Imp: 8 ohms. Recommended amplifier output: 15-40W. Dimensions: 10 × 11 × 19in. Teak/walnut foil finish. Price per pair: £85.00 (plus VAT).

*Trio LS 1900*

*Indicates entry is illustrated

GB3*

1B speaker with drive units: 130mm woofer, 27mm dome tweeter. Crossover frequency: 2kHz. FR: 50Hz-22kHz. Imp: 8 ohms. Recommended amplifier output: 10-40W. Dimensions: 15' x 21 1/2' x 26cm. Finish: teak or walnut. Ply cabinet. Price per pair: £75.00 (plus VAT).

GBS*

Reflex enclosure with drive units: 255mm woofer, 50mm, 14mm tweeter. Crossover frequency: 900-1.5kHz. FR: 40Hz-22kHz. Imp: 8 ohms. Recommended amplifier output: up to 80W. Dimensions: 31 x 31 x 62cm. Finish: teak. Price per pair: £320.00 (plus VAT).

■ VISONIK

Uher Ltd,
24 Market Place, Falloden Way,
London NW11.
Tel: 01-455 1771/01-458 8491.

David 302

Infinite baffle speaker with 98mm cone woofer and 60mm cone tweeter. Crossover frequency: 2,000Hz. FR: 50Hz-22kHz. Imp: 4-8 ohms. Recommended amplifier output: 5-30W. Dimensions: 10.3 x 10.7 x 17cm. Finish: grey/black grilles. Price per pair: £82.50 (plus VAT). MO (mobile model) £72.00 (plus VAT).

David 502

Infinite baffle speaker with 98mm cone woofer and 19mm dome tweeter. Crossover frequency: 1,400Hz. FR: 45Hz-30kHz. Imp: 4, 8 ohms. Recommended amplifier output: 20-70W. Dimensions: 10.3 x 10.7 x 17cm. Grey/black grilles. Price per pair: £103.50 (plus VAT).

Sub 1*

Infinite baffle Bass unit for use with David 502. Drive unit: 30mm cone woofer. Crossover frequency: 160Hz, 1,400Hz. FR: 16Hz-30kHz. Imp: 6 ohms. Recommended amplifier output: 20-70W. Dimensions: 43 x 35.5 x 63.5cm. Grey finish. Price: £226.50 each (plus VAT).

David 5000*

1B speaker with drive units: 98mm woofer, 25mm tweeter. Crossover frequency: 2,500Hz. FR: 50Hz-25kHz. Imp: 4-8 ohms. Recommended amplifier output: 20-50W. Dimensions: 10.9 x 10 x 17.2cm. Finish: black. Price per pair: £87.00 (plus VAT).

David 6000

As 5000 but FR: 45Hz-25kHz. Dimensions: 12.6 x 13.3 x 19.5cm. LED overload. Price per pair: £109.00 (plus VAT).



Videotone GBS



Videotone GB3



Visonik David 5000

David 7000*

1B speaker with drive units: 130mm woofer, 25mm tweeter. Crossover frequency: 2,500Hz. FR: 40Hz-25kHz. Imp: 4-8 ohms. Recommended amplifier output: 25-70W. Dimensions: 16.1 x 1.7 x 25cm. Finish: black. LED overload. Price per pair: £126.00 (plus VAT).

David 9000

1B speaker with drive units: 245mm woofer, 98mm mid, 25mm tweeter. Crossover frequencies: 900, 500Hz. FR: 35Hz-45kHz. Imp: 4-8 ohms. Recommended amplifier

output: 30-100W. Dimensions: 23.5 × 24.8 × 36.5cm. Finish: black. LED overload. Price per pair: £220.00 (plus VAT).

Sub 1*

Drive units: 300mm. Crossover frequency: 150-2,500Hz. FR: 20Hz-25kHz. Imp: 4-8 ohms. Recommended amplifier output: 30-100W. Dimensions: 43 × 35.5 × 63.5cm. Finish: black. Price: £226.00 (plus VAT).

Sub 2

As Sub 1 but with 245mm drive unit. Size: 36 × 31 × 49.5cm. Price: £175.00 (plus VAT).

Expuls 1*

IB speaker with drive units: 200mm, 37mm, 19mm. Crossover frequency: 900-4,500Hz. FR: 30Hz-25kHz. Imp: 4-8 ohms. Recommended amplifier output: 30-120W. Dimensions: 30 × 23 × 63cm. Finish: black. Price: £364.00 (plus VAT).

Expuls 2*

IB speaker. Drive units: 245mm, 37mm, 19mm. Crossover frequency: 800-4,500Hz. FR: 25Hz-25kHz. Imp: 4-8 ohms. Recommended amplifier output: 40-150W. Dimensions: 36.5 × 26 × 75cm. Finish: black. Price: £429.00 (plus VAT).

Expuls 3*

IB speaker. Drive units: 300mm, 98mm, 19mm. Crossover frequency: 550-4,000Hz. FR: 20Hz-30kHz. Imp: 4-8 ohms. Recommended amplifier output: 50-200W. Dimensions: 43 × 31 × 95cm. Finish: black. Price: £654.00 (plus VAT).



Visonik Sub 1 with David 7000

■ WHARFEDALE

Rank Hi-Fi, Highfield Road, Idle, Bradford, West Yorks. Tel: Idle 611131.

Denton XP2

Infinite baffle enclosure with 1 treble and 1 bass/mid. FR: 65Hz-20kHz. Imp: 6 ohms. Rec. amplifier output: 10-30W. Dimensions: 25 × 22 × 36cm. Finish: teak, walnut. Price per pair: £66.55 (plus VAT).

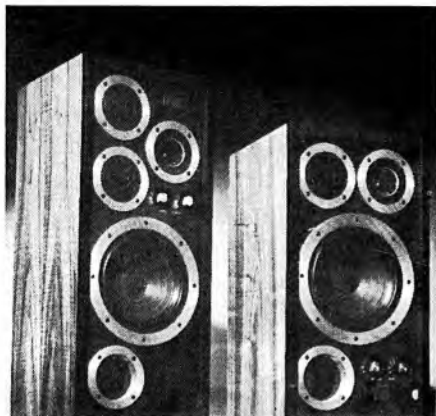
Shelton XP2

Infinite baffle enclosure with 1 treble and 1 bass/mid drive unit. FR: 63Hz-20kHz. Imp: 6 ohms. Rec. amplifier output: 10-35W. Dimensions: 26 × 24 × 42cm. Finish: teak, walnut, black. Price per pair: £83.52 (plus VAT).

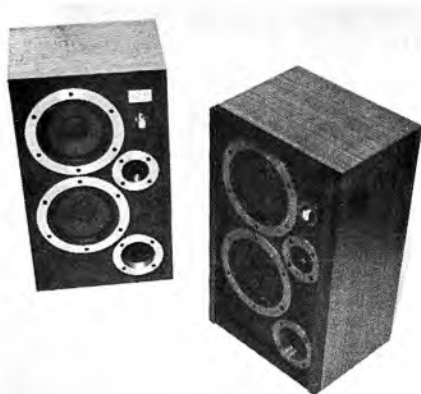


Visonik Expuls 1, 2, & 3

*Indicates entry is illustrated



Wharfedale E70 50



Wharfedale E30

Dovedale SP2*

Reflex enclosure with 1 treble, mid, 2 bass units. Crossover frequency: 800Hz-5kHz. FR: 35Hz-26kHz. Imp: 6 ohms. Output: 10-60W. Dimensions: 39 × 32 × 64cm. Finish: teak, walnut. Features: Isodynamic tweeter unit. Price: £226.90 (plus VAT).

E50*

Reflex enclosure with 3 drive units. Crossover frequency: 800Hz, 7kHz. FR: 55Hz-18kHz ±3dB. Imp: 8 ohms. Output: 3-80W. Dimensions: 34 × 34 × 66.5cm. Features: High efficiency —94dB at 1 metre for 1W. Finish: walnut. Price: per pair: £262.86 (plus VAT).

E70*

Reflex enclosure with 4 drive units. Crossover frequency: 800Hz, 7kHz. FR: 50Hz-18kHz. Imp: ohms. Output: 3-120W. Dimensions: 34 × 36 × 81.5cm. Features: high efficiency —94dB at 1 metre for 1W. Finish: walnut. Price per pair: £324.28 (plus VAT).

E30*

Reflex enclosure with drive units: 2 × 170mm bass/mid, 25mm treble. Crossover frequency: 4kHz. FR: 63Hz-18kHz ±3dB. Recommended amplifier output: 15-50W. Dimensions: 33.5 × 26.1 × 58cm. Finish: walnut. Features: treble level control. High efficiency —94dB at 1 metre for 1W. Price per pair: £177.69 (plus VAT).

■ **WIFONA**

Paul Spring Electronics Ltd,
19-23 Masons Hill, Bromley, Kent BR2 9HD
Tel: 01-464 0823.

LS III*

Infinite speaker with drive units: 165mm, 87mm, 52mm. Crossover frequency: 800/3,000Hz. FR: 45Hz-18kHz. Imp: 4 ohms.



Wharfedale Teesdale & Dovetail

Linton XP2

Infinite baffle enclosure with 1 treble, 1 mid and 1 bass unit. FR: 60Hz-20kHz. Imp: 6 ohms. Rec. amplifier output: 10-40W. Dimensions: 26 × 24 × 48cm. Finish: teak, walnut, black. Price per pair: £101.48 (plus VAT).

Glendale XP2

Infinite baffle enclosure with 1 treble, 1 mid, 1 bass unit. FR: 50Hz-20kHz. Imp: 6 ohms. Rec. amplifier output: 15-50W. Dimensions: 31 × 27 × 57cm. Finish: teak, walnut. Price per pair: £134.83 (plus VAT).

Teesdale SP2*

Reflex enclosure with 1 treble, 1 mid, 1 bass. Crossover frequency: 800Hz, 5kHz. FR: 40Hz-26kHz ±3dB. Imp: 6 ohms. Output: 10-40W. Dimensions: 34 × 28 × 58cm. Finish: teak, walnut. Features: Isodynamic tweeter unit. Price: per pair: £167.24 (plus VAT).

Recommended amplifier output: 30W, 45W.
 Dimensions: 23 × 17.5 × 33cm. Finish:
 Genuine walnut. Price per pair: £52.90 (plus
 VAT).

LS IV*

Infinite baffle speaker with drive units: 200mm,
 87mm, 52mm. Crossover frequency: 800Hz,
 3,000Hz. FR: 35Hz-20kHz. Imp: 4 ohms.
 Recommended amplifier output: 50W, 70W.
 Dimensions: 26.5 × 21 × 40cm. Genuine
 walnut cabinet. Price per pair: £66.50 (plus
 VAT).

LS V

Infinite baffle with drive units: 200mm,
 120mm, 87mm, 52mm. Crossover frequency:
 300Hz, 1,000Hz, 4,000Hz. FR: 30Hz-20kHz.
 Imp: 4 ohms. Recommended amplifier output:
 75W, 100W. Dimensions: 27.5 × 22 × 48cm.
 Genuine walnut. Price per pair: £87.50 (plus
 VAT).

Pop Sound*

Infinite baffle speaker with Disco lights. Drive
 units: 165mm, 57mm. Crossover frequency:
 2,000Hz. FR: 50Hz-18,000Hz. Imp: 4 ohms.
 Recommended amplifier output: 30W, 40W.
 Dimensions: 25 × 21.5 × 36cm. Ebonised
 walnut cabinet. Contains switching amplifier
 with AGC and sockets for two coloured 40W
 reflector bulbs and mains connection, 2
 threshold controls, 1 bulb flashes in sympathy
 with treble notes, the other with bass. Price:
 £93.50 (plus VAT).

■ **YAMAHA**

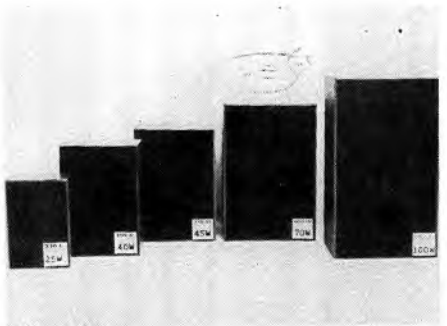
Natural Sound Systems Ltd,
 10 Byron Road, Wealdstone, Harrow,
 Middlesex HA3 7TL.
 Tel: 01-863 8622.

NA 100M

Speaker using beryllium. Drive units: 30cm,
 8.8cm, 3cm. Crossover frequencies: 500Hz and
 6,000Hz. FR: 40Hz-20kHz. Imp: 8 ohms.
 Power handling: 100W. Dimensions: 37.5 ×
 67.5 × 32.6cm. Price: £888.50 (plus VAT).



Wifona Pop Sound



Wifona Range

Other models

S1000M Price: £710.00; NS500 £355.20; NS655
 £266.40; NS635 £168.73; NS615 £266.40 (plus
 VAT). Details on application.



CONTROL YOURSELF.

Alone among stereo equalisers, the new ADC Sound Shaper Two Mark II incorporates a Light Emitting Diode (LED) metering system. Unlike conventional meters, the 14 LEDs—even for each channel—monitor signal levels instantly and with unerring accuracy.

But wait until you hear what it can do for your system. Those tempting slider controls give up to 12 dB lift or cut at any of 12 audio frequencies on each channel.

They can turn a bad listening room into a good one. Or a good loudspeaker into a great one.

They can compensate for the less than perfect quality that characterises some recordings. Or the midrange 'suck-out' that characterises some loudspeakers.

And to the tape enthusiast, they offer almost unlimited creative scope.

ADC also make the Sound Shaper One, a similar equaliser but with control over five stereo frequency bands instead of twelve.

Then there's the new ADC SLM-2 Sound Level Meter, a valuable but inexpensive

addition that helps get the best from any system—especially one including an ADC Sound Shaper.

Send us the coupon, and we'll send you the details. If you can't control yourself in the

meantime however, ask your ADC dealer for a demonstration.

To: Audio Dynamics Corporation,
Powke Lane, Cradley Heath, Warley,
West Midlands B64 5QH.

Please send me your brochure showing the complete range of ADC hi-fi equipment.

Name

Address



Audio Dynamics Corporation. A division of BSR Limited.

You'll hear more from us.



Surround Sound

(Two channel decoders intended for use with four or more speakers)

* Indicates entry is illustrated

Abbreviations used in this section are given on page 5.

■ ADASTRA

Adastra Electronics Ltd, Unit 24,
Cricklewood Trading Estate,
Claremont Road, London NW2 1TU.
Tel: 01-452 6288/9.

A.20 Four-Speaker Synthesiser

Converts two channel stereo into four speaker stereo for high fidelity systems up to 10W. Flexible control with variable blending of front and rear set-ups, surround A/B phase switching and rear volume control. Dimensions: 6½ × 2¾ × 5½ in. Price: £17.16 (plus VAT).

■ BANG & OLUFSEN

Bang & Olufsen (UK) Ltd,
Eastbrook Road, Gloucester GL4 7DE.
Tel: Gloucester 21591.

Ambio Control Unit*

Ambiophonic adaptor for use with most conventional amplifiers to facilitate the use of



Bang and Olufsen Ambio Control Unit

two side loudspeakers in conjunction with main stereo loudspeakers. Enables greatly enhanced reproduction to be obtained from stereo programme sources. Features 6kHz filter switch to limit rear speaker signals above this frequency. Size: 1.4 × 1.9 × 4.3in. Price: £14.00 (plus VAT).

■ CATRONICS

Catronics Ltd, Communications House,
20 Wallington Square,
Wallington, Surrey
Tel: 01-669 6700.

Matrix HJ Surround Sound Unit

Based on the design published in the June 1977 issue of *Wireless World*. The decoder enables a stereo FM tuner to receive the Matrix H surround sound and IBA transmissions when broadcast by the BBC. Price: £79.45 (plus VAT).

■ JVC

JVC (UK) Ltd,
Eldonwell Trading Estate, Staples Corner,
6-8 Priestly Way, London NW2 7AF.
Tel: 01-450 2621.

Binaural-Phonic (Biphonic) sound

Biphonic sound on JVC portables RC828 and 838 is a JVC innovation enabling listener to experience surround sound. Also available is BN5 professor which enables binaural recording to be played biphonically through normal stereo system.

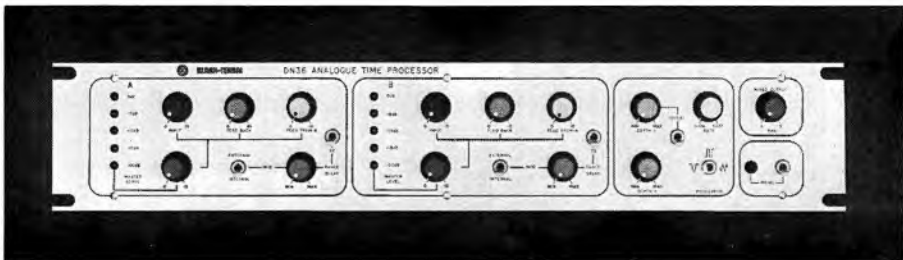
■ KLARK-TEKNIK

Klark-Teknik Research Ltd,
Summerfield, Kidderminster,
Worcs. DY11 7RE.
Tel: Kidderminster 64027.

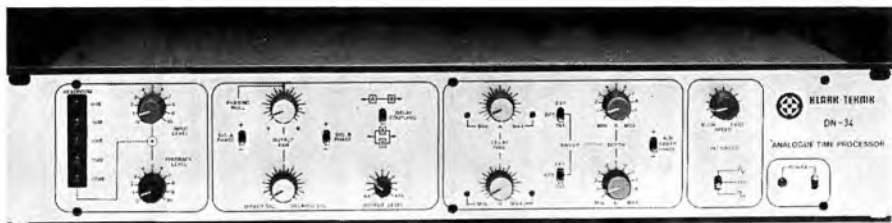
DN 36 Analogue Time Processor*

A dual-channel voltage controlled delay system. Delays can be set manually or controlled automatically. Built-in modulator allows delay length to be swept in various function patterns at variable rates and depths. Multipath feedback controls are included to enable the user to synthesise innumerable time-related effects including: reverberation, phasing, flanging, vibrato, chorus, single/double-repeat echo, Doppler shift, enhancement, modulated relay, ADT and many more. Level indicator shows max. level to -20dB in 5dB increments. Input impedance: 10K ohms. Sensitivity: -10dB to +20dB. Output impedance: 50 ohms. Output level: adjustable to +22dB at Clipping Point. Delay time: 0.5m-50m continuously variable. FR: 20Hz-15kHz. Internal modulator range:

*Indicates entry is illustrated



Klark-Teknik DN 36



Klark-Teknik DN 34

0.1Hz-10Hz continuously variable. Dynamic range: 90dB. Distortion: 0.2%, 0.5% at 3dB below Clipping level. Price: on application.

DN 70 Digital Time Processor*

DN70 is the first of a new generation of digital products from Klark-Teknik. Special emphasis has been placed on the working performance of the unit, and many months of development have been put in on the design of the A-D convertor, the heart of any digital system. There are 3 maximum delay options, 163mS, 326mS, and 652mS and an In-house designed analogue-to-digital convertor, giving superior distortion and noise performance. A high clocking speed of 50kHz, enabling frequency response to 15kHz on all delay options, and high value digital word, quasi 15-bit using a 12-bit linear plus 2-bit instantaneous flying comma system are among some of the excellent facilities. There is a perpetual memory of delay settings for permanent or semi-permanent installations and a high technology semiconductor memory, the 652 option uses 28 x 16K bit random access memories. Price: on application.

DN 34 Analogue Time Processor*

Latest addition to Klark-Teknik's analogue delay range is an exceptionally versatile signal processing and special effects unit, designed around two discrete, independently-controllable delay sections. Greatly improved charge-transfer devices has enabled the design of this unit to represent the ultimate in current state-of-



Klark-Teknik DN 70

the-art analogue delay technology. Some of the many effects include: positive flanging, negative flanging, double tracking, resonant flanging, triple tracking, loudness enhancement, pitch detune, true vibrato, chorus etc, etc. There are also a number of effects not found on less flexible units, such as: cross-over flanging, complex Doppler effects and time-related frequency synthesis. Price: on application.

■ NEAL

North East Audio Ltd,
Simonside Works, South Shields,
Tyne and Wear NE24 9NX.
Tel: South Shields 566321.

4 Speaker Resolver*

Unit designed to be fed from a stereo amplifier and to supply four loudspeakers to give surround sound effects from encoded records, stereo records and broadcasts and mono programme material. No power supply required. Front/rear balance control. Mode switch. Loudspeaker switch. Connection by DIN plugs. Size: 5½ x 5¼ x 1½in. high. Price: £18.40 (plus VAT).

■ QED

QED Audio Products Ltd,
112 Windmill Road, Sunbury-on-Thames,
Middlesex TW16 7HD.
Tel: Sunbury 87344.

Type 21/1 and 21/2 Surround Sound Adaptor*

Suitable for recovering ambience information from stereo records, tapes, and radio. Includes volume and blend controls. Power rating: 100W per channel. Price: £20.40 (plus VAT).

Type 15/1 Decoder Module

For converting 21/1 or 21/2 to a full four speaker decoder. Price: on application.

■ J. E. SUGDEN & CO LTD

Carr Street, Cleckheaton, West Yorkshire.
Tel: Cleckheaton 872501.

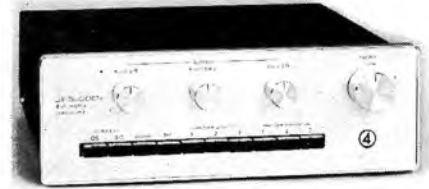
Q51 Four Speaker Matrix Control Unit*

Intended for adding to C51/P51 based system with additional P51 power amplifier, but will work equally well with any system. There are two basic sections — matrix decoder and tape facility section.

Tape facility section: not 4-channel, being included only to increase versatility of the basic P51/C51. Permits connection of three tape recorders which can be played separately or simultaneously. Q51 is fitted with 6dB amplifier on tape monitor circuits together with closely matched volume control enabling user to adjust monitor level to match original signal level to render AB monitoring accurate and valuable. Tape post filter permits recordings to be made after the tone and filter controls should it be



Neal 4 speaker Resolver



Sugden Q51

desired to doctor the frequency response prior to recording. Matrix decoder: will decode SQ, QS and BMX matrices for leading four speakers from two channel encoded discs, tape or radio. It is equipped with a difference matrix, similar to the Hafler configuration and a Schieffer matrix. Three balance controls. General: styled to match C51 with brushed silver fascia. Power is supplied from P51 power amplifier driving rear channels or, in the event of use with other amplifiers, any smooth 16-19 volt source or two PP9 batteries. Price: £96.00 (plus VAT).

Tape Accessories

(For tape storage units in cabinet styling see under Hi-Fi Cabinets)

*Indicates entry is illustrated

Abbreviations used in this section are given on page 5.

■ ADASTRA

Adastra Electronics Ltd, Unit N22,
Cricklewood Trading Estate,
Claremont Road, London NW2 1TU.
Tel: 01-452 6288.

R100 Cassette Carrying Case Mk II

Designed to hold 16 compact cassettes in rigid drop-front case. Finished in padded simulated leathercloth. Snap-fast closing. Slotted compartments and moulded handle. Finish: red, tan or black. Size: 14½ × 4¾ × 3¼ in. Price: £2.82 (plus VAT).

R51

Tape splicer. Self-contained with instant cut and trim action. Spring-loaded arms secure tape to padded cutting block. Price: £1.62 (plus VAT).

R101 Cassette Carrying Case

32 cassette version of R100 with double opening front and individual moulded tray holders. Size: 14½ × 3½ × 9 in. Price: £4.30 (plus VAT).

R54

De-luxe tape head demagnetizer. Operates from AC mains 220-240V. Removes residual magnetism from recording head, etc. Features extra long probe for access to difficult parts. Complete with 1m lead. Heavy duty 'Torpedo' shaped body. Overall length: 6½ in. Price: £3.96 (plus VAT).

R110/R111 Stako-Tape

Vertical and horizontal interlocking storage system in two versions: (R110) holding 10 cassettes; (R111) containing 8 8-track cartridges. Moulded cabinets in orange, white or black. Can be wall-mounted or used free-standing. Price: 80p (plus VAT).

Tape Spools

First grade plastic tape spools with standard tape threading facilities and of a design enabling them to fit all tape recorders. In sizes 3, 4, 5, 5¾, 7 in. Price: on application.

R40 Cassette Library Cases

Standard design to accommodate all compact cassettes with the flip lid moulded in clear material. Size: 110 × 70 × 17mm. Price: 10p each.

R45 Cassette Tape Tension Winders (M1111)

For manual winding of compact cassettes for editing and repair purposes. Neat moulded knobs in black with silver trim have hexagon shaped projections for fitting into the hub recesses of compact cassettes packed in pairs in top card see-through presentation. Price: 42p (plus VAT).

R55

Deluxe tape head demagnetizer with 1½ in. angled probe for cassette and cartridge application. 1 metre lead. Moulded body. Overall length 5½ in. Price: £4.15 (plus VAT).

R50

Cassette head cleaner with impregnated tape for safe cleaning of cassette heads. Price: 42p (plus VAT).

R106

Carousel type rotating double sided rack accommodating 40 cassettes. Cabinet is finished in teak, rosewood or white. Price: £8.00 (plus VAT).

M105 Imp-Verta*

Impedance converter enabling long lead, low impedance microphones to be used directly into input sockets of amplifiers and tape recorders. Conversion factor of 20:1. Jack socket connections. Internal 9V battery. Price: £6.00 (plus VAT).



Adastra Imp-Verta

*Indicates entry is illustrated

■ AUDIO MAGNETICS

AMSA Magnetics Ltd, Loverock Road,
Reading, Berks. RG3 1JZ.
Tel: Reading (0734) 598036.

Head Cleaners

Cassette — 60p; cartridge — £1.39.

■ BASF

BASF United Kingdom Ltd,
Audio/Video Tapes Division,
Haddon House, 2-4 Fitzroy Street,
London W1P 5AD.
Tel: 01-637 8971.

Plastic Spools

Standard sizes: 8-26.5in. Prices: 38p-£3.06 (plus VAT).

Metal Spools

18cm £4.22; 22cm £6.05; 26.5cm £6.54 (all plus VAT). Spools for ferro, super LH tape: 13cm 62p, 15cm 74p, 18cm 76p.

Hinged Lid Plastic Boxes

5 1/4in. 90p and 7in. reels £1.18 (plus VAT).

Hinged Lid Plastic Boxes for LH Super Tape

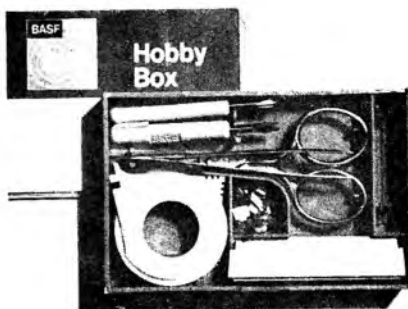
5 1/4in. — 86p; 5 1/2in. — £1.00; 7in. reels £1.28.

Other Accessories*

Empty C Box — 58p; C Box carrying handle — 78p; C Box mounting bracket — 78p; BR reel to reel cleaning tape — £2.68; CR cleaning cassette — £2.68; Profi-nab adaptor — £5.92; hobby box (reel to reel) — £4.88; hobby box (cassette) — £5.32; leader tape 300m/984ft — £4.94; leader tape 25m/80ft — £1.46; splicing tape 6.25mm x 25mm (1/4in. x 80ft) — £2.32; splicing tape 12.50mm x 25m (1/2in. x 80ft) — £3.62; splicing set — £1.04; metallised foil 6.25mm x 25m (1/4in. x 80ft) — £3.94; leader tape set — £2.18; plastic tape clips (box of 10) — 70p; head alignment tape — £8.80; 7 pin microphone (9202/9302 model) — £7.92; mains lead (9202/9302 model) — £2.80.

BASF Checkpoint Accessories*

Tape head cleaning kit — 80p; cleaning cassette — 76p; cassette tape splicing kit — £1.60; cassette tape editing kit — £2.50; cassette repair and care kit — £3.70; 50 cassette labels and 25 index cards — 90p; 2 cassette boxes, 2 index cards, 4 labels — 40p; cassette screwdrivers — 50p; cleaning fluid — 36p; salvage cassette — 60p; cassette splicing tabs — 80p; test cassette — £3.52; scissors and tweezers — 68p; chinagraph pencils (3) — 48p; reel-to-reel tape editing kit — £4.40; red and green leader tape (10m each) — 86p; clear leader tape (10m) — 60p; grey/white



BASF Cassette Hobby Box



BASF Checkpoint

and red/white leader tape (10m each) — 86p; reel-to-reel splicing tabs — 68p; reel-to-reel tape clips (20) — £1.16; reel-to-reel tape splicing block — £2.00; complete cassette care kit — £4.70; complete reel-to-reel tape care kit — £10.28.

■ BIB

Bib Hi-Fi Accessories Ltd,
Kelsey House, Wood Lane End,
Hemel Hempstead, Herts HP2 4RQ.
Tel: Hemel Hempstead (0442) 61291.

Ref. J. Compact Tape and Cleaning Kit

Price: £1.35 (inc. VAT).

Ref. 78. Cassette Fast Hand Winder*

Very simple and easy to use, it winds a C90 cassette in 60 seconds. Saves batteries. Price: £1.40 (inc. VAT).

Ref. 51A. Cassette Care Kit*

Contains: head cleaner, salvage cassette and re-

TAPE ACCESSORIES



Bib Ref 76 cassette fast hand winder



Bib cassette care kit

record kit, editing and joining kit. Price: £4.79 (inc. VAT).

Ref. 31. Cassette Head Cleaner

Price: 79p (inc. VAT).

34 Cassette Case

High quality black padded PVC case, with carrying handle. For 12 cassettes. Price: £2.68 (inc. VAT).

Ref. 83. Cassette Title and Container Labels

Contains 20 cassette body labels and 10 library container edge labels. Price: 58p per pack (inc. VAT).

Ref. 30A. Cassette Tape Splicer

For use with 1/8in. (3.2mm) tape. With full instructions. Price: £1.58 (inc. VAT).

Ref. 37. Luxury Cassette Carrying Case

Fitted with a moulded inner tray to hold 30 cassettes in their containers for easy selection. Covered in a simulated pig-skin PVC with carrying handle. Approximate size: 15in. long × 8-1/8in. wide × 3/4in. high. Price: £5.18 (inc. VAT).

Ref. 62. Cassette Head Cleaner

Essential for regular cleaning of tape heads, capstan and roller. Pack contains blue tape head applicator and white tape head polisher tools, bottle of special formula cleaning fluid and full instructions. Price: 77p (inc. VAT).

Ref. 90. Tape Head Demagnetizer*

Suitable for cassette, cartridge or reel-to-reel machines. Attractively styled and simple to use. Designed for 240V 50 cycle operation. B.S.I. approved. Price: £6.48 (inc. VAT).

Ref. 93. Combined Cassette Head Cleaner/Demagnetizer

Cleans and demagnetizes tape heads in one simple operation. Price: £2.93 (inc. VAT).

Ref. 98. Cassette Editing and Splicing Kit*

Contains tape splicer, tape cutters, tape piercer, reel of splicing tape and tape winder/remover. Neatly packed in hinged box complete with full instructions. Price: £2.70 (inc. VAT).

Ref. 99. Universal Tape Head Maintenance Kit*

Features a unique cleaning tool with inter-



BIB tape head demagnetizer

*Indicates entry is illustrated



Bib Ref 98 cassette editing kit



Bib Ref 99 universal tape head maintenance kit

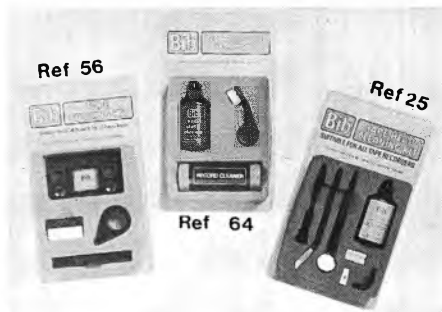
changeable parts allowing access to heads of all cassette, cartridge or reel to reel machines. Kit also includes cleaning and polishing pads, anti-static cleaning liquid, cleaning brush, cleaning cloth and inspection mirror. Price: £2.70 (inc. VAT).

Ref. 25. Tape Head Cleaning Kit

Suitable for all makes of tape recorders. Features the patented BIB multi-angled head cleaning tool, cleaning brush, inspection mirror, tape head cleaning fluid and 8 spare cleaning pads. Price: £1.99 (inc. VAT).

Ref. 56. Universal Splicing Kit*

Suitable for cassette and 1/4 in. tape. Comprising patented BIB cassette tape splicer, on which diagonal and butt joints can be made. Splicing tape on dispenser, tape cutter with handle and adapter for 1/4 in. tape. Price: £2.31 (inc. VAT).



Bib accessories

■ B and J IMPORTS

66 Woodcock Hill, Kenton,
Harrow HA3 0JF.
Tel: 01-907 6667.

Stereo stamps

Small rubber stamp enabling tape recording enthusiasts who record in stereo to label their tapes making them easily identifiable. Price: 50p including postage.

■ CADULAC CHEMICALS LTD

Old Baston Trading Estate, Penny Lane,
Haydock, St Helens,
Merseyside WA11 9SG.
Tel: 0942 75311.

Rocket WD40

Tape head cleaner. Price: £1.10 for 6oz. size, £1.85 for 13 1/2 oz.

■ CAMBRA INTERNATIONAL LTD

260 Church Road, Leyton, London E10 7JQ.
Tel: 01-556 1916.

No. 29*

Cassette tray holding 36 cassettes in individual divisions. Free standing or wall mounted in attractive smoke finish. Provides easy access and product identification.

Music Mobile Model 111

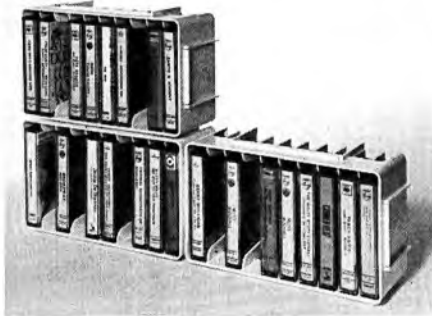
Record and cassette storage unit holding 150 LP records and 69 cassettes in individual divisions. Extra area for small accessories. Fitted castors and translucent hinged lift-off lid. Packed in knockdown form.

Stakotape storage units*

Each individual unit holds ten cassettes or eight cartridges. Free standing or wall mounted. Interlocking horizontally and vertically and available in five attractive colours: orange,



Cambra 29 cassette tray



Cambra cassette stakotape

white, black, smoked, brown. Many other cases and cabinets to hold both records and cassettes. Details on request.

Model 56 Cassette Caddy

Holds up to 56 cassettes without library boxes or 40 in library boxes. Hinged, translucent smoked finish sides for easy title identification.

■ **CONDOR**

Condor Electronics Ltd,
100 Coombe Lane,
London SW20 0AY.
Tel: 01-946 0033..

C105 Cassette Head Cleaner

Cleaning tape packed in rugged library case and presented in a dispenser carton for retailers. Price: 62p (plus VAT).

C107 Tape Editing and Care System

Custom styled storage case holding splicing block, splicing tape 1/4 x 1/8in, cutters, cassette



Condor Cassette Care Pack

head cleaner, polishing stick and fluid. Price: £3.25 (plus VAT).

C110 Splicing Block

Professional splicing block accurately machined for 1/4in. and cassette tape widths. Features 45 deg and 90 deg cutting guides, non-slip base. Complete on blister card with cutting blade. Price: £1.50 (plus VAT).

C115 Cassette Care Pack*

Comprises cassette head cleaner, tape stick, 30cc bottle of tape and capstan cleaning fluid. Price: £1.20 (plus VAT).

C118 Tape Head and Capstan Cleaning Kit

30cc bottle tape head and capstan cleaning fluid, plus cleaning and polishing tape head stick. Price: 75p (plus VAT).

C209 Head Cleaner Demagnetizer

For cassettes. Price: £4.15 (plus VAT).

C210 Head Cleaner Demagnetizer

For reel-to-reel. Price: £3.55 (plus VAT).

■ **EAGLE**

Eagle International, Precision Centre,
Heather Park Drive, Wembley HA0 1SU.
Tel: 01-902 8832.

TD79 Tape Head Demagnetizer

250V AC mains operation. Price: £3.65 (plus VAT).

TD 83*

Cassette head demagnetizer. 24V AC operation, suitable for compact cassette recorders and players. Price: £4.75 (plus VAT).

*Indicates entry is illustrated



Eagle TD 83 tape head demagnetiser

■ ELECTROLUBE

QED Audio Products Ltd,
112 Windmill Road, Sunbury-on-Thames,
Middlesex TW15 7HD.
Tel: Sunbury (093 27) 87344.

Type EL/1 Tape Clean

A special safety solvent for cleaning recording heads and other delicate parts of sound and video recorders, Tape Clean dries rapidly and leaves a perfectly clean surface. Price: £2.06/can.

■ EMI

EMI Tape Ltd,
Tape House, Dawley Road,
Hayes, Middlesex.
Tel: Tel: 01-573 3888.

Cassette Maintenance Kit

Comprising head cleaner, head cleaning fluid, inspection mirror, lint-free cloth, cotton buds.

Cassette Editing Kits

Including splicing block, splicing tape, razor blades, leader tape. All in special library case.

Cassette Head Cleaner

Prevents build-up of oxide debris.

Cassette Head Cleaning Fluid

For cleaning magnetic heads, pinch roller and capstan assemblies.

Cassette Library Cases

Each pack contains two library cases.

Open Reel Editing Block

Accurately machined to splice ¼in. tape to professional standards.

Open Reel Splicing Tape

¼in. splicing tape. Easy-to-use self-adhesive.

Open Reel Leader Tape

Both red and green in twin pack.

■ FERROGRAPH

North East Audio Ltd,
Simonside Works, South Shields,
Tyne and Wear NE34 9NX.
Tel: South Shields (0632) 566321.

Defluxer

For depolarising heads, capstans and guides. Ensures maximum signal/noise ratio. Prevents hiss and protects tapes from cumulative background noise. Price: £11.00 (plus VAT).

Carrying Case for Tape Recorders

Waterproof canvas case with zip fastener. Price: on application. Please quote model.

Endless Loop Cassette

Permits ferrogaphs to be operated continuously on an endless loop of 8 min duration at 7½in. Price: £18.00 (plus VAT).

Ferrotape Spools

Aluminium, anodised grey. Prices: 7in. £2.67 (plus VAT); 8¼in. £3.67 (plus VAT). In library boxes: 7in. £3.07; 8¼in. £4.07; 10in. £5.33 (plus VAT).

NAB Adaptor

Converts cine centred spool carrier to NAB centred. Price: £6.67 (plus VAT).

Remote Control Unit

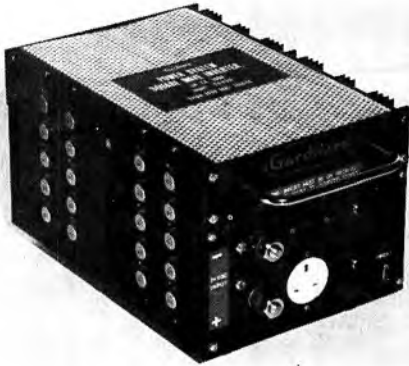
Duplicates main operating controls for Logic 7 recorders: run, pause, record/cancel, wind/reverse, stop. Price: £40.00 (plus VAT).

Dust Cover

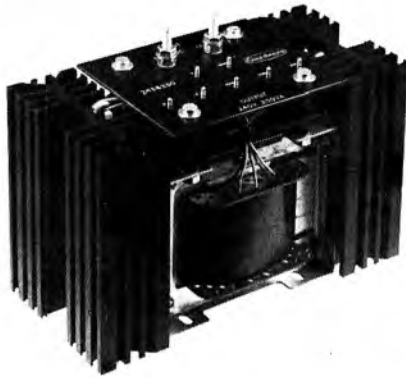
Rigid transparent cover to protect recorders. Price: Series 7 £18.00 (plus VAT). Super 8 and Logic 7 £20.00 (plus VAT); PC4-Nene 102, 103 £8.00 (plus VAT).

■ GARDNERS TRANSFORMERS LTD

Christchurch, Dorset BH23 3PN.
Tel: Christchurch (020 15) 2284.



Gardners Invertor



Gardners Invertamod

Invertamod Inverters*

The Invertamod range provides 220 or 240V C 50Hz and has been designed with economy, reliability, flexibility and efficiency as basic features.

Input, either 12, 24 or 50Vdc (nominal). Output frequency, 45Hz to 400Hz (pre-settable). Rating from 50W to 4000W. Overload capability 150% full load. Protection, short circuit and reverse polarity. Operating temperature range 0 to 50°C. Load regulation better than 10%. The unit can also be fitted with an automatic changeover unit to switch from mains to battery in the event of mains failure. Full specification sheet on request. Prices: on application.

■ **KELSONICS**

Kelsonics Ltd, Kelsey House,
Wood Lane End,
Hemel Hempstead, Herts HP2 4RQ.
Tel: Hemel Hempstead (0442) 61291.

