

RER

DOMESTIC APPLIANCES

LIGHTING

RADIO-TV-AUDIO

● DOMESTIC ELECTRIC COOKERS AND COOKER HOODS

THE LEADING TRADE MONTHLY

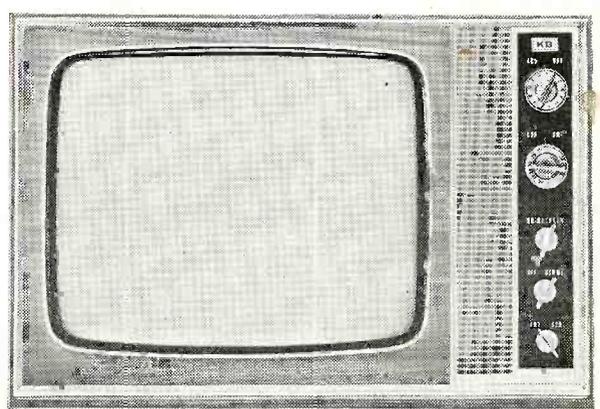
20



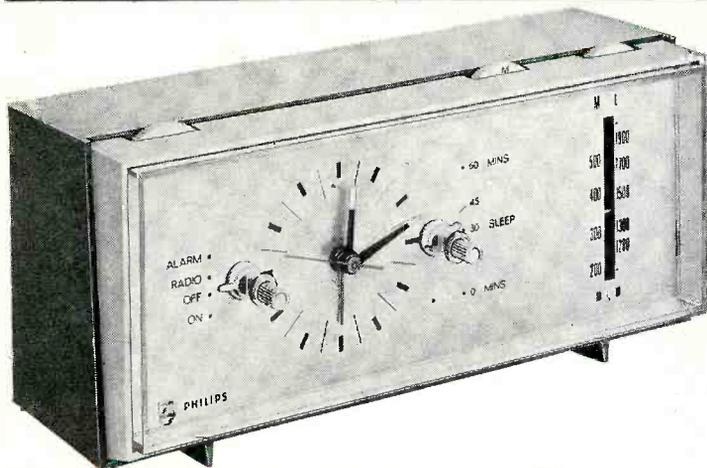
First 20" tv in Britain. Flatter, better looking picture. Straighter sides, squared corners. Hand-wired reliability.

KB squared screen tv

KB



Sensationally successful Philips Clock Radios go nation-wide!



Order now to ensure supplies

MODEL RS261. A superb all-transistor mains radio and electric clock. Receives long and medium wavebands. Lulls you to sleep and switches itself off. Wakes you to music, and nine minutes later gives you a call—buzzing until you switch it off. Can be automatically set to switch on any programme. Beautifully styled in pastel blue and ivory, it is ideal for bedroom, kitchen, all around the house. £17.17.6 (recommended price).

Massive TV advertising planned for Autumn

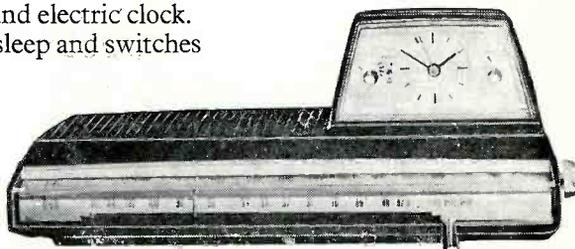


To maximise sales during the gift season, we will advertise heavily on TV in the Autumn and pre-Christmas.

Ref. Ad. No. 445

From now on, the whole Trade can share the profit from Philips Clock Radios—the ones that caught the public's eye when launched in London last October.

Dealers in the launch area will agree our two clock radios are a tremendous success. Excellent product design, realistic pricing and aggressive promotion have paid off.



MODEL RS274. Dramatically styled in black or ivory. It also has a VHF waveband for interference-free listening to BBC national and local programmes, and an extra long scale for easy tuning. £36.16.9 (recommended price).

PHILIPS

Century House, Shaftesbury Ave., London WC2.

The Thermair heat-n-lite range is value STOCK IT AND SEE

Thermair Heat-n-Lite range De luxe

Beautiful styling and maximum heat spread from the 750W infra-red element. Two pull cords for separate light and heat control. B.E.A.B. approved. Suggested retail price £8.18.3 inc. tax.



Standard

750W infra red heating spread by polished aluminium reflector. Light operates from normal wall switch, pull cord for heat. Suggested retail price £7.17.3 inc. tax.



Compact

Especially suited to rooms where space is at a premium. It has a 750W infra red element and anodised aluminium reflector and there are separate pull cords for light and heat. Suggested retail price £6.16.3



Fan assisted

This heater incorporates a low velocity fan heater which circulates warm air throughout the room. Pre-set at 750W can be adjusted to 950 or 1120. Suggested retail price £10.10.0

Every year the demand grows larger for Thermair Heat-n-Lite units because they provide such a safe and logical form of main or auxiliary heating in small rooms, from the only surface not in use—the ceiling. Thermair are the major manufacturers of heat-n-lite units and their years of experience makes their products a byword for good design, manufacture and value. That's what counts, Thermair value, that's what we shall be telling your customers about in national advertising this autumn and that's what they will be looking for—Thermair value.

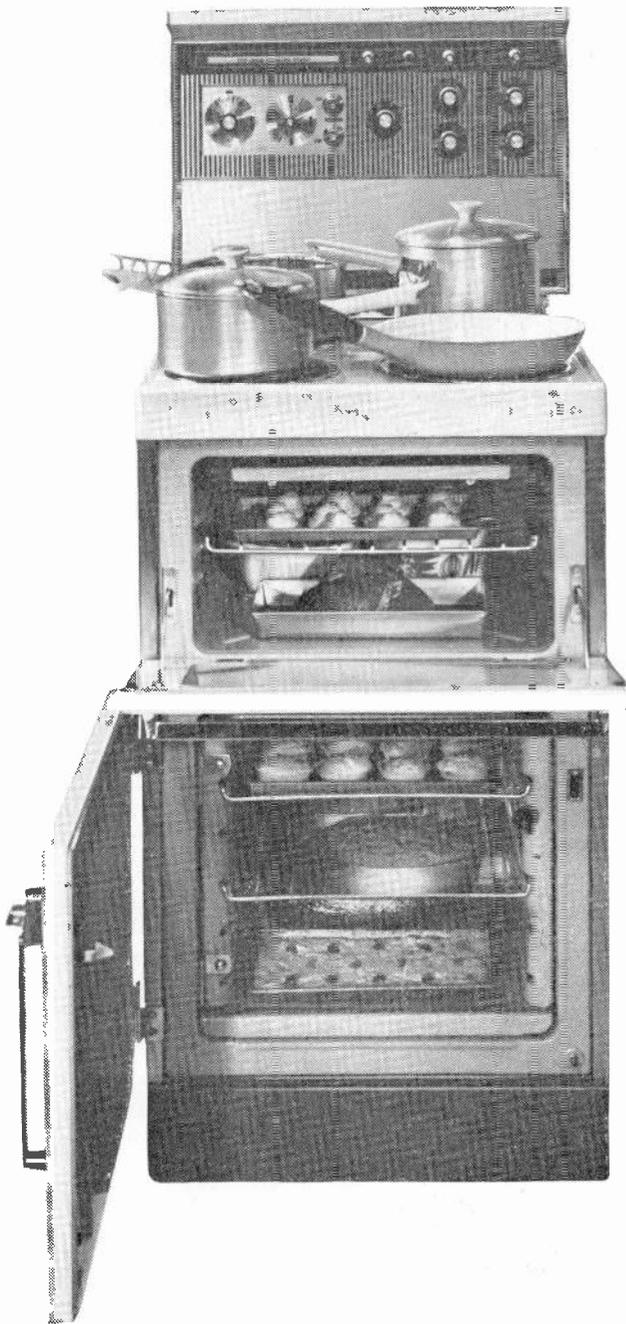
Stock it and see

Thermair

Thermair

Thermair Domestic Appliances Ltd., Burnley, Lancs. Tel. OBU2-27241
Member of the Electrical Division of Burco Dean Ltd.

Every family needs 3 cookers. Here it is.



The English Electric double oven cooker is really three cookers in one.

Small oven on top.

Large oven underneath. Or use them both together.

And that says flexibility and economy in capital letters to your customers. But that's not all.

You've got the added assurance of dependable quality and proven design working for you. Backed up by a powerful advertising campaign that's already under way in the leading Sunday newspapers.

So right now's the time to stock up. For faster turnover. Faster profit.

The demand for Rapide double oven cookers is higher now than it's ever been.

ENGLISH ELECTRIC 

RER

RADIO & ELECTRICAL RETAILING

Vol. XXIII

No. 7

Editor: REGINALD E. B. HICKMAN
Adv. Manager: ROBERT C. CORNWALL

Editorial and Advertising Offices:
46-47 CHANCERY LANE
LONDON, W.C.2

Telephone: 01-242 1411

IN THIS ISSUE:

	page
Recent Releases	259
R & A Reply to <i>Which</i>	263
ECA Conference Report	264
Counter Talk	266
Preparing for Decimal Currency	268
Photo Tour Mullard Factory	270
Literature Received	271
Grimthorpe's People	272
Is Record Racking for You?	273
To Help Your Sales	279
Cooker Trends in 1968	281
Survey of Domestic Electric Cookers	283
Survey of Cooker Hoods	286
Have You Heard About	289
Croxley's Column	292
Index to Advertisers	296

NEXT MONTH:

Survey of Electric Blankets and Bedwarmers
Pre-view of London Trade Shows

Radio and Electrical Retailing is published on or about the first of each month. It reaches Radio, Television and Electrical Retailers, Installation Contractors, Music Shops, Electricity Boards, Service Managers and Engineers, Wholesalers and Manufacturers. Subscribers to *R.E.R.* also receive the supplement *Service Engineer* including 3 Data Sheets.

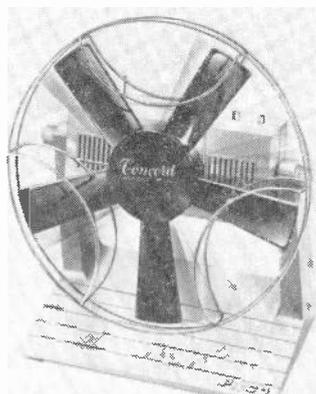


© FOUNTAIN PRESS LTD., 1968

RECENT RELEASES



AEG have introduced a new front loading fully automatic dishwasher, the Favorit, which can be built into the kitchen or supplied as a separate unit with working top. It has 5 wash programmes, and can wash up to 12 place settings. A water softening unit is a standard feature. Measuring 33½in high x 23¾in wide x 23¾in deep without working top. Price £206 5s. 3d. **E340**



PIFCO's new Concorde model 1083 2-speed electric fan can be used on a table top or can be wall mounted. In pastel grey with 8½in diameter maroon blades, it measures overall 10½ x 9¼ x 5in. Price £4 19s. 6d. **E341**

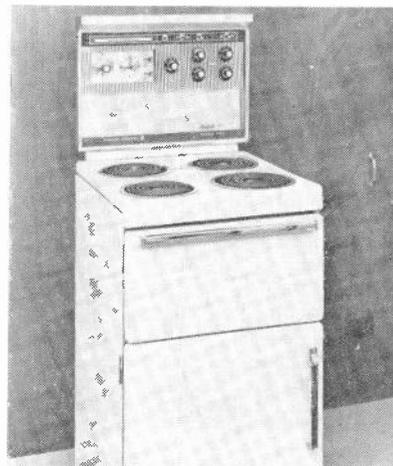
Five new electric cookers are announced by ENGLISH ELECTRIC. The Rapide 56 model 2015 and 57 model 2016 incorporate the newly introduced 8in superfast 3kW 2-in-1 hotplate and both are double-oven automatic cookers. Priced at £72 10s.

and £74 11s. respectively, they replace the Rapide 47 and 48 cookers.

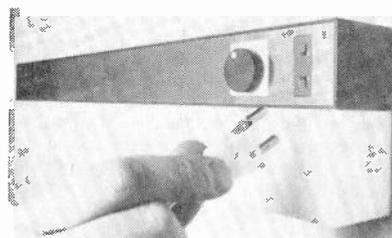
The Rapide 52, model 2012 and the Rapide 53 model 2013 replace the Rapide 38 and 39 and have new fascia panel design and controls. Prices £50 7s. and £58 2s. respectively.

The Rapide 54A model 2014 will replace the 54 introduced in January of this year. It will feature the more powerful 7in 2.2kW hotplate with 2-in-1 control.

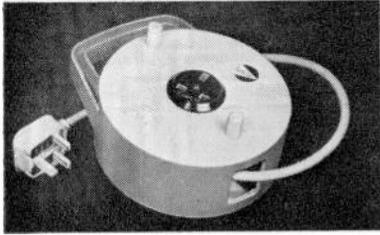
Price £63 14s. All models are ▼ BEAB approved. **E342**



The ATLAS 'Viewpoint' is a fluorescent mirror and bed-head light with built-in shaver socket. It has a brushed silver fascia, white opal diffuser and slate-grey moulded case and a miniature 15W warm-white fluorescent tube is used. The fitting measures 18½in long and is available in two versions—for bathrooms, to comply with IEE regulations, and for bedrooms or other locations. The bathroom fitting has a pull-switch and is fitted with dual-voltage control (115 or 230V a.c.) for the shaver socket. Quick-start control gear is used in the bathroom fitting and the recommended price is £10 14s.; the other version is priced at ▼ £7 15s. 6d. **E343**



RECENT RELEASES



The new **LOBLITE** cable reel, List No. ▲ 3800, is made from high-impact plastic and fitted with a 13A shuttered socket outlet. The 30ft of 13A 3-core cable is complete with an unbreakable moulded-on 13A fused plug and spare fuse. Price £4 9s. 6d. **E344**

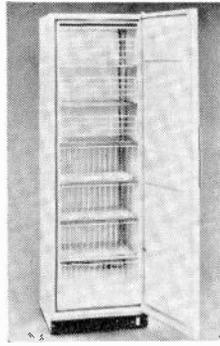


KB have entered the refrigerator ▲ market with two Italian made models—the 5cu ft 1120 at 41gn and the 7cu ft R720 at 59½gn. Both are slimline models and have full width, two star frozen food storage compartments, and push-button defrost. Both are BEAB approved.

The model 1120 (above), is 17½in wide x 33½in high x 23½in deep, and has a white acrylic resin lacquered aluminium inner wall liner which will not rust. The cabinet is of a Formica type melamine laminate which is claimed to be very damage-resistant. A melamine table top is fitted. The model R720 is 19½in wide x 48in high x 23½in deep, with white porcelain enamel inner liner.

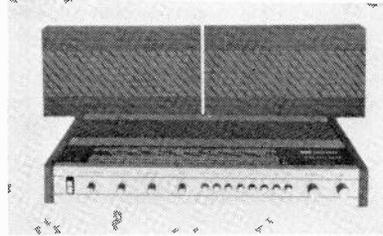
Servicing for both these refrigerators will be undertaken by Total Refrigeration Ltd. who have a nation-wide service coverage. **E345**

The **GRUNDIG** 208 portable radio covers l.w., m.w. and v.h.f. and has a r.f. stage for v.h.f./f.m. reception. There is a built-in ferrite aerial for medium and long wavebands and a telescopic aerial for v.h.f. Finished in black grained leather with silver trim and satin-silver sunstar loudspeaker grille, it is priced at 19gn. **E346**



The new **UPO** model 14F 14cu ft ▲ vertical freezer requires less than 4sq ft of floor space, and is 5ft 11in high. The exterior is stove-enamelled sheet steel and the interior double galvanized sheet steel, stove enamelled in white. Each shelf is refrigerated, the top three having plastic coated hinged grids and the lower four with plastic coated baskets suspended on runners. Right hand and left hand versions are available and the price is £132 10s.

A matching combination refrigerator/cooler, model 14 RC (41252/3) at a cost of 135gn and a combination refrigerator/deep freezer, model 14 RF (41250/1) at 159gn are available, with similar dimensions to the 14 F. **E347**



At the RTRA Conference **KB** demonstrated a range of equipment from Schaub-Lorenz.

The Stereo 4000 a.m./f.m. tuner amplifier (above) uses 29 transistors and 17 diodes. Frequency response is 40 to 17,000c/s. Radio coverage is l.w., m.w., s.w. and v.h.f. It incorporates multiplex v.h.f./f.m., stereo beacon, precision tuning indicator and sockets for diode take off, tape and disc playback, and external speakers.