K10 Rapid-Winder*

Battery operated. Winds a C60 cassette in approx. 30 seconds. Size 4 × 3½ × 2¼in. Weight: 1lb. Power: 6V DC batteries. Price: £9.98 (inc. VAT).

K11 Erase-Sure*

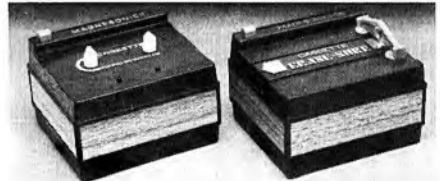
Cassette/cartridge erasing unit totally self-contained. Will instantaneously erase previous recordings. Just pass the tape slowly across Erase-Sure erasing field and it becomes clean and silent. Dimensions: 4 × 3½ × 2¼in. Weight: 1lb. Power: AA or HP7 batteries. Price: £9.98 (inc. VAT).

K26 Tape Head and Pinch Roller Cleaning Pack

Contains two bottles of cleaning fluid with applicator/polishing sticks packed in plastic wallet. One fluid is for use of tape heads, the other for the pinch roller. Both are suitable for all types of cassette or reel machines. Price: £2.48 (inc. VAT).

K9 Cassette Cabinet

Finished in simulated teak with insert for 40 cassettes. Two smoked acrylic sliding doors allow easy access and cabinet can be used either free-standing or wall mounted. Price: £11.49 (inc. VAT).



Kelsonics K10 and K11



Kelsonics K26

*Indicates entry is illustrated

K2 Cassette Head Cleaner

Price: 88p (inc. VAT).

K13 Cassette Case

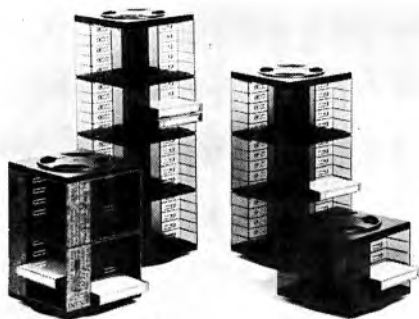
For thirty. Price: £5.18 (inc. VAT).

K27 Tape Head Cleaning Fluid

300ml. Price: £4.99 (inc. VAT).

K24 Cassette Head Cleaner*

Special cleaning cloth incorporated in cassette effectively cleans tape heads in one quick operation. Simply use in play position. Price: 65p (inc. VAT).



Knowin Carousel collection

■ KNOWIN

Knowin (UK) Ltd,
Knowin House, 37 Churchill Way,
Fleckney, Leicestershire LE8 0UD.
Tel: Leicester (0533) 403331.

Archifix Boxes

New system of filing records and cassettes in a space saving and clear way. Cassette boxes measure 34 × 32 × 8cm. and are available in a variety of colours.

Archi-Box 17cm

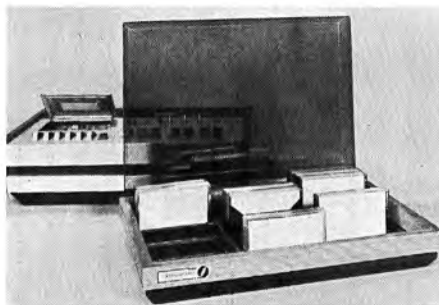
'L' Racks. Measure 20 × 10 × 11cm. in Polystyrol and will take 10 cassettes. Available in a variety of colours.

Cassette-Carousel*

A method of storing so that cassettes can be easily seen and selected. Several units form a space saving cassette library in colours to suit modern tastes.

Profile*

Cassette box for 36 cassettes.



Knowin Profile 36 cassette box

■ LEDA

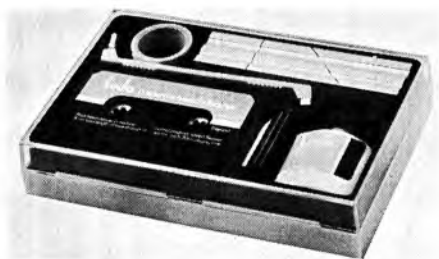
Leda Audio Accessories Ltd,
7 Thane Works, Thane Villas,
London N7 7NU.
Tel: 01-607 1107/8.

LA 31 Supa Care Pack 2*

Custom styled storage case holding splicing block, splicing tape, cutters, cassette head cleaner, polishing stick and fluid. Everything permanently stored for the cassette enthusiast.

LA 40 Hi-Fi Care Compendium*

Including self tracking cleaning arm, disc wipe, cassette head cleaner, cloths, brushes and fluids. In large presentation pack.



Leda LA 31 Supa Care Pack



Selection of Leda Hi-Fi care kits

■ **LYRICHORDS**

N Miers & Co Ltd, 28 Piercing Hill,
Theydon Bois, near Epping,
Essex CM16 7LE.
Tel: 037-881 2611.

Tape Accessories

8-track cartridge demonstration and test tape £2.48 (plus VAT); 8-track cartridge tape head cleaner £1.10 (plus VAT); tape head cleaning kit for reel-to-reel and cassette recorders 90p (plus VAT); 1/8in. cassette splicing and editing kit £1.99 (plus VAT); cassette salvage kit 48p (plus VAT); universal modification kit £1.50 (plus VAT).

■ **MEMOREX**

Memorex UK Ltd,
Hounslow House,
730 London Road, Hounslow, Middlesex.

Tape Cleaner

Price: £1.16.

■ **METROSOUND**

Metrosound Audio Products Ltd,
Freedex House, 4-10 North Road,
London N7 9HN.
Tel: 01-607 8141.

M.4 Klenztape kit

Patented head cleaner. Kit comprises ribbed cleaning tape, two special spools and bottle of Klenztape fluid. Price: £1.35 (inc. VAT).



Metrosound cassette salvage kit

M.17 Metro-Splicing Block

Professional precision metal splicing block for 1/4in. tape, supplied with non-magnetic cutter blade. Price: £1.36 (inc. VAT).

M.18 Leader tapes

Choice of six colours, approximately 40ft of leader tape, wound on to plastic mini-spool. Price: 56p (inc. VAT).

M.19 Stop foil

Metallic tape for actuating electronic auto stop mechanisms for tape recorders. Approximately 15ft on mini-spool. Price: £1.13 (inc. VAT).

M.20 Jointing tape

1/4in. wide, approximately 12ft on mini-spool. Price: 56p (inc. VAT).

M69 Cassette Edit Kit

Presented in permanent storage case containing professional machined splicing block, roll leader tape, roll splicing tape and two splicing cutters. Price: £2.10 (inc. VAT).

M.71 Cassette Deck Care Kit

Presented in special purpose permanent storage case containing head cleaner, cassette head cleaning spatula with brush and velvet polisher, cassette head cleaning fluid, multi-purpose duster and spare spatula velvets. Price: £2.48 (inc. VAT).

M.32 Head Cleaner Cassette

Complete cassette conforming to international specification; loaded with silicone impregnated, non-abrasive, fibrous tape; contained in plastic library case. Price: 83p (inc. VAT).

M.39 Cartridge Head and Capstan Cleaner

8-track cartridge moulding containing fluid tank with soft felt pad activated by sprung lever in rear cavity. Bottle of specially formulated cleaning fluid and nylon tuft brush for cleaning pad. Price: £1.94 (inc. VAT).

M.62 Cassette Salvage Kit*

Kit contains one complete compact cassette splicing block, editabs, hub key and cutter to facilitate easy and economical repair of damaged cassettes. Price: £1.08 (inc. VAT).

■ **MUSONIC**

S & B Trading, 34-38 Verulam Road,
St Albans, Herts AL3 4DF.
Tel: St. Albans (0727) 50611.

MT5

Cassette cleaner in library box. Price: 76p (plus VAT).

*Indicates entry is illustrated

MT6

Cartridge head cleaner. Price: £1.11 (plus VAT).

MT7

Cartridge head and capstan cleaner. Price: £1.67 (plus VAT).

MT12*

Cassette storage. Each module holds 8 cassettes and can be interlocked in a variety of ways. Price: 97p (plus VAT).

MT13

Add 'n' stac for 6 cartridges. Price: £1.17 (plus VAT).

MT16

Empty cassette library box. Price: 16p (plus VAT).

M18

Cassette cleaner without library box. Price: 61p (plus VAT).

MT20*

Pack of 10 spare cassette index cards. Price: 37p (plus VAT).

MT24

30mins. cassette in postal pack. Price: 81p (plus VAT).

MT25*

Tape cleaning head kit. Cleaning tool, fluid; can be used as a jointing block. Price: 76p (plus VAT).

MT26

Cassette tape splicing block. Price: £1.07 (plus VAT).

■ **NEAL**

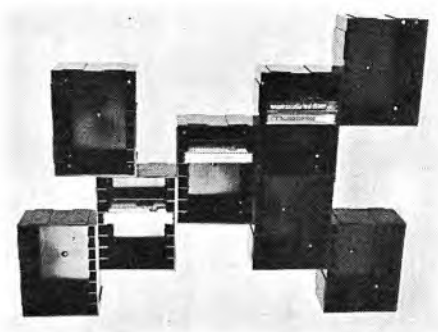
North East Audio Ltd,
Simonside Works, South Shields,
Tyne and Wear NE34 9NX.
Tel: South Shields (0632) 566321.

Remote Control Unit 300

Duplicates main operating controls for 302, 330, 340 cassette recorders. Fast forward, rewind, play, stop, record. Price: £26.67 (plus VAT).

Wood Side Panels

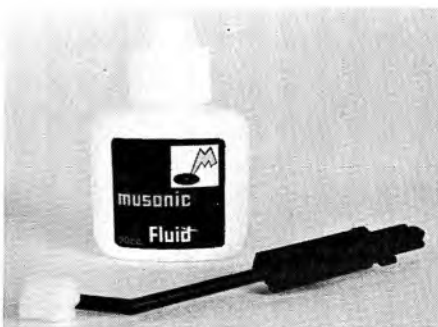
Real wood end checks for 302, 330, 340. Price: walnut £12.00 (plus VAT). Teak £900 (plus VAT).



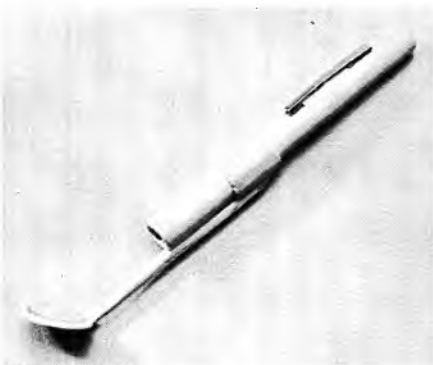
Musonic cassette storage MT12



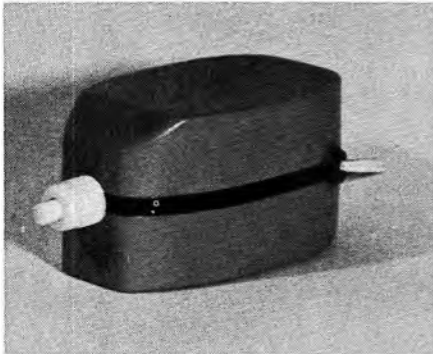
Musonic MT20



Musonic MT25



Nion checklite



Osmabet bulk eraser

■ **NION**

RTB Ltd,
17 Verran Road, Camberley,
Surrey.
Tel: Camberley (0276 20572).

Checklite*

High quality mirror illuminated to enable the user to inspect tape heads with the minimum of effort. Power pack is specially constructed to minimise battery leakage and is powered by a sealed cell with an approx life of two years. Price: £3.30 (inc. VAT).

■ **OSMABET**

Osmabet Ltd, 46 Kenilworth Road,
Edgware HA8 8YG.
Tel: 01-958 9314.

Bulk Tape Eraser and Recording Head Demagnetizer*

Operates from AC mains to provide rapid and complete erasure of tapes and cassettes prior to making quality recordings. In addition, the eraser can be used for the instant removal of

residual magnetisation of recording heads, in the majority of cases without the removal of recording head protective covering. Is suitable for all sizes of tape reels or cassettes. Price: £5.50 (plus VAT).

■ **OAS**

Quality Audio Supplies, Wollaton Road,
Beeston, Nottingham NG9 2PB.
Tel: Nottingham (0602) 252222.

Wide range of audio accessories, including phono plugs, DIN plugs and sockets, 4mm and wander plugs, couplers, screw terminals, slider switches, connecting leads with all types of terminations, audio switching units. New additions to the range are screw fixing blank cassettes, cassette head cleaners and dynamic microphones. All items individually blister-packed for over the counter or self-service sales.

Tape Selector

Designed to permit two tape recorders to record and play back without being disconnected from the amplifier. Size: 5½ × 1¼ × 2¼in. Finish: brushed aluminium. Price: £6.75 (plus VAT).

AC/DC Adaptor

220/240V mains AC to 6V, 7.5V or 9V DC. Polarity change switch neon on/off mains switch manufactured to RS 415 and ideal for powering tape recorders, calculators, transistor radios, etc.

■ **PHILIPS**

Philips Electronics and Associated Industries Ltd, 604 Purley Way, Croydon CR9 4DR.
Tel: 01-686 0505.

Head Cleaning Cassette 811/CCT*

It is inevitable that the slight friction between tape and tape-heads/guides should grind small amounts of material off the tape and certain low quality types are more prone to this problem than others. Particles adhere to heads reducing tape contact degrading both recording and playback. Normally the head cleaning cassette can cope but where build-up becomes excessive, cleaning with alcohol is necessary. Price: on application.

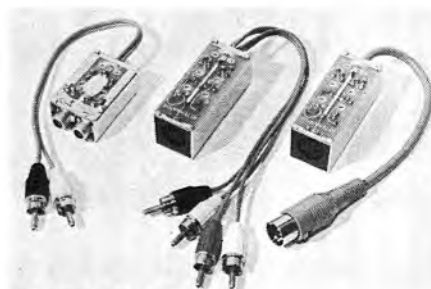
■ **QED**

QED Audio Products Ltd,
112 Windmill Road,
Sunbury-on-Thames, Middlesex TW16 7HD.
Tel: Sunbury 87344/5..

*Indicates entry is illustrated



Philips head cleaning cassette



QED 14/1, 14/2, 14/3



QED tape switching unit 22/1

Type 14/1 Variable Attenuator*

When connecting various pieces of Hi-Fi equipment, it is sometimes necessary to attenuate the input or output to avoid overload. This attenuator is designed to overcome the problem by providing four adjustable level controls that can be 'set' in minutes. The device is connected in series with the audio lead. DIN to 4 phono. Price: £5.46 (plus VAT).

Type 14/2 Variable Attenuator*

As above except DIN to DIN. Price: £4.90 (plus VAT).

Type 22/1 Tape Switching Unit (2-way)*

New slim line unit suitable for connecting and controlling up to two tape decks. Built-in 'compatibility controls' to allow any matching between decks. Rocker switch operation. Price: £13.00 (plus VAT).

Type 14/3 Variable Attenuator*

Similar to 14/1 except Phono to Phono. Price: £5.82 (plus VAT).

Type 23/1 Tape Switching Unit (3-way)*

Similar to 22/1 but for up to three tape decks. Fitted with DIN sockets. Size: 155 x 43 x 94mm control surface. Height: 33mm. Price: £16.88 (plus VAT).



QED 23/1, 23/2 tape switching unit

Type 23/2 Tape Switching Unit (3-way)*

Same as 23/1 but with phono sockets. Price: £22.67.

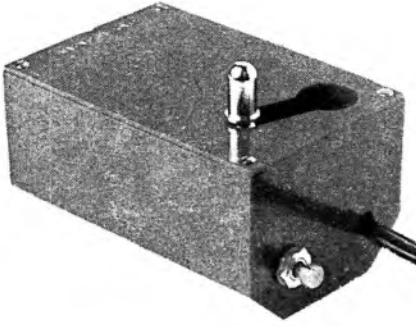
■ REVOX

F. W. O. Bauch Ltd, 49 Theobald Street, Borehamwood, Herts. WD6 4RZ.
Tel: 01-953 0091.

Slide Synchronizer

For use with automatic projectors. Switching

TAPE ACCESSORIES



Ross RE537K

pulses are recorded on the second track while tape remains laced in its normal path. For A77. Price: £91.44 (plus VAT).

Remote Control

For A77 controls all operating modes. May be used in conjunction with electric timers. Price: £31.68 (plus VAT). For G36 start-stop only. Price: £13.25 (plus VAT). A77 control with three position thumb-switch for play/stop/ repeat. Price: on application.

Empty Reels

7in. dia. with slotted driving hole as per cine spec, made of anodised aluminium. 10.5in. dia. with NAB hole made of anodised aluminium.

Library Boxes

Made of high-impact plastic. Lid hinges to one side allowing easy removal of stored tape reel. Several boxes may be assembled to form a practical storage unit.

Tape Cutting and Splicing Block

May be installed directly over sound heads in place of head cover. For lateral or diagonal cutting, permitting use of wide or narrow splicing tape. Price: £4.26 (plus VAT).

Cleaning Kit

Special liquid and tools for keeping recorder and tape heads in perfect condition. Price: £1.80 (plus VAT).

Cutter Set

For splicing and editing operations. Consists of 1 splicing block, 1 antimagnetic scissors, splicing tabs, 1 grease pencil — all in handy case. Price: £8.10.

Remote Control

For B77, controls all tape transport functions and set/record facilities for slide synchronisation. Built-in off/play/record switch for use with electric timers. Price: £78.48 (plus VAT).

Varispeed Control

For B77, coarse and fine control of tape speed. The unit gives a speed variation from 2.5 to 11 i/s. Price: £61.20 (plus VAT).

■ ROSS ELECTRONICS LTD

323 Rathbone Place, London W1P 1AD.
Tel: 01-580 7112.

Cassette Head Cleaner

Lint-free cleaning tape in a compact cassette package removes oxide residue and dirt from record and erase heads. Price: 48p (plus VAT).



Ross RE634



Ross RE464 car cassette care kit

*Indicates entry is illustrated

RE527K Tape Head Demagnetizer

Removes gradual build-up of residual magnetism from tape heads by briefly applying tip to heads in cassette and reel-to-reel recorders. Operates from mains supply. Totally enclosed and insulated. Price: £3.48 (plus VAT).

RE528K

Construction and operation similar to RE-527K but equipped with specially shaped pole piece designed to reach into cassette recorder head without dismantling case parts. Price: £3.90 (plus VAT).

RE537K*

Bulk tape eraser for cassettes, 8-track cartridges and open reel tape up to 7in. diameter. Totally enclosed in a tough plastic case with foldaway reel spindle. For 230/250 volts AC operation. Price: £11.50 (plus VAT).

RE632

Cassette head care kit. Comprises: special cleaner to prevent build-up of cassette head deposits. Price: £1.12 (plus VAT).

RE634*

Cassette editing and salvage kit, providing practical and economical repair of valuable cassette recordings, plus editing facility. Kit comprises: 5-screw fixing replacement cassette case, leader and splicing tape, splicing block and two cutters. Price: £2.80 (plus VAT).



Scotch editing and repair kit

RE464*

Designed to facilitate servicing of in-car cassette player mechanisms. Kit contains: miniature torch with angled lens, dental mirror with universal joint to view tape head condition, cleaning tool with detachable straight or angled brush, cassette head cleaner, cleaning fluid and spare brush. In plastic storage case with 2-part Velcro strips for simple in-car fixing. Price: £4.10 (plus VAT).

■ SCOTCH

3M United Kingdom Ltd, 3M House, PO Box 1, Bracknell, Berks. Tel: Bracknell (0344) 58357.

Editing and Repair Kit*

Splicing block with adhesive-tipped polyester strips. Splicing is simplified by means of tabs and cutting guides which can give professional finish. Price: on application.

■ SONY

Sony (UK) Ltd, London Showroom, Consumer Information Service, 134 Regent Street, London W1R 6DJ. Tel: 01-439 3874.

SB200*

The SB200 is a SOS and echo adaptor for three head stereo tape recorders which have an independent channel monitoring facility. It provides a simulated echo effect or a full sound on sound facility. This enables you, for example, to record a guitar backing on one track and then playback the guitar recording and while monitoring this through headphones, to add a piano melody, both then being recorded on the other track. This process can be repeated adding different instruments, each time transferring the recording from track to track. Price: on application.

SB300*

SB300 is a tape deck selector, which will be invaluable to anyone possessing more than one tape recorder but with insufficient tape inputs and outputs on his amplifier. The SB300 permits up to 3 tape recorders to be connected to a standard amplifier. Simply by selecting the appropriate buttons it is possible to record, and playback using any desired combinations of your units. Full A-B, monitoring is possible from all recorders providing the amplifier is equipped with a tape monitor switch. Price: on application.

Tape Amplifiers and Mixer Units

*Indicates entry is illustrated

Abbreviations used in this section are given on page 5.

■ ADASTRA

Adastra Electronics Ltd, Unit N22, Cricklewood Trading Estate, Claremont Road, London NW2 1TU.
Tel: 01-452 6288/9.

M103

Transistor stereo/mono microphone mixer. Power supply: 9V. Two stereo channels (with independent gain controls) or four mono channels. Input jack sockets, output phono sockets. Mono/stereo mode switch. On/off switch. Input impedance: 100K. Max input signal: 1V. Gain: 3dB. Free-standing case. Price: £14.00 (plus VAT).

M101

Transistor mono microphone mixer. Power supply: 9V. Four channels with individual gain controls. Input jack sockets, output phono sockets. Input impedance: 100K. Max input signal: 1V. Gain: 3dB. Free-standing case. Price: £9.00 (plus VAT).

M104

Six-channel stereo mixer/amplifier. Enables multiple combinations of high and low impedance microphones, pickup cartridges and other signal sources to be controlled by slider type gain controls. Low-noise transistor circuit. Special RIAA 50K socket. Power supply: internal battery. Weight: 3¼lb. Price: £57.00 (plus VAT).

■ EAGLE

Eagle International, Precision Centre, Heather Park Drive, Wembley HA0 1SU.
Tel: 01-902 8832.

PRE 38

Tape or microphone booster pre-amplifier for increasing record/playback signals from/to amplifier. Inputs and outputs are phono sockets. Variable output. Price: £10.95 (plus VAT).

GD 580

7in/2 out stereo mixer with built-in headphone amplifier, studio type slider controls and lever cue controls. Inputs: two stereo PU's 3mV 47K, aux 200mV 100K, microphone (mono mixes across both channels). Cross fade control between turntables, 'talkover' switch, low filter. Headphone level control. Power supply: 240 AC. Suitable for console mounting or free-standing (wooden end checks available extra). Size: 26 × 12 × 19cm. Price: £64.00 (plus VAT).

GM 560

6 in/2 out stereo microphone mixer, studio type slider controls. Power supply: 240V AC. (Available also in battery-operated form, model GM 450). Suitable for console mounting or free-standing (wooden end checks available extra). Size: 26 × 12 × 19cm. Price: £55.00 (plus VAT).

GM 540

4 in/1 out mono microphone mixer, studio type slider controls. Power supply: 240V AC. (Available also in battery-operated form, model GM 430). Suitable for console mounting or free-standing (wooden end checks available extra). Size: 26 × 12 × 19cm. Price: £52.00 (plus VAT).

GH 520

Graphic equaliser with slider controls at 60Hz, 240Hz, 1kHz, 3.5Hz and 10kHz. Defeat switch. Inputs for two turntables, auxiliary and microphone (mono). Two 'high' level outputs, one 'low' level output. Power supply: 240V AC. Wooden end checks available extra. Size: 26 × 12 × 19cm. Price: £59.00 (plus VAT).

■ MINIMIXER

Allen and Heath Ltd, Pembroke House, Campsbourne Road, London N8.
Tel: 01-340 3291.

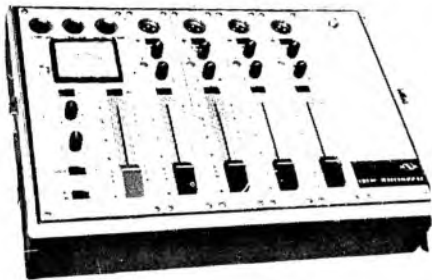
Minimixer*

Six channel stereo mixer with dual line return. Mechanical double sided printed circuit board with board mounting components used throughout. Matt black stoved steel case. Size: 22.3 × 29.8 × 3.8cm. Input sensitivity: continuously variable from better than -50dB at 100K with accessory transformer better than

*Indicates entry is illustrated



Allen and Heath minimixer



Sennheiser M101

—72dB at 200 ohms. Input: better than —122dB at 200 ohms. Output level: 0dBm (0.775V) at 500 ohms. Headroom: +14dB. Output noise better than —68dBm. Linereturn: 2 inputs feeding left and right buses. Variable from —10dB at 8K. Bass and treble control as per input channels. FR: 30Hz-15kHz. Distortion: less than 0.2%. Price: miniature mixer £185.00, inc Power supply 24VDC. (plus VAT).

SD 12—2 Stereo mixing console

Semi-modular construction. Format: 12 into 2 + 1 + 1. Output: programme, foldback, echo send. Headphones: 500mW per channels into 8 ohms. Input sensitivity: —61dB for +4dBm programme output. FR: 40Hz-20kHz ± 1.5 dBmic, 20Hz-20kHz ± 1.5 dB line. Noise: equiv input noise at full gain —124dB. Output noise at full gain —60dB. Input attenuation: 0-60dB continuously variable. Input clipping level: mic level—not possible under normal conditions; line level ± 15 dBm. Distortion: mic in less than 0.4%, line in less than 0.05%. Equalisation: ± 12 dB at 12kHz, 2.6kHz, 700Hz, 150Hz. Input impedance: mix 1K at 40dB gain; line 50K bridging, echo 10K. Output impedance: less than 100 ohms, rec load imp 600 ohms or greater. Dimensions: 10.9 x 52.5 x 71.2cm.

S6-2

Designed for production of tape collages for radio, TV and films. Ideal for DJ's, broadcasting units and production companies. Details on application.

■ SENNHEISER ELECTRONIC

Distributors: Hayden Laboratories Ltd, Hayden House, Churchfield Road, Chalfont St. Peter SL9 9EW. Tel: Gerrards Cross (49) 88447.

Audio equipment showroom service department and despatch department: 6 Bendall Mews, Bell Street, London NW1.

M101*

Battery operated portable mixer. Inputs: four microphone inputs switchable for 200 ohm dynamic and AB powered capacitor (mics). Output: unbalanced +6dB at 60 ohms. Prefade listening using ML101 mixer monitoring unit. PPM. Slider-type faders. Separate bass and treble controls switchable to channel four or to mixer output. Treble control: ± 12 dB at 15kHz, bass control +10dB —14dB at 40Hz. Power supply: two 9V EverReady cells type 276 or equivalent, or 18V from other equipment. Price: on application.

■ SHURE ELECTRONICS LTD

Eccleston Road, Maidstone, Kent ME15 6AU. Tel: Maidstone (0622) 59881.

M68FCE

Five-channel mono mixer/pre-amplifier to accept dynamic, ribbon or condenser low impedance balanced or high impedance unbalanced plus one auxiliary high level input. Controls: five input volume controls plus master volume control which adjusts level of all inputs. Outputs: high or low impedance microphone level and high level auxiliary output. Mains or external battery powered: $2\frac{3}{4} \times 11\text{-}3/8 \times 5\frac{1}{2}$ in. Price: £82.08 (plus VAT).

■ SONY (UK) LTD

London Showroom, Consumer Information Service, 134 Regent Street, London W1R 6DJ. Tel: 01-439 3874.

MX8

Passive six-channel stereo mixer for microphone or line inputs. Inputs: six-channel inputs (passive type). Impedance: Mic low. Sensitivity: —50dB (2.1mV). Impedance: Line 82K. Sensitivity: —5dB (435mV). Output

impedance: line 280 ohms. Output level: —60dB (0.775mV). General: Dimensions (approx.): 23.8 × 7.6 × 14.8cm including projecting parts. Weight (approx.): 3lb 2oz (1.4kg). Supplied accessories: 2 × PCI plug adaptor.

■ **UHER**

24 Market Place, Falloden Way,
London NW11.
Tel: 01-455 1771/01-458 8491.

A124

Portable mixer unit for five channels: two stereo plus one mono or five mono channels. Inputs available for 200 ohms microphone, radio or pickup. Outputs: one 40mV nominal, one 500mV nominal. FR: 20Hz-20kHz. Slider faders with directional control, muting switches and 1kHz generator. Powered by PP3 battery or Z131 mains unit. Price: £89.62 (plus VAT).



PHILIPS

WE'VE IMPROVED OUR SOUND TO INCREASE YOUR VOLUME.

The new Philips K12 has the best sound system we've ever put into a television

It's a 26" set with a sound system built to DIN Hi-Fi standards.

There are separate controls for Bass, Treble, Volume and Pre-Set Volume

The amplifier pumps out 10 watts. A 2" tweeter handles the high frequencies. While a 4" Bass speaker projects the low end.

K12 combines the ultimate in sound with all our advanced picture quality and reliable technology.

Since today's consumers are getting more used to high standards of sound reproduction from Hi-Fi systems, it's only common sense to offer them a television with similar performance.

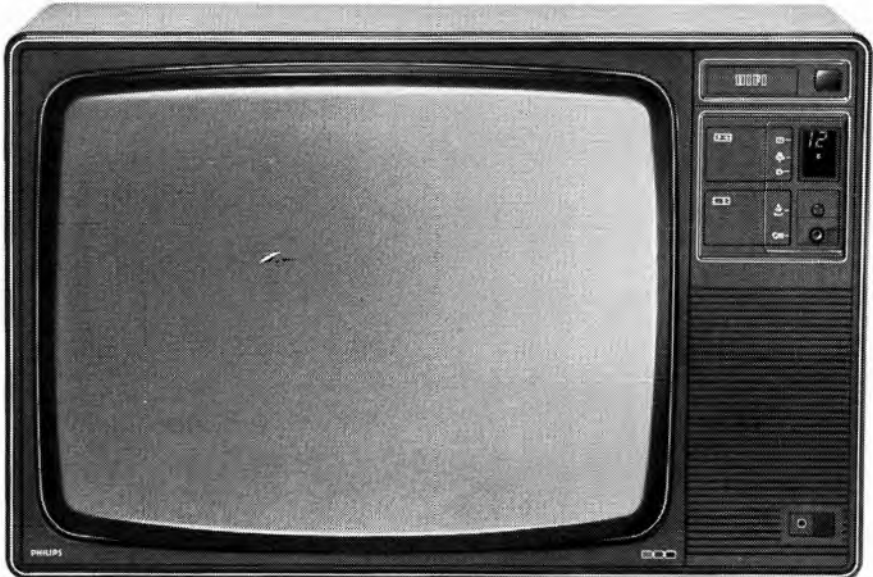
So, with all this going for you, it's obvious that stocking K12 could be the soundest investment you'll make this year.

Simply years ahead



BASS SPEAKERS REFLEX ENCLOSURE

SLIDE-IN CONTROL PANEL



PHILIPS K12. TELEVISION FOR PEOPLE WITH EARS.



Sony SB200 echo adapter



Sony SB300 tape deck selector



Sony spools

Tape Spools*

R5A empty spool 5in.; R7A empty spool 7in.; R7MB empty spool 7in. in black; R11A empty 10½in. NAB spool. Price: on application.

Recorder Cassette Accessories*

RAD 1 10½in. NAB reel adaptor; RE4 endless cassette, size 46m. BE9H cassette eraser and micro cassette cover. DP24 dust cover for TC138SD. DP25 dust cover for TC177SD.



Sony foot switch

DP27 dust cover for TC645. DP28 dust cover for TC135/136SD. DP30 dust cover for TC765/766.2 FS6 foot switch. HE3 tape head demagnetizer. Carrying cases. RM15, RM30 remote control switches. SB 200E — switch box (SOS & echo) for 3-head tape recorders. SB300 — switch box — interconnect/monitor 3 tape recorders. BP28 rechargeable battery for TC510-2; BP8 rechargeable battery for TC153SD, TC158SD, TC520CS, TC525; CK15 cassette stand designed to hold 15 tapes, hinged cases. Prices: on application.

■ TANDBERG

Tandberg (UK) Ltd, Farnell House, 81 Kirkstall Road, Leeds LS3 1HR. Tel: Leeds (0532) 35111.

Spools

Empty metal spool boxed. 7in. — £4.00; 10½in. — £7.00 (inc. VAT).

Slide Synchroniser

Model 3 can be used with any automatic slide projector and stereo tape recorder, and also with mono recorder equipped with free head output. Price: £81.00 (plus VAT).

Head Cleaning Kit

Price: £2.00 (plus VAT).

*Indicates entry is illustrated



Sony tape head demagnetiser



Sony DP20 dust cover



Sony RM30 tape deck remote control

■ TAPE RECORDER SPARES LTD

206-210 Ilderton Road, London SE15 1NS.
Tel: 01-639 7844.

Large range of spares and accessories for all makes of tape recorder. Free trade catalogue on request — nominal charge to the public.

Bulk Spares Service*

99 matching packs of 100 components covering DIN, jack, power and aerial plugs and sockets. Brochure on request.

Fuse Kits*

85 × 20mm fuse kits each containing 250 fuses of five different ratings. In partitioned plastic flip-top dispenser. Range includes Quick Blow and Anti Surge and replacement packs of 10 or 50 fuses. Brochures on request.

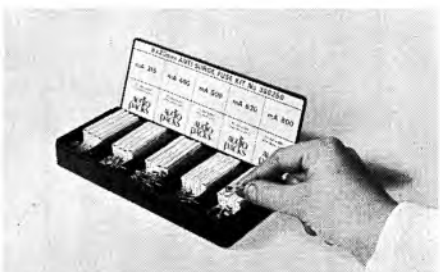


Tape Recorder Spares fuse kits

8 ¼ in. × 1 ¼ in. Fuse Kits each containing 150 fuses of five different ratings. In partitioned plastic flip-top dispenser. Range includes Quick Blow and Anti Surge and replacement packs of 10 or 30 fuses. Brochure on request.

■ TDK

TDK Tape Distributor (UK) Ltd,
Pembroke House, Wellesley Road,
Croydon, Surrey.
Tel: 01-688 7372.



Tape Recorder Spares bulk spare service



TDK audio accessories



Zeepa tape head and stylus cleaner



Weircliffe bulk eraser



Zeepa rubber cleaner/head cleaner

Accessories*

HCI, HCOIB cassette head cleaner. HCO3 TDK head cleaning kit. HDOI TDK head demagnetizer. EL 40 TDK cassette labels. EX25 TDK cassette index cards. All prices on application.

■ **WEIRCLIFFE**

Amos of Exeter Ltd, Weircliffe Court, Exwick, Exeter, Devon.
Tel: Exeter (0392) 72132.

Magnetic Tape Bulk Eraser*

Capable of erasing any saturated tape or film up to 2in. video on any tape or reel up to 14½in. dia. to a level of better than -80dB in 10-14 seconds. Price: on application.

■ **ZEEPA**

Zeepa Instruments Ltd,
15 Richmond Grove, Surbiton, Surrey.
Tel: 01-399 0966.

Tape Head and Stylus Cleaner*

Aerosol spray for cleaning both tape heads and styli. Price: £1.75 (inc. VAT).

Magnetic Head Demagnetizer*

Suitable for both 240V and 110V with built-in pilot light. Price: £9.95 (inc. VAT).

Tape Head/rubber cleaner*

Two bottles of cleaning fluid, one for tape heads and one for pinch wheels. Price: £2.95 (inc. VAT).

Total Cassette/Tape Recorder Care Kit

Containing rubber and head cleaning fluid, four angled stalks and inspection mirror. Price: £3.35 (inc. VAT).

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Tape Decks and Recorders

*Indicates entry is illustrated.

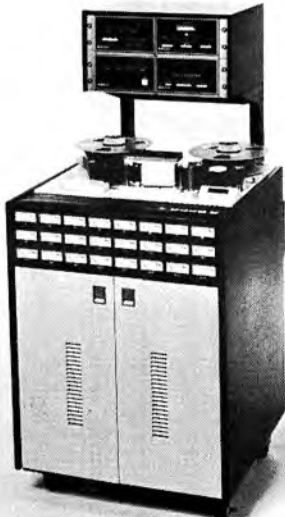
Abbreviations used in this section are given on page 5.

■ AMPEX

Ampex GB Ltd, Acre Road, Reading, Berks RG2 0QR.
Tel: Reading (0734) 85200.

MM-1200*

Professional multi-track recorder 8 track on 1in. tape, 16 or 24 tracks on 2in. tape. Tape speeds: 7½/15 ips or 15/30 ips. W and F: 0.08%. FR: 50Hz-18kHz at 30 ips, 30Hz-15kHz at 15 ips. 40Hz-15kHz at 7.5 ips, all ±2dB. Output: Nom + 4dB, Max + 27dB. S/N ratio: 8/16 tracks 64dB, 24 tracks 59dB. Bias frequency: 150kHz. Motors: 3. Heads: erase, record, play. Max. spool capacity: 16in. Dimensions: 73.6 × 68.6 × 114.3cm. Price: on application.



Ampex MM-1200



Ampex ATR-100



Ampex ATR-700

ATR-100*

Professional multi-track recorder 1 or 2 track on ¼ in. tape, 4 track on ½ in. tape. Tape speeds: 30, 15, 7½, 3½ ips. W and F: 0.1% 3½ ips, 0.05% 7 ips, 0.03% 15/30 ips. FR: 30Hz-10kHz at 3½ ips, 30Hz-15kHz at 7½ ips, 20Hz-20kHz at 15 ips, 35Hz-28kHz at 30 ips. Output: nom + 12dB. Max + 25dB into 200 ohms. S/N ratio: 81dB at 30 ips, 78dB at 15 ips, 78dB at 7½ ips, 72dB at 3½ ips. Bias frequency: 432kHz, two switched levels for each speed. Motors: 3. Heads: erase, record and play. Max spool capacity: 14in. Dimensions: 53.4 × 81.3 × 46.3cm. Price: on application.

ATR-700*

Studio recorder reproducer, ¼ in. portable.

*Indicates entry is illustrated

Tape speeds: $7\frac{1}{2}/15$ or $3\frac{3}{4}/7\frac{1}{2}$ ips. W and F: 0.08% at $7\frac{1}{2}$ ips, 0.12% at $3\frac{3}{4}$ ips. FR: 40Hz-7.5kHz at $3\frac{3}{4}$ ips, 40Hz-15kHz at $7\frac{1}{2}$ ips, 40Hz-18kHz at 15 ips. Output: nom +4dB 600 ohms, max +24dB. S/N ratio: 2 track 60dB. Bias frequency: 150kHz, three switched levels. Motors: 3. Heads: erase, record, play and optional 4th head. Max spool capacity: 10.5in. Dimensions: 54.8 x 44 x 24.6cm. Price: on application.

■ FERROGRAPH

North East Audio Ltd,
Simonside Works, South Shields,
Tyne and Wear NE34 9NX.
Tel: South Shields (0632) 566321.

Series 76: 'Logic 7'. Push-button control with electronic interlocks by logic circuits.

7602H

$\frac{1}{2}$ -track, high speed stereo tape unit, with pro-amp only. Speeds (cm/sec): 38, 19, $9\frac{1}{2}$. Max spool size: 10 $\frac{1}{2}$ in. W and F: 0.08% (38), 0.10% (19), 0.17% ($9\frac{1}{2}$). S/N ratio: better than 60dB (0.17% unweighted). FR: 30Hz-20kHz ± 2 dB (38), 30Hz-17kHz ± 2 dB (19), 40Hz-14kHz ± 3 dB ($9\frac{1}{2}$). Inputs: Mic 200 μ V-50mV, 200-1000 Ω . Line 50mV-7V at 2M Ω Mixing plus master record control. Outputs: 600 Ω 2V, low level 300mV into 10k Ω , phones—for 8-600 Ω . bass and treble controls, bias adjustable. Motors: one synchronous and two constant torque. Mains: 200-250V 50Hz AC or 117V 60Hz (suffix A). Three heads, PB multiplay, AB comparison, adjustable tape tensioning. Size: 20 $\frac{1}{4}$ x 17 $\frac{1}{2}$ x 10in. Price: £573.33 (plus VAT).

7602DH

Same specification as 7602H, but includes Dolby 'B'. Price: £680.00 (plus VAT).



Ferrogaph equipment

7622H

Same specifications as 7602H but with power amps. Speaker output up to 10W per channel into 8-16 ohms. Speaker size: 7 x 4in. Price: £659.56 (plus VAT).

7622DH*

Same specifications at 7602H but with power amps and Dolby 'B'. Speaker output up to 10W per channel into 8-16 ohms. Speaker size: 7 x 4in. Price: £766.22 (plus VAT).

7604H

$\frac{1}{4}$ -track, high speed stereo tape unit with pre-amps only. Same specifications as 7602H. Price: £573.33 (plus VAT).

7604DH

$\frac{1}{4}$ -track, high speeds stereo tape unit with Dolby 'B' and pro-amps. Same specifications as 7602H. Price: £680.00 (plus VAT).

7624H

$\frac{1}{4}$ -track, high speed stereo tape unit with power amps. Same specification as 7602H. Speaker output up to 10W per channel into 8-16 ohms. Speaker size: 7 x 4in. Price: £659.56 (plus VAT).

7624DH

$\frac{1}{4}$ -track, high speed stereo tape unit with Dolby 'B' and power amps. Same specification as 7602H. Speaker output up to 10W per channel into 8-16 ohms. Speaker size: 7 x 4in. Price: £766.22 (plus VAT).



Ferrogaph 7622DH



Grundig TS 1000/4

■ **GRUNDIG**

Grundig International Ltd,
Newlands Park, London SE26 5NQ.
Tel: 01-659 2468.

TS 945

¼-track semi-professional. Tape speeds: 3¾, 7½ ips. W and F: 0.09 and 0.05. FR: 20Hz-16,000Hz at 3¾, 20Hz-20,000Hz at 7½ ips. Outputs: 2 × 50mW/400 ohms. Dimensions: 47 × 18 × 41cm. No rec retail price.

TS 1000/4*

¼-track semi-professional. Tape speeds: 1-7/8, 3¾, 7½ ips. W and F: 0.15, 0.09, 0.05. FR: 20Hz-12,500Hz, 20Hz-16,000Hz, 20Hz-20,000Hz. Output: 22 × 50mW/400 ohms. Features: twin VU metres, facilities for trick recording, senior buttons. Dolby noise reduction. Dimensions: 54 × 20 × 50cm. No rec retail price.

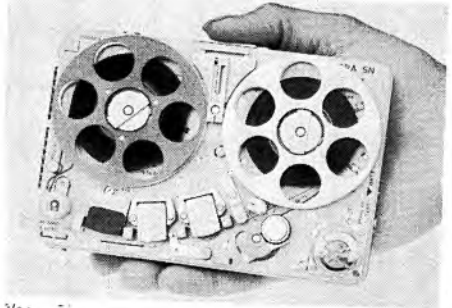
■ **NAGRA**

Hayden Laboratories Ltd,
Hayden House, Churchfield Road,
Chalfont St. Peter, Bucks SL9 9EW.
Tel: Gerrards Cross (49) 5511.

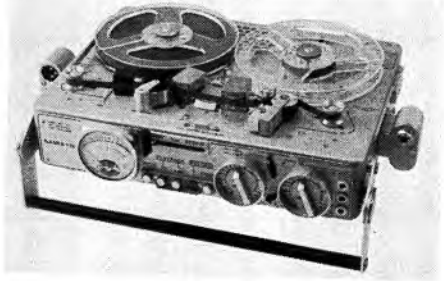
Audio equipment showroom, service department and despatch department: 6 Bendall Mews, London NW1.



Nagra 4.2



Nagra SN



Nagra IS

Model 4.2*

Professional battery-operated portable tape recorder. Speeds: 15i/s, 7½i/s, 3¾i/s. Size: 12½ × 8¾ × 4¼in. Max spool: (lid closed) 5in. (lid open) 7in. Power supply: 12 type SP2 batteries fitted internally, or external mains unit. Switchable auto-level control. Switchable input filters. Two-stage over-load filter. Modular construction. Preamplifiers to suit all types of microphones. Built-in monitoring speaker. Single DC servo-controlled motor. Monitoring headphones switchable to tape or direct. Reference tone generator. Separate record and playback amplifiers. Electro-magnetic indication of speed stability, battery level and tape jamming. W and F: 15i/s 0.05%, 7½i/s 0.07%, 3¾i/s 0.15%. Price on application.

Model 4.2L

Full-track mono version with pilotone. Inputs from two mics and line. Line output: 4.4V 600

*Indicates entry is illustrated



Nagra E

ohms. S/N ratio: —67 to —70dB depending on speed and tape. Visual pilotone indicator input level 0.5-25V. Price: on application.

Model 4.2LSP

As Model 4.2L but excluding pilot tone facility. Price: on application.

Model IV-S LSP

Stereo model with universal microphone pre-amplifiers. Output IV 600 ohms. Equalisation NAB or CCIR and special Nagra-master record equalisation. Coaxial PPM, switchable to read groove cutting depth S/N ratio: —65dB to —72dB depending on speech and tape.

Model IV-SL

As model IV-S LSP but fitted with third FM channel to permit pilot tone and cue speech recording. Price on application.

Miniature Nagra SN*

Full-track battery-operated professional mono recorder. Speeds. (model SNN-2) 3¼, 1-7/8i/s; (model SNS-2) 1-7/8, 15/16i/s. Spool capacity: 154m standard tape, 308m 12.5 micron tape. W and F: 3¼i/s ±0.1%, 1-7/8i/s ±0.15% (both to DIN 45 507). S/N ratio: 3¼i/s 603dB (ASA 'A' with tape); 1-7/8i/s 55dB (ASA 'a' with tape). FR: 80Hz-15kHz ±2dB. Replay char: CCIR. Meter level indicator. Inputs: microphone, current input from 200 ohms or greater (3µA RMS, max level 100µA RMS). Alternative line input for normal modulation level from 100 ohms source —160mV RMS. Outlets: line 600mV across 1K, headphones. One DC series commutator motor. Size: 5¼ × 4 × 1-1/8in. approximately. Price: on application.

IS*

Compact, battery operated mono portable tape recorder of modular construction equipped with two microphone inputs and switchable

input filters. DC servo-controlled motor. Monitoring headphones switchable to either tape or direct. Tape speed: 7½ ips. W and F: 0.15%. FR: 50-15,000Hz. Output power: 4.4V into 600 ohms. S/N: 68dB ASA weighted ref 320nWb/mm. Bias frequency: 120kHz. DC brush type motor. Three heads. Maximum spool capacity: 5in. Dimensions: 10¼ × 8 × 3-1/8in. Price: on application.

IS-DE

Identical to IS-D version but with universal microphone preamplifier (for dynamic and capacitor microphones), level metering switchable to modulation, super VU-meter or PV-meter, reference generator supplied as an option. Price: on application.

IS-DT

Identical to IS-DE version, but with two tape speeds, 7½ and 3¾in. A combined circuit with automatic level control and reference generator is supplied as an option. Price: on application.

IS-LT

Same as IS-DT but with pilotone. Price: on application.

E*

Low cost professional portable tape recorder. Power supply 12 HP2 batteries fitted internally, or external mains unit. Single speed mono, non-pilot only. One line input, one microphone input, microphone input switchable to accept either 200 ohms dynamic or A-B powered capacitor microphone. Single DC servo controlled motor. Built-in monitor loudspeaker. Monitor headphones switchable between tape and direct. A 3-frequency 2-level reference generator allows the adjustment of bias record gain and equalisation without need for external measuring instruments. Tape speeds: 7½ ips. W and F: ±0.1% to DIN 45507. FR: 50Hz-15kHz. Output: 0.94V for 320Wb/m. S/N ratio: 62dB ASA 'A' weighted. DC brush type motor, 3 heads. Maximum spool capacity: 5in. lid closed, 7in. lid open. Dimensions: 31.5 × 22.6 × 10.4cm. Price: on application.

■ PHILIPS

Philips Electrical Ltd, City House, 420 London Road, Croydon, Surrey. Tel: 01-689 2166.

N4512*

Open-reel tape decks with A-B monitoring. Tape speeds: 1-7/8, 3¼, 7½ ips. W and F: 0.2% at 1-7/8 ips, 0.15% at 3¼ ips, 0.1% at 7½ ips. Output: 1V. S/N ratio: 58dB at 1-7/8 ips, 50dB at 3¼ ips, 60dB at 7½ ips. Bias frequency:



Philips N4512



Philips N4515

100kHz. No chrome switching. 3DC motors; 3 long life heads. Dimensions: 41.5 x 20.5 x 42.5cm. Price: £181.50 (plus VAT).

N4515*

Open-reel tape deck with controlled pre-amp. Switchable inputs, DNL, A-B monitoring, mic/line mixing, variable wind speed, post-fade. Other details as N4512. Dimensions: 55.5 x 21 x 43cm. Price: £271.56 (plus VAT).

■ **PIONEER**

Shriro (UK) Ltd, Shriro House, The Ridgeway, Iver, Bucks SL0 9JL. Tel: Iver (0753) 652222.

RT 707*

Rack mountable 7in. open reel front loading auto reverse four track two channel with auto



Pioneer RT 707

reverse format, solenoid drive, direct switchable function, pitch control, dual capstan. Tape speeds: 19cm/s and 9.5cm/s. W and F: Less than 0.05% at 19cm/s, less than 0.08% at 9.5cm/s. FR: 20Hz-28kHz at 19cm/s, 20Hz-20kHz at 9.5cm/s. Output: line 450mV/700mV/50K. Headphones 70mV/80 ohms. S/N: more than 58dB. Distortion: less than 1% at 19cm/s. Bias frequency: 125kHz 2 by STD/LH Bias Selectors. 2 by EQ STD/LH Selectors. Motors: 3, 1 by FG AC Servo for capstan 2 by 6-pole induction motors for reel drive. 4 tape heads. Maximum spool capacity: 7in. Dimensions: 48 x 35.6 x 23cm. Price: on application.

RT 909

Rack mountable 10in. open reel, front loading, four-track, two channel with auto reverse format, solenoid drive, direct switchable function, pitch control, dual capstan, FLT counter, and meter. Tape speeds: 7½ ips, 3¾ ips. W and F: 0.04% at 7½ ips, 0.08% at 3¾ ips. FR: 20Hz-28kHz at 7½ ips, 20Hz-28kHz at 3¾ ips. Output: line 450mV-50K. S/N. ratio: 60dB. Bias-two step; equalisation: 2 step. Motors: two reel drive (AC and IFG servo capstan), -Four heads. Maximum spool capacity: 10in. Dimensions: 48 x 28.8 x 34cm. Price: on application.

■ **REVOX**

F. W. O. Bauch Ltd, 49 Theobald Street, Boreham Wood, Herts WD6 4RZ. Tel: 01-953 0091.

Series 77*

Stereo tape recorder. Tape speed: 3¼i/s and 7½i/s max deviation from nominal ±0.2%. W and F: total RMS, weighted 0.04% at 7½i/s and 0.05% at 3¼i/s. Weighted peak to peak flutter as per DIN 0.08% at 7½i/s and 0.1% at 3¼i/s. Tape slip: not exceeding 0.2%. Max spool size: up to 10½in. (minimum hum diameter 2.3/8in). Operating position: horizontal, vertical or

*Indicates entry is illustrated

inclined. S/N ratio: weighted as per ASA-A, readings via tape: $7\frac{1}{2}$ i/s better than 66dB (4 track 59dB). Crosstalk (at 1kHz); mono better than 60dB, stereo better than 45dB. Inputs (per channel): mic, low impedance 50-600 ohms. 0.15mV, high impedance up to 100K, 2.5mV, radio 2.5mV; aux 35mV. All inputs have an overload margin of 40dB (1:00). Outputs (per channel): amplifier max 2.5V; Internal impedance 2.5K; headphones, volume adjustable, load impedance 200 ohms or more. Power amplifier: optional plug-in amplifiers, 2×8 W continuous RMS power, 2×10 W music power as per IHFM. Power requirements: voltage selector for 110-250V, 50-60Hz operation without need for conversion, consumption 70-100W. Various versions as follows:

Model 1102 or 1104

Chassis in teak surround, no output, amplifiers, $\frac{1}{2}$ or $\frac{1}{4}$ -track. Price: £575.00 (plus VAT).

A700*

Stereo tape recorder. Tape speed: 15i/s, $7\frac{1}{2}$ i/s and $3\frac{3}{4}$ i/s. Weighted peak flutter: at 15i/s less than 0.08%, at $3\frac{3}{4}$ i/s less than $\pm 0.06\%$, at $7\frac{1}{2}$ i/s less than $\pm 0.1\%$. FR (via tape): 15i/s 50Hz-18Hz ± 1.5 dB; $7\frac{1}{2}$ i/s 50Hz-15kHz ± 1.5 dB; $3\frac{3}{4}$ i/s 50Hz-10kHz ± 1.5 dB. Equalisation: S/N: (ASA-A) referred to peak recording level (+6VU), 15i/s better than 65dB, $7\frac{1}{2}$ i/s better than 63dB. Inputs: mic stereo, balanced 50-600 ohms; position Low: 0.15V 6K; position High: 1.8V 6K. Phono 2.5mV 50K; radio 3mV 33K, 2×40 mV 100K. All inputs have an overload margin of 40dB (1:100). Outputs: output level from a peak-level recording at +6VU. Lines A and B 1.55V 5K. $1 \times$ radio (DIN): 0.775V, 10K; $2 \times$ headphone: max 4.9V 100 ohms; $1 \times$ power amplifier: max 3.1V 100 ohms, including remote mains switching for A722. Price: £1,323.00 (plus VAT).

B77*

Stereo tape recorder available in half or quarter track. Tape speed: $3\frac{3}{4}$, $7\frac{1}{2}$ ips. W and F: $3\frac{3}{4}$ less than 0.1%. $7\frac{1}{2}$ less than 0.08%. FR: $3\frac{3}{4}$ 50Hz-10kHz ± 1.5 dB; $7\frac{1}{2}$ less than 0.08%. Output: 1.55V at +6dB above 0VU adjustable with present control, max attenuation 26dB. S/N ratio: $3\frac{3}{4}$ better than 63dB ($\frac{1}{2}$ track), 59dB ($\frac{1}{4}$ track). $7\frac{1}{2}$ better than 66dB ($\frac{1}{2}$ -track), 62dB ($\frac{1}{4}$ -track). Three motors, three heads. Max spool capacity: 10.5in. Dimensions: 45.2 \times 20.7 \times 41.4cm. Price: £600.00 (plus VAT). Also available in high speed ($7\frac{1}{2}$, 15ips) versions, NAB or IEC equalisation. Price: £630.00 (plus VAT).



Revox 77 series



Revox A700



Revox A700 with A720 digital tuner and A722 power amp



Revox B77



Sony TC 510-2

■ SONY

Consumer Information, Sony Showroom,
134 Regent Street, London W1R 6DJ.
Tel: 01-439 3874.

TC880-2*

Stereo tape recorder. Recording system: AC bias. 160kHz. Track system: 2-track, 2-channel, rec/PB. 4-track, 2-channel, PB. Speeds: 7½i/s, 15i/s. W and F: 7½i/s ±0.04% DIN, 15i/s ±0.03% DIN. S/N ratio: 60dB SLH tape. FR: normal 7½i/s 25Hz-20kHz ±2dB. FeCr tape 25Hz-30kHz ±2dB, normal 15i/s 25Hz-30kHz ±2dB, FeCr tape 20Hz-40kHz ±2dB. Inputs: mic low -72dB (0.2mV), line -22dB (50mV) 100K. AC servo-controlled, direct-drive system motor. Mains: 240V AC. Price: £1,450 (inc. VAT).

TC 510-2*

Two-track portable stereo tape deck working from battery, battery pack, mains (adaptor supplied), car battery. Speeds: 19, 9.5cm/s. W. and F: ±0.05% at 19cm/s, ±0.08% at 9.5cm/s. FR: 30:Hz-25,000Hz ±3dB at 19cm/s, 30Hz-16,000Hz ±3dB. Output: 435mV at 100K. S/N Ratio: 64dB (FeCr tape) -19cm/s. Low, med, high bias switch. DC servo motor. Three heads. Spool capacity: 5in. Dimensions: 33 × 30 × 14cm. Price: £540.00 (inc. VAT).

TC 765*

Four-track open-reel tape deck, closed loop dual capstan drive with AC servo control, logic control panel and remote control facility. Speeds: 19, 9.5cm/s. W and F: ±0.04% at 19cm/s, ±0.08% at 9cm/s. FR: 30Hz-25,000Hz ±3dB at 19cm/s; 30Hz-18,000Hz -3dB at 9cm/s. Output: 435mV-100K. S/N ratio: 58dB -SLH tape 19cm/s, 61dB FeCr tape 19cm/s. Low, mid, high bias switch. Switching for normal, special, FeCr, etc. Three motors. Three heads, spool capacity 10½in. Dimensions: 45 × 53cm. Price: £579.00 (inc. VAT).

TC 766-2*

Two-track open-reel tape deck, closed loop dual capstan drive with AC servo control, logic control panel and remote control facility. Speeds: 38, 19cm/s. W. and F: 0.018% at



Sony TC 765



Sony TC 766-2

*Indicates entry is illustrated

38cm/s, 0.04% at 19cm/s. FR: 30Hz-30,000Hz \pm 3dB at 38cm/s; 30Hz-25,000Hz at 19cm/s. Output: 435mV-100K. S/N Ratio: 61dB—SLH tape at 38cm/s, 64dB FeCr tape 38cm/s. Low, med, high bias switch. Three motors. Four heads. Spool cap: 10 $\frac{1}{2}$ in. Dimensions: 45 \times 2 \times 53cm. Price: £690.000 (inc. VAT).

TC 399*

Three-head open reel tape recorder—ferrite and ferrite heads. Tape speeds: 7 $\frac{1}{2}$, 3 $\frac{3}{4}$, 1-7/8ips. W and F: 0.06% at 7 $\frac{1}{2}$ ips, 0.09% at 3 $\frac{3}{4}$ ips, 0.12% at 1-7/8ips. FR: 30Hz-25kHz \pm 3dB at 7 $\frac{1}{2}$ ips. 30Hz-18kHz \pm 3dB at 3 $\frac{3}{4}$ ips. Output: line—more than 10K 435mV. S/N ratio: 58dB at 7 $\frac{1}{2}$ ips special tape SLH. Bias and eq. switching. Motors: 1. Heads: 3. Maximum spool capacity: 7in. Dimensions: 41.5 \times 19 \times 43.5cm. Price: on application.

■ TANDBERG

Tandberg (UK) Ltd, 81 Kirkstall Road, Leeds LS3 1HR.

Tel: Leeds (0532) 35111.

TD 20A*

10 $\frac{1}{2}$ in. reel-to-reel deck employing Tandberg Actilinear Recording System. Tape speeds: 15, 7 $\frac{1}{2}$, 3 $\frac{3}{4}$ ips. W and F: 0.06%, 0.08%, 0.14% peak cr 0.03%, 0.05%, 0.10% weighted. FR: 15Hz-34kHz at 15ips, 15Hz-30kHz at 7 $\frac{1}{2}$ ips, 15Hz-20kHz at 3 $\frac{3}{4}$ ips. At DIN: 20Hz-30kHz at 15ips, 20Hz-25kHz at 7 $\frac{1}{2}$ ips, 20Hz-18kHz at 3 $\frac{3}{4}$ ips \pm 3dB. S/N ratio: 69dB at 15ips, 67dB at 7 $\frac{1}{2}$ ips, 66dB at 3 $\frac{3}{4}$ ips. Three motors: four heads. Max. spool capacity: 10 $\frac{1}{2}$ in. Dimensions: 43.5 \times 45 \times 19.5cm. Price: £532.45 (plus VAT).

■ TEAC

Harman UK, St. John's Road, Tyler's Green, High Wycombe, Bucks. Tel: High Wycombe (049481) 5331.

2300SX

$\frac{1}{4}$ -track, two channel stereo or mono recorder with tape speeds of 7 $\frac{1}{2}$, 3 $\frac{3}{4}$ ips. W and F: 0.08% (7 $\frac{1}{2}$), 0.10% (3 $\frac{3}{4}$). FR: 7 $\frac{1}{2}$ 30Hz-28kHz 3 $\frac{3}{4}$ 30Hz-20kHz. S/N ratio: 58dB. Output: 2 link 0.3V/load impedance 10K or more, 1 stereo headphone jack 8 ohms. Three motors, three heads. Maximum spool capacity: 7in. Dimensions: 44 \times 210 \times 39.2cm. Price: £408.00 (plus VAT).

A 7300

$\frac{1}{4}$ -track reel-to-reel, 2 channel stereo or mono. Tape speeds: 7 $\frac{1}{2}$, 3 $\frac{3}{4}$ i/s. W and F: 0.05% at 7 $\frac{1}{2}$, 0.08% at 3 $\frac{3}{4}$ i/s. FR: 25-28,000Hz at 7 $\frac{1}{2}$, 25-20,000Hz at 3 $\frac{3}{4}$. Distortion: overall 0.08%



Sony TC399



Tandberg TD 20A

at 1000Hz normal operating level. S/N: 5dB. Erase, record, playback. Max. spool capacity: 10 $\frac{1}{2}$ in. Dimensions: 54.8 \times 44 \times 24.6cm. Price: £1,243.56 (plus VAT).

A 7300/2T

Reel to reel, 2 track recorder, stereo or mono. Tape speeds: 15, 7 $\frac{1}{2}$ i/s. W and F: 0.04% at 15, 0.05% at 7 $\frac{1}{2}$. FR: 25-30,000 at 15, 25-28,000 at 7 $\frac{1}{2}$. Distortion: overall 0.08% at 1,000Hz normal operating level. S/N: 60dB. Erase, record and playback heads. Max. spool capacity: 10 $\frac{1}{2}$ in. Dimensions: 54.8 \times 44 \times 24.6cm. Price: £1332.44 (plus VAT).

A-7300 RX

Professional stereo tape deck with DBX system. Tape speeds: 15, 7 $\frac{1}{2}$ i/s. W and F: 0.04% at 15,

7½i/s. W and F: 0.04% at 15, 0.05% at 7½. FR: 25-30,000Hz at 15, 25-28,000Hz at 7½. S/N: 60dB, 100dB at DBX in. One direct drive DC servo capstan motor. Erase, record and playback heads. Max. spool capacity: 10½in. Price: £1,776.89 (plus VAT).

A 3300 SX

¼-track, 2-channel stereo or mono recorder with tape speeds of 7½, 3¾ips (±0.5%). W and F: 0.06% at 7½, 0.09% at 3¾. FR: 30Hz-28kHz at 7½, 30Hz-20kHz at 3¾. Output: 2 line 0.3V/load impedance 10K or more, stereo headphone jack 8 ohms. S/N ratio: 58dB. Three motors, three heads. Maximum spool capacity: 10½in. Dimensions: 44 × 44 × 21cm. Price: £532.44 (plus VAT).

A 3340 S

4-track, multi-channel with simu sync. Tape speeds: 15, 7½ips (±5%). W and F: 0.04% at 15, 0.06% at 7½. FR: 30Hz-30kHz at 15, 30Hz-28kHz at 7½. Output: 2 stereo headphone jacks (one front, one rear), impedance 10K output level 0.775V. S/N ratio: 55dB. Three motors, three heads. Maximum spool capacity: 10½in. Price: £880.00 (plus VAT).

A 2300 SD

¼-track, two channel stereo or mono recorder with tape speeds 7½ and 3¾i/s. W and F: 0.08% at 7½, 0.10% at 3¾. FR: 30Hz-28kHz at 7½, 30Hz-20kHz at 3¾. Output: 2 line, 0.2V/load impedance 10K or more, 1 stereo headphone jack. S/N: 60dB, but can be improved with Dolby. Three motors, three heads. Maximum spool capacity: 7in. Dimensions: 44 × 39.2 × 21cm. Price: £532.44 (plus VAT).

Other Models

Details on applications. Prices: A300SX-2T £532.44; A4300SX £631.33; A6100II £888.00; A6300 £888.00 A6600 £976.89; A2340SX £799.11. All plus VAT.

■ TECHNICS

National Panasonic (UK) Ltd, 101-109 Whitby Road Trading Estate, Slough SL1 3DR. Tel: Slough (75) 34522.

RS-1700, RS-1506US, RS-1500US, RS-1800.

Details on application.

■ UHER LTD

24 Market Place, Falloden Way, London NW11. Tel: 01-455 1771/01-458 8491.

Accessory

Scene marker module No. Z521. Price: £9.73 (plus VAT).

4200 Report Stereo IC

Transistor mains/battery stereo tape recorder. ½-track. Speeds: 7½, 3¾, 1-7/8, 15/16i/s. Max spool 5in. W and F: 7½i/s 0.2%, 3¾i/s 0.25%, 1-7/8i/s 0.35%, 15/16i/s 0.56%. H and N: 7½i/s —57dB; 3¾i/s —55dB, 1-7/8i/s —53dB. FR: 7½i/s 35Hz-20kHz; 3¾i/s 35Hz-16kHz; 1-7/8i/s 35Hz-8kHz; 15/16i/s 35Hz-5kHz (all to DIN 45-500). Replay char: NAB. Level indicator: two meters. One motor. Pause. Digital position indicator. Monitoring. Parallel track replay. Size: 11 × 3 × 8in. Price: £325.00 (plus VAT).

4400 Report Stereo IC

¼-track version of 4200. Specification almost identical. Price: £325.00 (plus VAT).

Uher 5000 Universal

Mains ½-track mono recorder. Speeds: 3¾, 1-7/8, 15/16i/s. FR: 40Hz-15kHz ±3dB at 3¾i/s. Max spool: 5¾in. W and F: 3¾i/s ±0.2%. Inputs: mic 200 ohms, radio 47K, PU 1M. Solenoid operation for remote control

PLAY-FAIR

Record Accessories,

Stylus Timers, Stylus Cleaners, Antistatic Cleaning Pads, Antistatic Fluid, Discodusters (Record Changer and Single Player models), Record Care Kits, Record Cleaners, Record Cleaning Arms, Conductive Fibre Record Brush, Record Sleeves. **Tape Accessories,** Tapehead Cleaning Fluid, Tape Cassettes and Cartridges, Cassette and Cartridge Cleaners, Cassette Index Cards, Tape Head and Capstan Cleaners, Cassette and Cartridge Carrying Cases, Cassette Care Kits.

MICRO-DIAMOND and MICRO-SAPPHIRE

Replacement Stylfi. Most Comprehensive range of replacement stylfi, including many Japanese types. Best quality, reliable service, keen prices. Also Micro-Diamond retipping service.

DRY-SPLICE and TAPE ACCESSORIES

(Tapes, Spools and Plastic Tape Boxes).

TAPE HEADS

Woelke Magnetbandtechnik (Germany) Cassette Heads, ¼" Studio Heads, ½"-2" Studio Heads, Film Heads and Mini-Cassette Heads.

Manufacturers and Distributors:

LENNARD DEVELOPMENTS LTD

**206, Chase Side, Enfield, Middx. EN2 0QX
Tel. (01) 363 8238**

working. All metal case. Large range of dictation and transcription accessories available. Price: approximately £338.00 (including VAT).

SG521*

Stereo mains operated reel to reel tape recorder with internal speakers and interchangeable head assemblies (1/2-track and 1/4-track). Speeds: 7 1/2, 3 3/4, 1-7/8i/s. Max spool size: 7in. W and F: 7 1/2i/s 0.05%, 3 3/4i/s 0.10%. Hum and noise: 7 1/2i/s —57dB/2-tracks (—55dB/4-tracks), 3 3/4i/s —55dB/2-tracks (—53dB/4-tracks), 1-7/8i/s —55dB/2-tracks (—53dB/4-tracks). FR: 7 1/2i/s 30Hz-20kHz, 3 3/4i/s 30Hz-15kHz, 1-7/8i/s 30Hz-8kHz. All figures to DIN specification 45 500. Inputs: mic 0.16mV-30mV, radio 1.8mV-600mV, phono (1) 80.0mV-7mV, phono (2) 250.0mV-25V. Outputs: line (2 tracks) 2 × 800mV across 15K, line (4 track) 2 × 600mV across 15K. Speakers: 2 × 6W (sine) across 4 ohms. Features: Input mixing, vertical and horizontal operation, interchangeable plug-in head assemblies, add-on automatic level control module (optional accessory), matt black finish and tinted perspex cover. Price: £283.00 (plus VAT).



Uher SG521



Uher 4000 Report



Uher SG631 Logic

SG616

Semi-professional mains operated reel to reel tape recorder with dia-pilot slide synchroniser mono/stereo 1/4-track or 1/2-track (interchangeable assemblies). Speeds: 7 1/2, 3 3/4, 1-7/8, 15/16i/s. Max spool size: 7in. W and F: 7 1/2i/s ±0.04%, 3 3/4i/s ±0.10%, 1-7/8i/s ±0.20%. Hum and noise: 7 1/2i/s —58dB/2-track (—56dB/4-track), 3 3/4i/s —57dB/2-track (—55dB/4-track), 1-7/8i/s —56dB/2-track (—55dB/4-track). FR: 7 1/2i/s 20Hz-20kHz, 3 3/4i/s 20Hz-15kHz, 1-7/8i/s 20Hz-9kHz. All figures to DIN specification 45 500. Level indicators: 2VU meters. Inputs: mic 0.12mV-70mV 200 ohms, radio 1.2mV-110mV 47K, phono (1) 40.0mV-2.8V, phono (2) 200mV-18V. Outputs: monitor: 2 × 0.65V across 15K, line 2 × 600mV across 15K, speaker 2 × 10W (sine) across 4 ohms. Audio output with internal speakers: 6W per channel (sine). Features: pause, inching, straight through amplifier, horizontal or vertical operation, A-B monitoring, input mixing, echo, sound with sound, sound on sound, dia-pilot slide synchronising, separate replay bass and treble controls, matt black finish and tinted perspex cover. Price: £435.00 (plus VAT).

4000 Report IC*

Transistor mono battery portable tape recorder 1/2-track. Speeds: 7 1/2, 3 3/4, 1-7/8, 15/16i/s. W and F: 7 1/2i/s 0.20%, 3 3/4i/s 0.25%, 1-7/8i/s

0.35%. Hum and noise: $7\frac{1}{2}$ i/s —57dB, $3\frac{3}{4}$ i/s —55dB, $1\text{-}7/8$ i/s —53dB. FR: $7\frac{1}{2}$ i/s 35Hz-20kHz, $3\frac{3}{4}$ i/s 35Hz-16kHz, $1\text{-}7/8$ i/s 35Hz-8kHz, $15/16$ i/s 35Hz-5kHz. All figures to DIN specification 45 500. Inputs: mic 0.12mV-40mV across 200 ohms, radio 2.4mV-700mV across 47K, phono 45mV-20V across 2M ohms. Output: line 1V across 15K, speaker 0.8W across 4 ohms. Features: die-cast metal case, 5in. spool size, operation from dry batteries, rechargeable accumulator, 110-240V AC mains/charger unit, 6V, 12V and 24V car battery, power supply for condenser mic, internal speaker, switchable (speech, music and off) automatic level control. Price: £266.00 (plus VAT).

SG 631 Logic*

Professional standard with omega drive—a non pinch roller drive system. Speeds: 19, 9.5 and 4.7cm/s. W and F: 19cm/s 0.04%, 9.5cm/s 0.1%, 4.7cm/s 0.20%. FR: 20Hz-25kHz at 19, 20Hz-16kHz at 9.5, 20Hz-10kHz at 4.75%. Output: DIN 750mV 15K ohms, monitor 750mV 15K ohms, headphone 1.7V 200 ohms. Switching for Fe tapes. Four motors, 2 heads. Max spool cap: $10\frac{1}{2}$ in. Dimensions: 51 × 40 × 14.6cm. Price: £557.00 (plus VAT).

*Indicates entry is illustrated

Test Tapes and Discs



Bib Hi-Fi Stereo Test Cassette

Abbreviations used in this section are given on page 5.

■ AMPEX

Ampex Great Britain Ltd,
Acre Road, Reading, Berks RG2 0QR.
Tel: Reading 85200.

For all pro audio tapes, including CCIR and NAB test tapes 1/4 in. to 2 in. Prices and details of specifications on request.

■ BIB

Bib H-Fi Accessories Ltd,
Kelsey House, Wood Lane End,
Hemel Hempstead, Herts HP2 7EP.
Tel: Hemel Hempstead 61291.

53 Stereo Test Cassette*

Devised by BIB and recorded by Decca the cassette contains: channel identification, balance control, speaker phasing, adjusting record volume controls, reducing tape hiss and eliminating hum, wow and flutter. Also includes music, brass band, grand organ, etc. Price: £3.24 (inc. VAT).

■ DECCA

Decca Record Company Ltd,
Decca House, Albert Embankment, London SE1 7SW.

A Guide to Better Listening

A complete Hi-Fi system test on one LP (PFFS1). Features: left and right channel identification, balancing and phrasing, tone controls, separation and crosstalk, pick-up trackability, transient response, rumble hum and noise, wow and flutter, realism in sound reproduction. Side two features a recording of the *Firebird Suite* (Stravinsky) with Hans Vonk conducting the Royal Philharmonic Orchestra. Price: £3.99.

■ FERROGRAPH

North East Audio Ltd,
Simonside Works, South Shields,
Tyne & Wear NE34 9NX.
Tel: South Shields (0632) 66321.

781-028

0 VU level. Full track recording on 1/4 in tape; continuous tone 500Hz. Corresponds to US 'operating level' and Dolby NR system reference level. Price: £10.00 (plus VAT).

781-029

1/4-track alignment. Track 2 recorded on 1/4 in. tape; continuous tone 63Hz. For correct head height setting of 1/4 track stereo replay head. Price: £10.00 (plus VAT).

781-030

Two separate full width recordings on 1/4 in. tape at 19cm/s (7 1/2 in./s). Response tones, (10dB below peak level) NAB/DIN (19H) 50 + 3180µ sec and IEC/CCIR/DIN (studio) 70µsec characteristics; also includes peak level (320nW/m), US 'operating level'. (0 VU) and azimuth alignment. Price: £40.00 (plus VAT).

781-033

Full width recording on 1/4 in. tape at 19cm/s (7 1/2 in./s). Response tones (10dB below peak level) at NAB/DIN (19H) 50 + 3180µ sec characteristic; also includes US 'operating level' (0 VU) and azimuth alignment. Price: £25.00 (plus VAT).

781-034

Full width recording on 1/4 in. tape at 19cm/s (7 1/2 in./s). Response tones (10dB below peak level) at IEC/CCIR/DIN (studio) 70µsec characteristic; also includes peak level (320nW/m) and azimuth alignment. Price: £25.00 (plus VAT).

781-035

Full width recording on 1/4 in. tape at 38cm/s (15 in./s). Response tones (10dB below peak level) at IEC/CCIR/DIN (38) 35µ sec characteristic; also includes peak level (320 nWb/m) and azimuth alignment. Price: £25.00 (plus VAT).

781-036

Full width recording on ¼ in. tape at 9.5cm/s (3¼ in./s). Response tones (20dB below peak level) at IEC/NAB/DIN (9.5) 90 + 3180µsec characteristic; also includes azimuth alignment and repeat response frequencies as calibration check. Price: £25.00 (plus VAT).

■ LYRICHORD

N. Miers & Co Ltd, 29 Piercing Hill,
Theydon Bois, Nr. Epping,
Essex CM16 7LE.
Tel: 037-881 2611.

8-track cartridge demonstration and test tape
£2.48 (plus VAT).

■ METROSOUND AUDIO PRODUCTS LTD

Freedex House, 4-10 North Road,
London N7 9HN.
Tel: 01-607 8141.

MT63 Cassette Azimuth Alignment Tape

For accurate alignment of cassette deck playback heads. Price: £2.70 (inc. VAT).

MT73 Cassette Frequency Response Test Tape

Required for the precise checking of accuracy of tones produced from cassette machines. Prices: £10.80 (inc. VAT).

MT74 Reel to Reel Azimuth Alignment Test Tape

To allow for correct setting of replay heads on open reel recorders. Price: £4.32 (inc. VAT).

MT75 Reel to Reel Dolby Tone Test Tape.

A specially produced tape for correct setting up and calibration of reel to reel recorders incorporating Dolby noise reduction systems. Price: £3.78 (inc. VAT).

MT76 Reel to Reel Frequency Response Test Tape

Essential for the precise checking of accuracy of tones produced from open reel recorders. Price: £10.80 (inc. VAT).

M48 Dolby Tone Test Cassette

A specially produced pre-recorded tape for correct setting up, alignment and calibration of high quality Dolby cassette players. Price: £2.70 (inc. VAT).

M.70 Tape (¼ in.) Edit Kit

Professional machined splicing block, with leader tape, splicing tape and cutters in a storage case. Price: £2.10 (inc. VAT).

M.91 Compact Kit

Cassette and disc cleaners combined in a storage unit. For owners of complete music systems. Price: £3.53 (inc. VAT).

M.86 Tape Head Cleaner Kit

A bottle of tape head cleaning fluid and two special cleaning spatulas with brush and polishing pads are provided. Price: 90p (inc. VAT).

M.92 Music Centre Kit

Head cleaner cassette, fluid and spatula with record cleaning arm and ioniser in a storage case. For the owners of quality music centres. Price: £6.19 (inc. VAT).

M87 Cassette Head Care Kit

Contains a head cleaning cassette, cleaning fluid and spatula. Price: £1.46 (inc. VAT).

M88 Tape Head Aerosol Spray

Suitable for cassette, reel-to-reel, video and 8-track machines. Price: £1.25 (inc. VAT).

■ PHILIPS

Philips Electronics and Associated Industries Ltd,
604 Purley Way, Croydon,
Croydon CR9 4DR.
Tel: 01-686 0505.

Test Cassette 397 37001

Speed 1-7/8ips designed for checking and adjusting tape speed and the azimuth setting of the record/playback head. Range: 6.3kHz ±1% tone with 800Hz pulses. Equalisation: 120µs + 1,500µs. Price: on application.

Testcassette 812/MCT (Code No. 395 30035)*

The azimuth setting of the record/playback head may be adjusted using 812/MCT which has an 8kHz tone recorded on one of its tracks. Only if the record/playback head is accurately set so that it is vertical to the running direction of the tape will high frequencies, which includes the 8kHz tone, be reproduced properly. Price: on application.

Mirror Cassette 814/SMC (Code No. 395 30058)*

Device which enables visual check to be made on state of tape guide and pressure roller as well as providing check on recording/playback and erase heads for wear and/or contamination. Adjustments can then be made as necessary to ensure tape runs in straight path past the heads and capstan with a minimum of twisting and bending. Price: on application.

*Indicates entry is illustrated



Philips Testcassette for service test



Philips service mirror cassette

Torque Meter (Code No. 395 30054)*

The Torque Meter Cassette tape 811/CTM (Code number 395 30054) indicates the applied torque of both spindles under the following advantages conditions: (a) measurement under normal operating situation. (b) use in recorders with automatic stop mechanism without having to make special changes. (c) measurement

without the need to dismantle the recorder. With practice and experience the torque values obtained can provide a good indication of the actual cause of the trouble such as slipping drive belts, faulty capstan bearing, incorrect adjustment of pressure roller, etc. The torque meter is placed in the recorder like any normal cassette, then the recorder is switched to either the record or playback mode, tape-up or take-up spool of the meter, the other spool indicating the counter torque. Price: on application.

Philips Cassette Service Set 801/CSS (Code 395 30064)

The 801/CSS is an improved version of the well-known 800/CSS, with the added advantages of a new styling to provide better read out facilities and greater stability. The unit, together with test cassette 812/MCT which is supplied, can be used to check and adjust the tape speed of a recorder, as well as the alignment of the record/playback head. For adjustment of the tape speed, the test cassette is inserted in the cassette recorder, and the 50Hz pre-recorded test signal reproduced is fed-back to the meter unit in the 801/CSS, where it is compared with the frequency of the mains. The recorder is adjusted for optimum tape speed when the swing of the meter pointer is at minimum. Price: on application.

Test cassettes for compact cassette recorders

TC/A 10: Azimuth 10kHz. Code No. 397 37005.

TC/FL3.15: Wow and Flutter 3150Hz. Code No. 397 37002.

TC/R: Reference Tapes. Code No. 397 37008.

TC/QR: Hi-Fi Reference Tape. Code No. 397 37007.

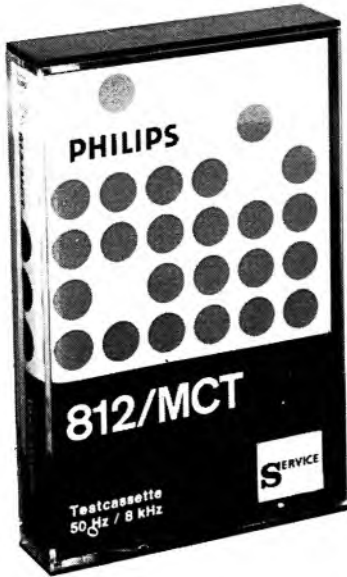
TC/A6.3: Azimuth 6300Hz. Code No. 397 37006.

TC/FR: Frequency Response. Code No. 397 37011.

TC/QFR: Hi-Fi Frequency Response. Code No. 397 3009.



Philips cassette torque meter



Philips 812/MCT.

■ SHURE ELECTRONICS LTD

Eccleston Road, Maidstone,
Kent ME15 6AU.

Tel: Maidstone (0622) 59881.

These records provide an effective means of cartridge evaluation through a variety of technical measurements. Shure engineers have developed four records for testing trackability, stylus wear, channel balance, phasing and anti-skating. TTR 115 & TTR 110 are designed for listening tests at home; the other two for use with professional test equipment.