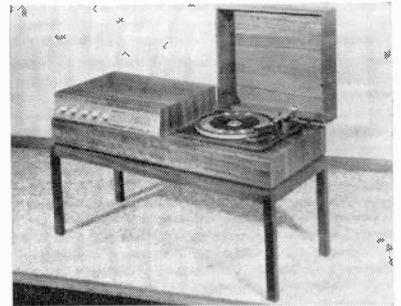
The Weekend Universal portable 9-transistor radio covers l.w., m.w., s.w. and v.h.f., with bandspread on 41 and 49M. Telescopic aerial for v.h.f. and s.w. and ferrite rod for l.w. and m.w. Sockets for earphone, diode connection, external car aerial, mains adaptor and for connecting power supply. The cabinet is of moulded plastic covered in leathercloth. It uses 4 x U2 batteries or 6 or 12V external supply.

The Touring Europa portable 10-transistor radio covers l.w., m.w., s.w. and f.m. and incorporates telescopic whip for v.h.f./f.m., ferrite rod for m.w. and l.w. and internal loop for s.w. The cabinet is in moulded plastic covered in leathercloth with chromium trim. Sockets for tape recorder take-off and record player,

car aerial, earphone or external speaker and for connecting external power supply. It uses 5 x U2 batteries, or 6 or 12V external battery.

The Intercontinental 17-transistor portable covers l.w., m.w., 5 s.w. bands and v.h.f., and has 2W output. Sockets for external aerials, earth connection, earphone, external power, diode take-off and car aerial. There is ferrite rod for m.w. and l.w., separate ferrite rod for s.w.1 and telescopic two section whip for f.m. and s.w.2-5. The cabinet is in chipboard covered in leathercloth. It uses 6 x U2 batteries or 6 or 12V external d.c. supply.

The Schaub-Lorenz speaker enclosure STL201 is an infinite baffle sealed pressure unit employing 2 x 5in high flux speakers with a frequency range of 50 to 14,000c/s and 25W peak output. Measuring 21½ x 11½ x 3½in. Prices available from KB. **E348**



Added to the **FERGUSON** range of ▲ Unit Audio equipment are Unit 3400 stereo f.m. radio and record player in a lowboy cabinet, and Unit 3402, a loud-speaker unit.

Unit 3400 (above) comprises a stereo f.m. radio integrated with a stereo amplifier and record playing deck. The tuner has five selector buttons pre-set for v.h.f. stations. A sixth control provides a.f.c. There is a decoder fitted. Finished in teak veneer, the price is £87 9s.

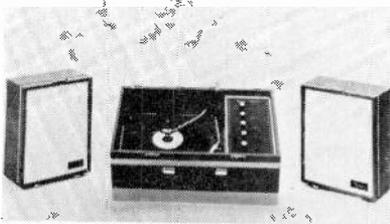
Unit 3402 loudspeaker, suitable for use with the 3400, has a frequency response extending from 40Hz to 15kHz. It has an 8in diameter bass unit with high compliance cone suspension and a 2in h.f. pressure unit with a wide radiation angle to minimise directional effects. Price £19 2s. **E349**



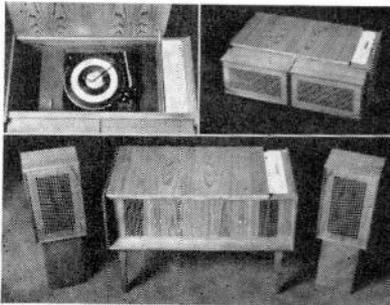
HIGHGATE ACOUSTICS preview- ▲ ed their new Hi Fi Automatic/Manual Turntable, the PE 2020, at the recent Audio Fair. It can track every record at the recommended 15° vertical stylus tracking

RECENT RELEASES

angle during manual and automatic play, by means of an exclusive control in the cartridge shell. The shell permits insertion of any cartridge into a new slide mounting, and the cartridge cannot be inserted improperly. Turntable less cartridge costs 49gn; turntable with Goldring G800, 56gn; turntable on base with cover less cartridge, 59gn; turntable on base with cover with Goldring G800, 66gn. **E350**



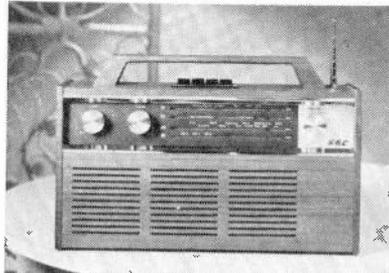
The new **RADON** Celtic portable stereophonic record player consists of three separate units—the main cabinet which houses the player deck and amplifier, and two loudspeaker units in totally enclosed cabinets provided with a carrying handle. The player deck is a Garrard precision unit with four speed auto-change and stereo cartridge. Power output 5-6W per channel. Price £74. **E351**



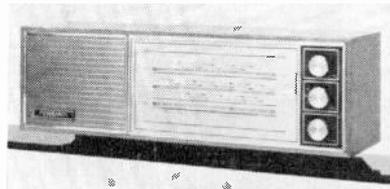
The new **GEC** model G.987 Stereo-matic fully transistorised stereophonic record player incorporates a 4-speed turntable unit for manual or automatic use, and features a diamond stylus ceramic cartridge mounted in a low mass tubular arm with cue and pause lever. Power output is 7W into separate removable acoustic enclosures each fitted with a two loudspeaker system. Price 75gn. **E352**

The new Wien model 55 stereo radiogram introduced by **H. O. THOMAS** at the Audio Fair has a Garrard 2025 TC auto-changer with Acos GP93/1 cartridge, fully transistorised stereo tuner/amplifier of new design and two compact speakers. Power output is 5W per channel. Fitted together, it measures 17 x 15 x 8in. Price 68gn. **E353**

The **GEC** 837 a.m./f.m. portable 10-transistor radio covers l.w., m.w., band-spread and v.h.f. wavebands. A 4-stage audio amplifier delivers 800mW into a 6 x 4in loudspeaker. In an all wood cabinet, with black padded leathercloth back, it is priced at 28gn. **E354**

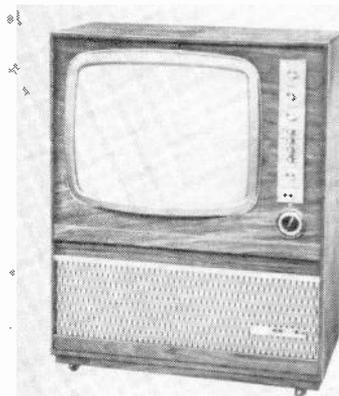


From **FERRANTI** come two new models. The 23in model T1173 television receiver costs £89 16s. and has a cabinet satin finished in Canaletto veneers with silver



trim. The set is fitted with printed circuit silicon transistorised push-button multi-band tuning.

Model 5701 mains table radio (above), at £28 10s., is equipped for l.w., m.w. and v.h.f. reception and is fitted with a 4in forward facing speaker. Finish is teak veneer with silver coloured grille and black and silver scale. **E355**



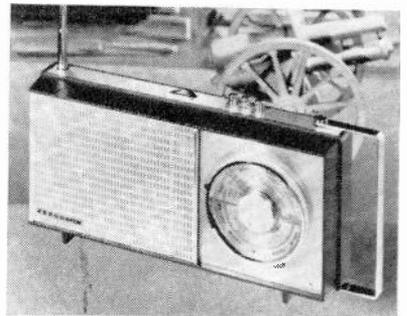
From **BAIRD**, the first 19in console colour television set, at 250gn, includes three new features—colour values stabilised by special circuitry; automatic frequency control on u.h.f. tuner; use of beam limiting circuit. The model 708 is in French walnut veneer with melamine satin finish and has been specially designed so that all parts are easily accessible to the service man. **E356**

BRC have extended the **FERGUSON** range to include a further five models.

Two 23in television receivers, the model 3654 in melamine laminate with straight-grained walnut effect at £82 8s. and the de-luxe model 3655 in all wood cabinet veneered in American walnut, with new full-view tube presentation, at £84 14s.

Model 3026 de-luxe transistorised record player with 5W output, has a BSR UA65 record changer with C1 ceramic stereo cartridge and diamond and sapphire styli. Price £35 12s. There is a matching amplifier and loudspeaker, model 3401, with an output of 5W through a 6 x 4in loudspeaker, at £15 10s.