TTR 103 Phono Cartridge Trackability Test Record—Professional Equipment required

This 45 rpm 12in. laboratory standard test record is designed for use with sophisticated measuring equipment. TTR 103 contains three tests for trackability: (a) 10.8kHz pulsed high-frequency test with 270Hz repetition rate trackability and distortion test; (b) 1,000Hz plus 1,500Hz mid-frequency trackability and distortion test; (c) 400Hz plus 4,000Hz low-frequency trackability and distortion test. Three inspection methods are suggested: distortion measurements, an oscilloscope examination, and listening. Instructions on usage are included with the record. Price: £9.33 (plus VAT).

TTR 109 Level and Crosstalk Test Record Professional Equipment required

This 33 1/3 rpm 12in. record provides 12 bands of 1kHz left and right reference levels at 5cm/sec

recorded velocity. May be used as a crosstalk test. Designed for professional use. Instructions are included. Price: £6.42 (plus VAT).

TTR 110 'An Audio Obstacle Course—Era III'—Listening Test Record

This 33 1/3 rpm test record provides the most demanding and definitive audio tests for high fidelity cartridges. The total level range is the same as the TTR 101, but the increments of increased velocity are refined (6dB from first to second level; 2dB for the remaining three levels). The TTR 110 includes recordings of difficult-to-track instruments, with complete orchestral and vocal ensembles from commercial recordings plus level, balance and phasing checks. Complete instructions are included. Price: £4.09 (plus VAT).

TTR 115 'An audio obstacle course—ERA IV' trackability test record

An audio obstacle course, Era IV (TTR 115) is a test record developed and produced by Shure to help evaluate total cartridge performance by analysing its most important performance characteristic: total trackability.

This new record enables you to evaluate trackability of the cartridge with musical instrument sounds covering high, mid-range, and low frequencies at graduated recorded velocity level, and various combinations of these instruments which present even greater demands on the cartridge. These tests incorporate many complexities and difficulties encountered in today's increasingly demanding commercial recordings under controlled conditions that enable you to define and isolate problem areas in your own playback system, without the need for test instruments. There are many other important tests, such as an arm-cartridge resonance test which indicates the ability of the cartridge-pickup arm system to reject warp effects. Level, balance, and phasing tests etc., are also included. Complete with instructions and evaluation guidelines.



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Eagle International,
Precision Centre,
Heather Park Drive, Wembley,
Middx. Phone: 01-902 8832.

 **EAGLE**

Unit Audio Systems

(see also Cassettes and Music Centres section)

*Indicates entry is illustrated

Abbreviations used in this section are given on page 5.

■ AIKO

Plustronics Ltd, Hempstalls Lane,
Newcastle, Staffs ST5 0SW.
Tel: Newcastle (0782) 615131.

ATP-711*

Stereo cassette recorder system with speakers. Output: 10W per channel. Twin mics, headphone socket. FR: 50Hz-12,000Hz. W and F: 0.3%. Keyboard cassette operation. Controls: sliders for tone, volume, balance with push button power. Tape counter and dual VU meters plus auto stop. Price: £101.61 (inc. VAT).

■ ALBA ELECTRONICS LTD

Bull Lane, Edmonton, London N18 1SD.
Tel: 01-803 4451.

8070B

Tuner/amplifier/record player. Band coverage; 87-104MHz, 1640-520kHz, 270-158kHz. VHF sensitivity: better than 1 micro Volt (IHF). Ceramic IF Filter (AM and FM). FM distortion less than 0.5%. VHF aerial: 75 ohms co-ax. Audio power output: 10W x 10W rms both channels driven. THD: less than



0.2% at all levels up to rated maximum. Range of tone controls: ± 12 dB. BSR: 132 D1 record deck. Speeds: 33, 45, 78 rpm. W and F: less than 0.2%. Cartridge: ceramic. Stylus: sapphire. Loudspeaker drive unit: 16.5cm dia full range. Impedance: 8 ohms. Centre unit dimensions: 59.8 x 36.9 x 15.2cm. Loudspeaker dimensions: 26 x 16.5 x 36cm. Matching black and teak finished cabinets. Price: on application.

■ BEOCENTER

Bang & Olufsen (UK) Ltd,
Eastbrook Road, Gloucester GL4 7DE.
Tel: Gloucester (0452) 21591.

2800

Amplifier, tuner and record player. Amplifier: 2 x 25W into 4 ohms. FR: 20Hz-35kHz. Damping Factor: >50. Inputs: tape, PU. Outputs: tape, headphones. Tuner covers FM/AM with 4 presets on FM. Variable tuning. Sensitivity: 90 μ V. S/N: >60dB. Fully auto record player with electronic servo drive system. Speeds: 33 $\frac{1}{2}$, 45 rpm. W and F: < $\pm 0.09\%$. Rumble: >62dB. Pickup: MMC 3000 with compliance: 25 x 10⁻⁶cm/dyne. Dimensions: 50 x 12 x 37cm. Price: £260.00 (plus VAT).

■ FIDELITY RADIO LTD

Victoria Road, London NW10 6ND.
Tel: 01-965 8771.

UA9*

Player and AM/FM radio in unit combining black and teak look finish. Push button controls. Player unit has a single play autodeck, cueing device and stereo ceramic cartridge with turnover stylus. Sockets for speakers, AM and FM aerials and auxiliary tape recorder playback, and record. Complete with tinted, removable, hinged, transparent lid, and FM indoor aerial 300 ohms. BSR multispeed single play deck with stereo ceramic cartridge, turnover sapphire stylus, and cueing device. Performance: MW 525-1625kHz, 572-184 metres. Sensitivity 400 μ V/metre at 1MHz for 20dB signal to noise ratio. LW 150-250kHz,



Aiko ATP 711

*Indicates entry is illustrated

200-1200 metres. Sensitivity 1mV/metre at 200kHz for 20dB signal to noise ratio. FM 87.5-108MHz. Sensitivity better than 15 μ V for 3dB from limiting. FM stereo channel separation 25dB at 1kHz. Output power: 8 watts per channel RMS into 4 ohms. S/N ratio: 55dB with tone controls flat. FR: 40Hz to 15kHz \pm 3dB tone controls flat. Tone controls

(in relation to flat response): bass +12dB -17dB at 100Hz. Treble +13dB -13dB at 10kHz. Auxiliary: input sensitivity 50mV into 50K. Output sensitivity 100mV at low impedance. Speakers: two units each with 203mm \times 128mm. Impedance 4 ohms. Dimensions: 16.6 \times 54 \times 38cm. Speakers: 20.5 \times 12.5cm. Price: £100.44 (plus VAT).

Aurex
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the new name for Hi-Fi excellence.

*Indicates entry is illustrated

Miscellaneous

Abbreviations used in this section are given on page 5.

■ AUDIO PRO

Audio Pro (UK) Ltd,
Sandy Lane, Moston Road,
Sandbach, Cheshire CW11 9HT.
Tel: Sandbach 7520.

MSS 400 C Modular Switching System for Audio Showrooms

Will provide quick customer evaluation of any combination of up to 99 different turntables, decks and amplifiers with 99 speaker pairs. Damping unit: in order to obtain same sound level from speakers with different efficiencies, damping unit allows 0-14dB attenuation without any effect on speaker transient damping. Control unit: provides remote control for switching between apparatus. It also switches the damping unit in and out to demonstrate the efficiency between speakers and a muting of 20dB to let the salesman talk to customers. Central unit with display: contains control logic for the system, connector for tape monitor and displays for identification numbers of equipment being demonstrated. Spotlight unit: ten halogen lamp spotlights for automatic illumination of speakers being demonstrated. Technical details: FR: 10Hz-500kHz \pm 3dB. Distortion less than 0.01%. Cross talk better than 50dB. Noise level better than 70dB below 5mV for phono, 90dB below 600mV for tape. Input impedance: 47K phono and 100K tape. Output impedance: 1.5K phono and 10K tape. Maximum signal input: 300mV phono and 4V tape.

■ HOWLAND WEST

Howland West Ltd,
3-5 Eden Grove, London N7 8EQ.
Tel: 01-609 0293/5.

MX660 6-channel stereo mixer

Battery powered

This compact unit has facilities for mixing one microphone (mono) of low or high impedance, two turntables (stereo) with magnetic or ceramic cartridges, two tape units (stereo) open reel or cassette, and one tuner (stereo). It is powered by a 9V battery. Specifications: Channel 1: micro-

phone, low impedance 0.4mV 600K ohm or microphone, high impedance 3.5mV 50K ohm. Channels 2 & 3: phono, magnetic 3.0mV 50K ohm or phono ceramic 150.0mV 100K ohm. Channels 4 & 5: tape, cassette or open reel 150.0mV 100K ohm. Channel 6: tuner 150.0mV 100K ohm. Output: 0.2V \pm 0.05V. S/N ratio: better than 50dB. Maximum output level: 2.5V with less than 5% distortion. Semiconductors: 11 low noise silicon transistors. Dimensions: 270mmW \times 160mmD \times 60mmH.

MX 685 6-channel stereo mixer*

Mains powered

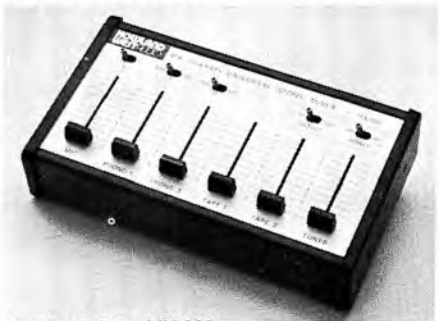
Specifications: Channel 1: microphone 0.3mV 1K ohm. Channel 2: microphone 0.3mV 1K



Howland West MX 690



Howland West MX 685



Howland West MX 660

ohm. Channels 3 & 4: phono, magnetic 3.0mV 50K ohm. Channels 3 & 4: phono ceramic 150.0mV 100K ohm. Channels 5 & 6: tape/tuner 150.0mV 100K ohm. Channels 5 & 6: tape output 100.0mV 50K ohm. Output: 0.2V \pm 0.05V. S/N ratio: better than 50dB. Maximum output level: 2.0V with less than 5% distortion. Semiconductors: 2 ICs, 13 silicon transistors, 2 diodes. Dimensions: 297mmW \times 191mmD \times 58mmH.

MX690 6-channel stereo mixer*

Mains powered

This unit is basically similar to MX685 but has a number of additions. It has a full cabinet instead of a chassis, a pilot light, and output level meters for both channels. The output is also increased by around 25%. Specifications: Channel 1: microphone 0.3mV 1K ohm. Channel 2: microphone 0.3mV 1K ohm. Channels 3 & 4: phono, magnetic 3.0mv 50K ohm. Channels 3 & 4: phono, ceramic 150.0mV 100K ohm. Channels 5 & 6: tape/tuner 150.0mV 100k ohm. Channels 5 & 6: tape output 105.0mV 50K ohm. Output: 0.25 \pm 0.05V. S/N ratio: better than 50dB. Maximum output level: 3.0V with less than 5% distortion. Semiconductors: 2 ICs, 15 silicon transistors, 2 diodes. Dimensions: 305mmW \times 200mmD \times 50/80mmH.

MX750 Disco Mixer*

This unit is made specifically for disco work and has six inputs, with four individual controls, and one master control. A cue control is available for monitoring via headphones and a fader control is provided for the four music input channels. The 'talk' switch attenuates the music by 14dB enabling announcements to be made without altering the input levels. An optional wooden case is available. Specifications: Inputs: microphone 0.5mV 10K ohms; phono 3.0mV 50K ohms; line 150.0mV 50K ohms. Rated output: 1V. Distortion at rated output: 0.2%. Distortion at 6V output: 0.3%. Microphone: max I/P 45mv, hum and noise -52 dB, freq. resp. 30-16000Hz (-1 dB). Phono: 140mV, -62 dB, 30-20000Hz (RIAA ± 2 dB). Line: 35V, -65 dB, 20-30000Hz (-1 dB). Dimensions: 322mmW \times 240mmD \times 90mmH (max).

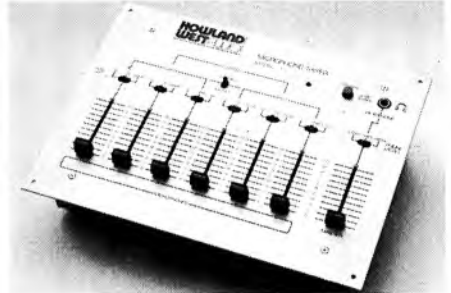
MX850 Frequency Equalizer*

This unit has seven independent frequency ranges for each channel with a variation of ± 12 dB for each range. A defeat switch is incorporated to enable comparison to be made with the original signal. An optional wooden case is available. Specifications: Frequency response: 10-30,000Hz $-dB$ (flat setting). Tone

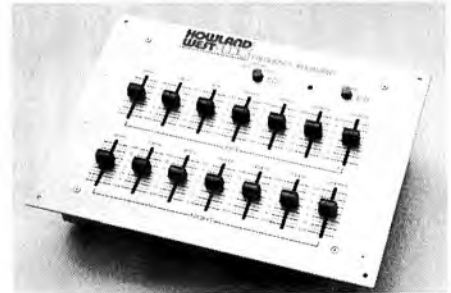
control range: 50, 130, 350, 1000, 3000, 6000, 12000Hz ± 12 dB. Intermodulation distortion: at 2V output 0.05%. Harmonic distortion: at 2V output 0.05%. Hum & noise: shorted input -80 dB below 2V output. Output level: maximum 10V. Total gain: 0dB flat setting. Output load: 1K ohm or greater. Output impedance: 500 ohms. Input impedance: 50K ohms. Semiconductors: 8 ICs, 8 transistors, 6 diodes. Dimensions: 322mmW \times 240mmD \times 90mmH (max).

MX950 microphone mixer*

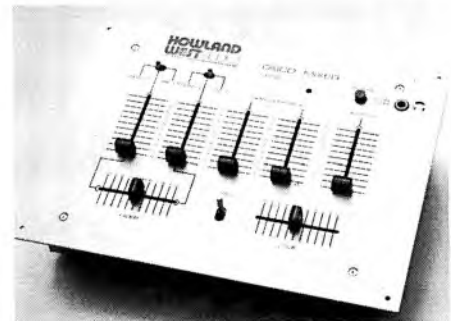
This unit has facilities for six microphone inputs and two stereo line inputs. Slide volume controls are provided for each, and in addition four microphones have 10 or 20dB attenuation



Howland West MX 950



Howland West MX 850



Howland West MX 750

*Indicates entry is illustrated

switches and the other two 14dB attenuator switches. A master volume slide control is provided as well as a three position switch for level control of the headphone monitor. The output has a stereo/mono control. Specifications: Input sensitivity: microphone 0.5mV, line 65mV. Maximum input level: microphone 500mV (att. 20dB), line 30V; 250mV (att. 14dB); 160mV (att. 10dB); 50mV (att. 0dB). Rated output: amp or rec 1V. Output impedance: 100 ohms. Harmonic distortion: at rated output 0.1%, at 7V output 0.3%. Hum & noise: microphone -52dB, line -65dB. Frequency response: microphone 20-18000Hz -1dB, line 10-30000Hz (-1dB). Dimensions: 322mmW x 240mmD x 90mmH (max).

■ **LYNWOOD ELECTRONICS**

Lynwood Electronics, 20 Stourcliffe Avenue, Bournemouth, Dorset BH6 3PT.
Tel: Bournemouth (0202) 426299.

LS 14/P Tape Switching Unit

Enables connection of up to three recorders and main amplifier. Recording from any signal source to any recorder; playback signals monitored via main amplifier. Option of DIN or phono connections. Can be permanently installed as part of any system. Price: £20.00 (plus VAT).

LS14/A

Includes all features of LS14/P but also has buffer amplifiers in each record channel enabling recording on to two or three recorders at one time. Price: £38.00 (plus VAT).

Electronic Timer

Combines a 24hr digital clock with facility to switch mains driven equipment up to 1kW on and off at pre-determined times, accurate to within seconds, either once only or daily. Price: on application.

■ **McLAREN**

McLaren Audio, PO Box 4,
149-151 Newhouse Road, Perth PH1 2JT.
Tel: Perth (0738 83) 441.

L711A 8 Track 2 Channel Stereo Cartridge Tape Player

Power output: 2 x 4W. Speaker impedance: 8 ohm. Tape system and controls: 8 track cartridge, speed 9.5cm/sec (3¾in. per sec.); automatic programme change with overriding manual select button; FR: 50Hzx to 10,000Hz; tone-volume-stereo balance. Pick-up input: socket 180° DIN, 5 pin switched to MAG (magnetic); RIAA input: input impedance 47K

ohm; sensitivity: 4mV, switched to CER (ceramic); input: input impedance 1M ohm; sensitivity: 100mV. Auxiliary input/output: Socket 180° DIN 5 pin input; impedance 27K ohm, sensitivity 500mV; output source impedance 10K ohm; output (approx.) 400mV. On/off switches: cartridge switches on unit when inserted into slot; separate push-push switch controls amplifier only when required for input or auxiliary input/output operation; auxiliary output operates on all inputs. Dimensions: 44 x 26 x 9.9cm.

L711B

Specification as per L711A except for: 100-120 volts, 60Hz. Despatched pre-set for 120V. Switch adjustable for 100V. Matched pair 8W loudspeakers. 8 ohm impedance.

L811A 8 Track 2 Channel Stereo Cartridge Tape Deck

Output: two stage pre-amp giving 350mV. FR: 50Hz to 10,000Hz. Output socket: 180° DIN 5 pin stereo output. Tape system: 8 track cartridge, speed 9.5cm./sec. (3¾in. per sec.). Control: track change selector button, with illuminated track indicator; engagement of cartridge switches unit 'on'; withdrawal of cartridge switches unit 'off'. Dimensions: 28.6 x 26 x 9.5cm.

■ **SANSUI**

Sansui Audio Europe NV,
Unit 10A, Lyon Industrial Estate,
Rockware Avenue, Greenford, Middlesex.

GE-7 Graphic Equalizer

Details on application.

■ VISONIK/CEC

Uher Ltd,
24 Market Place, Falloden Way,
London NW11.
Tel: 01-455 1771/458 8491.

VT 3300*

Record deck with plinth arm and cartridge.
Speeds: $33\frac{1}{3}$, 45rpm. W and F: 0.07%.
Rumble: -65dB DIN. Turntable: 310mm
weighing 1kg and made of aluminium. Belt
drive. Motor: 4-pole synchronous. Pickup arm:
straight arm with Ortofon FF 15C. Finish: grey.
Features: semi-auto. Price: £87.00 (plus VAT).

VT 5300

As above except: W and F: 0.06%. Rumble:
67dB. Motor: frequency generator. Price:
£109.50 (plus VAT).

VT 7300

Record deck with plinth, arm and cartridge.
Speeds: $33\frac{1}{3}$, 45rpm. W and F: 0.04%.
Rumble: -68dB. Turntable: 320mm weighing
1.8kg made of aluminium. Belt drive. Motor:
frequency generator. Pickup arm: straight arm
and Ortofon VMS20 EC. Finish: grey.
Features: semi-auto. Price: £139.50 (plus VAT).

VT 8300*

As VT 7300 except: W and F: 0.03%. Rumble:
70dB. Direct drive. Price: £163.50 (plus VAT).

VT 9300

As VT 7300 except W and F: 0.02%. Rumble:
-75dB and quartz lock frequency generator.
Fully auto. Price: £246.00 (plus VAT).

■ YAMAHA

Natural Sound Systems Ltd,
10 Byron Road, Wealdstone,
Harrow, Middlesex HA3 7TL.
Tel: 01-863 8622.



Visonik VT3300



Visonik VT8300

YP-B2

Turntable with plinth, tonearm and cover.
Speeds: $33\frac{1}{3}$, 45rpm, W and F: better than
0.08%. S/N ratio: better than 52dB. Turntable:
30cm die cast aluminium. Belt drive. Motor:
4-pole synchronous. Pickup arm: 'S' type 215mm
long. Price: on application.

Home entertainment

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The Electronic Organ — Then and Now

by Philip C. Baldwin, Editor of
Home Organist & Leisure Music

It was only 44 years ago that Laurens Hammond a clock maker from the USA exposed, to an unsuspecting world, a device which was to create a multi-million pound industry within his lifetime.

That was, of course, the one we know today as the electronic organ industry, a business which has grown from those humble beginnings into a £35 million industry in Great Britain alone.

What Hammond did was to cause multi-sided discs about the size of an old fashioned half crown, to rotate at a certain speed between two solenoids. The irregular periphery of each disc cut through the magnetic field of the solenoids, inducing a small current into the pick-up coils. These were then amplified into a usable state, processed and turned into music.

The processing consisted of two main functions. First, the signal level of each note could be controlled by means of variable slider resistors and second, different footages were obtained by cross-connecting the notes. Thus, by pressing one key on the keyboard, several notes could be made to sound at once and to varying degrees of volume. To a limited degree, by judicious mixing of the harmonics, a reasonable imitation of organ pipes could be achieved. However, because of economics, only seven harmonics were available in the earlier models. This placed a severe restriction on which sounds could be emulated to any degree of high fidelity. The current induced into the coils was basically a sine wave so that flute tones were the instrument's strongest points.

This organ caught the imagination of the jazz artists of the day particularly when the output was played through a rotating speaker invented by Don Leslie, from whom it took its name.

What is very often forgotten when the early days of the electronic organs are discussed is that almost at the same time, John Compton, a British organ builder, came up with a device which some thought even better than the Hammond. This was the Compton Theatrene electrostatic organ, some of which are still in use today as are the early models of the Hammond.

Whereas Hammond used metal discs to

produce electromagnetic variations, Compton etched his sine waves on to flat metal discs and then rotated them to create a simulation of the fins of a variable capacitor. Compton then took the output from each sine wave area and fed it to a buss bar where the sounds were mixed by using resistors as jumpers between the buss bars. The end result was the same as the Hammond except that Compton went for the more traditional form of control of tones, ie tab stops.

A theoretical advantage of the Compton system was that it allowed up to 17 harmonics to be integrated into one resultant tone. However, both these systems had the disadvantage of being additive and therefore very limited.

It was not until after the war that any significant changes in design came about. Needless to say, virtually all production of electronic organs came to a halt, certainly in Britain, during the war years. Yet it was the accelerated advance in electronic technology during the war which caused the changes to come about.

It was found possible to use valve oscillators as the tone sources and instead of generating sine waves and having to add them together, almost any waveform could be produced by valve oscillators and then, by the use of filters,



How an early Hammond tone-wheel organ looked. (This is the modern version, the B3000).



An up-to-date big one. The Rodgers Trio 321B. unwanted harmonics could be filtered away, leaving only the wanted sounds.

This system gave rise to two great advantages, one of which was destined to live until today. In both the Hammond and Compton organs, each note had to be generated individually. Using oscillators, it became possible to generate the top octave of notes and then divide each one several times to produce the lower octaves. This was possible because in music, a note one octave below another, has a frequency of exactly one half. Thus it was necessary to produce only the 12 semitones of an octave and the rest was pure repetition. This meant that only twelve oscillators had to be tuned and the octaves were automatically tuned at the same time. The system which did not live was the converse, in which the lowest notes were generated and then multiplied to give the upper octaves.

Needless to say, any system has disadvantages. The main drawback of the divider system was that all the octaves were locked in phase. Thus, whilst the aim was still to emulate the pipe organ (both church and cinema), the individually tuned pipe effect was lost. That is in all but a very few organs, notably Conn, Gulbrandsen and Allen who used individual oscillators for each note.

There were other companies in the market just before World War II but it wasn't until almost 1950 or even later that the band-wagon started to roll. Most of the organs seen in Great Britain bore the names of American manufacturers—Wurlitzer (of theatre organ fame), C. G. Conn who were already known for pianos and musical instruments, Thomas, Lowrey, Baldwin, already famous for their pianos. Since then, other names have become famous — Yamaha and Kawai from Japan, Galanti, Farfisa, Viscount, Elka from Italy, Eminent, Solina and Riha from Holland. It is a regrettable fact that even though there have been famous names in Great Britain, Compton,

Jennings, Bird, Kentucky, Livingstone, the numbers of imported ones have always outweighed the home produced.

The next major step in the fascinating history occurred when two engineers in the Bell Laboratories in the USA discovered—by accident—a device which has changed everybody's life, certainly in the civilised world. It took place in 1948 and became known as the transistor. As soon as it became a mass produced item and therefore cheap enough, it replaced the bulky, expensive-to-run valve. In theory, a transistor placed in a properly designed circuit, can be forgotten for evermore. Furthermore, it is about one hundredth the size of valve thereby allowing far more electronics in the same space and at a cheaper price.

The effect this had on electronic organs was outstanding. The organ suddenly became a full blown orchestra, the rhythm unit became a full percussion section and many other previously impracticable features became feasible because so little space was required for the actual electronics. Of course the physical size of the console had to remain large and ungainly because large and ungainly human beings had to operate it. From the transistor came the electronic marvels we accept as part of our everyday lives—the chip, embodying thousands of components into a scrap of silicon $\frac{1}{4}$ in. square and less than a one thousandth part of 1in. in thickness, the much talked about micro-processor and all the other myriad of electronic devices.

Having said all this, there remains one burning question to be answered—why has the electronic organ become so popular?

To answer this, we must look back to the allegedly good old days when Victoria reigned supreme. In nearly every 'parlour' was a piano which was the main source of entertainment, certainly in the middle class homes. Father would sing, Mother would play, Aunt Bessie would play the violin and the children would join Father in singing. There were no such diversions as radio and television and it was the era of making one's own amusements. Piano lessons were the 'in' thing and many a child suffered the agony of scales, arpeggios and knuckles made sore by the constant rap of a ruler for careless mistakes. Ah me! Little seems to have changed! Unfortunately, this state of affairs led to the vast majority of children giving up their lessons just as soon as they could. Admittedly, the parents suffered too. Who could honestly admit to enjoying the sound of a youngster struggling through Handel's *Largo* at a greatly reduced speed and containing more mistakes than Dr Barnardos?

Suddenly, the electronic organ came along and showed that no matter who pushed down the note, the end result was the same. Further, as long as a note or chord was held down, it stayed on. For the first time, the mind boggling plonk-plonk of the unsustained piano note was gone.

Gone too was the need for regular tunings. This was of particular interest to churches who dared to venture into this sacrilligeous field. Organs were much smaller than the old fashioned upright monstrosities of the pre-overstrung era in pianos.

But perhaps the greatest attraction of the organ—apart from the ego-boosting pretence that the player was another Reginald Dixon—was the introduction of the self-teaching courses. Such names as the *Anchor System* and *Creative Organist* became by-words of the organ loving fraternity. "Point to the chord note, put your thumb up three notes and your little finger down four and play the chord." That roughly, was how the *ab initio* was taught to play with his/her left hand. Pedals? If you play a G chord, play a G pedal. What could be simpler? Equally easy was the way of teaching the player to read music for the melodious right hand.

Needless to say, the marketing departments were not backward in coming forward. Here was a musical instrument which could be learned in the privacy of one's home; teachers were unnecessary; earphones could now be used so that the organist would not interfere with those wishing to indulge in the cultural pastime of watching Crossroads. Even the medical people recommended organ playing as a

relaxing therapy. And all the world bought electronic organs.

There were many spin-offs as well. Retailers formed organ clubs as a sales tool. A quasi social scene was created so that dealers could keep in touch with their customers. Later, many of these clubs became self supporting and self sufficient and today, there are somewhere in the region of 150-200 such clubs scattered throughout the British countryside.

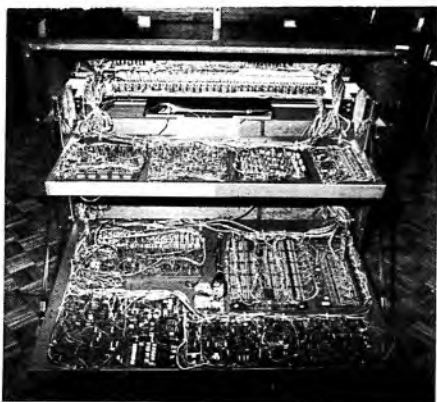
But what of the organs today? What can one expect to find in the instruments being sold in the High Street shops? The design of organs has reached a crossroads. When they were first designed, the main purpose was to imitate the pipe organ but as the years have gone by, the majority of organ manufacturers have gone away from that concept and are now making their instruments far more orchestral. For example, a stop marked "String" (violin, viola or 'cello) emulated the sound made by a similarly marked stop in a pipe organ. Today, it is designed to imitate an actual stringed instrument. However, some organs still sound more like the pipe theatre organs than their orchestral sisters. So now there is a choice.

Not only have there been great advances in the quality of reproduction but in the ancillary functions as well. No longer is it necessary to play a full chord to accompany a melody. Instead, one finger pressing one note will produce that chord, an automatic percussed accompaniment, an automatic arpeggiator, properly selected pedal notes and even automatic chording of the melody.

There are even organs made in kit form and these are no toys. The organ made popular by Klaus Wunderlich comes in kit form which may be built in the living room (with your spouse's permission, of course) as simply as those popular hi-fi kits.

And coming to choice, what do you look for when setting out to purchase your first electronic organ? As with any other commodity, yer gets wot yer pays fer! Well, by and large you do, so your choice will be limited to how friendly you are with your bank manager. You will find that organ dealerships are very much like those in the car business. Except in the very large cities, there is normally only one dealer handling any one make. He may well handle several makes but franchise areas are still jealously guarded.

The only way to ascertain which is the make and model for you is to go and listen. Most retailers put on public concerts in conjunction with the suppliers at which all the models of that particular make are demonstrated by the manufacturer's demonstrator—who is usually one of the very top organists in the country—Jerry



A mass of electronics. The inside of the Lowrey 'Celebration' organ. The undersides of the trays are similarly loaded.



The left hand cheek blocks of the Eminent 2000 showing the Arpeggio, String Ensemble and Rhythm unit controls. The rhythm unit contains the controls for the automatic bass, accompaniment and memory.

Allen, Bryan Rodwell, Len Rawle, George Blackmore, Brian Sharp and many more. These large concerts are usually followed by 'in-store' parties to which a limited number of interested people are invited to have a cup of coffee (or whatever) and talk about it all.

Fortunately, all the makes of electronic organs sold in this country come from reputable manufacturers and are retailed by very reputable retailers. The salesmen want to sell, of course, but they also want you to say loyal to them. Pulling a fast deal would be the quickest way of losing clientele.

Every retailer has some form of hire purchase

to offer and organs may be purchased for as little as 10 per cent down, and even though there are models available for as little as, say £500 or even less, there are also those which cost several thousand. Hire purchase in the organ business is a way of life.

We have spoken about the past and the present, so what of the of future? On that score, your guess is as good as mine. What impact will microprocessors have? Who knows what the hi-fi of ten years hence will be like? Don't worry about the future—enjoy what we have today and that includes a wonderful array of electronic organs.

Electronic and TV Games

Space-age technology fun for all the family

by Nikki Parry, Assistant Editor,
Electrical and Electronic Trader

THE idea of living in a computer-controlled environment may sound like a futuristic setting for a science-fiction novel but in fact it could turn into a reality—even before 1984.

Home computers now available can be programmed to switch lights, TV and radio on and off in the home, control the temperature, answer the telephone, issue cheques, work out income tax, tell us what is in the freezer, control the cooker, educated our children and even play games with us. Obviously these computers are beyond the means of many of use at the moment. And even if we could afford one, the idea of having our lives so well organised does not appeal to all of us either. It's a bit like having "Big Brother" in the house.

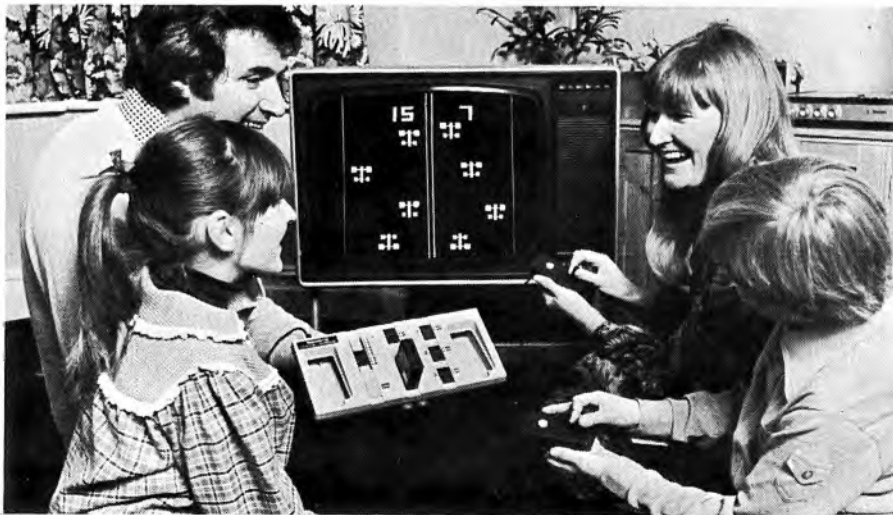
But an interesting thought is that in the not too distant future we may be writing our own programme to play TV games with our computers. Pie-in-the-sky perhaps—although the computer manufacturers obviously don't think so—but at the moment an occupation strictly reserved for electronics enthusiasts. Luckily you don't need a computer yet to play TV and electronic games. And even though you

can't yet invent your own games there are so many exciting and innovative versions available in the shops that really don't need to.

Based on silicon chips and, in the case of the more sophisticated ones, on microprocessors, they represent one of the most exciting and fast-moving areas of development in the home entertainment field at the moment.

The market kicked-off about four years ago with the now somewhat primitive black and white TV ball games and electronic technology has since expanded into a host of more sophisticated hand-held and TV games. Visually they're now more exciting having moved on from mono versions to colour. Many have flashing lights, illuminated digits and other dramatic visual effects. They also possess an amazing repertoire of sound effects. And the things they are capable of doing are far more complex as well—from playing tank battles, motor racing games and inter-galactic war games to backgammon, blackjack, chess at a high standard and posing complicated mathematical problems.

Electronic wizardry is catching on fast



Videomaster Colour Cartridges—the comprehensive home TV Game centre.

amongst toy manufacturers too these days and we're going to see more and more hand held games in the shops this year. And sophisticated electronic board games like chess and backgammon are coming down in price all the time as well as improving in technology. In fact the games market has progressed by leaps and bounds since those early days of bat and ball.

Some of the early TV games suffered from unreliability and you may understandably still be under the impression that models now available are poor quality. Unfortunately with any young technology reliability is often a problem at the outset and the electronics field was no exception. It happened with the early calculators and digital watches as well as TV games, but reliability has now improved as the markets have matured.

If you went to your local electrical dealer or department store to buy a TV game it is unlikely that you would have much idea about the many different types available. In many cases you could probably rely on the retailer to help you out but even better would be to know a bit about them in advance. One rather confusing aspect is the difference in the types of programmable games in the shops and you should be aware of this so you don't pay over the odds for something that isn't what you think it is.

There are now a whole host of games available using electronic technology, the number is increasing all the time and I can't hope to mention them all but I can give you some idea of what is in the shops at the moment and some exciting developments you can expect in the future.

Video games were invented as a spin-off from the NASA space programme and they made their first appearance here in amusement arcades, pubs and clubs. These early versions were usually black and white with no sound and a very limited range of games, tennis or football usually, but the British company Videomaster recognised the domestic potential for these products and worked out how they could be adapted for use on a TV set in the home. The first game launched on the UK domestic market by Videomaster cost around £70, quite expensive for something that would probably go for less than £10 these days.

Basically the games consist of a console containing the electronic components which is plugged into the TV aerial socket. The TV is tuned to an empty channel and the game is displayed on the screen. The controls needed for playing the games are either part of the console or, more normally, separate hand controls plugged into the unit.

Since the early days the games have become progressively more complex and sophisticated.



Checker Challenger 4—a four-level computerised draughts board marketed by Spectrum Marketing.

In the case of the basic bat and ball variety more games have been added on, so now the versions available usually offer four games in black and white (Tennis, Football, Squash and Solo for example), and four games in colour. Additional target shooting games can also be added on to these with the purchase of an electronic gun. Six-game models are also now available in mono or colour and there are even more comprehensive versions, such as the Videomaster Sportsworld, which offers ten games in colour—Tennis, Squash, Hockey, Solo 1, Football, Basketball, Gridball, Solo 2 and two target games.

Other improvements over the very early games include the introduction of on-screen digital scoring and realistic sound effects as well as the ability to handicap players to make things more exciting. These basic games have now been superseded by many new ideas but they are still to be found in the shops at very reasonable prices compared with what they cost initially when the market first started.

Moving on from the "dedicated" bat and ball games we come to the "semi" and "quasi" programmables—so called because they are not truly programmable systems but represent a stepping stone between the two extremes.

The programmable-type game consists of a console which cartridges containing games can be plugged into. It offers many more different kinds of games than the basic dedicated version and therefore it follows that it is more expensive, retailing at around £30 to £40. To make things even more complicated though, there is another type of "semi" or "quasi" programmable on the market which costs under £100 and has more functions than the cheaper version but is still NOT as sophisticated as the truly programmable type.

The Optim EG-1001 fits into this category.

It's a video programmable system with a micro-processor, retailing at about £75. Its cartridges (£12.95 each) include games called Targets, Grand Prix, Math Quiz, Kung Fu, Strategy, Chemin-De-Fer, Black Jack, Codemaster, Wrap-Around, Checkers, Chinese Slot Machine and Word Games.

The best way to distinguish between the "semi" and the truly programmable type at the moment is by price—the programmables still cost around £100. The advantage of this type of system is that new programmes can be continuously written and added on by the manufactureres which makes it possible to compile an enormous library of games. The functions that it is capable of are also far more numerous and more complex.

The Atari Video Computer system is a truly programmable game which has a recommended retail price of £169.95. Additional cartridges cost £14.95. There are others in the market and one or two manufactures have plans to introduce programmables but they are waiting for prices to drop and demand to develop but there seems little doubt that this type of system will take a major share of the market eventually.

The Atari programmes range from complex combat games with tanks, planes, helicopters, guided missiles and submarines to educational programmes like Basic Maths, science fiction like Space Wars, video olympics like Soccer and Hockey, casino games like Blackjack, reaction tests like Surround, and stopping stage-coaches and fighting gun duels with Outlaw. And just to put things into perspective, the cheaper programmable, like Videomaster's Colour Cartridge (£43.95), still offers quite a variety of games such as one cartridge providing ten ball games and other cartridges include Tank Battle, Road Race, Stunt Rider, Hunt the Submarine, Target and Super Wipeout and further cartridges are on the way.



Ingersoll Electronics Colour Match XK500C, hand-held 6-game unit.

We've covered the basic types of TV games but there is one that doesn't really fit into any of these categories. Videomaster believe their Star Chess game is in a category of its own. "It is a really new game concept," they say. This is because it is unlike other board games. You can't play Star Chess in any other way except on the TV screen for which it has been designed.

An inter-galactic war game, in fact they refer to it as "the galaxy's most advanced home TV game," briefly it works as follows:

Both players are Admirals of a fleet of 16 spaceships and their mission is to annihilate each other's Commander and, at all times, to protect their own Commander from destruction. To help each player in their tasks they have Starfighters, Supercruisers, Superfighters, Starcruisers and an extremely powerful Destroyer. Each of these spaceships has an armoury of missiles to blast the enemy's forces off the screen. And all manoeuvres are accompanied by dramatic sound and visual effects.

And there's more excitement to come. When 'one spacecraft is in danger and has no apparent means of escape it can be "warped into hyperspace". But a word of caution—the ship will re-materialise in almost any square on the screen wiping out any spaceship occupying it—even your own Commander. And when one of the Commanders is finally destroyed cosmic pandemonium breaks out on the TV screen. Recommended retail price of Star Chess is £59.95.

When the first electronic chess game appeared on the market a year or two ago it was a fairly basic affair which didn't require a great deal of skill to beat. But electronics chess has jumped a few moves ahead since then and it now offers a real challenge even to the expert player. Obviously the ideal of having a computer to play against appeals to many people, especially



Electronic Master Mind by Invicta Plastics.

those who are always searching around for an opponent. The main problem with them has been that the more complicated a game the computer is capable of playing the longer it takes to make its move because it has to go through so many possibilities in its memory bank.

One company that has specialised in board games and particularly in chess is Spectrum Marketing. Chess Challenger 7, retailing at under £100, has recently been introduced and has seven levels of play it will play against you—or against itself, allows you to change sides in mid-game—on any move and has “mate in two” and “Chess by mail” capabilities.

Slightly more expensive, at £200, is the ten-level-of-play version, Challenger 10. In a solid walnut case with simulated leather and brushed gold foil playing surface it comes complete with Staunton design magnetised chess pieces.

Another newcomer being introduced this year is Voice Chess Challenger. “The ultimate in microprocessor mini-computer wizardry—the first ‘think for itself—play by yourself’ chess game”, is how Spectrum describe it. It features the strongest chess programme ever placed in a microprocessor and is approximately twice as fast as other models in the series, they say. It will retail at about £250 and its features include: Infinite levels of play—continues to compute its move until “half” key is pressed; a large repertoire of chess book openings; re-computes its move to respond at any level of difficulty; speaks every move and capture and will repeat board positions on demand; and at the end of the game the computer displays the number of moves played.

Other versions of Chess available now are Videomaster’s Chess Champion and Boris “the world’s most advanced portable chess computer” which, according to the sales literature will “decisively defeat any other compact chess computer on the market.” It is distributed by Optimisation.

Other board games from Spectrum include Checker Challenger 2 (or draughts) which has two levels of play and incorporates “a micro-processor with the thinking power of around 1000 scientific calculators”. Retail price is £59.95. Checker Challenger 4 is a more complex version retailing at £99.95.

Other electronic games from Spectrum include their Zodiac Astrology Computer, retail price £25.95, which builds up a complete horoscope chart for anyone, including planetary positions at time of birth and corresponding personality characteristics.

A game designed for the kids is Spectrum’s UFO master blaster Station. It’s a hand-held game which tests hand and eye co-ordination

and retails at £21.95. Digits, at £13.95, is another hand-held game for children using numerals instead of traditional board and colour pegs; Zap!! is a computerised missile game for two costing £19.95; Lil Genius helps teach the essential rudiments of arithmetic to children aged 5 and up (£6.45); and finally in the Spectrum range is Amaze-A-Tron which offers a choice of eight maze games with over a million variations—price £17.95.

The Spectrum range gives a good indication of the electric games now available. As I mentioned earlier, the toy trade are latching on to electronic wizardry fast, a fact that is underlined by Waddingtons’ (the toy people) takeover of Videomaster last year.

It would require too much space to describe in detail all the electronic toys which are likely to be in the shops this year. Suffice to say they will be games requiring skill and speed of reaction and will include war and battle games, quiz games, shooting games, musical toys and learning aids. And even the well known game Mastermind is now available in electronic form.

Many people believe that the most popular electronic toy this year will be Simon from Milton Bradley. Its a computer controlled game consisting of a base unit with four colour lenses and a control panel—an electronic version of the “Simon Sez.” game. With flashing lights and musical sound it has great appeal with children and the idea of it is to repeat correctly its longer and longer sequence of signals.

Only you can decide whether electronic games are just gimmicks or whether they have a genuine contribution to make to your family’s entertainment but if you go into the shops and try out some of them for yourself you’ll at least have fun making up your mind!



First-ever astrological computer, Zodiac, introduced by Spectrum Marketing.

Video in the Home

by Arthur W. Ord-Hume
deputy editor of Electrical & Radio Trading

THE technique of recording a moving picture on magnetic tape has been practised for some years. In broadcast studios, video tape has been used for almost a quarter of a century.

As indeed happens with just about every level of technology, increased use and acceptance by the professional end of the market spectrum ultimately leads to the technique coming down to the ordinary consumer—you and me. Nowhere has this been more noticeable than in the world of microelectronics and computers and today the scientific calculator offers the man in the street a fantastic computing ability. People can now buy personal computers which are small, compact and easy to programme for domestic use. Spin-off, in terms of technology, from the space age has given us the liquid-crystal display digital watch, tiny yet powerful solid-state electronics for hi-fi and TV, and a whole range of products the likes of which would have seemed totally improbable to an earlier generation.

One of these is domestic video. Here the opportunities lie in two directions—the recording of off-air television programmes for subsequent viewing at the convenience of the user, and the making of your own recorded “TV

programmes” as an extension of the growing home-movie world.

Home video has been available now for several years, yet the consumer is still understandably deterred from buying by the fact that there are so many different and non-compatible systems on the market. Expressed simply, this means that whereas the audio compact cassette is now universal and a cassette recorded on a cassette machine anywhere in the world can be played back anywhere else on any equipment, the same cannot be said of video.

Of the systems available, probably the two oldest and best established are the JVC (Video Home System) and the Sony Beta. Sony's Beta comes as the domestic application of experience developed over many years making professional U-Matic video equipment. The U-Matic uses a $\frac{3}{4}$ in. wide tape, whereas all the home video systems use the narrower $\frac{1}{2}$ in. tape. Sony equipment is known and marketed the world over and is backed by a spares and service network which is second to none.

Virtually the same can be said of JVC—this is the Victor company of Japan which is one of the oldest companies in home entertainment business going right back to the Victor



Victor video disc prototype.

Gramophone Company in the dim distant past. JVC'S video is backed by a vast technological organisation which has been responsible for some major developments in the world of home entertainment. Again, the company is backed by a world-wide spares and service organisation.

Third on the list is Philips which has no fewer than three different video systems on the market—four if you include its current development work with Magnavox in America on the video disc (more of than anon). Philips entered the market with the N1500 domestic machine some years ago. This was developed into the N1700 which, although outwardly identical to the earlier model, recorded and played back at a different speed. The N1700 was updated earlier this year into the N1702 with eight-day timer and other detail improvements which do not undermine the compatibility of recordings between the N1700 and the newer model.

The new Philips system, developed in conjunction with the German maker, Grundig, is the most revolutionary of the lot and is the one which both Philips and Grundig are looking to for their successful expansion of the video market. This is the V2000 which has a number of unique features, not the least of which is a "flippable" cassette. This means that just like an audio cassette, it can be recorded on one side, turned over and recorded on the other. With all the other systems, the cassette or tape cartridge can only be recorded and played back in one direction and the tape cannot be reversed.

Grundig entered the video market last year



JVC HR3330.

with a most impressive machine—the SVR 4004. Using a special chrome-finish tape (video recording tape has to be of a far higher quality than ordinary audio tape), the SVR is a well-styled machine which can produce a recorded picture quality slightly better as regards resolution and definition than the other systems. It is, however, costly and the tapes are expensive. It is significant therefore that Grundig has introduced a new and improved video system in conjunction with Philips as mentioned above. The new Grundig model is called simply the Video 2000. The new system will be in production alongside the SVR which will not be phased out.

One major limiting factor of the early video recorders was that they recorded their signals onto tape at a very high speed and this meant that cassettes only played for a short while—in former times twenty minutes was about maximum. Then it was discovered that unlike normal audio tape, you did not have to record the picture in a "straight line", so to speak, on the tape, but you could produce a large number



JVC video cassette recorder and camera.



Grundig SVR-4004.

of inclined tracks of recording diagonally across the width of the tape. This is called helical scanning and it at once made it possible to pack considerably more information into a given length of tape. Recording times consequently moved up into practical lengths of well over an hour.

Of course, this produced a difference between the actual linear speed of the tape through the machine and the effective speed of recording. This is demonstrated by an analysis of the comparative tape and recording speeds of the systems. Sony's Betamax recorder uses its tape at a speed of 1.873cm/s but the video signal is recorded at an effective speed of 6.6m/s giving a maximum playing time on the largest cassette of 3¼ hours.

The VHS type uses tape at 2.339cm/s but records it effectively at 4.8m/s for up to three hours maximum length. The Philips machine, known as the VCR (and covering the N1700 and N1702) uses its tape at a higher speed than the others—6.56cm/s—and records at 8.1m/s for a maximum of 2½ hours. Grundig's SVR (also, incidentally, using some Philips technology as part of an exchange agreement) uses its tape at 3.95cm/s, yet records at the highest speed of them all—8.21m/s. This machine has a maximum recording time of four and a quarter hours. The new Philips and Grundig machines, only unveiled at the Berlin Radio Show this summer, allow four hours of recording per side of the cassette—a total of eight hours per full-length tape.

It would make sound economic sense were there to be any indications that some of these systems were to be phased out to leave one as a market leader which would eventually become the world-wide video standard. However, this seems very unlikely, yetawhile at any rate, and all the system manufacturers are adamant that their systems will survive. Philips says, however, that both the N1500 and N1700/1702 recorders and tapes will remain in the Philips' production "as long as there is demand for them".

Sony maintains that its system is the most successful in the world and that it will most certainly capture an increasing market share. JVC says almost exactly the same. Both these systems are available in products by other manufacturers. For example, Toshiba offers video equipment to the Beta standard, and Hitachi offers equipment to the VHS one—and these are just two of a large number of makers and brands wedded to the respective systems. ITT has its own version of the Grundig SVR system, and Thorn, under its Ferguson brand name, has the Videostar VHS.

Certainly the arrival of the new Philips and Grundig system this year is likely to have a major impact on the video market and the sheer utility and technical advantage offered by the 2000 concept may well prove to be a deciding factor over the next few years.

The 2000 model of Philips and Grundig is suitable for all TV standards voltages and voltage frequencies, at once making it marketable in all parts of the world. Unlike all the other video systems so far available, this new one offers both slow motion and rapid play for search and locate use. It can also stop and freeze a frame. This frame-freeze ability is one which both the SVR and the Sony Beta can do to a certain extent although the picture quality is still very good.

The Philips/Grundig combined attack on the Far East's video imports is certainly formidable competition both in terms of availability and in features. When the 2000 comes onto the market at the end of 1979 its price will be no more than about 20 per cent more than that of the N1702.

For this the consumer will have at his disposal a machine which has such advanced features as an automatic track-following system (so making cassettes recorded on any 2000-standard machine absolutely interchangeable), floating video head to optimise the video signal performance, dynamic noise suppression (DNS) which ensures a "clean" picture both on recording and playback, and a micro-processor control system which removes many of the moving parts from the switching of functions.

Indeed the V2000 is not so much a new recorder as a total system which will ultimately include portable recorders and copies for cassettes and existing home movies on conventional film. It is being marketed as the new "European standard" for video recording.

It must be said that this new system has much in its favour and will certainly offer a serious challenge to the Japanese equipment makers. However, against that must be set the fact that both VHS and Beta have been around for a long time and many people have built up libraries of

tape which they will think about more than twice before considering changing systems.

The first generation of domestic video recorders effectively came to the end of the road this summer with many companies introducing their second-generation models. Among these has been a trend for many of the VHS-brand equipment makers to do somewhat more than just put their labels on a JVC product. The new models are attractively styled, easy to use and all incorporate sophisticated timers for up to eight days ahead. This allows you to leave home for a whole week without missing your favourite TV programme. The Grundig and ITT SVR, incidentally, has a ten-day timer facility.

A notable trend in video recording is the move towards portable machines and cameras to meet the growing demand for home-taping of events as an extension of movie-making. There are now quite a few cameras available, both black and white and colour, and all have sound-recording facility. Naturally the colour cameras are very expensive. It is possible to buy a good quality monochrome camera for under £200, but a quality colour camera with zoom lens can set you back by up to £800.

Over the past year, several makers of VHS equipment have introduced portable recorders which can be taken out on picnics or to the seaside on holiday for use with the video camera and a shoulder-pack of rechargeable batteries. Although these portable recorders tend to be more expensive than the drawing-room complete video machine, they can be used as the centre of such a system: they have a mains/battery application and can be fitted with a separate TV tuner.

As for the video disc, this is still being developed and offers a bright future for the years ahead. The home recording facility, so vital to a home video system, is still some way from being a low-cost consumer possibility but for prerecorded material it is extremely fine. Test-marketed in America earlier this year, the videodisc offers extreme flexibility in use. The "records" are smaller than an audio LP, have a surface which, unlike the audio disc, is unharmed by dirt, dust and even scratches, and can be considered as almost indestructible. They are played not by contact with a stylus but by a laser beam which scans the surface. The laser can traverse the disc at any speed forwards or backwards, or can remain stationary scanning just one single track of information to produce a perfect still picture.

The developed video disc may well emerge as the later standard for audio as well, offering the possibility of having one "record player" for both audio discs (in this case probably digitally-recorded for quality and length) and video discs.



Philips N1702.

Video promises to be the most exciting new experience for the consumer, particularly if it is taken to embrace the home-movie aspect. Whereas Super-Eight cine film costs about 70p a minute, video tape costs no more than around eight pence a minute—and you can keep the camera going on one shot, if you wish, for up to four hours!

For the newcomer to video, there are two ways of entering the field without too great a capital outlay. First there is rental and now the majority of TV rental companies will also rent video recording equipment and, in some cases, the rest of video accessories such as portables and cameras. At present the cost of renting an ordinary video recorder is about £18 a month.

With many superseded models on the market today, it might well be that the increasing availability of clearance-priced lines could show significant savings on outright purchase.

The sophistication of this equipment, even though it is all extremely easy to set up and to use, means that the user should seek professional advice and recommendation before buying. This can be obtained at no cost by discussing needs and requirements with the local specialist hi-fi and television retailer who will have trained staff to answer all questions and offer the benefit of market and even local experience. The local retailer will also be in a position to offer service as and when needed, along with a supply of tape cassettes and of course the installation and initial setting up and tuning of the video receiver to the transmitters serving your area.

All the trappings of amateur cine work—projectors, screens, splicing film, time, space and setting up—are now replaced by one versatile machine which will allow you to watch one TV channel while recording another, will record while you are away from home, and will preserve those personal and priceless family moments on tape.

The home video recorder is truly the greatest consumer product since the invention of the tape recorder and colour TV.

Electronic Organs and Synthesizers

*Indicates entry is illustrated.

■ CAVENDISH

Cavendish International (Organs) Ltd,
Brick Knoll Park, Ashley Road, St. Albans,
Herts.

Tel: St. Albans (56) 60191.

750-R

Easy-play organ with two 44-note keyboards, 13-note pedal board. Stops: Flute, Reed, Clarinet, Cello on upper keyboard; Flute, Sax, Viola on lower keyboard. Effects: pedal sustain, vibrato, reverberation. Auto rhythm: Waltz, March, Tango, Rock, Slow Rock, Foxtrot, Bossa Nova, Samba. Controls: pedal volume control, keyboard balance, expression pedal, rhythm on/off, touch button rhythm volume control, tempo control. Output: 10W. Dimensions: 108 × 53 × 87cm. Finish: Case in wood veneers, music desk and padded bench. Easy-Play: one finger chords, sustain chord, memory, auto bass, auto accompaniment, auto bass volume control, auto accompaniment volume control. Price: £495.00 (inc. VAT).

1000-R

Easy-play organ with two 44-note keyboards, 13-note pedal board. Stops: Flute 16, Clarinet 16, Flute 8, Reed 8, Strings, Flute 4 on upper keyboard; Flute 8, Melodia 8, Diapason 8, on lower keyboard. Effects: pedal accent, pedal sustain on pedalboard, vibrato. Auto rhythm: Waltz, March, Tango, Rock, Slow Rock, Foxtrot, Bossa Nova, Samba. Controls: manual balance, reverberation, volume, expression pedal, rhythm on/off, touch button rhythm volume control, tempo control. Easy-Play: one finger chords, sustain chord, memory, auto bass, auto accompaniment, auto bass volume control, auto accompaniment volume control. Output: 20W. Dimensions: 108 × 53 × 87cm. Finish: Case in wood veneers, music desk and padded bench. Price: £595.00 (inc. VAT).

1500-R*

Easy-play organ with two 44-note keyboards, 13-note pedal board. Stops: Piano, Clavichord,

Spinet, Decay Long, Flute 16, Clarinet 16, Flute 8, Reed 8, String 8, Flute 4, String 4 on upper keyboard; Flute 8, String 8, Flute 4, String 4 on lower keyboard. Effects: pedal sustain 16 or 8, vibrato, reverberation. Auto rhythm: Waltz, Tango, Rock, Slow Rock, Foxtrot, Bossa Nova, Samba. Easy-Play: one finger chords, sustain chord, memory, auto bass, auto bass volume control, auto accompaniment volume control. Output: 20W. Dimensions: 108 × 53 × 87cm. Price: £775.00 (inc. VAT).

2000-R

Easy-play organ with two 44-note keyboards, 13-note pedal board. Stops: Flute 16, Cello 16, Clarinet 16, Flute 8, Strings 8, Oboe 8, Trumpet 8, Flute 4, Violin 4 on upper keyboard; Flute 8, Melodia 8, String 8, Flute 4, String 4 on lower sustain, pedal volume, reverberations volume board. Effects: pedal sustain, vibrato, delay vibrato. Controls: balance, repeat speed, upper sustain, pedal volume, reverberations volume control. Auto rhythm: Waltz, Foxtrot, March, Slow Rock, Rhythm Blues, Shake, Tango, Bossa Nova, Cha-Cha, Rhumba, Samba, Beguine. Easy-play: auto bass and guitar with volume and decay, auto and sustained chords, free chord, memory, touch, arpeggios, individual and cumulative, piano voice, spinet voice, arpeggio volume control, arpeggio decay control. Output: 40W. Dimensions: 109 × 60 × 97cm. Finish: Case in wood veneers, music desk, locking roll top fall, bench. Price: £875.00 (plus VAT).

4000-R

Easy-play organ with two 44-note keyboards, 13-note pedal board. Stops; nine harmonic tonebars on upper manual, upper drawbar cancel button, Percussion, alternate voice, piano solo, Piano diapason, Clavichord,



Cavendish 1500-R

*Indicates entry is illustrated

Spinetta, long decay, coupler, strings, six harmonic tonebars on lower manual. Pedal Bourdon 16, Flute 8, Bass Guitar, pedal column tonebar on pedal keyboard. Auto Rhythm: Waltz, Foxtrot, March, Slow Rock, Rhythmi Blues, Shake, Tango, Bossa Nova, Cha-Cha, Rhumba, Samba, Beguine. Easy-play: auto bass and guitar, free chord, memory, touch auto or sustained chords, arpeggios, individual and cumulative, Piano voice, spinet voice, arpeggio volume control, arpeggio decay control, single finger chords. Speakers: 2 x 12in., 1 x 8in., 1 x 3in, 1 x space sound rotary unit. Finish: Case in wood veneers, louvres, music desk, roll top locking fall, bench. Price: £1,565.00 (inc. VAT).

Portable II

Easy assembled or dismantled with two 44-note keyboards, 13-note pedal board. Stops: 8 upper and 4 lower keyboard tonebars, pedal tonebar, Bourdon, Flute 8, Guitar 8. Special Features: Viola, Violin, String Ensemble on upper keyboard; Piano, Piano Solo, Clavichord, Spinetta on lower keyboard. Controls: Piano volume reverberation, pedal sustain, percussion delay, Percussion volume, repeat speed, etc. Dimensions: 110 x 68 x 100cm. Price: £1,085.00 (inc. VAT).

Sonorous Speakers to match above:

Specially designed to meet needs on performance, portability, and price. Careful matching of amplifier, loudspeaker, and rotor unit gives bright sound with full breadth of tone. Deep maroon vinyl case has stage appeal and is robust with carrying handles and built-in castors.

301

Price: £185.00 (inc. VAT).

601

Single channel tone cabinet with two-speed rotor, chorale or tremolo. Output: 60W into 12in. Altec Driver. Upper frequencies reinforced by 2.5in. Piezo electric tweeters. Dimensions: 75 x 59 x 48.3cm. Weight 42kg. Price: £425.00 (inc. VAT).

602

Single channel tone cabinet with bass and treble two-speed rotor, chorale and tremolo. Output: 60W into 12in. electro voice bass driver. Upper frequencies channelled through electro voice re-entrant driver. Dimensions: 113 x 59 x 48cm. Weight: 58kg. Price: £560.00 (inc. VAT).

Pre-Amp

Price: £55.00 (inc. VAT).



Eko Tivoli 18A

■ EKO

John Hornby Skewes & Co Ltd,
Salem House, Garforth, Leeds LS25 1PX,
West Yorkshire.

Tel: Leeds (0532) 865381.

Auto Tivoli 18A*

Easy to play chord for the beginner with one keyboard of 37 keys plus 6 major chord buttons, 6 minor chord buttons and 6 bass note buttons. Stops: Flute, Horn, Reed, Strings. Effects: vibrato. 6 auto rhythms and auto accompaniment. Controls: volume slider, rhythm volume slider and rhythm tempo slider. Speakers; 6in. Dimensions: 76 x 79 x 41cm. Output: 5W. Features: Plastic top, simulated wood cabinet. Price: £175.11 (plus VAT).

Tivoli Star

Easy to play chord organ for the beginner with one keyboard of 37 keys plus 6 major chord buttons, 6 minor chord buttons, 6 bass note buttons. Stops: Flute, Horn, Reed, Strings, Effects: variable vibrato. 8 auto rhythms and auto accompaniment. Controls: volume slider, rhythm volume slide, rhythm tempo slider, vibrato slider. Speakers: 8in. Dimensions: 84 x 86 x 43cm. Output: 9W. Finish: PVC simulated wood cabinet. Price: £215.11 (plus VAT).

Tivoli 49S

Ideal organ for beginner wishing to learn full keyboard technique with 1 keyboard of 49 keys.



Eko Tivoli Elite 2

Stops: Flute, Horn, Reed, Strings. Effects: vibrato. 6 auto rhythms and auto accompaniment. Controls: Volume slider, rhythm volume slider, rhythm tempo slider. Speakers: 8in. Output: 9W. Dimensions: 84 × 86 × 43cm. Finish: PVC simulated wood cabinet. Price: £215.11 (plus VAT).

Tivoli Elite 2*

Sophisticated organ for the beginner featuring ACP chord programming memory. Before playing a tune all chords appearing in it can be prepared in advance to be released at the appropriate time in sequence at the press of a single button. One keyboard of 37 keys plus 6 major chord buttons, 6 minor chord buttons, 6 bass note buttons. Stops: Flute, Horn, Reed, Strings. Effects: variable vibrato. 8 auto rhythms and auto accompaniment. Controls: volume slider, rhythm volume slider, rhythm tempo slider, vibrato slider, auto chord programming memory system, swell pedal. Speakers: 8in. Output: 9W. Dimensions: 86 × 96 × 48cm. Finish: polished wood cabinet. Price: £322.67 (plus VAT).

■ ELECTROPHONIC

Cape Electronics Ltd,
56 Bedford Place, Southampton.
Tel: Southampton (0703) 21265.

Electrophonic Organs

Classical organs built to customer specification with 2, 3, or 4 manuals (61 note), 32 note polyphonic pedalboard. Speakers: 60W per

department. Output: 80W per department. Two amplifier speakers sections can be used for Hi-Fi reproduction. Dimensions: minimum 54in. wide, 29in. deep. Finish: to order. Price: from £2,500 (plus VAT).

■ ELGAM

J. T. Coppock (Leeds) Ltd,
Highfield House, Royds Lane,
Leeds.
Tel: Leeds (0532) 634652.

Broadway 444

Two 44 note keyboards and 13 note pedal board. Auto rhythm. Speakers: two 12in. Output: 30W. Finish: walnut. Price: on application.

Broadway 200

Two-44 note keyboards and 13 note pedal board. Auto rhythm. Speakers: 2 × 10in. Output: 25W. Finish: walnut. Price: on application.

Mistral 200

Two-44 note keyboards, 13 note pedal board. Auto rhythm. Speakers: 2 × 10in. Output: 25W. Finish: walnut. Price: on application.

Talisman Portable

Two manual-49 note Pedal board available but separately priced. Auto rhythm. Can be purchased with or without built-in amplifiers and speakers. Speakers: 2 × 10in. Output: 60W. Finish: blue/black. Price: on application.

Recital De Luxe

Two-49 note keyboards including synthesizers and push-button control, 13-note pedal board. Auto rhythm. Speakers: two-way plus tweeter. Output: 35W. Finish: walnut. Price: on application.

Recital

Two-49 note keyboards, 13-note pedal board. Auto rhythm. Speakers: two-way plus tweeter. Output: 35W. Finish: walnut. Price: on application.

Serenade

Two-37 note keyboards, 13 note pedal board. Auto rhythm. 10in. speaker. Output: 15W. Finish: walnut. Price: on application.

Symphony 200

Two-49 note keyboards, 13 note pedal board but priced separately. Effects: upper and lower sustain. Auto rhythm. Speakers: 2 × 8in. Output: 40W. Price: on application.

*Indicates entry is illustrated

■ LESLIE

Roosey & Hawkes (Electrosonics) Ltd,
Brick Knoll Park,
Ashley Road, St. Albans, Herts.
Tel: St. Albans (56) 60191.

Speakers

Specially designed for use with electronic organs. Leslie speakers produce a "live" sound by rotating electro-mechanical methods that cannot be reproduced by ordinary speakers. Full details on application. Price: 60 £528.00, 110 £277.00, 122 £706.00, 122RV £852.00, 130 £474.00, 145 £666.00, 147 £708.00, 147RV £841.00, 330 £754.00, 520 £717.00, 540 £462.00, 700 £637.00, 705 £708.00, 710 £788.00, 720 £954.00, 760 £729.00, 770 £722.00, 822 £558.00, 860 £791.00, 910 £907.00.

Pre-Amps

7800-1 £194.00, 9340-1 £87.00, 9370-1 £119.00,
9420-1 £126.00, 9875-1 £97.00. All above prices
are inclusive of VAT.

■ LOWREY

Norlin Music (UK) Ltd.,
Woopack Lane, Braintree,
Essex CM7 6BB.
Tel: Braintree (0376) 23061.

I-50 Magic Genie

Single manual with stops for: flute, string, 2 reeds, string bass, guitar. Effects: magic genie remembers any one of 48 one-finger chords and automatically adds string bass, vibrato, auto chord hold, guitar strum, piano arpeggio, boogie-woogie bass. Price: £795.00 (inc. VAT).

E-50 Debut

Two manuals and 13-note pedal board. Stops: 2 flute, 2 reeds, 1 string. 12 rhythm patterns. Controls: magic genie chords, 48 one-finger chords, auto chord hold. Price: £750.00 (inc. VAT).

M-125 Festival

Easy to play organ with two 44 note keyboards and 13 pedals. Stops: Trombone 16, Clarinet 16, Oboe 8, Viola 8, Flute 16, Flute 8, Flute 4 on upper keyboard. Flute 8, Piano/Horn 8, Guitar/String 8, on lower keyboard. String, bass, genie string bass, bass med, bass full on pedal. 18 auto rhythm. Controls: presents for Hawaiian Guitar, Piano, Harpsichord. 48 one-finger chords, magic genie chords, column slider, speed slider, vibrato, sustain. Features: glide control, expression pedal, headphone jack. Speakers: 12in heavy duty with integrated treble cone. Output: 35W amplifier. Price: £1,399.00 (inc. VAT).

M-325 Jamboree

Home organ with two 44-note keyboards and 13 pedal. Stops: orchestral pre-sets, Trombone 16, Clarinet 16, Viola 8, Flute 16, Flute 8, Flute 4, on upper keyboard. Flute 8, Piano/Horn 8, Guitar/String 8, Banjo/reeds 8 on lower keyboard. Guitar bass, genie string bass, pedal sustain, bass med, bass full on pedal board. Effects: magic genie chords, guitar strum, arpeggio, boogie woogie bass, vibrato, symphonic sound, auto organ computer gives chords from single note play, repeat, sustain



Lowry Organ in Home setting



Lowry Debut

slider. 18 auto rhythms. Control: 48: magic genie chords, expression pedal, glide control, minor chord control. Speakers: 12in heavy duty bass, 8in. main with integrated treble cone. Price: £1,899.00 (inc. VAT).

Other Models

M-525 Jubilee at £2,750.00; D-325 Holiday at £3,695.00; D-500 Coronation at £4,515.00; D-550 Contempo 80 at £4,604.00; C-300 Promenade at £6,450.00; C-500 Celebration at £8,750.00 (all inc. VAT).

■ RIHA

B.M.I. Ltd, Unit R, Penfold Works,
Imperial Way, Watford, Herts.
Tel: Watford (92) 46929/46920.

Saturn

Popular organ with connection facilities for headphones, tape recorders, and microphones. Two 44-note keyboards and 13-note pedal board. Stops: Tibia 16, Diapason 16, Flute 8, Principal 8, Flute 4, String 4 on upper manual and Flute 8, Clarinet 8 and String 8 on lower. Subbas 16, bass 8, sustain 8 on pedal. Effects: reverb, percussion, vibrato. Auto rhythm gives Waltz, Tango, March, Western, Bossa, Latin, Foxtrot, Rock, Swing, Beat, Soul, Slow Rock. Shuffle. Other controls: balance, volume. Dimensions: 95 × 111 × 56cm. Price: £749 (inc. VAT).

Saturn TT

As above but produces effects from rotary speaker systems. Price: £808.00 (inc. VAT).

Festivo Mk II

Popular organ with connection facilities for headphones, tape recorders and microphones. Two 44-note keyboards and 13-note pedal board. Stops: Bass-Guitar, bass, sustain on pedal, tibia, Horn, Cello on lower manual. Vibrato, Percussion, Flute 16, Flute 8, Flute 4, Trumpet, Clarinet, Cello, Violin, Oboe, Piccolo on upper manual. Auto rhythm. Waltz, 6/8, March, Swing, Disco Pop, Soul, Tango, Beguine, Bossa, Samba. Other controls: pitch, volume. Output: 45W. Dimensions: 94 × 112 × 56cm. Finish real walnut or oak. Price: £785.00 (inc. VAT).

Andante Mk II

Popular organ with connection facilities for headphones, tape recorders, and microphones. Stops: as for Festivo above. Auto rhythm: as Festivo above. Other controls: speed, volume, balance. Dimensions: 94 × 112 × 56cm. Output: 2 × 45W. Price: £899.00 (inc. VAT).



Riha Andante

Adagio Mk II

Popular organ with connection facilities for headphones, tape recorders, and microphones. Two 44-note manuals and 13-note pedal board. Stops: Bass/Guitar, bass, sustain on pedals, tibia, Horn, Cello on lower keyboard, vibrato, Percussion, Flute 16, Flute 8, Flute 4, Trumpet, Clarinet, Cello, Violin, Oboe, Piccolo on upper keyboard, Horns and Strings on polyvoice lower keyboard and Trumpets and Strings also on upper. Effect 48 one finger chords. Auto rhythm: Waltz, 6/8, March, Swing, Disco, Soul, Tango, Beguine, Bossa, Samba. Other controls: pitch, vibrato, percussion. Output: 2 × 45W. Dimensions: 94 × 112 × 56cm. Finish: oak or walnut. Price: £1,175.00 (inc. VAT).

Jupiter

Popular organ with facilities for headphones, tape recorder, or microphone. Two 44-note manual keyboards and 13-note pedal board. Stops: tibia 16, Diapason 16, Flute 8, Principal 8, Flute 4, String 4 on upper manual. Flute 8, Clarinet 8, String 8 on lower. Subbas 16, bass 8, sustain 8 on pedal. Sax, Accordion, Strings on polyvoice upper manual. Horns, Accordion, strings on polyvoice lower manual. Effects: Piano, Harpsichord, Cello, Trumpet, Hawaiian Guitar, Clarinet. Controls: balance, volume, reverb, percussion, vibrato. Optional Leslie speakers. Dimensions: 95 × 111 × 56cm. Price: £1,049 (inc. VAT).

Etude

Simplified version of the large Classica. Two 4½ octave keyboards and 13 or 27-note pedal board. Stops: bourdon 8, prestant 8, salicional

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ELECTRONIC ORGANS/SYNTHESIZERS

8, rohr Flute 4, octave 4, Flute 2, tertian 2 on upper keyboard. Rohr Flute 8, quintaton 8, dulciana 8, Flute 4, seqq on lower keyboard. Subbas 16, Fagott 16, stopped 8, prestant 8 or pedals. Solos: tibia, vox humana, Trumpet, Oboe. Effects: "Chiff" Controls: volume, reverb, vibrato. Dimensions: 54 × 112 × 94.3cm. with 13 note pedal or 65 × 105 × 12.5cm with 27 note pedal. Price: £997.00 (inc. VAT) for 13 note pedal board or £1,395.00 (inc. VAT) for 27 note pedal board.

■ RODGERS

Rodgers Organ Division,
Boosey & Hawkes (Electrosonics) Ltd,
Brick Knoll Park, Ashley Road,
St. Albans, Herts AL1 5LR.
Tel: St. Albans (56) 60191.

Columbian 700

Sounds like an authentic pipe-organ. Two 61-note manual keyboards, 32-note pedal board. Stops: principal 8, spitzflote 8, gambe 8, octave 4, open Flute 4, super octave 2, waldflöte 2, larigoy, mixture, sesquialtera on great. Bourdon doux 16, Viola pomposa 8, rohrflote 8, prestant 4, gedeckt 4, nasard, blackflote 2, tierce, mixture, Cornet on swell. Bourdon 16, leiblich gedeckt 16, octave 8, choral bass 4, nachthorn 4, zauberflote 2, mixture on pedals. Effects: foundation chorus, flute chorus, main tremulant, flute vibrato. Speakers: two independent systems contained within each console, each system consisting of woofer, midrange and high-compliance tweeter. Output: 50W per channel. Two outputs provided for connecting external speaker cabinets. Features: time sharing circuitry,

transposer with piston control, natural harmonic activity, adjustable tremulants, headphone jack, balanced expression pedal, illuminated music rack. Dimensions: minimum floor area 168 × 155cm. Height 117cm. Finish: walnut or oak console with matching bench and rolltop locking. Price: £4,677 (inc. VAT).

Other Models

Jamestown 725, Price: £5,989. Scarborough 750I, Price: 6,893. Scarborough 750E, Price: 6,520. Cambridge 850 Drawknob, Price: £13,368. (All inc. VAT). Other models and theatre organ consoles — details on application.

Speakers

Finished La Scala, Price: £846. Klipsch, Price: £603. M13, Price: £491. TM13, Price: £1,101. P1, Price: £837. P2, Price: £709. (inc. VAT).

■ WERSI

Aura Sounds, Cophthorne Bank,
Crawley, West Sussex.
Tel: Crawley (0293) 713338.

Wersi Organs

11 available ready-built or in do-it-yourself kits. Keyboards from two manual (49 note) to three manual (61 note), pedals from 13 note monophonic to 30 note polyphonic. Stops: 15-24 on upper keyboards, 8-22 on lower keyboards. Effects: wah-wah, Percussion, Piano, String orchestra, etc. 24 rhythms, drawbars. Speakers: 2 base, 2 tweeters. Output: 70W channel. Finish: in choice of veneers. Prices: from £1,200 in kit form to £20,400 for the largest organ ready built.

■ WURLITZER

Wurlitzer Ltd, Parkgate Industrial Estate,
Knutsford, Cheshire WA16 8DU.
Tel: Knutsford (0565) 52621/52622.

470*

Funmaker custom Spinet organ with two 37-note keyboards and pedal board. Stops: Flute 16, Flute 8, Flute 4, Diapason, Trumpet, wah-wah, Trombone, Cello, Clarinet, Banjo, on upper keyboard. Flute, Horn, String, on lower keyboard. Effects: all programmed rhythm orchestra features touch tone memory chords, dancing fingers, dancing chords, rhythm bass, pedal memory, bass riff, chromatic riff. Controls: five linear for volume, balance, tempo selection, vibrato, reverb. swinging rhythm, chord magic, slide, balance expression pedal. Dimensions: 96 × 105 × 55cm. Finish: traditional heritage fruitwood. Price: £1,494.00 (inc. VAT).



Wurlitzer 470

*Indicates entry is illustrated



Wurlitzer 475



Wurlitzer 480

475*

Funmaker custom spinet organ with two 37-note keyboards 25 note synthesizer and pedal board of 13 notes. Stops: Flute 16, Flute 8, Flute 4, diapason, Trumpet, wah-wah, Trombone, Cello, Clarinet, Banjo, on upper keyboard. Flute, Horn, String, on lower keyboard, 3 on lower. Effects: programmed rhythm orchestra, touch tone memory chords, dancing chords, rhythm bass, pedal memory, dancing fingers, bass riff, chromatic riff, chord magic slide, balanced expression pedal. Controls: synthesizer with 5 sine wave sounds, 5 preset voices, 5 linear controls for infinite shading and control. Orbit coupler allows synthesizer voices to be assigned to upper keyboard, vibrato, reverb, swinging rhythm. Dimensions: 97 x 105 x 55cm. Price: £1,689.00 (inc. VAT).

480

Funmaker Deluxe Spinet Organ with two 44-note keyboards and 13-note pedal board plus Wurlitzer Syntha-Solo voices. Stops: Flute 16, Flute 8, Flute 4, diapason 16, String 16, Clarinet 16, Trumpet 16, wah-wah Trumpet on upper keyboard. Flute 8, diapason 8, Viola 8, on lower keyboard. Pedal volume-linear, bass 8, bass 16, pedal memory on pedal keyboard, auto rhythm. Other features: chord magic giving auto harmony in upper keyboard voices, linear volume and balance controls, vibrato, reverb. Programmed rhythm orchestra features touch tone memory chords, dancing chords, rhythm bass, dancing fingers, chromatic riff, and bass riff, slide, balance expression pedal. Dimensions: 98 x 111 x 60cm. Price: £1,798.00 (inc. VAT).



Yamaha H-55

Other Models

As one of the major organ manufacturers in USA, Wurlitzer have a wide range of products. At time of going to press they were: 565 at £2,041.87; 580 at £2,352.37; 580T at £2,547.00; 580T in antique white and gold £2,617.87; 630 at £2,945.25; 630T at £3,134.25; 630T in antique white and gold £3,206.25; 4700 Concert at £4,685.62; 950 at £4,911.75; 950TA at £5,680.00 and the 950TA in antique white and gold top of the range at £5,785.00 (all inc. VAT). Full specifications available from the company.

ELECTRONIC ORGANS/SYNTHESIZERS

■ YAMAHA

Kemble (Organ Sales) Ltd,
Mount Avenue, Bletchley,
Milton Keynes MK1 1JE.
Tel: Milton Keynes (0908) 71771.

A55*

Electronic organ with two keyboards of 37 notes each and 13 note pedal board. Stops: Trombone, Clarinet, Oboe, String, Flute, Horn, Cello. Effects: rhythm wah, Piano, Harpsichord, Vibraphone. 12 auto-rhythms. Controls: manual balance, single-fingered chord, fingered chord, custom ABC, memory, synchro-start, master volume. Speakers: two. Output: 30W. Dimensions: 103 × 53 × 90cm. Finish: american walnut grain. Price: £599.00 (inc. VAT).

B35

Organ with two keyboards of 44 notes each and 13 note pedal board. Other features as A55 plus wah-brass, Guitar preset, attack length control, tremelo on upper Flute, upper orchestra and lower voices with speed control and easy play features. Price: £775.00 (inc. VAT).

B55*

Organ with two keyboards of 44 notes each and 13 note pedal board. Stops: Trombone, Clarinet, Trumpet, Oboe, String, Flute, diapason, Horn, Cello. Effects: wah brass, rhythmic wah, Bass Guitar, Piano, Harpsichord, Guitar, vibs, Banjo. Controls: vibrato, reverb, manual balance, speed, tremelo with four selectors, single finger chord, fingered chord, custom ABC, memory. 12 auto rhythms. Two speakers. Dimensions: 114 × 58 × 96cm. Price: £945.00 (inc. VAT).

Other Models

C35, £1,495.00; C55, £1,795.00; C40, £2,100.00; C60, £2,800.00; D80, £3,500.00;



Yamaha A-55

D80 in Ivory, £3,700.00; E30, £3,900.00; E50, £5,500.00; E70, £7,500.00; E70 in Ivory, £7,800.00.

B75

Organ with two keyboards of 44 notes each and 13 note pedal board. Stops: Trombone, Clarinet, Trumpet, Oboe, String, Flute, diapason, Horn, Cello. Effects: wah wah, Bass Guitar, Piano, Harpsichord, Guitar, vibs, Accordion, Banjo, Mandolin. Controls: volume, upper ensemble, lower ensemble, vibrato, slow attach, reverb, manual balance, tremolo. Features: single finger chord, fingered chord, custom ABC, multi-bass, constant, memory, synchro-start, foot switch, tone balance, auto arpeggio. Three speakers. Output: 30W. Dimensions: 114 × 58 × 96cm. Finish: american walnut grain. Price: £1,199.00 (inc. VAT).

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Colour Television Sets

*Indicates entry is illustrated.

■ ASA

Asaradio Television,
4 Victoria Street, Bristol BS1 6BN.
Tel: Bristol (0272) 25266.

7500

26in table TV. Touch button controls and remote control facilities. Finish: slimline in walnut, black/white. Special features: green line tuning, digital clock. Price: £550.00 (plus VAT).

■ BEOVISION

Bang & Olufsen (UK) Ltd,
Eastbrook Road, Gloucester GL4 7DE.
Tel: Gloucester (0452) 21591.

3300*

20in table TV. Controls: 8 pre-set stations, volume, bass, treble, brightness, contrast colour. Special features: remote control, automatic beam cut-off. Finish: teak, rosewood veneer, moulded black with metal grille. Extra slim styling. Dimensions: 62.5 × 40 × 38.5cm. Price: £450 (plus VAT).

3802*

22in table TV. Controls: 8 pre-set stations, volume, bass, treble, brightness, contrast colour. Finish: white plastic moulded cabinet. Special features: remote control, automatic beam cut-off. Dimensions: 61 × 41 × 42cm. Price: £450.00 (plus VAT).