Model 3238 3-speed, 4-track tape recorder takes spools up to 7in and comes in a black leathercloth cabinet with teak speaker grill. Price £58 11s.

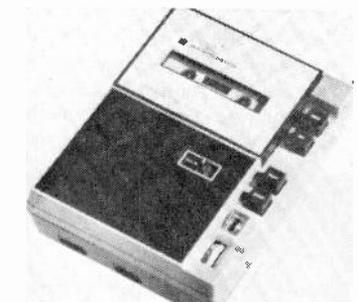


Model 3164 portable radio (above) covers l.w., m.w. and s.w., has push-button waveband selection and a 7-section telescopic aerial for shortwave. Price £10 9s. **E357**

Three new Standard models from **DENHAM & MORLEY**. The model SRK 466F Micronic Ruby is claimed to be the smallest a.m./f.m. radio in the world and can be used with the new local stations. It has a telescopic f.m. aerial and sells at 23gn.

The SR 107 capstan driven tape recorder uses the standard Philips type cassette and is powered by four U2 batteries with provision for use with mains converter. Price 27gn.

The SR 101 cassette tape recorder also uses a Philips type cassette and runs on four U2 batteries. It has an output of 600mW, uses 7 transistors and has a 2½in loudspeaker. Complete with leather case, it is priced at 38gn. **E358**



LABGEAR PATTERN GENERATOR

SIMPLIFIES COLOUR RECEIVER INSTALLATION

Specially designed for
the P.A.L. system

**TRANSISTORISED—
BATTERY OPERATED—
PORTABLE**

No hum—No valves—No
warm up. Just rock-steady
patterns for ultra quick
convergence adjustment.
A 'must' for colour.

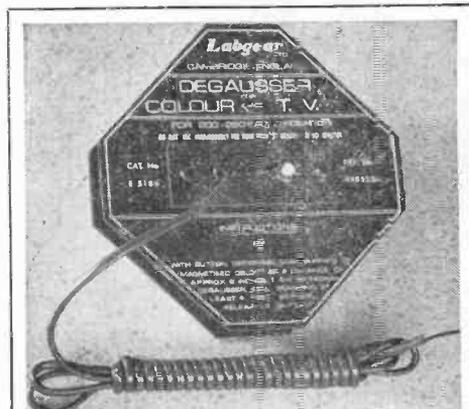


Patent applied for

- 4 Patterns: cross-hatch; dots; grey scale; blank raster.
- For 625 and 405 line systems.
- Compensation for mains frequency variation to receiver.
- Covers VHF Channels 6-13, UHF Channels 21-68.
- Size $10\frac{1}{2}$ ins. x $8\frac{3}{4}$ ins. x $6\frac{1}{8}$ ins. Weight 9 lbs. (including batteries and co-axial leads). Uses six HP2 batteries.
- Mains operated power unit available as optional extra.
- Width of vertical lines adjustable from front panel control.

All items available for immediate delivery.

Obtainable from the sole manufacturers Labgear Ltd. of Cambridge, or from Combined Electronic Services Ltd., Gloucester Street, Cambridge and leading wholesalers.



The Labgear Degausser—Prior to the adjustment of colour television receivers, surrounding metal objects should be de-magnetized and the LABGEAR DEGAUSSER Type E.5186 is recommended for this purpose.

Nett price £4.4.0

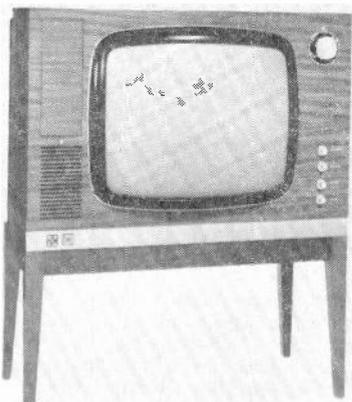


Labgear

LABGEAR LIMITED
CROMWELL RD • CAMBRIDGE • ENGLAND
Telephone: 47301 (4 lines) STD OCA3
Telex: 81105 LAB.
Telegrams: Labgear • Cambridge

RECENT RELEASES

A further development in the **SHARP** model RD-504 has lead to the release of model RD-505 tape recorder. The refinements of a turn counter and either manual or automatic level recording by switch selection have been added. A further addition has been the provision of a fully variable tone control incorporating a monitor switch. Price £39 18s. **E359**



PYE have introduced their first 19in ▲ colour television, the model CT71, at £282. The basic chassis is the same as Pye's 25in model, the cabinet being finished with afrormosia veneers with silver coloured controls and trim. A stand is available at £5. **E360**

PHILIPS claim that their new cassette car radio, the world's first, is destined to play a big part in car entertainment equipment. The cassette player and a 2-band radio are mounted in one unit measuring 7 x 1 3/4 x 5 1/2 in, which can be fitted into most British or European cars. A special offer enables every purchaser of the unit to buy a Philips Musicassette car collection of five cassettes for only £4 10s. including a rack for storage in the car. The price of the RN582 car radio is 38gn. **E370**

EUROPA ELECTRONICS have introduced the Korting Cassette Super 69, a transistorised mains radio complete with cassette recorder, which they claim to be the first of its type to be marketed in this country. The radio covers l.w., m.w., s.w. and f.m. The audio output on radio or tape is 2.5W into a 3 1/2 x 6in speaker. Price of the Super 69 is 79gn. **E371**

For further details about products mentioned on these pages use the prepaid enquiry form on page 296 quoting reference number.

IN BRIEF

RADON announce a reduction in the price of the Radon 404 from £60 to £56 14s. **E361**

TELETON have reduced the price of their TF911 a.m./f.m. 9 - transistor portable radio from £9 14s. 10d. to £8 4s. 1d. **E362**

MORPHY RICHARDS have reduced the Shannon Radiant Convector with teak surround, Cat. No. WSR/30 from £24 8s. 6d. to £20 14s. 1d. **E363**

The **BURCO** Tumbler drier drum has been redesigned to give a better flow of air and thus improve the drying performance. The flush-fitting counter-balanced door now has a smooth clean-cut frontage and the working top a teak-grain melamine finish. **E364**

HEATSTORE's HR storage radiators have been reduced to the following prices: HR1—magnolia/mid-brown, £21 17s. 6d.; magnolia/teak or chocolate/teak, £23. HR2—magnolia/mid-brown, £25 2s. 6d.; magnolia/teak or chocolate/teak, £26 5s. HR3—magnolia/mid-brown, £28 13s; magnolia teak or chocolate/teak, £29 19s. 6d. **E365**

THORN-AEI showed new Mazda picture tubes at the IEA exhibition. The 20in monochrome tube CME2013(A50-120W) is the first 20in 'squared-up' tube to be made in Britain. It is rated at 20kV, has a scanning angle of 110°. It is a Rimguard III self-protected tube. CME2013 will be made with either Sparkguard S or Sparkguard R B8H bases. CME2013 is at present only available to setmakers. It will be released for maintenance shortly.

There is also a 17in 'squared-up' version of the 16in CME1602, with Rimguard III and ratings as CME2013. **E366**

SGS-FAIRCHILD have introduced two 60V multi-purpose n-p-n transistors. Designated BFW66 and BFW71, the new devices are epitaxial transistors with ambient rating of 0.5W (TO-18) or 0.8W (TO-39). Further details from the manufacturer. **E367**

PETO-SCOTT introduced a new range of Philips closed circuit television equipment in association with PYE TVT at the International Industrial Training Exhibition at Eastbourne. The new range features a mini compact cameras, a multi purpose camera chain, a video recorder, two television monitors and a receiver/monitor. **E368**

The new **ROWEN** range of Slimline thermal storage heaters includes 1 1/4, 2 1/2 and 3kW models, all BEAB approved. The 1 1/4kW model is a tall narrow model, and was shown at the 1968 EDA exhibition. Prices from the manufacturer. **E369**

RADIO & ALLIED REPLY TO WHICH

To the Editor 'RER'

Dear Sir,

You are certainly aware that the magazine *Which* has criticised many aspects of colour television receivers produced by the industry.

It would be wrong if the industry was hostile to all objective criticism of its products, for the single reason that objective and impartial criticism, in the long run, benefits not only the prospective buyer but the industry itself.

What I find disturbing about some of the criticism which the magazine gives is that it sets itself arbitrary standards, for example, of temperature rise, and then draws the conclusion that some sets are more reliable than others accordingly.