4002

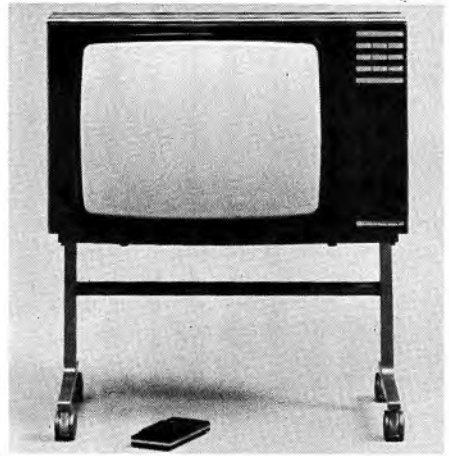
26in table TV with specifications as above except no remote control. Dimensions: 69.5 × 49 × 46cm. Price: £475.00 (plus VAT).

4402

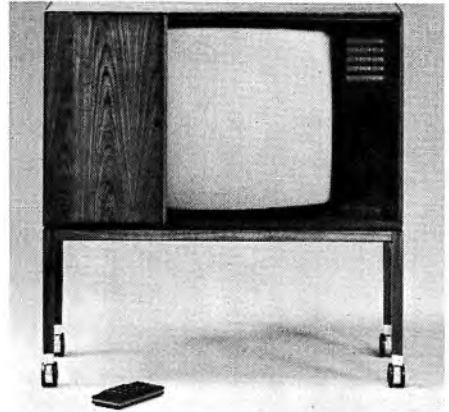
As above with remote control. Finish: teak, rosewood veneer, plastic moulded cabinet. Price: £520.00 (plus VAT).

6002*

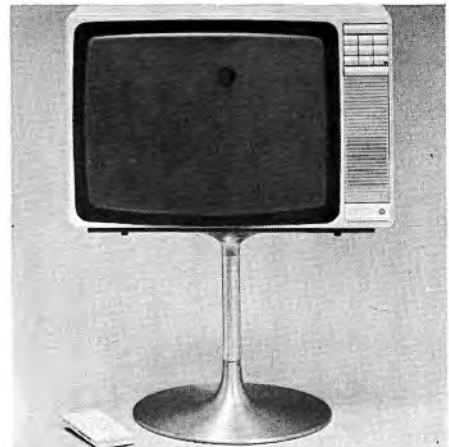
26in table TV. Controls: 8 pre-set stations,



Beovision 3300



Beovision 6002



Beovision 3802

*Indicates entry is illustrated

volume, bass, treble, brightness, contrast, colour. Features: remote control, on screen channel display, 4-phone socket, extension loudspeaker socket, tambour door. Finish: teak, rosewood, plastic moulded cabinet. Dimensions: 77 × 48 × 48cm. Price: £590.00 (plus VAT).

■ DORIC

Rediffusion Consumer Electronics,
Fullers Way South, Chessington,
Surrey.
Tel: 01-397 5411.

CU 6733D R/C*

26in table TV. Controls: volume, tone, brilliance, contrast, colour, on/off. Remote control with full 21 functions. Special features: twin speakers, audio socket, PIL tube. Finish: real wood either teak or walnut veneers. Dimensions: 78.1 × 52.7 × 46.3cm. No rec. retail price.

■ DYNATRON

Dynatron Radio Ltd,
Ditton Walk, Cambridge CB5 8QD.
Tel: Teversham (022 05) 2781.

Blenheim CTV50*

Screen size: 26in (66cm). Tube: 20AX high brightness. Chassis: Philips G11. Controls: push-button on-off switch, rotary volume, tone, brightness and colour controls, push-button station selection from five station selectors plus a VCR button. LED above panel indicates station selected. Station tuning buttons located behind removable vertical panel at front of set. Standby facility, indicated by light on plinth. Standby light flashes when set receiving signal from remote control handset. Full remote control: channel selection, fine adjustment to volume, colour, brightness. Reset button restores controls to level previously set manually. Mute and standby switch. Cabinet: Queen Anne style, finished in walnut burr veneers. Cabriole legs with shell carvings, ornamental hinges. No rec. retail price. Approx "going" price: £775.00 (inc. VAT).

Regent CTV54*

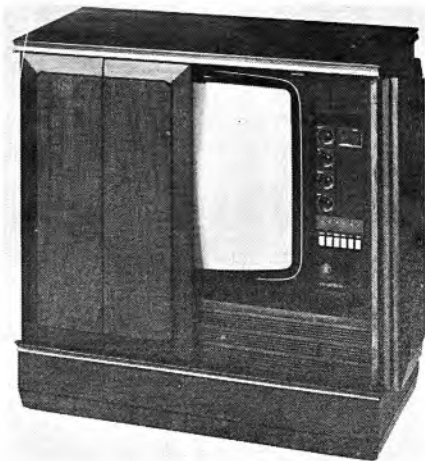
Screen size: 26in (66cm). Tube: 20AX high brightness. Chassis: Philips G11. Controls: see CTV50. Full remote control: see CTV50. Cabinet: Regency style, finished in cured mahogany veneers, fluted legs. No rec. retail price. Approx "going" price: £775.00 (inc. VAT).

Stirling CTV55*

Screen size: 26in (66cm). Tube: 20AX high



Doric CU 6733d R/C



Dynatron Blenheim

brightness. Chassis: Philips G11. Controls: see CTV50. Full remote control: see CTV50. Cabinet: Regency style, finished in yew. Full length double doors, on bracket plinth. Ring handles. No rec. retail price. Approx "going" price: £775.00 (inc. VAT).

Warwick CTV59*

Screen size: 26in (66cm). Tube: 20AX high brightness. Chassis: Philips G11. Controls: see CTV50. Full remote control: see CTV50. Cabi-

COLOUR TELEVISION SETS

net: Rosewood finished in "modern-traditional" style. Double doors, each hinged centrally to fold back in half. Solid plinth. No rec. retail price. Approx "going" price: £750.00 (inc. VAT).

Edinburgh CTV32*

Screen size: 22in (56cm) 110° colour. Solid state chassis. Controls: push-button tuning, slider volume, brightness, contrast and colour, variable tone control. VCR compability. Cabinet: Jacobean style, veneered in English oak. Handles of malleable iron. Dimensions: 87.3 ×

70.6 × 50.7cm. No rec. retail price. Approx "going" price: £590.00 (inc. VAT).

Knightsbridge CTV41

Screen size: 22in (56cm). Tube: 20AX high brightness. Chassis: Philips Gil. Controls: see CTV50. Full remote control: see CTV50. Cabinet: bow fronted Queen Anne style, finished in burr walnut veneers, with cabriole legs. No rec. retail price.

Berkeley CTV43*

Screen size: 22in (56cm). Tube: 20AX high



Dynatron Warwick



Dynatron Regent



Dynatron Edinburgh



Dynatron Stirling

*Indicates entry is illustrated



Dynatron Berkeley



Dynatron Knightsbridge

brightness. Chassis: Philips G11. Controls: see CTV50. Full remote control: see CTV50. Cabinet: bow fronted Regency style, finished in cured mahogany veneers. Fluted legs, ring handles. No rec. retail price.

■ GRUNDIG

Grundig International Ltd,
London SE26 5NQ.
Tel: 01-659 2468.

S9260

26in colour TV with 25W hi-fi sound amplifier feeding two forward facing speakers. Remote control for channel selection, colour contrast, brightness, volume and sound mute. Amplifier can be connected to radio tuner, tape or cassette recorder. Quartz controlled clock which appears when required in large digits on the screen together with number of channel selected. Price: on application.

■ HITACHI

Hitachi Sales (UK) Ltd,
Hitachi House, Station Road,
Hayes, Middlesex.
Tel: 01-848 8787.

CTP 213

Table TV with 20in tube. Controls: 8 channel soft touch buttons, tone control. Remote control. Finish: dark grey fascia, simulated teak cabinet. Special features: auto frequency control, auto voltage, regulator, VTR playback on any channel. Dimensions: 62.9 x 42.6 x 48cm. Price: £469.00 (inc. VAT).



ITT 16" Viewdata

■ ITT

ITT Consumer Products UK Ltd,
Chester Hall Lane,
Basildon, Essex.
Tel: Basildon (0268) 3040.

TX792*

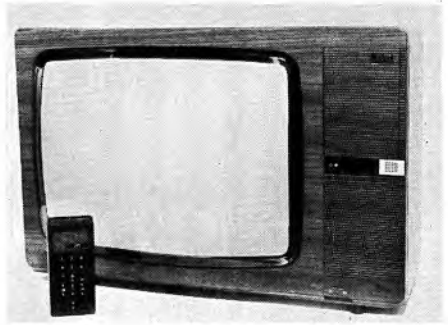
Full remote control, on-set control and video-tape facility. Viewdata and teletext. Available in either 26in screen size or as a 16in plinth-mounted version. Switchable AFC. Controls: volume, brilliance, colour, tone. Finish: teak. Dimensions: 35 x 48 x 37cm. Price: on application.

■ **JVC**

JVC (UK) Ltd,
Eldonwall Trading Estate, Staples Corner,
6-8 Priestley Way, London NW2 7AF.
Tel: 01-450 2621.

7875 GB*

20in table TV with touch tuning and remote control. Finish: mahogany or teak. Dimensions: 43.7 × 62.3 × 46.8cm. Price: £380.00 (plus VAT).



JVC 7875 GB

■ **KERACOLOR**

Group Systems (Keracolor) Ltd,
59a Middlewich Road, Northwich,
Cheshire.
Tel: Northwich (0606) 6762.

B 626

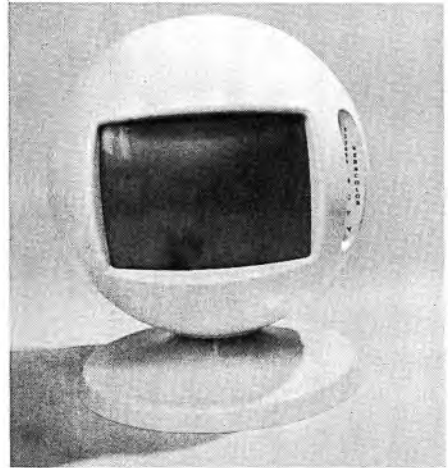
Floor standing spherical shaped TV with 26in tube. Six push-button controls, remote control. Finish: black, white, teak. Size: 33in dia. No retail selling price.

B 772*

As above but with 22in tube. Size: 30in dia.

B 520*

Spherical TV set which can be floor standing or suspended. Tube size: 20in. 6 push-button controls, remote control. Finish: black, white, teak. Size: 27in dia. No rec., selling price.



Keracolor B772



Keracolor B520

*Indicates entry is illustrated

■ KORTING

Europa Electronics Ltd,
Howard Place, Shelton,
Stoke-on-Trent, Staffs ST1 4NW.
Tel: Stoke 25477.

DT884

22in table TV with full remote control. Special features: digital clock, VHF, VCR operation, digital tuning, channel indication. Finish: walnut. Dimensions: 77 × 51 × 46cm. Price: £526.00 (plus VAT).

DT 886

26in table TV with full remote control. Special features: digital clock, VHF, VCR operation, digital tuning, channel indication. Finish: walnut. Price: £569.00 (plus VAT).

■ METZ

Paul Spring Electronics Ltd,
19-23 Masons Hill, Bromley,
Kent BR2 9HD.
Tel: 01-464 0823.

Crete 6891

Table TV with 26in tube. Sensors for selection of 12 stations. Slider controls, AFC. Finish: light walnut or silver and graphite. No rec. retail price.

Panama 6893

Table TV with 26in tube. Remote control selection of up to 16 stations and volume, brightness, contrast, sound mute, on/off. AFC. Auto switch-off 2½ minutes after transmitter viewed goes off the air. Finish: light walnut or silver and graphite. No rec. retail price.

Samoa 6894

Table TV with 26in tube. Automatic self-seeking tuning and electronic storage of up to 16 stations. Digital long-term storage of tuning information. Remote control. Auto switch-off 2½ minutes after transmitter viewed goes off the air. Finish: light walnut or silver and graphite. No rec. retail price.

Mallorca DTU 6695

Table TV with 26in tube. Remote control with selection of 12 stations, volume, brightness, colour contrast, sound mute, on/off. AFC. Digital long-term storage of tuning information. Finish: light walnut or silver and graphite. No rec. retail price.

Studio DTU 6696

26in tube TV on stand. Remote control, AFC, digital long-term storage of tuning information. Electronic digital quartz-clock. Finish: wood,

silver and graphite or all black, matching rotating stand. No rec. retail price.

■ NORDMENDE

Nordmende (UK) Ltd,
Nordmende House, Rickfords Hill,
Aylesbury, Bucks HP20 2RT.
Tel: Aylesbury (0296) 20501.

SK2 Colour de Luxe Colorsonic

26in colour set with sound coming from two drive units located centrally in centre pedestal giving 15W music output. Telecontrol digital quartz clock, remote control with 39 functions, remote control fine tuning. Station indication for 16 channels on screen. Pulsed monitoring; ASC sound system allows connection of headphones, audio systems or tape recorder. Mains locking key, AFC fine tuning. Dimensions: 62 × 100 × 44.5cm. Finish: metallic gold, silver, brown, green, blue, red, black and white. Price: on application.

■ PANASONIC

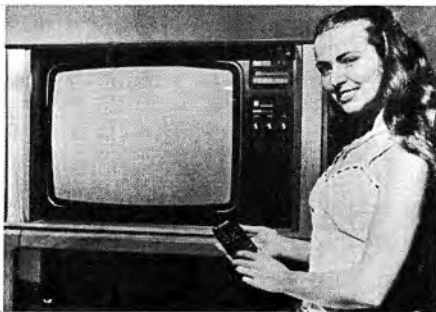
National Panasonic (UK) Ltd,
101-109 Whitby Road, Slough SL1 3DR.
Tel: Slough (75) 27516.

TC6200G

Projection TV, floor standing. Three tube system on 60in screen. Controls: volume, colour, brightness, channel select, normalisation, station memory, volume mute, station search, tone control. Remote control: 26 functions. Finish: walnut. Features: single unit projection TV, self-seek tuning, facility for use with PAL or NTSC video recorder, on screen/channel indication. Dimensions: 132 × 170 × 67cm. Price: £3,551.11 (plus VAT).

■ PYE

Pye Ltd,
137 Dittons Walk, Cambridge.
Tel: Cambridge (0223) 2781.



Pye CT 483 Teletext

CT 483 Teletext*

26in console with double tambour doors and castor-mounted legs. 110° tube. Controls: pre-set tuning, press-button varicap tuner with LED indicators. 31-button full remote control unit. Finish: de luxe cabinet styling in teak veneers. Features: built-in teletext decoder for CEEFAX and ORACLE. Dimensions: 83.2 × 89.5 × 49.5cm. Price: on application.

CT 481*

26in console with castor-mounted legs. 110° tube. Controls: pre-set tuning concealed behind removable flap. Sonic remote control hand unit. Finish: de luxe cabinet styling with split tambour doors in teak veneers. Features: VCR Unit may be connected without modification. Dimensions: 83.2 × 89.5 × 49.5cm. Price: on application.

*Pye CT 481***■ ROBERTS VIDEO**

Roberts Video Ltd,
Molesey Avenue, West Molesey,
Surrey KT8 0RL.
Tel: 01-979 7474.

RCT 262T*

26in floor standing console with full control of all user functions including sound mute and on/off controls: on/off volume, colour, brilliance, treble cut and lift, pre-set contrast, touch-tuning. Finish: teak veneer with tambour door and matching stand on castors. Special features: audio take-off to hi-fi system and headphone socket with switch to mute internal loudspeaker, VCR facility. Dimensions: 86.5 × 50 × 86cm. No recommended retail price.

RCT 262M

26in floor standing console, as above.

■ SABA

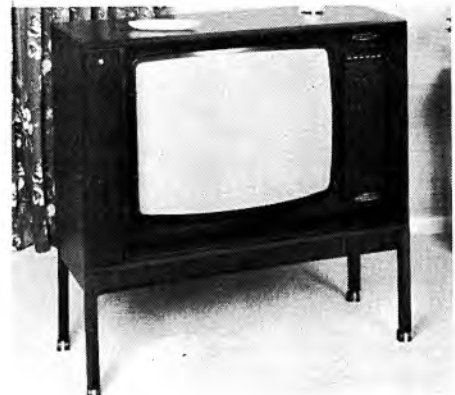
Saba Radio and Television Ltd,
10-12 Cornbrook Park Road,
Manchester M15 4EE.
Tel: 061-872 7661.

T5158

Table TV with 20in tube. Remote control, 12 channels. Finish: light walnut, metallic. Features: fully remote control of all functions, headphone socket, tape recorder socket. Dimensions: 60.5 × 40.5 × 45.5cm. Price: £425.72 (plus VAT), metallic extra.

T5628*

Table 22in TV set. Micromatic controls. Finish: light walnut, metallic. Special features:

*Pye remote control for CT 481**Roberts Video 262*

*Indicates entry is illustrated

headphone socket, tape recorder output. Dimensions: 65 × 45 × 43cm. Price: £413.33 (plus VAT), extra for metallic.

T5658

Table 22in TV set. Remote control, 12 channels. Finish: light walnut, metallic. Features: fully remote control of all functions, headphone socket, tape recorder output. Dimensions: 65.5 × 46 × 43.5cm. Price: £471.33 (plus VAT), extra for metallic.

T5668

Table 22in TV set with remote control of 16 channels. Finish: light walnut, white, metallic. Features: fully remote control of all functions, headphone socket, tape recorder output. Dimensions: 77 × 51.5 × 47cm. Price: £551.55 (plus VAT), extra for white and metallic.

T6758

Table 26in TV with remote control of 12 channels. Finish: light walnut, white, metallic. Features: fully remote control of all functions, headphone socket, tape recorder output. Dimensions: 77 × 51.5 × 47cm. Price: £551.55 (plus VAT), extra for white and metallic.

T6768

Table TV with 26in tube. Remote control of 16 channels. Finish: light walnut, white, metallic. Features: fully remote control of all functions, headphone socket, tape recorder output. Dimensions: 77.5 × 52.5 × 47cm. Price: £589.32 (plus VAT), extra for white and metallic.

T 6794

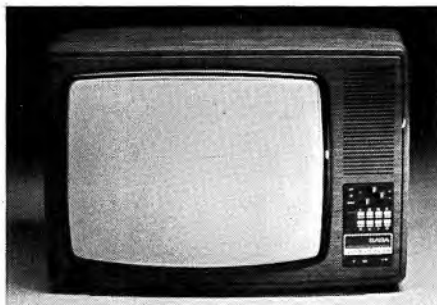
Table TV with 26in tube. Remote control of 12 channels plus 8 "picture in picture" options. Finish: light walnut, metallic. Features: ability to prevent alternative channels whilst viewing main channel. Provision to use video camera for security, babysitting. Fully remote control of all functions, headphone socket, tape recorder output. Dimensions: 77 × 51.5 × 47cm. Price: £706.67 (plus VAT), extra for metallic.

■ SONY

Sony (UK) Ltd, Consumer Showroom, 134 Regent Street, London W1R 6DJ. Tel: 01-439 3874.

KV 2202 UB Teletext

22in table TV with Teletext service for CEEFAX and ORACLE. 32-key cordless remote control unit operates teletext as well as basic TV volume, colour and contrast.



Saba T5628



Sony KV 2202 UB Teletext



Toshiba C-2085B

Trinitron tube. Dimensions: 66.9 × 45.9 × 41.3cm. Price: on application.

■ TOSHIBA

Toshiba (UK) Ltd, Toshiba House, Frimley Road, Frimley, Camberley, Surrey GU16 5JJ. Tel: Camberley (0276) 62222.

C-2085B*

20in console TV set. Controls: on/off, volume, colour, contrast, AFC, brightness, remote,



Wren CU 6733

feather-touch channel change, clock setting. Remote control for on/off, channel change, volume, time display. Finish: teak effect cabinet with black and silver moulded fascia. Secondary control compartment behind door on fascia. Features: on screen display, indicating time/channel, IC tuning memory system, remote control. Dimensions: 35.5 × 58.5 × 37.5cm. Price: £400.00 (plus VAT).

■ **WREN**

Wren Electronics Ltd,
Dawson Road, Mount Farm Estate,
Milton Keynes, Bucks.
Tel: Milton Keynes (0908) 71611.

CU 6733*

26in console with 12 channel remote control. Finish: walnut veneer. Features Queen Anne styling. No rec. retail price.

Electronic and TV Games

*Indicates entry is illustrated.

■ ACADEMY

Kohli and Co. Ltd, 36 Concord Road, Westwood Park Estate, Acton, London W3. Tel: 01-993 5001.

D5996

Programmable cartridge game for use on Colour TV sets. Price: £42.50 (plus VAT), optional cartridge £12.87, mains adaptor £3.74.

■ ADAM IMPORTS

Adam Imports Ltd, Unit 2A, Ripon Road Industrial Estate, Harrogate, North Yorkshire. Tel: Harrogate 501151.

Grandstand

Video entertainment computer which will take over 32 different games with thousands of variations to choose from. Special multi-function push buttons and remote armchair-comfort hand controllers with 12-way action. Prices range from £9.21 to £120.32 (plus VAT).

■ AMELTONE

Mercantile Electronics Ltd, Amelton House, 61 Derby Street, Manchester M8 8HE. Tel: 061-832 6525.

Stadium

Television game available in three versions



Atari Video Computer

C4003 for colour sets, and 4002 and Stadium Mark II. Details on application.

■ ATARI.

Ingersoll Electronics Ltd, 202 New North Road, London N1 7BL. Tel: 01-226 1200.

XK 2600

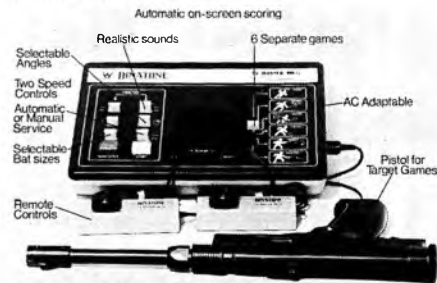
Video computer system complete with 27 game combat cartridge, mains transformer, aerial switchbox, paddles and joysticks. Price: £169.95. Accessories: Paddles £11.95, keyboard controller £17.95, Joysticks £11.95, aerial switchbox £2.60, mains unit £5.40, mains unit continental 2 pin £8.50, cartridge tray £3.50. Cartridges £14.95. Chess cartridge £42.50.

■ BINATONE.

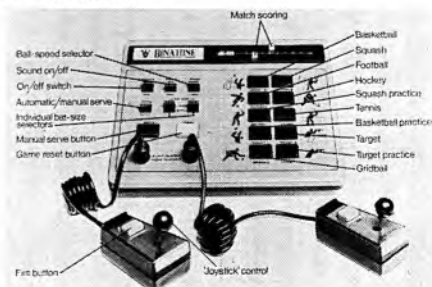
Binatone International Ltd, Binatone House, Beresford Avenue, Wembley, Middlesex HA0 1YX. Tel: 01-903 5211/8322.



Binatone Mk 10



Binatone Mk 6



Binatone Joystick control and "fire" button

TV Games*

TV games with 4, 5, 8 or 10-game consoles: Tennis, Squash, Football, Basketball, shooting games with photo-electric guns and 'fire' buttons, Ice-Hockey and Gridball. All work with most black and white and colour TV sets and require just six HP2 batteries. Mains adaptor available as optional extra. Prices: Mk 4 £11.95 (inc. Vat), Mk 6 £15.95 (inc. VAT), Mk 8 £19.95 (inc. VAT), Mk 10 £21.95 (inc. VAT). All above except the Mk 8 available in full colour for an extra £4.00.

■ DACOLL

Dacoll Games Ltd, Dacoll House,
Bathgate, West Lotian.
Tel: Bathgate (0506) 56565.

Traka*

Electronic games machine which is the heart of new game "Gotcher". Consists of scan button, evade button, speed control, on/off control, scan control button.

Gotcher*

Game for up to 8 players based on theme of a prison breakout with fugitives attempting to reach freedom before being caught by hunters. A number of chase permutations develop turning into battle between all players, hunters and fugitives alike.

Traka 16*

Compendium of 16 different games suitable for players from 5 years upwards. They include Tug of War, Fishing, Bowling, all with instructions easily understood by children.

■ DECCA

Decca Radio and Television Ltd,
Neachells Lane, Willenhall,
Staffs WV13 3RW.
Tel: Willenhall (0902) 67467.

TG0062

Six game compendium for colour TV sets.
Price: on application.

TG 0063

Electronic target pistol game for TV. Price: on application.

■ HANIMEX

Hanimex (UK) Ltd,
Hanimex House, Faraday Road,
Dorcan, Swindon, Wilts.
Tel: Swindon (0793) 26211.

TVG7771/TVG6665

Television games. Prices and details on application.



Selection of Dacoll games



Ingersoll Strike Command

■ INGERSOLL

Ingersoll Electronics,
202 New North Road, London W1.
Tel: 01-226 1200.

Strike Command*

Programmable video game with central console in grey, two hand-held controls with joystick levers and serve/shoot buttons. Varied colour backgrounds. DC battery operation or AC with optional XK9 powerpack. Automatic on-screen scoring, realistic sounds for each game. Tennis, Hockey, Football, Squash, Gridball, Basketball, Basket Practice, two-player target, one-player target. Price: £39.95 (inc. VAT). Additional cartridges at £9.95. Stunt cycle and tank battle £12.95 (inc. VAT).

XK600B*

6-game black and white model complete with gun. Attack buttons secretly increase ball speed or vary angle of play. Price: £19.95 (inc. VAT).

XK500C*

Hand held 6-game colour unit complete with

*Indicates entry is illustrated

gun. On-screen auto scoring, variable bat size and unique attack buttons for competitive play. Price: £29.95 (inc. VAT).

XK410C*

10-game full colour unit with different screen background colours. 8 ball games for two players and 2 target shooting games for one or two players all with individual joystick control movements. Individual bat sizes, ball speed automatically increases for "rallies" after the seventh consecutive hit. Price: £39.95 (inc. VAT).

■ MICRO ELECTRONICS

Micro Electronics Ltd,
Consumer Products Division,
766 Finchley Road, London NW11 7TH.
Tel: 01-458 9844.

Baseball game*

Said to simulate all the functions of a real game in a battery operated unit. Three speeds of play. When player has scored a hit a simulated crowd cheer is heard. Players can introduce offensive or defensive options in form of hitters or pitchers respectively. LED displays simulate movements of players and ball and show score. In addition, an event counter shows the score of the present batter. The game is housed in sturdy plastic case and input is provided for an external 9V DC supply. Price: on application.

■ OPTIM

Optimisation Ltd, 45 South Street,
Bishops Stortford, Herts.
Tel: Bishops Stortford (0279) 51247/52058.

Susie

4 game TV game in black and white. Price: on application.

Susie C

4 game TV game in colour. Price: on application.

106C

4 game colour TV game plus 2 shooting games. Price: on application.

203 Supersport

8 game colour TV game plus 2 target games with XY movement through joysticks. Price: on application.

Majestic

Micro-processor programmable TV game. Price: on application.



Ingersoll XK600B



Ingersoll XK500C



Ingersoll XK410C

600/1010

Low priced programmable TV game in colour. Price: on application.

Boris

Chess computer. Price: on application.

■ RADOFIN

Radofin Electronics (UK) Ltd,
91-93 King Street, London W6 9HW.
Tel: 01-741 2401

511

Four game, black and white, hand held. Ultra

modern design with on screen scoring with unique feature of sound through the television. Four games comprise Football, Tennis, Squash, practice. Price: £9.00 (plus VAT).

782*

Low cost programmable TV game complete with one 10 game cartridge giving Football, Tennis, Squash, Target, Basketball, Ice Hockey, Gridball, two practice games, etc. AC mains adaptor and TV aerial switchbox included. Three position switch allows different coloured backgrounds. Other cartridges, i.e. Road Race, Skill Cycle, Convoy, Tank War, Target Gallery, Super Wipeout at £9.95. Price: £39.00 (plus VAT).

888

Similar to above. Price: £39.00 (plus VAT).

962

Low cost colour programmable TV game with facilities for introducing cartridges such as Road Race, Skill Cycle, Convoy, Tank War, Target Gallery, Super Wipeout. Compact design. Price: £34.00 (plus VAT).

■ SPECTRUM MARKETING

Spectrum Marketing,
48 Cambridge Road, Barking, Essex.
Tel: 01-591 5654.

Chess Challenger 7

Seven levels of play computerised chess board. It will play against you or play itself. It allows you to change sides in mid-game on any move. Price: £59.00 (inc. VAT).

Chess Challenger 10*

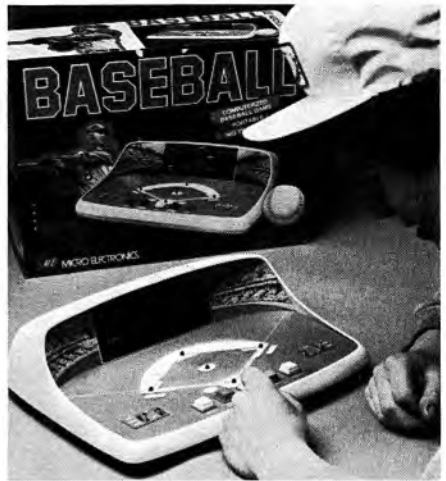
Ten levels of play and many sophisticated features. Gold metal playing surface and keyboard with large LED display windows to show moves, all contained in solid wood case and complemented with magnetised French style pieces. Random response capability. Retail price: £200.00 (inc. VAT).

Voice Chess Challenger

A "Think for yourself" — play by yourself" chess game that Speaks! Infinite levels of play, large repertoire of chess book openings, speaks every move and capture and will repeat board positions on demand. At conclusion of the game, the computer displays the number of moves played. Price: £250.00 (inc. VAT).

Checker Challenger 2

Two levels of play. Selection of offence or defence, position memory by computer memory



Electronic baseball game from Micro Electronics



Radofin 782 programmable game



Spectrum Chess Challenger 10

*Indicates entry is illustrated

recall, random computer responses. Price: £59.95 (inc. VAT).

Checker Challenger 4*

Four levels of play suitable for the draughts novice or true aficionado. Can be used to solve draughts problems and can recall the computer's last move to compare response at each level of difficulty. Price: £99.95 (inc. VAT).

Zodiac Astrology Computer*

Computerised astrology! A complete horoscope chart can be built up including planetary positions at time of birth and corresponding personality characteristics, daily preview, advice mode. Price: £29.95 (inc. VAT).

UFO Master Blaster Station

For children from eight onwards. Idea is to hit enemy UFOs by firing a missile and guiding it by mini joystick to explode on target. Computer keeps the score and game ensures a test of hand and eye co-ordination. Three different speeds. Price: £21.95 (inc. VAT).

Digits*

Computer code-breaking game for children using numerals instead of traditional board and colour pegs. Two levels of skill. Price: £13.95 (inc. VAT).

Zap

Electronic missile game for two players designed to test hand and eye co-ordination. Price: £10.95 (inc. VAT).

Amaze-a-Tron

"Magic Box" offering one or two players a choice of eight maze games with over a million variations. A wrong move brings a "raspberry" and a right one a tune. Price: £17.95 (inc. VAT).

Electronic Dice

New "uncheatable" electronic dice shows completely random configuration for two dice every time two buttons are touched and released. Price: £9.95 (inc. VAT).

■ SUPERSPORT

Bruce Kaberry Marketing Ltd,
43 Broomfield, Leeds LS16 6AE.
Tel: Leeds (0532) 67618.

TV Games

SA £7.56; S2 £5.25; S3 £11.02; TUG £15.85; TVG £22.50. (All plus VAT). Details on application.



Spectrum Checker Challenger 4



Spectrum Zodiac Astrology Computer



Spectrum Digits

■ TELENG

Teleng Ltd, Arisdale Avenue,
South Ockendon, Essex RM15 5TR.
Tel: South Ockendon 3477.

Mercury Commander

Complete with mains adaptor and 10 game cartridge for Football, Hockey, Tennis,

Squash, Motor Racing, target, wipe out, grid ball, etc. Price: £36.99 (plus VAT).

■ VIDEOMASTER

Waddington Videomaster Ltd,
36-44 Tabernacle Street, London EC2A 4DT.
Tel: 01-253 9366.

Star Chess*

TV game for 2 players. Both players command a fleet of spaceships, and aim is to annihilate the opposing flagship and at all times protect your own from destruction. Fleet consists of Starfighters, Supercruisers, Superfighters, Starcruisers and Destroyers, all capable of blasting enemy forces off the screen. A novel introduction to the classic game of chess, and a new dimension for the experienced chess player. Price: £59.95 (inc. VAT).



Videomaster Star Chess

Chess Champion*

Electronic micro-computer in form of compact console programmable to six levels of ability. LED read-out shows moves clearly. Price: £89.50 (inc. VAT).



Videomaster Chess Champion

All Star*

TV game comprising solo, squash, football and tennis. Each can be varied by changing either bat sizes, ball speeds, or both. Two remote hand controls and socket for Shooting Star, an electronic rifle which provides two extra target shooting games. Price: £14.95, rifle £5.49 (inc. VAT).



Videomaster All Star

Colourscore II*

Choice of four TV games with attractive console: Solo, Squash, Football, Tennis. Each can be varied by changing bat sizes and ball speeds. Socket for Shooting Star giving another two target shooting games. Price: £16.95 (inc. VAT).

Sportsworld*

Ten TV games in one console: tennis, squash, hockey, solo 1, football, basketball, gridball, solo 2 and two target games. Two joystick hand controls enabling player to move bat over whole field of play. Features include independent handicapping, action sound effects. Price: £29.95 (inc. VAT).

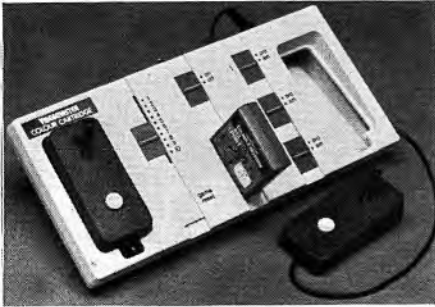


Videomaster Colourscore II

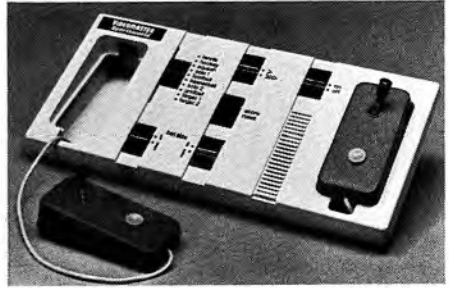
Colour Cartridge*

Ten TV games free with Colour Cartridge, which has facility to accept a multitude of different games by addition of another cartridge. Cartridge provided has Tennis, Squash, Hockey, Solo 1, Football, Basketball, Gridball, Solo 2 and two target shooting games. All can be varied by changing individual bat

*Indicates entry is illustrated



Videomaster Colour Cartridge



Videomaster Sportsworld



Voltmace Aerial Combiner



Voltmace Mercury Commander

sizes and altering ball speed. Three additional cartridges give Road Race, Super Wipeout, Stunt Rider. Future developments may include a tactical war game, target shooting, and a submarine chase. Price: £43.95 (inc. VAT). Extra cartridges range from £9.58 to £17.27.

■ VOLTMACE

Voltmace Ltd, Knap Close,
Blackhorse Road, Letchworth, Herts.
Tel: Letchworth (046 26) 78624.

Mercury Commander*

Chip programmable colour TV game with 10

game cartridge and AC mains adaptor. Other cartridges available are Road Race, Stunt Rider, Tank Battle, Wipeout. Available soon will be a Two Rifle/Pistol Target game, submarine warfare and others. Price: £36.99 (plus VAT). Cartridges range from £10.14 to £22.18 (plus VAT).

TV Game/Aerial Combiner*

Enables a TV game to be permanently connected, or coupled and uncoupled without disturbing the input aerial to the TV set, and without needing access to rear of the set. Filter circuit avoids use of a switch, eliminating moving parts. Price: £2.66 (plus VAT).

Radio Radiograms and Cassettes

*Indicates entry is illustrated.

■ AKAI

Akai (UK) Ltd,
82-106 Cricklewood Lane,
London NW2 2DP.
Tel: 01-450 2011.

AJ480 Radio-Cassette

Stereo portable radio cassette. Four wave bands: FM, L, M, S. Two-way, four speaker system, good sound quality, dual microphones for stereo recording, auto shut-off, sleep timer, variable sound monitor, separate tone controls, mode selector, loudness control, DIN jack, tape counter, two external speaker jacks.

■ CROWN

York Electronics Ltd,
73 Grosvenor Street, London W1X 9DD.
Tel: 01-529 8368.

CSC 640F*

Portable stereo radio and cassette recorder featuring two-way four speaker system and two 13cm woofers and two 4cm tweeters giving total output of 8W (maximum) power. Automatic tape selecting mechanism for chrome or normal tapes. Recording direct from the radio or via two built-in condenser microphones. Cassette features an automatic shut-off switch and automatic level control. Radio covers VHF, L, M, S. A VU meter, AFC switch. The CSC 640 can be operated by dry cell batteries, mains or 12V battery. Price: on application.

CSC 656L*

656L comprises a VHF stereo radio, and cassette player with a two-way four speaker system plus a quartz digital clock with timer, alarm and sleep functions. Radio receives VHF, L, M, S, which can all be directly recorded and monitored. Two 13cm woofers and two 4cm tweeters. An automatic recording system allows radio programmes to be recorded at any preset time and automatic timer and sleep alarm gives

the user the choice of being awoken either by the radio or pre-recorded music of their own choice. Unit weighs 11 1/2lb and can be operated direct from the mains, via batteries or a 12V car battery. Price: on application.

■ DYNATRON

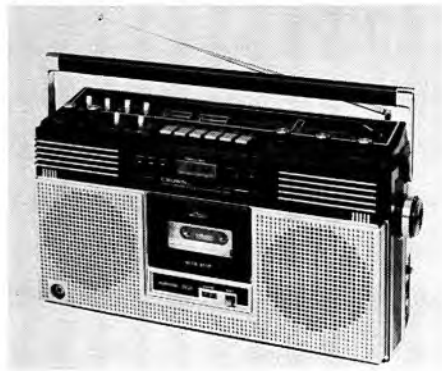
Dynatron Radio Ltd,
Ditton Walk, Cambridge CB5 8QD.
Tel: Teversham (022 05) 2781.

Burlington RG1010PW*

Garrard SP25 Mk IV, single record playing deck with a Vernertron V100 magnetic cartridge and diamond stylus. Tuner/amplifier: three wave-bands, LW, MW and stereo VHF/FM. Slider controls for bass, treble, balance and volume. Output: 20W. One bass and one retractable treble speaker at each side. Cabinet: Queen Anne style, finished in valnut hurr veneers. Cabriole legs. Dimensions: 64.1 x 97.2 x 41.9cm. No rec. retail price. Approx "going" price £375.00 (inc. VAT).



Crown CSC 640F radio/cassette



Crown CSC 656L radio/cassette

*Indicates entry is illustrated



Dynatron Burlington



Dynatron Kensington

Kensington RG110PM*

Garrard SP25 Mk IV single record playing deck with a Vernitron V100 magnetic cartridge and diamond stylus. Tuner/amplifier: three wave-band, LW, MW and stereo VHF/FM. Slider controls for bass, treble, balance and volume. Output 20W. One bass and one retractable treble speaker at each side. Cabinet: Regency style, finished in curled mahogany veneer. Ring handles, carved legs. Dimensions: 64.1 x 97.2 x 41.9cm. No rec. retail price. Approx "going" price £370.00 (inc. VAT).



Dynatron Argyll

Argyll RG1210PK*

Garrard SP25 Mk IV single record playing deck with a Vernitron V100 magnetic cartridge and diamond stylus. Tuner/amplifier: three wave-band, LW, MW and stereo VHF/FM. Slider controls for bass, treble, balance and volume. Output: 20W. One bass and one retractable treble speaker at each side. Cabinet: Jacobean style, finished in English oak veneer. Brass drop handles. Dimensions: 62.9 x 97.8 x 41.8cm. No rec. retail price. Approx "going" price: £360.00 (inc. VAT).

magnet (low/medium frequency system, switchable tweeter). Graphite cabinet. Dimensions: 50 x 32 x 13cm. Weight: 8.9k without batteries. Price: on application.

■ **HACKER**

Hacker Sound Ltd,
Shadesworth, Blackburn, Lancs.
Tel: Blackburn (0254) 53525.

■ **GRUNDIG**

Grundig International Ltd,
London SE26 5NQ.
Tel: 01-659 2468.

SP80

Transistor radio. Receives FM, L, M. Directional aerial, headphone socket, integral record/playback socket. Finish: rosewood veneers. Features: twin speakers. Price: £132.00 (inc. VAT).

Satellit 3000

AM/FM radio with digital frequency display for all channels for spot-on tuning. Field strength meter. Built-in SSB Unit makes it possible to receive single-sideband and unmodulated telegraph transmitters without additional units. 6 pre-set stations on VHF, removable 24 hour quartz clock with LCD display. Separaterotary controls for bass, treble and volume. Two speakers with heavy duty

■ **MBO**

MBO Electronics (UK) Ltd,
Geldered Road, Leeds LS12 6NB.
Tel: Leeds (0532) 791261.