In our case, *Which* concluded that our 19in receiver is allegedly less reliable because the temperature rise is higher. I do not know where the temperature was taken as this was not defined, although the difference amounted to only 7°C.

Even if this were so, the set in question was our small 19in version, which necessarily has a smaller volume than the 25in receivers against which it was compared. One would expect that, everything being equal, a proportionate temperature rise must follow. Nevertheless, we took great care to design in such a way that temperature sensitive components were well away from heat generating components, and this particularly applies to tuners, i.f. stages, decoders and convergence panels, so that the maximum temperature taken above heat generating components has little sense.

Surely engineers who undertake this type of work must be aware of these facts and therefore could not reach such conclusions unless they are less than partial.

Yours sincerely,
for RADIO & ALLIED
INDUSTRIES LTD.

(signed) K. Vesely
Technical Director.



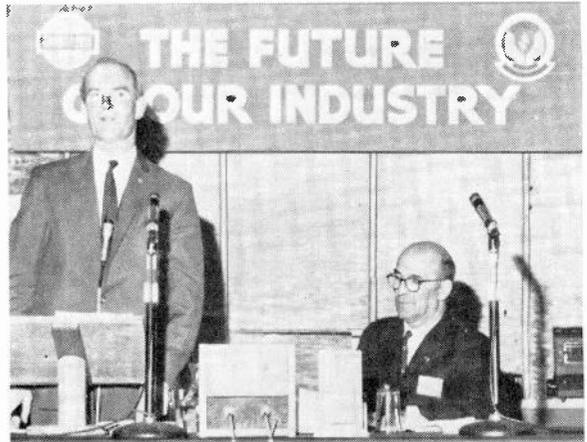
ECA CONFERENCE

TORQUAY—MAY 19-21



David Pitts, 'one of the younger generation', addresses the Conference. See report below. Chairman is R. A. Joseph.

THE FUTURE IN YOUNGER HANDS



THE ELECTRICAL CONTRACTORS' ASSOCIATION is well aware of the rapid developments which are likely to take place in the remainder of this century, and in consequence is endeavouring to involve a much younger Technical Committee, whose ideas (which may well be thought revolutionary) could lead to the initiation of research and development from within the industry.

So declared David Pitts, a member of the ECA Council in a provocative, but well received, address to delegates at the Annual Conference of the Electrical Association recently held in Torquay.

It is vital, said Mr Pitts, if the ECA is to command respect and authority in technical matters in the same way as it now does on commercial and contracting matters that there should be liaison at an early stage with all the other sections of the industry. Only in this manner can the Association remain an effective force.

A Technical Officer is to be appointed shortly. His objective will be to develop research and to promote the quicker implementation of site techniques, as well as keeping members informed of the latest developments available.

Trends

Looking forward to future trends and possibilities, Mr Pitts hoped that the forthcoming introduction of the use in the UK of the metric system would also bring with it more modular standardisation.

He saw the present trend of mergers resulting in fewer manufacturers who would offer standardised equipment, with a greater emphasis on integrated engineering services.

Taking a broad swipe at the supply industry's preoccupation with storage

heating, he pointed out that of all the many things that can be done by electricity, storing it was just about the most difficult. The use of separate circuits for different tariffs is unsatisfactory, he said. Would it not be better to subsidise the heating load, at least for an initial period, so as to get over the thorny problem of the cost of heating by electricity.

On the question of manpower in the industry, Mr Pitts foresaw an increasing number of professional electrical engineers, managers and marketing men entering contracting, and an increase of contracting interest within the IEE.

Future Objectives

The main prerequisite for the commercial endeavours of ECA must be to achieve a considerable reduction in unit labour cost.

The electrical contractor is subject to many outside influences which introduce delays. Delays tend either to compress his programme and increase premium time working or to prolong the work to the detriment of future plans. Either way there is additional unnecessary expense.

Should we not, asked Mr Pitts, bring pressure to bear on clients and architects to make them realise the economic desirability of deciding exactly what is required for a particular project before committing themselves to paper, and then allowing no deviation until the work is completed. The result would be better organisation and pre-planning and a more economic installation.

Earlier consultation could also influence the client to adopt new ideas and techniques which make for better working and installation, and in consequence, a greater profit for the contractor.

The introduction of the ECA Management Courses is helping to correct the dearth of middle management. An extension of these methods down to operator training is vitally necessary.

A useful help in minimising costs can come from the use of pre-fabricated installation components made in the contractor's own workshop. The use of conservative, though well established, methods of installation, merely for the sake of using them, should be avoided, and every job should be looked at objectively to decide on the most economical way of carrying it out.

Increasing Turnover

Criticising the industry for not being sufficiently self-analytical, Mr Pitts pointed out how the expectancy of life of buildings had shrunk over the years, and asked, are we providing installations which have a life well in excess of building requirements.

The average turnover per operative in the contracting industry was about £2,800 per annum. To keep pace with the estimated rising demand for electrical services this must be increased by a factor of three times before the turn of the century. This can only be done by the development and adoption of new techniques, both technical and managerial.

Electrical contractors have a responsibility, not only to their own companies, but also to the industry as a whole. To live up to this responsibility they must be effective in their work, they must influence their clients, and perhaps most

ECA CONFERENCE *continued*

important they must specialise, with a move towards larger groups offering comprehensive services. Unless all these things are done there is a very real danger of installation and maintenance work leaving the recognised electrical contractor in favour of other outlets.

NEW LOOK TENDERING

W. L. WILSON, chief mechanical and electrical engineer, Ministry of Public Works and Buildings, speaking at the first session of the ECA Conference suggested that the whole of the building process stood in need of review.

There was need, he said, for a new analysis of need, optimisation of dimensions, mass and shape, adjustment to meet internal and external environmental requirements, followed by detailed design and construction.

A logical outcome of such a process would mean more widespread responsibilities for main and sub-contractors, as well as a rethinking of professional roles.

Mr Wilson thought that the building

The Mayor-Elect of the County Borough of Torbay, Ald. A. L. Goodrich, opens the Conference, supported by the outgoing and the incoming Presidents.



process was lagging behind technological development and that there is scope for taking greater advantage of the skills and expertise of contractors of all kinds.

The present line of responsibility he thought to be too long and cumbersome. The same could also be said of the tendering process.

He suggested that on large projects, mechanical and electrical services should be undertaken by one sub-contractor, and tenders for building and mechanical and electrical engineering work should be issued together. It was interesting to hear this view from one who might be described as a professional in the field later endorsed in similar terms by a practising contractor.

Contractors, said Mr Wilson, should be allowed to tender not only against the specified time, but also against a time scale which suited their own particular resources. This would enable clients to weigh up economic considerations against other aspects of the job.

Again foreshadowing what Mr Pitts was going to say, Mr Wilson emphasised that it is vital for the future progress of the contracting industry that innovations should be encouraged, that the function and importance of contract managers and site supervisors should be recognised along with the need to attract and train the right kind of recruits.

Whilst many of the suggestions made by Mr Wilson might be thought to be

**WHY ARE SO MANY
TURNING TO ALBA?**

When you have built a business on a product which gives good performance, tasteful design and excellent value, the word gets around. And do not forget that 1968 is, for Alba, "50+1". A wonderful record!

Now Alba are introducing the first of their new 1968 series. These models are built to the same high standards and offer the same fine value.

START TURNING OVER NOW! ►

ALBA Sounds as good as it looks!

ECA CONFERENCE *continued*

more applicable to the larger firms, he recognised the virtues of the smaller firms as being their flexibility, response and economy, and indeed thought that many large firms might well benefit if they could organise themselves in such a way as to promote the same kind of service.

THE CHALLENGE OF TRAINING

THE FUNDAMENTAL OBJECTIVE of any training scheme is to enable an individual to learn quickly, easily and surely in order to be competent, confident and continuous in his performance.

This definition was put forward by S. R. Witkowski, development manager of the Construction Industry Training Board, speaking at the ECA Conference.

The Industrial Training Act and the setting up of the various Training Boards has focused attention on training and education to such an extent that one could mistakenly get the impression that a new technique had been discovered which is going to solve all problems.

This of course is not so, said Mr Witkowski. There is a lot of skill available at the present time and training has been going on for many years past.

ECA for instance established craft apprenticeship courses as long ago as the early 1920s.

The new philosophy is of systematic training, which is the only way of ensuring a better way of doing things. Training for its own sake is of little value. To determine if a training activity has succeeded we must evaluate whether the trainee can do what is required of him in a job situation and whether he does the job to the required standard.

The idea of training at any cost cannot be supported today. We have passed the age of skill as a manual operation and entered the era of techniques. To try to transmit skills which are difficult to acquire or seldom used is wasteful. If something is too difficult to learn we should not waste time or money trying to do it.

SYSTEMATIC TRAINING

Systematic training aims at producing trainees who can be increasingly productive throughout their training period. It involves short block release courses taken at technical colleges or training centres for practical, theoretical and further education elements, interspersed with planned on-the-job training with the employer.

As a direct result of the efforts of the ECA the CITB has started a national project concerned with the Career Pattern in the electrical services sector of the construction industry. The results of the survey should be useful in preparing recommendations for the training of technicians and technologists, as well as improvements to the operatives training scheme.

Although the existing Grant Scheme has provision for grant aiding management and supervisory development, the CITB felt that additional incentives should be given to encourage the initiation of any development activities covering all grades of management and supervision. They are therefore offering an additional grant for this purpose payable for up to three years.

In a programme for the next twelve months the Board has arranged a 6-day residential course for principals, and a 5-day course for travelling supervisors of small firms.

The commercial and clerical fields are not being overlooked, and training schemes for the various levels are being prepared.

Finally, said Mr Witkowski, the Board's staff is always willing to discuss any matters concerning levies or grants, training, recruitment or selection, and in fact to help in every way possible. This they believe to be the best way to discover the requirements of the industry and to benefit from the experience of contractors.

A YEAR EARLY

THE PRESIDENT of the Electrical Contractors Association for 1968-9 found himself in the seat of honour one year before he expected to be there.

As he explained in his inaugural address, the president elect, Mr V. Ferens was prevented from assuming the office due to continued ill health.

The new president is J. P. Inglis, director, Drake and Scull Engineering of London, who has been in the Association for 30 years and a vice-president since 1966.

Newly elected as vice-president was A. J. K. Parker, chairman and managing director of F. H. Wheeler of Morden, Surrey. M. E. Broadbent, chairman and managing director of T. W. Broadbent of Huddersfield, was re-elected vice-president for a further year.

Mentioning that one of the problems, albeit one of the minor ones, in the task of amalgamating the three associations (ECA, NECTA and NFEA) was to find a suitable title for the combined association. Mr Inglis said that one which had been suggested was the Electrical Installation Engineers Association (EIEA), Alternative suggestions from members would be welcomed.



HAND CONVICTED

The news that Rank Bush Murphy are farming out some of their sub-assembly work on colour sets to H.M. Prisons represents a major triumph on somebody's part in tact, diplomacy, cutting of red tape, and handling of Trade Unions. The situation, however, gives rise to speculation when one lets one's imagination run riot. Somebody must exercise a tight control over the passage of the stuff, if only to prevent printed panels from being filed to the shape of

door keys, or wire and sundries being adapted to receive messages from outside.

The days of prisoners being sent pies with files in them may be past, but the principle remains the same. There must lurk in every prisoner's mind a desire to escape. The nearest I ever got to knowing what it feels like was a short spell in hospital, not because it was a bad hospital but simply because they had all my clothes. There is something about being shut in a place that makes you frantic to get out. Therefore anything novel like a small assembly job on TV wiring looms must naturally attract potential escapees if only to see what the possibilities are. Half the battle, they tell me, is to get a message out, so at the risk of starting a fashion, I suggest that all of you who are R.B.M. dealers have a good look round for cryptic writings on the inside of your sets. You may get the message. If you don't it's up to R.B.M. to provide one. "Hand convicted" might be a useful expression on sales aids, and for the really elderly among you, what about "It's a wise bird that settles on a Scrub", as a bit of Christopher Stone breaking?

METRICATED

Just to get us used to decimal coinage when it comes the banks have issued a

number of New Tenpenny Pieces to take the place of our florins, and some New Fivepenny Pieces to feed in to the slot meters. Maybe you have handled some already.

Ekco have already started to give the weights and measures of their models in metric units as well as avoidupois. They still refer to their 63cm, 59cm, and 47cm models by the old fashioned 25in, 23in and 19in names even though the metric number has been printed on the tube label ever since cathode ray tubes were made. No doubt this very well meaning effort will be neutralised immediately they get inside our shops as we price them up in that nightmare of the sterling system—the guinea. Although I cannot wait to see the passing of this method of pricing (which should have gone out with the coin that bears its name) I agree with Ekco that it is high time we metricated not only our currency, but our weights and measures system as well. After all, there is a metric pound (half a kilo) which is slightly heavier than our pound; moreover a metre is slightly longer than our yard. If these two units were introduced at the same time as our new penny the Prices and Incomes Board would have no problems about us wicked shop keepers rounding off our prices to the nearest new halfpenny. If, for example, something now costs 1s 8d per pound or per yard (i.e. 20d per lb or yard) it would,

in metric terms, with the new currency be priced at 10 New Pence (ie 20 New Half Pence) per metric pound or metre, which of course is two bob's worth of our present money. So you pay a little more, and you get a little more.

My support of metrication started a few years ago on a visit to Holland when I defended our weights and measures system on the grounds that at least it showed that Napoleon never got as far as England. "All right", they said, "If you are so proud of your system, tell us how many square poles make a rod." At that instant I was converted.

FLOATING CITY

Isolated as we are here, we can at least go out for business in all directions. This advantage was pointed out to me by friends on the East coast who say that to expand their trade they can only go West. To travel East, North or South, lands them in the North Sea. Published recently to brighten our hopes of an expanded hinterland, is a suggestion to create a holiday town 15 miles east of Great Yarmouth. Accord-

ing to the report it is quite a practical proposition, especially since the oil rigs have proved that life on stilts in this turbulent stretch of water can be possible. In summertime, of course, everything will be lovely, but come the equinoctial gales, and winter, things would be a bit different. This is where we get involved, for our trade keeps people happy under such conditions. Imagine the problems of TV servicing in the winter months. No longer could you just pop back for another PL36 if the one in your box was dud. No longer could you set up a colour receiver in the workshop and hope that it was reasonably all right when you got there. Dust, as a hazard, would give way to powdered salt, and there wouldn't be much of a market for vacuum cleaners—in fact speculation as to how to live in such conditions is endless. Still people do live on or by the water. Along the Rhine the water-borne shop is as common as the mobile ice cream man is here. So it may not be long before I am writing out a job sheet for a repair, "No BBC2 at high tide—ITA and BBC1 O.K. Nobody in after six bells".

by a Provincial Dealer



WHO BUT ALBA COULD OFFER SUCH FANTASTIC VALUE?



ALBA 4002 3-WAVEBAND STEREOGRAM

Gives you 3-band Radio . . . Stereophonic sound . . . and sells for 49½ gns!
 In brief, here are your selling points:
 * 3 waveband radio, Long, Medium and Short (16-55m.). * Dual speed tuning. * BSR Monarch 4-speed auto-changer. * 6 watts output from 2 amplifiers. * 2 matched 8 in. speakers * Bass/treble control.
 Attractive sideboard type cabinet in simulated teak finish with gilt trim is an eye catcher from the very first and includes record storage space. How this is going to sell!

*** NEW**

49½ gns. (Recommended price, tax paid)

ALBA

Sounds as good as it looks!

AND NEXT

Alba (Radio and Television) Ltd., Tabernacle Street, London E.C.2

PREPARING FOR DECIMAL CURRENCY

A. G. ADAMS, Executive Sales Manager, Gross Cash Registers Ltd. sets out some of the facts dealers will want to know about the impending changeover to Decimal Currency in the UK.

THE DECIMAL CURRENCY BILL became law in July, 1967. Monday, February 15th, 1971 is nominated as D Day, the day of the official changeover.

The pound (£) will stay unchanged, but will henceforth consist of 100 new pennies (100p), so that each new penny will be worth 2.4d.

The new coins so far designated are three in bronze ('copper'): $\frac{1}{2}$ p (=1.2d), 1p (=2.4d), 2p (=4.8d); and three in cupro-nickel ('silver'): 5p (=1s), 10p (=2s) and 50p (=10s). The 5p and 10p coins are already in circulation, and the 50p (which displaces the ten shilling note) will appear in October 1969. The other new coins will not be legal tender until D Day. The $\frac{1}{2}$ d will cease to be legal tender on August 1st 1969 and the halfcrown will be demonetised on 1st January 1970.