3200*

Stereo radio/cassette recorder with 4 wave-bands and auto repeat on recorder. Radio tuner: FM, L, M, W. Optical stereo indicator. Slide controls for volume, balance and tune. Auto

stop and fast forward on recorder which takes normal or CrO₂ tape. Two built-in condenser microphones. Tape counter and pause control. Connections for stereo headphone, DIN jack, two external mics, external speakers, external aerial. Power: battery/mains or car battery. Dimensions: 42 × 25 × 11cm. Finish: black and silver. Price: £141.00 (inc. VAT).

■ **PANASONIC**

National Panasonic (UK) Ltd,
107-109 Whitby Road, Slough SE1 3DA.
Tel: Slough (75) 27516.

RF 2600*

Transistor radio covering FM, L, M, S. Mains/battery operation. AFC. Telescopic aerial and internal ferrite rod. Speaker: 10cm. Controls: volume, bass, treble. Dimensions: 34.2 × 11.6 × 23.7cm. Features: digital frequency readout, preselector for pitch, tuning, meter, bandwidth selector, RF gain. Price: £168.84 (plus VAT).

RF 2800

Transistor radio covering FM, L, M, S. As RF 2600. Dimensions: 38.1 × 12 × 24.6cm. Price: £191.51 (plus VAT).

RF 4900*

Transistor radio covering FM, L, M, S. Mains/battery operation. AFC. Telescopic reel aerial. Speaker: 10cm. Controls: volume, bass, treble. Dimensions: 48.2 × 35.4 × 20cm. Features: digital frequency readout, RF gain, bandwidth selector, antenna trimmer, SW calibration, tuning meter, AM mode selector. Price: £345.73 (plus VAT).

DR 26*

Portable radio covering FM, L, M, S. Integrated circuits, digital frequency readout. Pre-



MBO 3200 radio/cassette



Panasonic RF 2600



Panasonic RF 4900



Panasonic DR 26



Panasonic DR 49

*Indicates entry is illustrated

select tuning on SW. Choice of wide or narrow bandwidth. Dimensions: 34.2 × 23.7 × 11.6cm. Weight: 7lb without batteries. Price: £189.95 (inc. VAT).

DR 49*

Communications receiver with FM, L, M and eight SW. Five-digit electronic display of all frequencies and wide/narrow bandwidth selector. Aerial trimmer. Dimensions: 48.2 × 20 × 35.4cm. Weight: 17lb without batteries. Price: £388.95 (inc. VAT).

■ **SABA**

Saba Radio and Television Ltd,
10-12 Cornbrook Park Road,
Manchester M15 4EE.
Tel: 061-872 7661.

RCR 394

Stereo radio recorder with four wavebands FM, L, M, S. Output: 2 × 4W built-in speakers with woofer and tweeter on each channel. Stereo recording with two built-in microphones. Timer. Battery/mains with auto switch-over. Tuning meters, record level and battery condition meters, AFC on VHF. Connections for phono/tape, radio and headphones socket. Built-in ferrite antenna for AM, telescopic antenna for FM. Provision for external aerials. Bass and treble controls and separate volume controls for left and right channels. Finish: matt black/metallic. Dimensions: 42 × 26.5 × 11.5cm. Accessories include: blank cassette, mains connection cable, audio ear plug. Price: £162.22 (plus VAT).



Williamson SC/2003

■ **WILLIAMSON**

Sculpture Electronics,
7 Conduit Street, London W1.
Tel: 01-491 1498.

SC/2003

Six-band radio stereo cassette recorder. Triple power source: mains/battery/12V car battery. Wavebands: FM, L, M, S. AFC. FM aerial. Seven speakers. Finish: matt black with diamond cut metal trims. Features: wide angle separation, special locking handle for home use. Price: £195.56 (plus VAT).

Video Cassette Equipment

* Indicates entry is illustrated.

■ AKAI

Akai (UK) Ltd, c/o The Production Village,
82-106 Cricklewood Lane,
London NW22 2DP.
Tel: 01-450 2011.

VS 9300

Incorporates both TV tuner and electronic clock to record any TV programme up to 24 hours in advance. Power consumption: 35W. Built-in TV tuner can be adjusted to any channel whilst monitoring picture. Three-digit counter. Simple tape loading system. Monochrome camera VC300 weighs only 800gm and will take optical viewfinder or electronic viewfinder. Colour cameras are available having 6:1 zoom lens and auto or manual aperture control and these can be connected to any video tape recorder or as a system with Akai portable colour tape recorders.

■ FERGUSON

Thorn Consumer Electronics Ltd,
284 Southbury Road,
Enfield, Middlesex.
Tel: 01-363 5353.

Videonstar*

VHS video cassette recorder. Colour/mono record playback, up to 3 hours play/record time. 8 light action channel selectors with LED indicator, pre-select timer for automatic unattended recording, tape counter with memory. Mic socket for sound dubbing during or after recording. Selection keys with safety latching for pause, audio, dubbing, record, fast rewind, stop, play, fast forward, eject. Cabinet finished in black and silver grey. Cabinet dimensions: 45.3 x 14.7 x 31.4cm. Price: on application.

3V01*

Portable Videostar battery/mains operation. Rechargeable battery with built-in battery supplied, AC mains adaptor unit doubles as

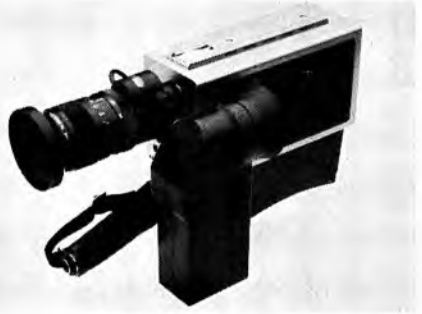
battery charger. 12V DC connection. Memory rewind. Lightweight being only 3lb approx with battery. When coupled to optional tuner/timer model 3V03 can be used to record TV programmes. 3V0 comprises recorder, AC mains adaptor/battery charger, carrying case, rechargeable battery, RF converter, E30 VHS cassette, earphone and leads. Price: on application.

Cameras*

3V06 single gun camera. 3V04 black and white video camera. Details on application.

3V03 tuner/timer*

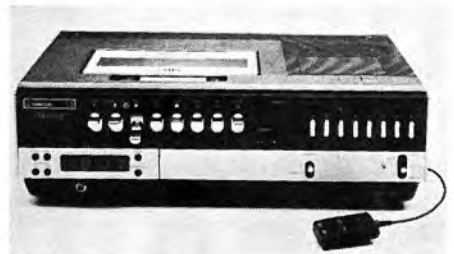
To be used in conjunction with 3V01 portable Videostar. 12 TV channel pre-set selectors. 8-day timer for automatic recording. Timed recordings can be programmed for both start and finish. Price: on application.



Ferguson colour video camera 3V06



Ferguson Portable Videostar 3C01



Ferguson Videostar 3V00

*Indicates entry is illustrated

■ GRUNDIG

Grundig International Ltd,
Newlands Park, London SE26 5NQ.
Tel: 01-659 2468.

4004

Simple programming device operates for a period of ten days, AFC and full electronic controls. Details on application.

■ HITACHI

Hitachi Sales (UK) Ltd,
Hitachi House, Station Road,
Hayes, Middlesex.
Tel: 01-848 8787.

VT 3000E

VHS system playing for 3 hours. Features: 24 hour electronic digital timer with LED, audio "dub", memory rewind, 8 push-button selector, pause control, built-in aerial booster. Specifications: Video recording system: rotary 2 heads helical scanning system. Tape speed: 23.39mm/sec. Tape width: 12.7mm. Cassette tape: VHS type video cassette tape. Recording time: 180 minutes max. with cassette E-180. Aerial: 75 ohms unbalanced type. TV standard: CCIR system 1, UHF 21-69 channels. Colour system: PAL. RF output signal: UHF 43-47 channel. Video cassette tapes: 4 tapes for different recording times. E30-½ hour. E50-1 hour. E120-2 hours. E180-3 hours. Length of the E180 is approx 259 metres. Resolution: 240 lines (better than 220 lines) Video S/N: 43dB (better than 40dB). Audio frequency range: 50Hz-10kHz. Audio S/N: 43dB (better than 40dB). Power consumption: 35W (preheat 7W). Weight: 13.9kg (30.8lb) approx. Dimensions: (WHD) 471 × 147 × 314mm approx. Power source: 110/127/220/ 240V. 50Hz.

VT 5000

Details not yet available.

■ ITT

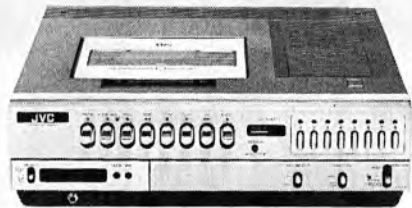
ITT Consumer Products (UK) Ltd,
Chester Hall Lane, Basildon,
Essex SS14 3BW.
Tel: Basildon (0268) 3040.

240

Super video system, 2 rotating video heads. Sloping track recording with a 180° wrap around. Power consumption: approx. 75W max. Dimensions: 59 × 15.1 × 32cm. TV standard: CCIR PAL, 625 lines. Resolution of picture: over 3MHz. Audio frequency



Ferguson tuner/timer



JVC HR3300

response: 80Hz to 10kHz \pm 4dB. Cassette size: 145 × 41 × 126mm. Playing time: with cassette SVC1 : approx. 60 min. With cassette SVC2 : approx. 120min. With cassette SVC3 : approx. 180min. With cassette SVC4 : approx. 240min. Tapespeed: 3.95cm/sec \pm 0.5%. Relative speed: video head/tape : 8.21m/sec. Video track: width : 50 μ m, length : approx. 164mm. Track spacing: 50 μ m (without neutral zone, centre to centre). Sound track: width : 0.7mm. Synchron track: width : 0.7mm. Remote control socket: 10-pin multiple socket for the functions: recording, playback, stop, fast wind, fast rewind and "cassette" (threading back of tape into cassette). Microphone socket: input : contacts 1 + 4:1 . . . 135m V (1kHz), input impedance : 47k Ω . Price: on application.

■ JVC

JVC (UK) Ltd, Eldonwall Trading Estate,
Staples Corner, 6-8 Priestley Way,
London NW2 7AF.
Tel: 01-450 2621.

HR 3300*

VHS PAL standard system with playing time of 3 hours. Features: pause control, audio dubbing control, microphone jack, built-in digital timer clock, search function with automatic tape

indexing, built-in electronic timer, built-in RF converter, built-in condenser microphone, standard lens, electronic viewfinder, colour compensator switch. Price: £710.00 (plus VAT). Tapes cost £13.43 for 3 hours, £11.11 for 2 hours, £7.87 for 1 hour and £6.48 for half hour (all plus VAT).

HR 4100*

Colour portable video system. HR4100 fully compatible with all VHS recorders weighs only 9.3kg complete with cassette, battery pack and RF converter. Price: £799.92 (inc. VAT). GC4100 colour video camera £934.20 (inc. VAT) and TU41 tuner/timer at £240.75 (inc. VAT).

■ NORDMENDE

Nordmende (UK) Ltd, Rickford House, Rickfords Hill, Aylesbury, Bucks.
Tel: Aylesbury (0296) 20501.

Spectra Video-Vision

VHS-PAL standard. Video recording system: helican scan with two video heads. Video signal system: CCIR PAL standard: 625 lines, 25 field/sec. Tape width: 12.7mm. Tape speed: 23.39mm/sec. Max. recording time: 180 minutes with E-180 cassette. Aerial input: Channels 2-4, 5-12 in the VHF band. Channels 21-69 in the UHF band. Aerial output: RF modulator on UHF, a channel in the 43-47 range (adjustable). Video signals: Input: 0.5-2.0Vpp/75 ohms. Output: 1.0Vpp/75

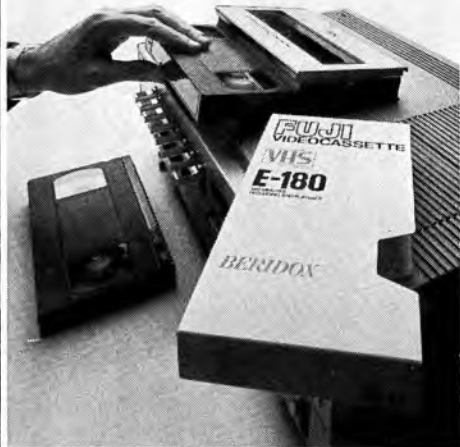


JVC HR 4100



Panasonic WV-3300E camera in use

Fair play for VHS.



Why high-technology video equipment needs high-technology video tape.

It may not be quite sufficient to feed a VHS with a video tape "developed for VHS". Make sure that the tape has been developed for PAL system VHS and not

primarily for the United States system, NTSC. The difference could be important. With PAL equipment, the tape-to-head speed is lower than with NTSC and the recorded track narrower. As with audio tape, both these factors have an adverse effect on quality. A better tape is needed to put the quality back. If it's much better, of course, it will add quality as well.

The search for such a tape need take you no further than your nearest Bell & Howell audio-visual dealer, or one of the other dealers who now stock the new Fuji VHS range. These have been developed by Japan's first and largest producer of professional video tapes with the special PAL systems in mind. They solve it in five separate but complementary ways...

1. The Beridox magnetic particles which account for the high reputation of the wider Fuji tapes have been made smaller for VHS. This means finer detail at the slower PAL speed.
2. The VHS Beridox is more sensitive. Higher black-and-white and colour output are the results.
3. The tape surface is smoother and more uniform in its magnetic properties. So the signal-to-noise ratio is improved, which in practice means clearer and cleaner colours on the screen.
4. There's a new high-durability binder, holding the Beridox coating more securely to the tape and thus reducing the "drop-outs" which cause partial or complete loss of picture. This is a benefit when the tape is new and an even bigger one when it's done a bit of work.

5. The cassette itself is made of high impact ABS) to remarkably high standards of precision. Close tolerances mean steady tape transport, good for the picture and equally important for the sound.

VHS is a technological triumph. It and the VHS user are entitled to Fuji VHS tape, developed with equally advanced technology for PAL system VHS.

The four sizes available are for running times of 1/2, 1, 2 and 3 hours. If you cannot locate a nearby stockist, or would like to study the impressive technical specification in detail, just send your letterhead and name in an unstamped envelope to Dept V, Bell & Howell A-V Ltd, Freeport, Wembley, HA9 1BR.

BELL & HOWELL
Solutions for the work, education and entertainment

*Indicates entry is illustrated

ohms. Signal to noise: 40dB. Horizontal resolution: Colour: >3MHz (-6dB). Monochrome: >3.6MHz (-6dB). Audio signals: input: microphone, 0.35mV/10kohm. PU/TR, 78mV/50kohm. Output: PU/TR, 780mV/1kohm. Signal to noise: >40dB. Frequency response: 70Hz-8kHz. Digital clock pause key. Dimensions: 45.1 x 14.7 x 33.7cm. Price: on application.

■ PANASONIC

National Panasonic (UK) Ltd,
107-109 Whitby Road, Slough SL1 3DR.
Tel: Slough (75) 27516.

NV8600B

VHS system playing for 3 hours. Features: VCR with UHF tuner, 24 hour timer allowing on/off recording, remote pause, direct drive quartz lock head cylinder. Aluminium die-cast chassis, HPF heads, input for camera, built in RF converter, microphone input. Price: £666.66 (plus VAT).

WV-3310E/WV-3300E*

Colour cameras for use with above. Pistol grip, light level indicators. Recorder can be started and stopped from the camera. WV-3310E is suitable for domestic use and has optical viewfinder and 25mm lens. WV-3300E has electronic viewfinder, 6:1 zoom lens and is designed for users in industry, education, as well as in the home. Price: £770.00.

■ PHILIPS

Philips Electrical Ltd,
19 Commerce Way, Purley Way,
Croydon CR9 4JA.
Tel: 01-688 7766.

N1700

Details on application.

■ PYE

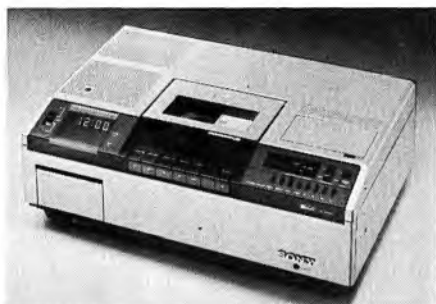
Pye Ltd, 137 Ditton Walk,
Cambridge CB5 8QD.
Tel: Teversham (022 05) 2781.

N1700*

Video cassette recorder fitted with UHF/VHF tuner. Modulator for playback through a 625 line UHF TV set. System: twin head helical scan tilted gap. Tape width 1/2in. Tape is spooled on two concentric reels and contained in a cassette. Tape speed: 6.56cm/sec. Tape-to-head: 8.1m/sec. Head drum: diameter 105mm. Rotation synchronised to field frequency. Playing time: up to 150min. Cabinet: moulded grey top cover with black base. Dimensions: 56



Pye N1700 video cassette recorder

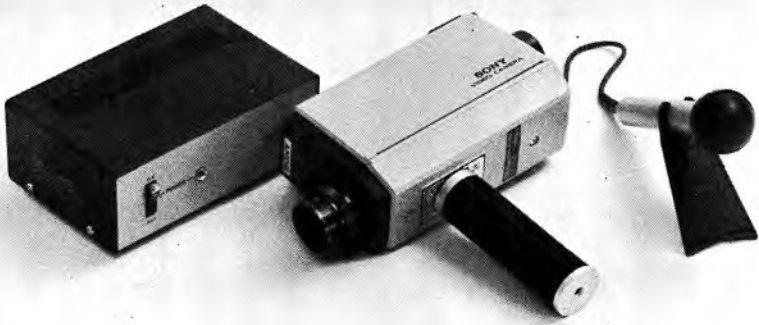


Sony Betamax



Sony videocassettes

x 37 x 16cm. Weight: approx. 16kg. Power requirements: 220 or 240V ±10%. Tuner: N1700/15 bands 1, 111, 1V and V. Aerial input: coaxial socket (DIN 45325) input impedance 75 ohms. Automatic fine tuning switched off when pre-selector button is completely depressed. Modulator (PAL): Aerial output socket: coaxial plug acc. to DIN 45325. Impedance: 75 ohms. Feed through gain (aerial signal) bands 1 and 111 2dB. bands 1V and V 2dB. Transmitter frequency: (adjustable) channels 32-42. Sound modulation: FM. Video (PAL): S/N ratio luminance: >40dB. Visible resolution at playback: colour: luminance 3.0MHz chrominance 650kHz. Audio: frequency response: 120Hz-10kHz within 8dB. Wow and Flutter: ≤0.3% (DIN 45507) for own recording.



Sony camera

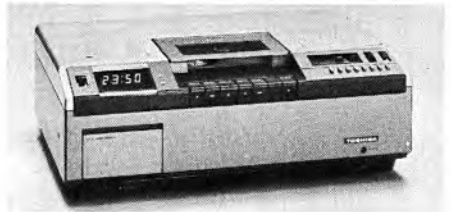
Harmonic distortion: at full level <7%. S/N ratio: >40dB weighted (DIN 45405). Erase oscillator: approx. 60kHz; erase damping >60dB.

■ SONY

Sony Consumer Information,
Sony Showroom, 134 Regent Street,
London W1R 6DJ.
Tel: 01-439 3874.

Betamax SL8000UB

Compact recorder with 8-channel tuner and record/playback facilities. Digital timer pre-select panel gives a choice within a 72 hour period. Video recording system: rotary 2-head helical scan. Video signal system: CCIR standard 625 lines 50 field PAL colour system. Tape width: 12.7mm. Tape speed: 18.73mm/sec. Max. recording time: 3hrs. 15min. with L-750. 2hrs. 10min. with L-500. 1hr. 5min. with L-250. 30min. with L-125. Aerial input: UHF CH 21.68. RF converter output: UHF CH 30-39 (adjustable). Video signals: input: 0.5-2V p-p. 75 ohm unbalanced sync negative. Output: IV p-p 75 ohm unbalanced sync negative. Horizontal resolution: more than 270 lines in colour. S/N: more than 42dB. Level control: AGC. Audio Signal: input: MIC low impedance —60dB line 100 kohm —10dB. Output: line 10 kohm —5dB at 100 kohm. Phono. S/N: better than 40dB. FR: 50Hz-8kHz. Level control: AGC. Pause: available with still picture. Supplied wired remote control unit. Auto tape stop: available at Fwd, FF and Rwd mode. Timer: electronic digital display timer with 0.00-23:59 display. Programmed recording: automatic recording within a 72 hour period using the built-in digital timer. Programme length can be 15, 30 or 60 min. switch or any combination of the above three lengths or to the tape end. Tuner: Built-in available 8 position E.T. tuner with British TV standard UHF CH 21-68. Operating



Toshiba V-5250B

temperature: 5°C-40°C. Power requirement: 240V ±10% 50Hz ±0.5% pre-set. Power consumption: 80W. Dimensions: 522 (W) × 189 (H) × 394 (D)mm 20-5/8 (W) × 7½ (H) × 15½ (D) inches. Weight: 19.2kg-42.3lb. Prices: video recorder SL 8000UB: £798.75. B & W Camera AVC 1420CE: £288.00. Tapes: 3hr 15mins. L 750: £13.50. 2hr 10mins. L 500: £10.50. 1hr 5min. L 250: £7.88. 30mins. L 125: £6.98.

■ TOSHIBA

Toshiba (UK) Ltd, Toshiba House,
Frimley Road, Frimley, Camberley,
Surrey GU16 5JJ.
Tel: Camberley (0276) 62222.

V-5250B*

Beta format with 3 hours 15min. playing time. General: Video recording system: rotary 2-head helical scan system. Video signal: CCIR standards, PAL colour. Head drum diameter: 74.487mm. Tape speed: 18.73mm/sec. Recording time: 3 hours and 15 minutes with L-750 video cassette. Video track pitch: 0.0328mm. Writing speed: 5.832m/sec. Tape width: 12.7mm. Horizontal resolution: more than 270 lines. Signal-to-noise ratio: better than 42dB. Power consumption: 80W. Power supply: AC 220/240V, 50Hz. Dimensions: 522 (W) × 189 (H) × 394 (D)mm. Weight: 19.2kg. Features: pause, stop-motion, remote control pause, one-touch recording operation, memory rewind. Price: on application.

Directory of Brand Names

Where the brand is the same as the name of the supplier please refer to the Directory of Manufacturers and Suppliers.

A

ACADEMY. Kohli & Co Ltd.
ACOUSTAT. Transonic Imports (Acoustical) Ltd.
ACOS. Cosmocord Ltd.
ACOUSTIC RESEARCH. Teledyne Acoustic Research.
ADC. BSR Ltd.
AKAL. Rank Audio Visual.
ALLISON. Audio Pro (Hi-Fi) Ltd.
AMELTONE. Mercantile Electronics Ltd.
AR. Teledyne Acoustic Research.
A & R. Amplification and Recording (Cambridge) Ltd.
ARNOLD. Janorhurst Ltd.
ASA. Asaradio Television.
ATC. Acoustic Transducer Co Ltd.
AUDIO PACKS. Tape Recorder Spares Ltd.

B

BEOCENTER. Bang & Olufsen (UK) Ltd.
BEOGRAM. Bang & Olufsen (UK) Ltd.
BEOLAB. Bang & Olufsen (UK) Ltd.
BEOMASTER. Bang & Olufsen (UK) Ltd.
BEOSYSTEM. Bang & Olufsen (UK) Ltd.
BEOVISION. Bang & Olufsen (UK) Ltd.
BEVOX. Bang & Olufsen (UK) Ltd.
B.I.C. VENTURI. B.I.C./Avnet.
BOLIVAR. Harman UK.

C

CAVENDISH. Boosey & Hawkes (Electronics) Ltd.
CELESTION. Rola Celestion Ltd.
CERWIN-VEGA. C. E. Hammond & Co Ltd.
CHARTWELL. Swisstone Electronics Ltd.
CONNOISSEUR. A. R. Sugden & Co (Engineers) Ltd.
CORAL. Videotone.
CROWN RADIO. York Electronics Ltd.
CURB. Janorhurst Ltd.
CW. J. Walker.

D

DALQUIST. Hayden Laboratories Ltd.
DENON. Eumig (UK) Ltd.
DENYO. Alban Electronic Supplies Ltd.
DISC-A-VAC. Janorhurst Ltd.
DISCLEANER. Discwasher Hi-Fi Ltd.
DUAL. Hayden Laboratories Ltd..

E

E.C.C. Edwards Construction Co.
EKO. John Hornby Skewes & Co Ltd.
ELAC. Paul Spring Electronics Ltd.
ELECTROLUBE. QED Audio Products Ltd.
ELECTROPHONIC ORGANS. Cape Electrophonics Ltd.
ELGAM. J. T. Coppock (Leeds) TV.
EMPEROR. MMG Associates.
EMPIRE SCIENTIFIC. Hayden Laboratories Ltd.
ENCORE. Artifact Designs Ltd.
EXACTOR. Audio Workshops Ltd.
EXCEL. Kelsonics Ltd.
EXPOSURE. Notes Electronics Ltd.
EXSTATIC. Golding Product Ltd.

F

FERGUSON. Thorn Consumer Electronics.
FERROGRAPH. North East Audio.
FORMULA 4. Mayware Ltd.
FUBA. Audio Workshops Ltd.
FUJI. Pyser Ltd.

G

GRADO. Transonic Imports (Acoustical) Ltd.
GROOVAC. R. I. Audio.
G.S.K. Group Systems (Keracolor) Ltd

H

HAFLER. Howland-West.
HARMAN/KARDON. Harman UK.
HMV. Intersound Electronics Ltd.

I

ISOPHON. Hayden Laboratories Ltd.

J

JBL. Harman UK.
JHANKO. Home Leisure Marine.
JOHNSON BRODY. National Sound Reproducers Ltd.

K

KERACOLOR. Group Systems (Keracolor) Ltd.
KLH. Webland International Ltd.
KORTING. Europa Electronics Ltd.
KOSS. Tape Music Distributors Ltd.

L

LEAK. Rank Audio Visual.
LESLIE. Boosey & Hawkes (Electronics) Ltd.
LOWREY ORGANS. Norlin Music (UK) Ltd.
LUX. Howland-West.
LUXMAN. Howland-West.
LYRICHORD. N. Miers & Co Ltd.

M

MAJA. Hamilton Jones Ltd.
MAXELL. Natural Sound Systems.
McLAREN. GR International Electronics Ltd.
MELODIUM. Audio Ltd.
METROCARE. Metrosound Audio Ltd.
METZ. Paul Spring Electronics Ltd.
MICRO-ACOUSTICS. Welsland Int.
MICRO-SEIKI. Harman UK.
MINIMIXER. Allen & Heath Ltd.
MOTOROLA. Pulsar Developments Ltd.
MUSONIC. S & B Trading.

N

NAGRA. Hayden Laboratories Ltd.
NAKAMICHI. Natural Sound Systems Ltd.
NEAL-FERROGRAPH. North East Audio Ltd.
NEUMANN GMBH. F. W. O. Bauch Ltd.
NION. RTB Ltd.
NOVA CHAIR. Tape City Ltd.

O

OPTIM. Optimisation Ltd.
OPTONICA. Sharp Electronics (UK) Ltd.
ORTOFON. Harman UK.

P

PANASONIC. National Panasonic (UK) Ltd.
PASO. Audio Ltd.
PEERLESS. Ross Electronics.
PHILIPS. Microphones — Pye Business Communications Ltd.
PICKERING. Sound Source.
PIXALL. Miltly Products.
PLUSTRON. Plustronics Ltd.
PWB. QED Audio Products Ltd.

Q

QAS. Quality Audio Supplies.
QUAD. Acoustical Manufacturing Co Ltd.

R

RAPPAPORT. Trasonic Imports (Acoustical) Ltd.
REALISTIC. Tandy Corporation.
REVOX. F. W. O. Bauch Ltd.
RIHA. B.M.I. Ltd.
RODGERS ORGANS. Boosey & Hawkes (Electronics) Ltd.
ROGERS. Swissstone Electronics Ltd.

S

SAKAI. Wren Electronics Ltd.
SANKYO. Webland International.
SATIN. Howland-West.
SCHNEIDER. Kuba Radio Sales & Services Ltd.
SCOTCH. 3M United Kingdom Ltd.
SEAC. Zeepa Instruments Ltd.
SEAS. Radio Components Ltd.
SES. Sussex Electric Services.
SENNHEISER. Hayden Laboratories Ltd.
SONOTONE. Vernitron Ltd.
SONUS. C. E. Hammond & Co Ltd.
SOUND SEATING SYSTEMS. Tape City Ltd.
SOUNDS PROFESSIONAL. F. W. O. Bauch Ltd.
STANTON. Wilmex Ltd.
STD. C. W. & J. Walker Ltd.
STUDIOCRAFT. Bose (UK) Ltd.
SUPEREX. Golding Product Ltd.
SUPERSCOPE. Marantz Audio UK Ltd.
SUPERSPORT. Bruce Kaberry Marketing Ltd.
SWA. E. & W. Magee Ltd.
SYNCHROTAPE. Adastral Electronics Ltd.

T

TANNOY. Harman UK.
TANTRAK. Dorking Audio Systems Ltd.

TEAC. Harman UK.
TECHNICS. National Panasonic (UK) Ltd.
TENOREL. Condor Electronics.
TENSAI. Wren Electronics Ltd.
THORENS. Metrosound Audio Products Ltd.
TRIO. B. H. Morris & Co (Radio) Ltd.
TRISTAN. Danil Engineering Co.

U

ULTIMO. Condore Electronics.
ULTRA. Thorn Consumer Electronics Ltd.
UNISOUND. Condor Electronics Ltd.

V

VIDEOMASTER. Waddington Videomaster Ltd.
VISONIK. Uher Ltd.
VORTA. Premier Industries (Cheltenham) Ltd.

W

WEIRCLIFFE. Amos of Exeter Ltd.
WERSI ORGANS. Aura Sounds.
WHARFDALE. Rank Hi-Fi.
WIFONA. Paul Spring Electronics Ltd.
WILLIAMSON. Sculpture Electronics.

Y

YAMAHA. Kemble (Organ Sales) Ltd.
YAMAHA. Natural Sound Systems Ltd.

Directory of Makers and Suppliers

A

Acoustical Manufacturing Co Ltd,
St. Peters Road,
Huntingdon PE18 7DB.
Tel: Huntingdon 52561.

Acoustic Transducer Co Ltd,
Pier House Laundry,
Strand-on-the-Green,
London W4.
Tel: 01-995 3654.

Adam Imports Ltd,
Unit 2A, Ripon Road Industrial Estate,
Harrogate, North Yorkshire.
Tel: Harrogate 501151.

Adastra Electronics Ltd,
Unit N22, Cricklewood Trading Estate,
Claremont Road,
London NW2 1TU.
Tel: 01-452 6288/9.

AEG-Telefunken (UK) Ltd,
217 Bath Road, Slough SL1 4AW.
Tel: Slough 872101.

Aerialite Aerials Ltd,
Whitegate, Broadway,
Chadderton, near Oldham,
Greater Manchester OL9 0QE.
Tel: 061-656 1111.

Aiwa Sales & Service (UK) Ltd,
Aiwa House,
30/32 Concord Road,
Westwood Park Trading Estate,
London W3 0TH.
Tel: 01-993 1672.

Akai (UK) Ltd,
The Production Village,
82-106 Cricklewood Lane,
London NW22 2DP.
Tel: 01-450 2011.

AKG Acoustics Ltd,
191 The Vale,
London W3.
Tel: 01-749 2042.

Alba (Radio and Television) Ltd,
Bull Lane,
Edmonton,
London N18 1SD.
Tel: 01-803 4451.

Alban Electronic Suppliers Ltd,
28 Spencer St.,
St. Albans,
Herts. AL3 5EG.
Tel: St. Albans 30236/7.

Richard Allan Radio Ltd,
Bradford Road,
Gomersal,
Cleckheaton,
West Yorkshire BD19 4AZ.
Tel: Cleckheaton 872442.

Allen and Heath Ltd,
Pembroke House,
Campsbourne Road,
London N8.
Tel: 01-340 3291.

Amdio Ltd,
26 Reading Road South,
Fleet,
Aldershot,
Hants.
Tel: Fleet 20567.

Amos of Exeter Ltd,
Wiercliffe Court,
Exwick,
Exeter EX4 2AG.
Tel: Exeter 72132.

Ampex Great Britain Ltd,
Acre Road,
Reading,
Berks RG2 0QR.
Tel: Reading 85200.

**Amplification and Recording
(Cambridge),**
French's Mill,
French's Road,
Cambridge CB4 3NP.
Tel: Cambridge 54507.

Amstrad Consumer Electronics Ltd,
1-7 Garman Road,
London N17 0UF.
Tel: 01-801 4431.

Antiference Ltd,
Bicester Road,
Aylesbury,
Bucks HP19 3BJ.
Tel: Aylesbury 82511.

Ariston Acoustics Ltd,
Society Street,
Maybole KA19 7BH,
Scotland.
Tel: Maybole 82424.

Armstrong Audio Ltd,
Walters Road,
London N7 0RZ.
Tel: 01-607 3213.

Artifact Designs Ltd,
35 Queen Street,
Henley-on-Thames,
Oxon RG9 1AR.
Tel: Henley 6037/8.

Asaradio Television,
4 Victoria Street,
Bristol RS1 6BN.
Tel: Bristol 25266.

Audio UK Ltd,
Debmarc House, 203 London Road,
Staines, Middx.
Tel: Staines 50132.

Audiokraft (Alarms) Ltd,
Mael House,
Armstrong Road,
Benfleet,
Essex.
Tel: Benfleet 58944.

Audio Magnetics (UK) Ltd,
121 Loverock Road,
Reading RG3 1J2,
Berks.
Tel: Reading 598036.

Audio Pro (Hi-Fi) Ltd,
CASL House,
Sandy Lane,
Moston Road,
Sandbach, Cheshire CW11 9HT.
Tel: Sandbach 7520.

Audiomaster Ltd,
22 Bridle Path,
Watford,
Herts WD2 4BZ.
Tel: Watford 33010.

Audio-Technica Ltd,
Unit 6, Hunslet Trading Estate,
Low Road, Hunslet,
Leeds LS10 1BL.
Tel: Leeds (0532) 771441.

Audio & Vision Furniture Ltd,
Lane Street,
Bradley, Bilston,
West Midlands WV14 8UT.
Tel: Bilston 41371.

Audiokits,
6 Mill Close,
Borrowash, Derby.

Audio Workshops Ltd,
33 London Road,
Southborough,
Tunbridge Wells,
Kent TN4 0PB.
Tel: Tunbridge Wells 39222.

Aura Sounds,
Cophorne Bank,
Crawley,
West Sussex.
Tel: Crawley 713338.

Avasound (UK) Ltd,
Rochdale Road,
Greedland, Halifax,
Yorks.
Tel: Halifax 7800.

Avon Recording Services,
29 Belvedere,
Bath BA1 5HR.
Tel: Bath 312082.

B

B.I.C.,
60-61 Leslie Park Road,
Croydon,
Surrey.
Tel: 01-656 2631/2.

Badger Sound Services Ltd,
46 Wood Street,
Lytham St. Annes,
Lancs FY8 1QG.
Tel: St. Annes 729247.

Baker Loudspeakers Ltd,
337 Whitehorse Road,
Croydon,
Surrey.
Tel: 01-684 1665.

Bang & Olufsen (UK) Ltd,
Eastbrook Road,
Gloucester GL4 7DE.
Tel: Gloucester 21591.

BASF United Kingdom Ltd,
Audio/Video Tape Division,
Haddon House,
2-4 Fitzroy Street,
London W1P 5AD.
Tel: 01-637 8971.

F.W.O. Bauch Ltd,
49 Theobald Street,
Borehamwood,
Herts WD6 4RZ.
Tel: 01-953 0091.

Beaver and Tapley Ltd,
Scotts Road,
Southall, Middlesex UB2 5DJ.
Tel: 01-574 4311.

Beyer Dynamic (GB) Ltd,
1 Clair Road,
Haywards Heath,
Sussex.
Tel: Haywards Heath 51003.

Bib Hi-Fi Accessories Ltd,
Kelsey House,
Wood Lane End,
Hemel Hempstead,
Herts HP2 4RH.
Tel: Hemel Hempstead 61291.

Binatone International Ltd,
Binatone House, Beresford Avenue,
Wembley, Middlesex HA0 1YR.
Tel: 01-903 5211/8322.

B + J Imports,
66 Woodcock Hill, Kenton,
Harrow HA3 0JF.
Tel: 01-907 6667.

Black Night Rumblecure,
Bank Top, Currier Lane,
Ashton-under-Lyne,
Lancs OL6 7TA.
Tel: 061-330 2836.

B.M.I. Ltd,
Unit R, Penfold Works,
Imperial Way,
Watford, Herts.
Tel: Watford 46929/46920.

Boosey & Hawkes (Electronics) Ltd,
Brick Knowle Park,
Ashley Road,
St. Albans, Herts AL1 5PP.
Tel: St. Albans 60191.

Boothroyd Stuart Ltd,
13 Clifton Road,
Huntingdon,
Cambs PE18 7EJ.
Tel: Huntingdon 57339.

Bose (UK) Ltd,
Trinity Trading Estate,
Milton Regis, Sittingbourne,
Kent ME10 2PD.
Tel: Sittingbourne 75341/2.

Bruce Kaberry Marketing Ltd,
43 Broomfield, Leeds LS16 6AE.
Tel: Leeds (0532) 674618.

BSR Ltd,
Powke Lane,
Cradley Heath,
Warley, Worcs B64 5QH.
Tel: Cradley Heath 65191.

B & W Loudspeakers,
Meadow Road,
Worthing BN11 2RX.
Tel: Worthing 205303.

C

Cadulae Chemicals Ltd,
Old Baston Trading Estate,
Penny Lane,
Haydock, St. Helen's,
Merseyside WA11 9SG.
Tel: 0942 75311.

Caldec Audio Ltd,
Hanningroyd Lane,
Hebden Bridge,
Yorks HX7 7DD.
Tel: Hebden Bridge 2159.

Cambra International Ltd,
260 Church Road,
London E10 7JQ.
Tel: 01-556 1961.

Cambridge Audio Ltd,
105-109 Oyster Lane,
Byfleet,
Surrey KT14 7JH.
Tel: Byfleet 51051.

Capo Electrophones Ltd,
56 Bedford Place,
Southampton.
Tel: Southampton 21265.

Castle Acoustics Ltd,
Park Mill,
Shortbank Road,
Skipton, Yorks.
Tel: Skipton 5333.

Catronics Ltd,
Communications House,
20 Wallington Sq.,
Wallington,
Surrey.
Tel: 01-669 6700.

Cavac Systems Ltd,
28 Bennett Road,
Reading, Berks RG2 0QE.

Ceol Products Ltd,
Swanville Place,
Rathmines, Dublin 6.
Tel: Dublin 981690.

Celef Audio,
130-132 Thirsk Road,
Borehamwood, Herts.
Tel: 01-953 8933/01-207 1150.

Cavendish International (Organs) Ltd,
Brick Knoll Park,
Ashley Road,
St. Albans, Herts.
Tel: St. Albans 60190.

Chave Innovations Ltd,
The Granary, Jackass Lane, Keston,
Kent BR2 6AH.
Tel: 0689-52051.

Clark Speakers,
122 Hull Road,
Anlaby, North Humberside HU10 6UV.
Tel: Hull 656706.

Condor Electronics Ltd,
100 Coombe Way,
London SW20 0AY.
Tel: 01-946 0033.

J. T. Coppock (Leeds) Ltd,
Highfield House,
Roids Lane,
Leeds.
Tel: Leeds 634652.

Cosmocord Ltd,
Eleanor Cross Road, Waltham Cross,
Herts EN8 7NX.
Tel: Lea Valley 716666.

D

Dacoll Games Ltd,
Dacoll House, Bathgate,
West Lothian.
Tel: Bathgate 56565.

Danil Engineering Co,
Old Teme Bridge,
Lower Wick,
Worcester WRS 4BY.
Tel: Worcester 425595.

Decca Radio and Television Ltd,
Neachells Lane,
Willenhall,
Wolverhampton, Staffs.
Tel: 090267367.

Decca Record Co Ltd,
Decca House,
Albert Embankment,
London SE1 7SW.

Decca Special Products,
Ingate Place, Queenstown Road,
London SW8 3NT.
Tel: 01-622 6677.

Discwasher Hi-Fi Ltd,
Unit 16F, Randles Road,
Knowsley Industrial Estate,
Knowsley, Merseyside L34 9EZ.

Doric Radio Ltd,
Rediffusion Group of Companies,
Fullers Way South,
Chessington, Surrey.
Tel: 01-397 5411.

Dorking Audio Systems Ltd,
23 South Street,
Dorking, Surrey.
Tel: Dorking (0306) 882897.

Dowall Audio Ltd,
Ardfallen, Fort Hill,
Magheralave Road,
Lisburn BT28 3BB.
Tel: 023 83 2899.

DTR Electronics Ltd,
Torrington Street,
Bideford,
North Devon EX39 4DR

Dynatron Radio Ltd,
Ditton Walk,
Cambridge CB5 8QD
Tel: Teversham 2781.