BANK CHANGEOVER

It is anticipated that Banks will change to decimal working simultaneously on February 15th, 1971, as will most Government departments. At the same time our income tax, social security benefits and deductions will also be decimalised. Banks will close on the previous Wednesday evening and spend the weekend clearing trading and converting all equipment and balances to decimal.

Wages for the week will have to be drawn on the Wednesday, and if required Banks will probably store the money in sealed bags for collection on Thursday or Friday. Deposits can be made through the Night Safe during the closed period.

When the Banks reopen on Monday they will no longer accept business in £sd. All transactions must then be in pounds and new pence. However it is anticipated that a second Decimal Currency Bill will make it legal for a depositor to change the figures on a cheque drawn prior to D day from £sd to £p. All old coinage will be banked in rounded up amounts and paid in as equivalent value in new pence. Banks will not recognise the new half-penny.

WRITING IT

D day will be followed by a transitional period during which trading will be carried on in both coinage systems. It is natural that many people will view with considerable suspicion new prices in the new currency. It is important

therefore that all new prices should be marked clearly and in the correct way.

The symbol for the new penny is p. £ remains for the pound. It is correct to put the letter p after the number of pence, e.g. 4p, and for the new half-penny to be expressed as a fraction, e.g. $4\frac{1}{2}$ p. It is equally correct to write £0.04 or £0.04 $\frac{1}{2}$. It is incorrect to use £ and p together, e.g. £1.45p is incorrect. During the transitional period, however, both signs will be used for amounts over £1 where the number of pence is less than 20, e.g. £1.15p will be used to avoid confusion with the old £1.15s.

When expressing new pence as a decimal of a pound it is necessary to use a nought before the decimal point to avoid confusion. E.G. £.15 is incorrect and could be mistaken for £15. It is also necessary to have the nought before the single pence when decimalised, £0.04 is correct, for 4p; £0.4 could be interpreted as meaning 40p.

To the dismay no doubt of many manufacturers the guinea will disappear as it will be incorrect to refer to a price in new pence over 99 $\frac{1}{2}$ p. The guinea will become £1.05, which does not look nearly so attractive!

To help shoppers before and during the changeover period it will be advisable to mark prices in both currencies and to display conversion tables prominently. In the decimal system there is no exact equivalent of any sum which is not a multiple of sixpence. An official conversion table, which, however, must not have the force of law behind it, rounds-up some amounts and rounds-down others to recommended decimal equivalents so as to produce no overall increase in the cost of living.

There are some snags in using this table. For instance 4d converts to 1 $\frac{1}{2}$ p, whilst 8d converts to 3 $\frac{1}{2}$ p, so that you should be able to buy two fourpenny Bounty bars cheaper than the double pack! Such anomalies will probably be overcome by changed packaging.

SAYING IT

We shall also have to get used to talking of money in a different way. It is not anticipated that the words new pence will be used in amounts of over £1. To say 45 new pence is correct. One pound, forty-five is correct, and it is unnecessary to say one pound, forty-five new pence.

During the transition period it will be necessary to say the words new pence in amounts over £1 where the number of new pence is less than twenty. E.G. one pound fifteen new pence is correct. One pound fifteen could be confused with one pound fifteen shillings.

This confusion will disappear after the end of the transition period.

MONEY HANDLING

All dealers should be giving consideration at the present time to the problems presented by their existing cash registers and other accounting machinery.

Any increase in errors which may be brought about by the use of incorrect machinery could turn profits into losses.

It is estimated that by 1971 there will be 750,000 cash registers in use. Some 250,000 new machines will be required to replace those which owners feel have served their useful life. To produce this number of machines in 1971 would be impossible, so that the load must be spread by forward planning.

The Government has decided that the costs of conversion must be borne by the user of the machine, a decision which aggravates the situation by making it appear wiser to wait until 1971 to buy a decimal machine, rather than to buy a £sd machine today and then pay to have it converted.

Manufacturers, however, are offering free conversions to overcome this hurdle. Since last year most manufacturers have been producing a machine designed to work for the present in £sd with easy conversion to decimal in 1971.

A Gross Ambassador Cash Register—left: before conversion and right: converted for decimal currency.



DECIMAL CURRENCY

Continued

Technically, all accounting machines are convertible, but the age of the particular unit should be taken into account, otherwise in certain cases the cost of the conversion could be more than the value of the machine.

Fourteen years was considered in Australia as being a reasonable economic life for a cash register, so on that basis all machines purchased prior to February 1958 should be considered as candidates for total replacement.

Pressdown machines have limited keyboard capacity, and if you are buying a new machine you should make sure that it has the keyboard capacity you will require. Button machines are considered the decimal machines of the future.

During the transition period a machine which issues a receipt listing the items and mechanically adding their prices will allay suspicion and build goodwill. The replacement now of your old machine by a modern itemising machine will not only ensure today's price, high trade-in allowance and give you the right machine for 1971, but will give your business the benefits during the next three years of an itemiser, together with familiarisation by your staff well before D day.

HANDLING TWO CURRENCIES

It is impossible to think or calculate in two currencies at the same time. You cannot charge £sd and give change in £p or vice versa—the incidence of error would be frightening.

Similarly you should not attempt to trade in both currencies at the same time. To try to use two cash registers, one £sd and one £p would result in chaos.

During the transition period therefore you should trade in the currency of your cash register and give change in that currency.

This means that each business will change to decimal working on the day its cash handling equipment is converted to decimal.

If plans are not laid well in advance a business could find itself still unable to record £p at the end of the transition period when the old currency is finally withdrawn.

PRIOR TO D DAY

Some of the other things which must be done prior to D day include the revision of education in schools. Recommendations have already been made as to how this should be done, although it is anticipated that the young will find little difficulty in adapting themselves to the new system.

Wages must be re-negotiated.

Printing orders for stationery incorporating money columns should be placed well in advance.

Recurring payments such as hire purchase rental and insurance premiums must be exactly convertible to decimal, i.e. in round shillings at present, to ensure that bankers orders will be met after D day.

All personnel will require training in handling the new currency and in adding decimal amounts. Overseas experience indicates that some 10–20 hours' training is necessary.

NOW IS THE TIME

Let me stress again that it is none too soon to be finalising your plans for conversion to decimal.

May I quote Mr G. Pearce, Mace HQ accountant writing recently in the *Grocers Gazette*: 'The longer retailers leave taking decisions over preparing themselves for decimalisation, the greater is the likelihood of them having to wait at the end of a very long queue of hundreds of thousands of businesses clamouring for equipment at the very time it matters. It is vitally important that every retailer starts thinking about this radical change to his business NOW!

GET THIS BOOK

A useful booklet which gives many of the facts about the coming changeover is: *Decimal Currency; Three Years to go: Facts and Forecasts*. It is available from most booksellers or from HMSO bookshops at 1s.

SYMPHONY IN TEAK



HI-FI STEREO CONSOLE RECORD PLAYERS

ALBA 559. This is nearing the ultimate in quality reproduction. Fully transistorised, the circuitry produces 10 watts output for each channel, using four matched speakers. Highly sophisticated controls provide a measure of quality and volume to suit all tastes. The acoustically designed cabinet with its unusual curved front is in teak finish.

(Recommended price including tax) **£63.12.6**

ALBA 449. Junior version. Fully transistorised and giving 7 watts output using four speakers. Similar controls to 559. Teak finished cabinet acoustically designed.

(Recommended price including tax) **£53.12.6**

ONLY ALBA
CAN COMBINE
SUCH QUALITY
AND VALUE!



*** NEW**

ALBA

Sounds as good as it looks!

Alba (Radio & Television) Ltd. Tabernacle Street, London E.C.2

**AND
NEXT**

Photo Tour of

MULLARD PICTURE TUBE FACTORY

MOST MODERN IN EUROPE

Mullard Simonstone is the largest television picture tube plant in the UK and the most modern in Europe.

Pilot production was commenced in 1955 and has since expanded to the present volume of 1½ million tubes per year. More than 8 million tubes have been made since 1955.

ColourScreen tubes are currently being produced at the rate of 2,500 per week, and this is expected to build up to 3,000 per week very soon.