E

Eagle International,
Precision Centre,
Heatherpark Drive,
Wembley HA0 1SU.
Tel: 01-902 8832.

Edwards Construction Co.,
4 Brunswick Drive,
Harrowgate.
Tel: Harrowgate 60921.

Elite Electronics Ltd,
74 Old Oak,
Common Lane, London W3.
Tel: 01-743 3733.

E.M.I. Tape Ltd,
Tape House,
Dawley Road, Hayes,
Middlesex.
Tel: 01-573 3888.

Enigma Audio,
136a Portland Road, Hove,
Sussex BN3 5QL.
Tel: Brighton 723979.

Environmental Sound,
Northallerton, North Yorks.
Tel: Northallerton 543475.

Eumig (UK),
14 Priestly Way,
London NW2 7TN.
Tel: 01-450 8070.

Europa Electronics Ltd,
Howard Place,
Shelton,
Stoke-on-Trent,
Staffs ST1 4NW.
Tel: Stoke 25477.

F

Falcon Acoustics Ltd,
Tabor House,
Norwich Road,
Mulbarton, Norwich,
Norfolk NR14 8JT.
Tel: 05087 8272.

Fidelity Fastenings,
The Ridgeway,
Iver, Bucks.
Tel: Iver 654222.

Fidelity Radio Ltd,
Victoria Road,
Willesden NW10 6ND.
Tel: 01-965 8771.

Fogg Loudspeaker Components Ltd,
Sound Components Division,
Fortwell Avenue,
Eastergate, Sussex.
Tel: 024-368 2731.

Fons International (Electronics) Ltd,
Maybole KA19 7BH,
Scotland.
Tel: Maybole 84244.

G

Gale Electronics,
23 Burton Place,
London W1.
Tel: 01-499 9966.

Gardeners Transformers Ltd,
Christchurch,
Dorset BH23 3PN.
Tel: Christchurch 2284.

Garrard Engineering Ltd,
Newcastle Street,
Swindon,
Wilts SW1 2LH.
Tel: Swindon 35381.

GEC (Radio and Television) Ltd,
Langley Park,
Slough S13 6DP.
Tel: Slough 22201.

Goldring Products Ltd,
Anglian Lane,
Bury St. Edmunds,
Suffolk IP32 6SS.
Tel: Bury St Edmunds 64011.

Goodmans Loudspeakers Ltd,
Downley Road,
Havant, Hants PO9 2NL.
Tel: Havant 486344.

GR International Electronics Ltd,
Almond Bank,
Perth.
Tel: Almond Bank 441.

Grabern Audio,
139a Brighton Road,
Cauldson,
Surrey CR3 2NJ.
Tel: 01-660 4780.

H. K. Griffin & Co (Electronics),
Siddons Factory Estate,
Howard Street,
West Bromwich,
West Midlands B70 0S4.
Tel: 021-556 6823.

Group Systems (Keracolor) Ltd,
59a Middlewich Road,
Northwich,
Cheshire.
Tel: Northwich 6762.

Grundig International Ltd,
Newlands Park,
London SE23 5NQ.
Tel: 01-659 2468.

H

Hacker Sound Ltd,
Shadsworth,
Blackburn BB1 2PT
Tel: Blackburn 53525

G.K.C. Hadcock,
Audio Division,
The Old Vicarage,
Doveridge, Derby DE6 5NN.
Tel: Uttoxeter 2452.

Hamilton Jones Ltd,
129 Marlowes,
Hemel Hempstead,
Herts HP1 1BB
Tel: Hemel Hempstead 51718/65435.

C. E. Hammond & Co Ltd,
105-109 Oyster Lane,
Byfleet,
Surrey KT14 7LA.
Tel: Byfleet 51051.

Hanimex (UK) Ltd,
Hanimex House, Dorcan, Swindon,
Wilts SN3 5HW.
Tel: Swindon 26211.

Harbeth Acoustics,
2a Nova Road,
West Croydon,
Surrey CR0 2TL.
Tel: 01-681 7876.

Harman UK,
St. John's Road, Tyler's Green,
High Wycombe, Bucks.
Tel: 049-481 5331.

Harrison-Chapman,
95 Gray's Inn Road,
London WC1X 8TX.
Tel: 01-405 9665.

Hitachi Sales (UK) Ltd,
Hitachi House,
Station Road,
Hayes UB3 4DR.
Tel: 01-848 8787.

Holder Pearce Ltd,
66 Grove Road,
Eastbourne,
Sussex BN21 4UH.
Tel: Eastbourne 26565.

Home Leisure Marine,
5 Athol Street,
Douglas,
Isle of Man.
Tel: Douglas 16556.

I

IMF Electronics Ltd,
Westnourne Street,
High Wycombe,
Bucks.
Tel: High Wycombe 35576.

Infinity Systems (UK) Ltd,
PO Box 14, 17 St. Martin's Street,
Wallingford, Oxon OX10 0EB.
Tel: Wallingford 37353.

Ingersoll Electronics,
202 New North Road,
London W1.
Tel: 01-226 1200.

Intel,
47 Hays Mews,
London W1.
Tel: 01-493 1921.

Intersound Electronics Ltd,
Victoria Road,
London NW10 6ND.
Tel: 01-965 6834.

ITT Consumer Products (UK) Ltd,
Chester Hall Lane,
Basildon,
Essex SS14 3BW.
Tel: Basildon 3040.

J

Janorhurst Ltd,
Century House, Shortmead Street,
Biggleswade, Beds.
Tel: Biggleswade 314252.

Jaybeam Ltd,
Sandfield Close,
Moulton Park Industrial Estate,
Northampton NN3 1QQ.
Tel: Northampton 46611.

Jensen Brothers (Furniture) Ltd,
Hillside Works, Livesey Fold,
Darwen, Lancs BB3 1QG.
Tel: Darwen (0254) 772837.

E. J. Jordan Ltd,
Stonyway, Bovingdon Green,
Marlow-on-Thames, Bucks SL7 2JH.
Tel: Marlow 2526.

Jordan Watts Ltd,
Benbow Works,
Silverdale Road,
Hayes UB3 3BW.
Tel: 01-573 6928.

JR Loudspeakers Ltd,
114 Ashley Road,
St. Albans,
Herts.
Tel: St. Albans 64337.

JVC (UK) Ltd,
Eldonwell Trading Estate,
Staples Corner,
6-8 Priestly Way,
London NW2 7AF.
Tel: 01-450 2621.

K

Kef Electronics Ltd,
Tovil,
Maidstone,
Kent ME15 6QP.
Tel: Maidstone 57258.

Kelsonics Ltd,
Kelsey House,
Wood Lane End,
Hemel Hempstead,
Herts HP2 4RQ.
Tel: Hemel Hempstead 61291.

Kemble (Organ Sales) Ltd,
Mount Avenue,
Bletchley,
Milton Keynes MK1 1JE.
Tel: Milton Keynes 71771.

Klark-Teknik Research Ltd,
M.O.S. Industrial Site,
Summerfield,
Kidderminster,
Worcs DY11 7RE.
Tel: Kidderminster 64027.

Knowin (UK) Ltd,
Knowin House,
37 Churchill Way,
Fleckney, Leics LE8 0UD.

Kohli & Co Ltd,
36 Concord Road,
Westwood Park Estate,
London N16 6TH.
Tel: 01-993 5001.

Kuba Radio Sales and Services Ltd,
1105 London Road,
Thornton Heath,
Surrey CR4 6JJ.
Tel: 01-764 5255.

L

Leda Audio Accessories Ltd,
7 Thane Works,
Thane Villas,
London N7 7NN.
Tel: 01-607 1107/8.

Legend Electronics Ltd,
25 East Street,
Bromley,
Kent BR1 1QE.
Tel: 01-460 3313.

Lentek Audio Ltd,
Edison Road,
Industrial Estate,
St. Ives, Cambs PE17 4LF.
Tel: St. Ives 62225.

L.N.B. Audio Ltd,
Duke Street,
Loughborough,
Leics.
Tel: Loughborough 61229.

Lynwood Electronics,
20 Stourcliffe Avenue,
Bournemouth,
Dorset BH6 3PT.
Tel: Bournemouth (0202) 426299.

M

McLaren Audio,
PO Box 4,
149-151 Newhouse Road,
Perth PHI 2JT.
Tel: Perth 441.

E. & W. Magee Ltd,
Spring Gardens,
Bigbury, Kingsbridge,
Devon TQ7 4AP.
Tel: Bigbury on Sea 323.

Marantz Audio (UK) Ltd,
193 London Road,
Staines, Middlesex.
Tel: Staines 95032.

Maxview Aerials Ltd,
Setch, King's Lynn,
Norfolk.
Tel: King's Lynn 810591/810376.

Mayware Ltd,
15 Heather Walk,
Edgeware HA8 9TS.
Tel: 01-958 9421.

MBO Electronics (UK) Ltd,
Gelder Road,
Leeds LS12 6NB.
Tel: Leeds 791261.

Memorex (UK) Ltd,
Hounslow House,
730 London Road,
Hounslow, Middlesex.
Tel: 01-570 7716.

Mercantile Electronics Ltd,
Amelton House, 61 Derby Street,
Manchester M8 8HE.
Tel: 061-832 6525.

Merlin Records Ltd,
15 Thames Meadow,
East Molesey, Surrey KT8 9TQ.
Tel: 01-979 8041.

MetroSound Audio Products Ltd,
Freedex House,
4-10 North Road,
London N7 9HN.
Tel: 01-607 8141.

Micro Electronics Ltd,
Consumer Products Division,
766 Finchley Road, London NW11.
Tel: 01-458 8944.

N. Miers & Co Ltd,
28 Piercing Hill,
Theydon Bois, Epping,
Essex CM16 7LE.
Tel: 037-881 2611.

Milty Products Ltd,
New Mansion House,
173/191 Wellington Road South,
Stockport, Cheshire SK1 3UA.
Tel: 061-480 8142.

Mission Electronics Ltd,
PO Box 65, London SW7 1PP.
Tel: 01-589 0048.

Monitor Audio Ltd,
347 Cherry Hinton Road,
Cambridge CB1 4DJ.
Tel: Cambridge 42898.

Keith Monks (Audio) Ltd,
26-30 Reading Road South,
Fleet,
Aldershot, Hants.
Tel: Fleet 20568/20569.

Monogram Professional Audio,
281 Balmoral Drive,
Hayes, Middlesex.
Tel: 01-573 1566.

Mordaunt Short Ltd,
Durford Mill, Petersfield,
Hampshire GU31 5AZ.
Tel: Rogate (073-080) 721/2.

B. H. Morris & Co (Radio) Ltd,
Precision Centre, Heather Park Drive,
Wembley, Middlesex HA0 1SU.
Tel: 01-902 9422.

Mustang Communications,
Nelson Street, Scarborough,
North Yorks YO12 7SZ.
Tel: Scarborough 63298.

N

Naim Audio Ltd,
11 Salt Lane, Salisbury,
Wilts SP1 1DT.
Tel: Salisbury 3746.

National Panasonic (UK) Ltd,
101-109 Whitby Road Trading Estate,
Slough SL1 3DR.
Tel: Slough 34522.

National Sound Reproducers Ltd,
Parr Road, Stanmore,
Middlesex HA7 1P2.
Tel: 01-951 0222/4.

Natural Sound Systems Ltd,
10 Byron Road, Wealdstone,
Harrow, Middlesex HA3 7TL.
Tel: 01-863 8622.

Nightingale Acoustics Ltd,
26 Station Road,
Bexhill-on-Sea,
East Sussex TN40 1RG.
Tel: Bexhill 219950.

Nordmende (UK) Ltd,
Rickford House, Rickfords Hill,
Aylesbury, Bucks.
Tel: Aylesbury 20501.

Norlin Music (UK) Ltd,
Woolpack Lane,
Braintree, Essex CM7 6BB.
Tel: Braintree 23061.

North East Audio Ltd,
Simonside Works,
South Shields,
Tyne and Wear NE34 4NX.
Tel: South Shields 566321.

Notes Electronics Ltd,
15 Holbein Place, London SW1.
Tel: 01-730 2417.

O

Omar Skinner and Sons,
Warfield Park Workshops,
Warfield Park,
Bracknell, Berks RG1 6RG.

Osmabet Ltd,
46 Kenilworth Road,
Edgeware HA8 8YG.
Tel: 01-958 9314.

Optimisation Ltd,
45 South Street,
Bishops Stortford,
Herts.
Tel: Bishops Stortford 51247/52058.

P

Pageantry Radio & TV Co Ltd,
104 Felsham Road, Putney,
London SW15 1DQ.
Tel: 01-788 5588.

Period High Fidelity Ltd,
Clivemont Road,
Cordwallis Trading Estate,
Maidenhead, Berks.
Tel: Maidenhead 21221.

Phillips Electrical Ltd,
Arundel Great Court,
8 Arundel Street, London WC2R 3DT.
Tel: 01-836 4360

City House, 420-430 London Road,
Croydon, Surrey CR9 3QR.
Tel: 01-689 2166.
Video Division, 19 Commerce Way,
Purley Way, Croydon, Surrey.
Tel: 01-688 7766.

**Philips Electrical & Associated
Industries Ltd,**
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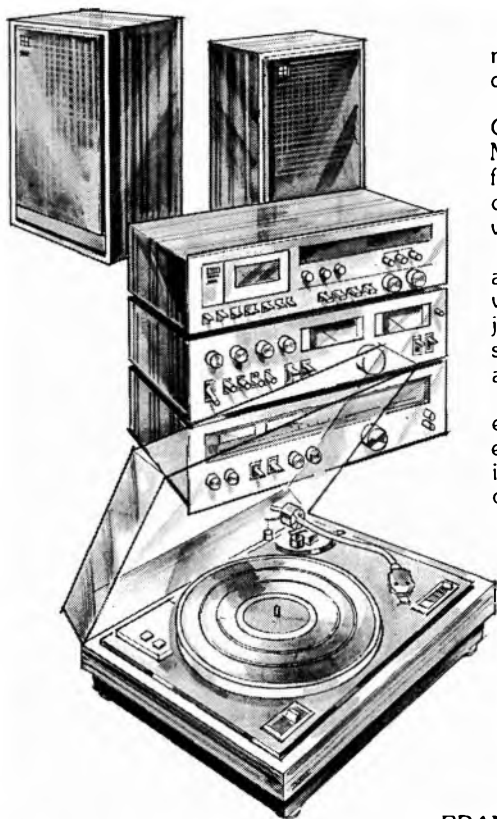
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Catalogue of Direct-Cut, Digital and Hi-Fidelity Discs

Readers might find the following list of interest. Most direct-cut labels are supplied in limited editions and some may, therefore, be deleted by the time this book is published. Similarly prices are subject to alteration.

■ DECCA

Decca Record Company Ltd,
Decca House, Albert Embankment,
London SE1 7SW.

Decca

D147D2 (KSXC2 7062)
New Year's Day Concert in Vienna (Boskovsky and Vienna Phil. Orch).
SXDL 7500 (KSXDC 7500)
Symphony No. 4 in A Mendelssohn (Dohnanji and VPO).
SXDL 7501 (KSXDG 7501).
Symphony No. 4 in G Mahler (Mehta and Israel Philharmonic Orch).

Decca maintains that it's digital recordings are on a par with direct-cut discs, and after sampling of the Mahler Fourth Symphony recorded in the Mann Auditorium in Tel Aviv I would say that the claims are fully justified. A pity then that the performance doesn't quite match up to the recorded sound. The additional clarity, elimination of surface noise, and absence of distortion only spotlights the weakness of the Israeli band, namely impoverished Violin and Cello tone, insecure Horns, and poor quality wind solos. This lack of string tone is most noticeable in the quiet opening bars of the Poco Adagio (Third Movement) which in this version takes on almost Chamber Music proportions. Soprano soloist Barbara Hendricks is completely unsuited to this role and sounds coarse and unsympathetic. Zubin Mehta is undoubtedly completely immersed in the score and gives a warm and happy reading. His violent changes of tempo are not out of place in this somewhat disjointed work, and there are many good things in this recording which makes it an ideal demonstration disc for only £4.99.

■ MERLIN

Merlin Records Ltd,
15 Thames Meadow, East Molesey,
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Tel: 01-979 8041.

Merlin Fidelity + :

MRF 78901
Orchestral Suites 3/4 (Bach). George Malcom conducting New Chamber Soloists.
MRF 78101
Flute Concerti (Vivaldi). Christopher Taylor with the Philomusica of London.
MRF 77901
On the Lighter Side Vol 1. Robin Davis Orchestra.
MRF 771201
On the Lighter Side Vol 2. Robin Davis Orchestra.
(All above priced: £5.75 (inc. VAT).

Merlin Fidelity are not Direct-Cut but recorded by mixing direct to stereo as against the usual multi-track method. As a result problems of surface noise, tape hiss, lack of dynamic range, and distortion are reduced to a minimum. MRF 78101 features four Vivaldi Flute Concerti played by Christopher Taylor with Carl Pini conducting the Philomusica of London. He has successfully avoided clashing with other established recordings and only the C Min P440 is available in more than one alternative. Continuo is exemplary and with a retail selling price of £5.75 this is an attractive proposition. Two Bach Suites Nos. 3 and 4 (MRF 78901) are up against stiffer opposition especially from Neville Marriner on Argo. Famous Harpsichordist George Malcolm directs the New Chamber Orchestra with Kenneth Sillitoe as leader and his fellow members of the Gabrieli Quartet as section leaders. Performance is brisk, rhythmic, and clean. Recording has all the virtues claimed above and is even a bit too dry. I would have liked more resonance and can't really acquiesce to the modern way of taking the outer movements of the Overture at a brisk pace. They all do it these days but, personally, I think it destroys the natural Slow-Quick-Slow pattern of the French Overture. Otherwise absolutely first-class.

■ GALE

Gale Electronics,
23 Bruton Place,
London W1X 7AB.

Gale Maximum Fidelity:

CMFD-1-76-001
17th Century Italian Music (Volume One)
CMFD-2-76-002-3

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Complete Flute Sonatas of J. S. Bach.
Christopher Taylor.
GMFD-1-76-004
Music for Percussion (Volume One) Tristan
Fry.
GMFD-1-76-005
Beethoven Sonatas Op. 53,00.57. Peter Frankl.
GMFD-1-76-006
Schumann and Brahms Lieder. Sheila
Armstrong.
GMFD-1-79-007
Romeo and Juliet, Caprice Italien, Elegie
(Tschaikowsky).
GMFD-1-79-008
Sonata in G Op. 78 (Schubert). Peter Frankl.
GMFD-1-79-009
Handel Variations Op. 24/Two Rhapsodies
Op.79 (Brahms). Peter Frankl.
GMFD-1-79-010
George and Me. Elvin Jones and the Jazz
Machine.
GMFD-1-79-011
Baroque Music for Double Bass and Harpsi-
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■ METRO SOUND

Metrosound,
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(Bach/Jongen).
CCS 7002-33 1/3 rpm
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CCS 7007-33 1/3 rpm
1685 A Sound Odyssey. Fernando Valenti at
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than Tough.
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San Francisco Ltd-Terry Garthwaite.

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CSR-1001
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S80
Schubert's Fifth Symphony — St. Paul
Chamber Orch.

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Frank Strozier Quintet — What's Goin' on.
SCD 17002
Walt Dickerson — Shades of Love.
SCD 17003
Horace Parlan Trio — Hi-Fly.

To demonstrate the virtues of Crystal Clear records I recommend CCS-7001 "The Fox Touch" which is an absolute stunner. One of the criticisms levied against the direct-cut method is that it does not attract the finest artists who are either a) under contract elsewhere or b) loath to commit themselves to a recording where re-takes are costly and undesirable. In general the artists that take up the challenge are naturally reticent and performances tend to be careful and even stilted. Internationally-famous organist Virgil Fox has no such qualms; he is a skilled performer and he knows it! He will not please everyone with this selection of Bach and Jongen in the grand manner à la Stokowski played with excessive rubato and extremes of volume on a monster organ. The Fratelli-Ruffati at the Garden Grove Community Centre, California has five manuals, 116 ranks, 108 stops, and 6,791 pipes! Recording covers the frequency response of 16Hz-1.5kHz and the flat reproduction of low frequency pedal notes form a challenge to most speaker systems. Those with sub-woofer systems will find a justification for their extra cost.

In the face of such technical wizardry music hardly matters but Mr. Fox is here wrestling with Bach's Toccata, Adagio and Fugue in C; the famous Toccata and Fugue in D Min and the Toccata from the Symphonie Concertante by Jongen. As these are limited editions I urge dealers to purchase a copy for demonstration.

■ **QUADRAMAIL**

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Michael Murray playing the great organ (Widor, Vierne, Dupre, Karg-Elert).
Quadramail discs listed above are priced at £8.75 unless otherwise marked. The company also market Gale and Merlin discs listed under their respective companies.

From the wide catalogue of Quadramail I sampled "Sugar Loaf Express" (JVC VJDC-2) featuring Guitarists Lee Ritenour and Eric Gale, drummers Harvey Mason and Steve Forman, bassist Abe Laboriel and Patrice Rushen on keyboards. There is no denying the immediate presence in this recording with keyboards imparting a perfectly natural timbre and the drums a live reverberance rarely heard in recorded music. The inserted notes in Japanese explain the recording studio set-up with detailed diagrams and it is a pity that few people in this country will understand them. The group are undoubtedly fine session musicians but their material is uninteresting and the main use for a record of this type is surely its value for demonstration material.

Stop Press

The following information was received after the main body of the book was passed for press.

■ ALECA

Comberton Manufacturing Co. Ltd,
Oldington Trading Estate, Stourport Road,
Kidderminster DY11 7QR.
Tel: Kidderminster 62154.

Speaker Drive Units

1in. PA/8

Tweeter with nominal cone dia: 2.54cm. Voice coil dia: 2.54cm. Nom. imp: 8 ohms. Flux density: 12,999G. Total flux: 29,000Mx. Nominal capacity: 80W. FR: 1,000Hz-20,000Hz. Price: on application.

5in. HG/8

Mid-range speaker with nominal cone dia: 12.7cm. Voice coil dia: 2.05cm. Nom. Imp: 8 ohms. Flux density: 9,800G. Total flux: 32,300Mx. Nominal capacity: 15W. FR: 70Hz-6,000Hz. Price: on application.

1½in. PM/8

Mid-range speaker with nominal cone dia: 3.81cm. Voice coil dia: 3.75cm. Nom. imp: 8 ohms. Flux density: 12,100G. Total flux: 57,700Mx. Nominal capacity: 80W. FR: 1,000Hz-6,000Hz. Price: on application.

8in. PG/8

Mid-range speaker with nom. cone dia: 20cm. Voice coil dia: 2.56cm. Nom. imp: 8 ohms. Flux density: 12,100G. Total flux: 59,600Mx. Nom. capacity: 60W. FR: 45Hz-4,000Hz. Price: on application.

6in. HG/8

Mid-range speaker with nom. cone dia: 15.24cm. Voice coil dia: 2.56cm. Nom. imp: 8 ohms. Flux density: 9,400G. Total flux: 38,500Mx. Nom. capacity: 25W. FR: 60Hz-5,000Hz. Price: on application.

12in. PG/8

Bass speaker with nominal cone dia: 30.48cm. Voice coil dia: 5.07cm. Nom. imp: 8 ohms. Flux

density: 11,500G. Total flux: 148,000Mx. Nom. capacity: 80W. FR: 35Hz-1500Hz. Price: on application.

10in. PG/8

Bass speaker with nominal cone dia: 25.4cm. Voice coil dia: 5.07cm. Nom. imp: 8 ohms. Flux density: 11,500G. Total flux: 148,000Mx. Nom. capacity: 70W. FR: 40Hz-2000Hz. Price: on application.

■ BIB

Bib Hi-Fi Accessories Ltd,
Kelsey House, Wood Lane End,
Hemel Hempstead, Herts HP2 4RQ.
Tel: Hemel Hempstead (0442) 61291.

Ref 27 Groov Guard XL2*

Anti Static record protector which reduces friction between stylus and record vinyl, reducing wear and with anti-stick properties. By reducing static, dust and particles of dirt are no longer attracted to the surface. Pump action dispenser contains 15g. Also included in pack is a Bib dust off. Price: £2.48 (inc. VAT).

■ BONTEMPI

Internete (UK) Ltd,
Brennand Mill, Fraser Street,
Burnley, Lancs BB10 1UL.
Tel: Burnley (0282) 35431.

HF 202.1

Small organ with detachable legs of chrome-



Ref 27 Bib Groov Guard XL2

*Indicates entry is illustrated

plated metal. Keyboard of 41 keys. Effects: Trumpet, Flute, Strings, vibrato. Autochord and rhythm generator. Price: £152.00 (inc. VAT).

HF 26

Small organ with detachable legs. Keyboard of 49 keys. Stops: manual bass, bass chords, diapason, Violin, reed, Clarinet, vibrato, Rhythms: Waltz, Swing, Slow Rock, Rock, Latin. 6.29in. speaker. Price: £189.83 (inc. VAT).

B27

Keyboard with 56 notes divided into bass and treble, 7 registers giving Manual Bass, Bass Chords, Flute, Strings, Trumpet, Horn, Vibrato. Sliding controls. Autochord. Rhythm: Waltz, Swing, Slow Rock, Rock, Latin. Expression pedal. 8in. loudspeaker. Price: £267.00 (inc. VAT).

B370.29

Upper keyboard: 37 keys. Lower keyboard: 37 keys. Pedal board: 13 notes. Stops: Flute 8, Flute 4, Violin, Piccolo, Clarinet on upper, Diapason, strings, Horn on lower. Vibrato, rhythm control and etronome. Auto rhythms: Cha-Cha, Western, Bossa, Samba-Latin, Rock, Slow Rock, Swing, Waltz, Rhythm'n Blues, March. Auto-Chord. Two frontal speakers both 200mm dia. Price: £459.95 (inc. VAT).

■ HMV

Intersound Electronics Ltd,
Victoria Road, London NW10 6ND.
Tel: 01-965 6834.

4000A Amplifier

Stereo amplifier with power output: 40W per channel into 8 ohms. FR: 15Hz-30kHz \pm 1dB. THD: less than 0.08%. Recommended load 4-8 ohms. Inputs: 3mV 50K, 150mV 100K, 1.15mV 100K, 2.15mV 100K. Outputs: 1.30mV 50K, 2.15mV 6K. Dimensions: 45 x 28 x 15.5cm. Finish: walnut effect with brushed black fascia. Price: £96.89 (plus VAT).

4000T Tuner

FM/AM tuner covering FM, L, M, S. Sensitivity FM: 1.5uV for 30dB. Sensitivity AM: 400uV/metre. Six presets for use on any waveband. Tuning and preset indicator meters. Finish: walnut-effect with brushed black fascia. Dimensions: 45 x 28 x 15.5cm. Price: £96.89 (plus VAT).

4000C Cassette Deck

Front loading stereo cassette deck with Dolby

noise reduction system. FR: 35Hz-14.5kHz normal, 35Hz-15.5kHz Chrome, 35Hz-15.5kHz ferri-chrome. Distortion: 1.3%. Features: lit cassette compartment, autostop, VU meters, digit counter with memory, pause control. Dimensions: 45 x 28 x 15.5cm. Price: £103.11 (plus VAT).

4000P Record Player

Direct drive player with Shure magnetic cartridge. W and F: 0.05%. Rumble: 68dB. S-shaped arm with gimbal suspension, skate control, viscous cue, decoupled weight and plug-in headshell. Dimensions: 27 x 39 x 15.3cm. Finish: black. Price: £88.00 (plus VAT).

4000S Speakers

Designed for use with above components. Drive units: 8in. woofer, 3 $\frac{5}{8}$ in. mid-range and lin. domed tweeter. Power handling: 40W. FR: 30Hz-20kHz. Imp: 8 ohms. Dimensions: 57 x 28 x 23cm. Finish: walnut effect. Price per pair: £60.44 (plus VAT).

■ JVC

JVC (UK) Ltd,
Eldonwall Trading Estate,
Staples Corner, 6-8 Priestley Way,
London NW2 7AF.
Tel: 01-450 2621.

A-S5

Amplifier replaces JA-S11G. Output 30W per channel into 8 ohms. FR: 20Hz-20kHz. THD: 0.06%. Price: £99.50 (inc. VAT).

T-V5L

Radio tuner covering FM, L, M. Replacing JT-V22 and JT-V11. S/N ratio: 82dB mono, 70dB stereo. FR: 50Hz-15kHz + 0.5dB-1dB. LED meters. Wide tuning dial. Price: £118.00 (inc. VAT).

A-S3

Integrated stereo amplifier. Output: 20W per channel into 8 ohms. FR: 20Hz-20kHz. THD: 0.08%. Price: £85.00 (inc. VAT).

T-V3L

Slimline three-band tuner matching above. Price: £89.50 (inc. VAT).

L-A55

Direct drive auto-return turntable. FG servo motor. W and F: less than 0.03%. S/N ratio: greater than 75dB (DIN-B). Lightweight low-inertia tone-arm. Price: £98.00 (inc. VAT).

I-A11

Belt-drive auto-return record deck with four pole synchronous motor. Loss-mass high sensitivity tone-arm. W and F: 0.06%. S/N ratio: greater than 63dB (DIN-B). Price: £76.00 (inc. VAT).

MEMOREX

Memorex (UK),
96 Church Street, Staines,
Middlesex.
Tel: Staines (81) 51488.

High Bias*

New tape for use at high bias (chrome/CrO₂) settings. Gives flatter frequency response at both -20dB standard calibration level and normal record level (0dB); good high frequency maximum output level (MOL/L). S/N ratio: 58.6dB at 315Hz, 48.0dB at 10kHz. Housed in case which will accept the cassette in any position and which has the added security of a snap-lock hinge. Price: £2.40 for C60; £2.99 for C90.

PANASONIC

Panasonic, Whitby Road,
Slough, Berks SL1 3DR.
Tel: Slough 27516.

NV-8610 Home Video Cassette Recorder*

Can "freeze" action and, if necessary, work a frame-by-frame slow motion through any filmed sequence. Extended clock/timer which can pre-set to record a programme up to seven days in advance. Simple piano-key control, remote pause button, tape counter with memory facility on rewind. Quartz locked direct drive video head motor. Price: £719.95 (inc. VAT).

ORTOFON

Quadramail, 10 Green End Road,
Sawtry, Huntingdon, Cambs PE17 5RX.
Tel: 0487 831451.

Ortofon 0001 Pickup Test Record

Side One: channel orientation and phasing; channel separation; white noise levels; silent groove; difference tone; tracking ability, vertical; tracking ability, lateral; tone arm resonance, lateral; tone arm resonance, vertical. Side two: Works by C. H. Lumbye played by the Tivoli Symphony Orch. cond. by Eifred Eckart-Hansen.

INSERT CASSETTE EITHER WAY-
ALBUM STILL CLOSES

SNAP LOCK
CONTROLS
ALBUM SWING



BUILT-IN HUB LOCKS
PREVENT TAPE UNWINDING

DURABLE, HIGH IMPACT
MOLDED PLASTIC CONSTRUCTION

Memorex High Bias album case



Memorex High Bias range



Panasonic NV-8610 video cassette recorder

OSAWA

J. Osawa & Co. (UK) Ltd,
10 Forge Court, Reading Road,
Yateley, Hants.

MP cartridges*

MP series of moving permalloy cartridges: MP-10, MP-11, MP-15, MP-20, MP-30, MP-50. Also available with optional magnesium headshell. 20, 20, 50 models all feature Nagaoka boron cantilever system. Price: on application.

*Indicates entry is illustrated

OD cartridges*

OS-100MP, OS-200MP, OS-300MP also available with optional headshell. Prices: from £6.00 upwards.

Record Care

GL-602 crystal turntable mat; GL-601 crystal stabilizer, RC401 stylus cleaner/stabilizer, Hiraoka disk SE-22 rubber turntable mat.

Ultracraft

Tone arm now available in various configurations for the first time in UK.

Satin

Moving coil cartridges and styli. Models available: M-117G, M-117Z, M117S, M-18E, M-18BX.

Trade Note

Osawa UK has now started its own operations in the UK. Many of the above mentioned products will be found in the main body of Hi-Fi Year Book under previous suppliers and the news of the present arrangement came to us too late to make the necessary changes.

■ ROTEL

Rotel Hi Fi Ltd,
2-4 Erica Road, Stacey Bushes,
Milton Keynes, Bucks.
Tel: 0908 317785.

Rotel products are now marketed by Rotel Hi Fi Ltd and details were received too late for publication in this book. As a rough guide to the range the equipment comprises:

Integrated amplifiers from £65.00-£440.00; Pre-amplifiers from £120.00-£850.00; Power amplifiers from £120.00-£1,650.00; Graphic equalisers at £75.00 and £200.00; Pre-amplifier/mixer RZ8 £380.00; Tuners from £70.00-£330.00; Receivers from £100.00-£400.00; Cassette decks* from £85.00-£220.00; Turntables £70.00-£160.00, Speakers from £65.00 to £120.00 per pair.

Systems

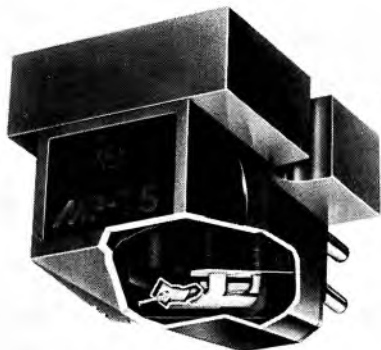
A300 comprising RA300, RT300, RD300, RP300, RL300, RK300. Price: £390.00. Other systems: A350 £420.00; X300 £360.00, RS40 £400.00; RS2000 £1,290.00.

■ TANDBERG

Tandberg (UK) Ltd,
81 Kirkstall Road, Leeds LS3 1HR.
Tel: Leeds (0532) 35111.

TCD 440A*

Stereo cassette deck for metal tapes is equipped



Osawa MP-15 cartridge



Osawa OS-2000 cartridge



Rotel RD-25F cassette deck



Tandberg TCD440A stereo cassette deck

with both Tandberg actilinear recording system and new Dyneq — dynamic equalisation system. Dyneq gives 12dB higher maximum output level at 10 kHz than conventional equalisation systems and reduces intermodulation distortion.

TPA 3003*

Power amplifier. Output: 150W, high speed direct coupled design, peak clipping indicators and ultra-low THD, IM and DIM distortion.

TCA 3002*

Control amplifier with electronic source switching, moving coil and moving magnet phono inputs, two tape monitors with dubbing, headphone jack with separate level adjustment, tone defect switch and calibrated volume control.

TPT 3001*

Programmable tuner incorporating 8 FM presets, digital display, direct reading meters for signal strength and centre tune, auto noise cancelling circuit, three position selectivity adjustment, continuously variable muting threshold adjustment and output level control.

■ TECHNICS

Technics, Bath Road, Slough, Berks SL3 6JB.
Tel: Slough 34522.

SP-15*

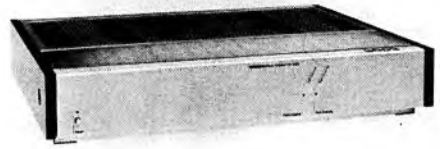
Quartz-synthesiser direct-drive deck with 0.1% speed adjustments over the range from 19.9%, Programme time, as well as pitch, can be minutely adjusted to match the pitch of a record with a musical instrument or for transcribing a musical score off disc. LED digital read-out ensures accurate pitch selection. Turntable 33.9cm of diecast aluminium, weighing 2.7kg. Speeds: 33 1/3, 45, 78 rpm. W and F: 0.025%. Rumble: —56dB (unweighted) —78dB (weighted). Price: on application.

SL-Q3

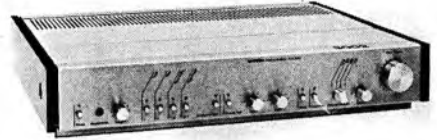
Automatic direct drive turntable. Ultra low-speed brushless DC motor. Aluminium diecast platter dia 31.2cm. Speeds: 33 1/3, 45 rpm. W and F: 0.012%. Rumble: —56dB DIN A unweighted. —78dB DIN B weighted. S-shaped tubular arm, static-balanced, anti-skating, oil-damped cueing. Effective length: 230mm. Overhang 15mm. Headshell weight: 7.5g. Dimensions: 43 x 13 x 37.5cm. Price: £265.95.

SL-Q2

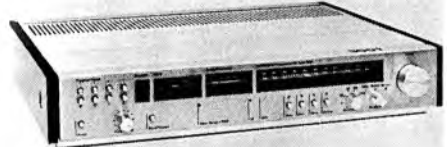
As above but semi-automatic. Price: £143.95.



Tandberg TPA 3003 power amp



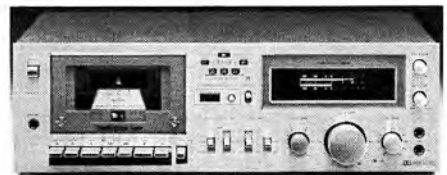
Tandberg TCA3002 control amp



Tandberg TPT3001 programmable tuner



Technics SP-15 turntable



Technics RS-M63 cassette deck

*Indicates entry is illustrated



Toshiba Ades adaptor

RS-M63*

Three-head Dolby front-loading cassette deck suitable for recording metal tapes. Features: auto-play, cue and review, five LED's to indicate source, output, playback, record and erase. W and F: 0.05%. FR: Metal tape 20Hz-20kHz, 30Hz-18kHz (DIN) 30Hz-17kHz ± 3 dB. S/N ratio: 67dB above 5kHz Dolby in, 57dB Dolby out. Inputs: mic, line. Outputs: line, headphone. Dimensions: 43 x 14.2 x 27cm. Price: £254.95 (inc. VAT).

■ THOMAS

Thomas Musical Instruments Ltd,
6 Abercorn Trading Estate,
Manor Farm Road, Alperton,
Wembley, Middlesex.

Playmate 1130

Contemporary design organ with two 37 note manuals and 13 note pedalboard. Stops: Flute, Trombone, Trumpet, Oboe, Violin. Features: memo chord, pedal sustain and memory, fancy foot. Auto rhythms: Waltz, Foxtrot, Rock, Latin. Dimensions: 39 x 21 $\frac{3}{8}$ x 37 $\frac{1}{8}$ in.

Playmate 1230

Contemporary design organ with two 37 note manuals and 13 note pedalboard. Similar to above but with extra auto rhythms.

■ TOSHIBA

Toshiba (UK) Ltd, Frimley, Surrey.

Adres Adaptor AD-5*

To enable top quality cassette and open-reel tape decks to be upgraded in performance the automatic dynamic range expansion system (Adres) is a new noise reduction system which Toshiba claims can improve S/N ratio by more than 30dB.

SM D30 Music Centre

Separate cassette/turntable (SR-F225), four wave-band radio with six preset FM stations,



Toshiba SM-D30 music centre

LED digital clock timer, Dolby. Output: 25W per channel. Price: £510.60 (inc. VAT).

■ VIDEO AND AUDIO FURNITURE

Video and Audio Furniture Ltd,
101 Eden Vale Road, Westbury, Wilts.
Tel: Westbury 823140.

VAF/100/S

Three-tiered trolley fitted with choice of wood or glass shelving. Dimensions: 66.5 x 92 x 46cm. Price: on application.

VAF/101/S

Cabinet designed for almost any Hi-Fi combination; adjustable shelving, cassette and record storage fitted with dust excluding perspex door. Dimensions: 66.5 x 92 x 46cm. Price: on application.

VAF/102/S

Contemporary cabinet accepting virtually any Hi-Fi system. Cassette drawers fitted to one side. Two adjustable shelves in opening 59 x 49cm. Dimensions: 65 x 80 x 46cm. Price: on application.

At £49.90* our PL-512 not only compares with decks of twice its price. More often than not, it's the better choice. We could hardly claim that without reasons. Here are the reasons.

Single-play manual belt-drive

The PL-512 follows on from the almost legendary PL-12D. All we've done is refine it even more. Showing, in the process, considerable technical merit over direct-drives at almost double the price. The facts speak for themselves.

Wow and flutter — 0.055%

0.055%. (W.R.M.S.) Most direct-drives would cost infinitely more to compete with that. The low wow and flutter stems from the PL-512's 4-pole synchronous motor, and its precision-machined motor shaft.

Other features worth knowing about are its 65db signal-to-noise ratio. (Din B). Its high-sensitivity S-curved tone arm, incorporating an anti-skate device. Low howl from its solid particle-board cabinet. And a rated platter speed in one second or less.

PIONEER®
EVERYTHING YOU HEAR IS TRUE.

**IT COULD BE THE £100
DECK YOU'RE LOOKING FOR.**



*Without cartridge

YAMAHA - MUSIC YOU CAN MAKE YOURSELF



Yamaha releases The Musician in all of us. The unique "ABC" easy-play system allows a complete novice to play in just a few hours.

Advanced players are well aware of the Yamaha "Tone Lever" precision method of voice selection and blending. See a Yamaha organ today. There's a Gold Star dealer in your area.

KEMBLE YAMAHA. Mount Avenue, Bletchley, Milton Keynes
Tel: 0908 71771