The factory employs some 2,000 people, and the plant is intensively mechanised. It operates on a three-shift basis, twenty-four hours per day.

One of the most impressive features is the conveyor system, which is over two miles in length. In addition to reducing handling costs in transport, the system is also used for slow cooling, drying and as a store. On one section the tubes being carried are energised and given a 1½ hour ageing process.

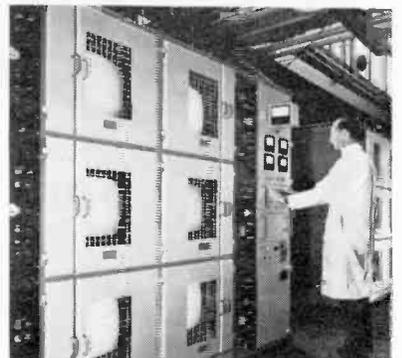
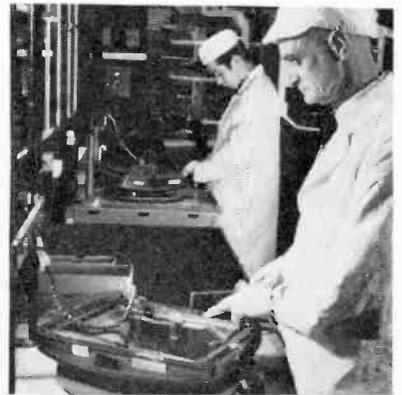
1967 saw an investment of £1 million in new plant for the glass factory, which has a throughput of 100 tons of glass per day and is the second largest in the country. Sufficient capacity is available to enable the factory to export up to £500,000 worth of raw glass per year.

1967 also saw the building of the special ultra-clean sealed off flow-coating room for laying the green, blue and red phosphors and photo-exposing. The whole of this area is temperature and humidity controlled and entirely dust free.

The shadow mask was originally produced at Simonstone, but in order to reduce costs this activity has now ceased and masks are being imported from Holland.

Manufacture of the three-gun assemblies for the ColourScreen tubes is a fine example of precision assembly in miniature. Most of this work, which is far more complex and precise than that required for a monochrome tube gun, is carried out by women. Not one of the parts is touched by hand, and component parts are stored on sealed vacuum jars until needed for assembly.

Development work currently being carried out by Mullard research staff on colour tube technology will bring squarer and flatter colour tubes. In addition Mullard scientists are constantly studying other methods of displaying colour television pictures.



Left to right and top to bottom: Assembly of colour gun components to insulating rods; Electrical and visual final inspection of guns; General view of the flow coating room, showing the three automated flow mills. Note the air filter bags suspended from the ceiling; An assembly station for mounting the shadowmask to the faceplate; An inspector checks the shadowmask visually against a controlled light source; Sample quantities of all production are subjected to life-test procedures. Here an engineer sets up the automatic test equipment.

literature RECEIVED

E372 A SPRING/SUMMER 1968 edition of Grundig's Accessory Broad-sheet is now available. It lists leads, cases, microphones, headphones, and all the miscellaneous accessories for Grundig tape recorders, with prices.

E373 A NEW comprehensive, 35-page colour catalogue, *Better things are electric by English Electric*, gives full details of all current models, as well as information on the function of appliances and some home hints.

E374 NOW AVAILABLE is the ASEE *Illustrated Guide to the IEE Regulations for the Electrical Equipment of Buildings*. A simplified explanation is given of selected Regulations in the hope that these will be of value to those in the industry. Blank pages have been left for notes or to accommodate future amendments. The guide is priced at 6s. 6d., with discounts for quantities.

E375 A THREE-FOLD LEAFLET has recently been produced for the Radford SCA 30 solid state stereo amplifier, suitable for customer use.

E376 IN THEIR 1968 brochure-catalogue Conelight not only show their latest lines, but also give sketches of round-the-home lighting schemes with simple ways of transforming the existing set-up which should set the customer's imagination working.

E377 THE 1968 MAZDA VALVE AND PICTURE TUBE DATA BOOKLET contains 168 pages of information on the range of receiving valves and tubes for domestic entertainment equipment. Colour TV tubes and valves are included for the first time. The equivalents list shows which Mazda valves are still available.

E378 THE LATEST trade price list, No. T3, from Multicore Solders, is a comprehensive guide to Ersin and Arax solders and Bib accessories. The list includes several recently introduced products.

E379 A NEW Mazda booklet, *Electrons in Shadowmask Colour Tubes*, is aimed at service engineers already familiar with the principles of b & w TV.

It gives the basic principles of operation of the tube with its external neck components, and explains the principles of convergence. Extensive use is made of simplified drawings and photographs. The booklet should prove a useful aide memoire for any engineer who has taken a colour TV course.

E380 NOW AVAILABLE are the 1968/9 editions of the Mullard reference guides to the company's wide range of products for industrial applications. Separate booklets deal with Valves, Tubes and Special Products; Semiconductors; and Components.

E381 AN ATTRACTIVE new full colour leaflet from Ronson Products lists their entire range of electrical products and is intended for customer use. Included are the three Rio hair-dryers and the rechargeable shaver.

E382 A CHART—*Power Control for Industry*—from Mullard, facilitates the selection of components for power control. Listed are thyristors, rectifier/diodes, stacks and controllers.

USE THE PRE-PAID FORM ON PAGE 296 TO OBTAIN FURTHER DETAILS OF ANY OF THE ABOVE ITEMS, QUOTING THE REFERENCE NUMBER.



NO WONDER YOU CAN'T HELP TURNING TO ALBA



*NEW



ALBA 636 DE-LUXE TRANSISTOR RADIO

All British. Outstanding quality of reproduction . . . impressive appearance. 10 transistor circuit. Two versions—FM, L, M & S and FM, L, M, and Trawler band (636T). 2-speed tuning for precise reception. 8 in. speaker. Push button controls. Combined socket for earphone and tape recording. Smart teak finished wooden cabinet with metal trim and fold back handle.
(Recommended price, including tax, excluding batteries) £29. 13. 0

ALBA R23 CASSETTE RECORDER

This is a delightfully presented example of this new and vital development of tape recording. Whilst offering the utmost in convenience and usefulness it is nevertheless an extremely efficient and comprehensive cassette recorder providing excellent quality. Complete with microphone, cassette and all accessories.
(Recommended price, tax paid, excluding batteries) £23. 14. 6

ALBA

Sounds as good as it looks!

ALBA (RADIO & TELEVISION) LTD., TABERNACLE STREET, LONDON E.C.2.

Grimthorpe's People

LORD HILL of Luton is going to add a great deal of brightness to the rather staid top table at RIC meetings in future. His inaugural speech in May was a delight. With the General Meeting overrunning a good five minutes, the new President was kept waiting, cooling his heels until rescued by retiring chairman, Colin Taylor. Not a good start, I felt. Lord Hill didn't think much about it either.

Congratulations to Charles King of Decca. He has been waiting a long time to fill a vacant place on the RIC committee. Fourteen years, I'm told. Well, you've made it at last, Charles.

Incidentally, one of the casualties in the election for the new committee was Ken Yandell. Ken has done some useful work during his year of office. The re-activation of the Promotions Committee, was I understand, one of his suggestions. Perhaps the moral here is a need for more liaison between ordinary members and the committee.

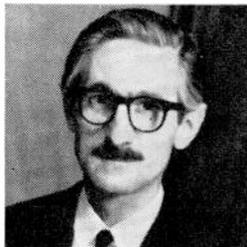
I'm sorry Arthur to be so late in recording your retirement from Eddystone Radio—after forty years, I'm told. Arthur Edwards joined Eddystone when it was known as Stratton and he will long be remembered for his pioneering work in the production of radio for the amateur enthusiast. Arthur, who spent his war years with the Fleet Air Arm, is retiring for health reasons. At the present moment he is regaining that health sailing and walking down Devon way, after which he plans a round-the-world trip in a freighter. After which, no doubt, call sign G6XJ will be on the air again.

Another retirement in April was that of A. W. G. Goode, Hoover's director in charge of engineering. It was Goode's job to enlarge Hoover's product range in 1965. Another victim of the pace, Mr. Goode retires because of ill health. Mention of Hoover reminds me that James O'Grady has retired after many years as their man in Ireland. You might have thought O'Grady had spent all his life with the Irish office, but you would be wrong. He joined Hoover in that other famous place of water—Bath. Terry Good, in spite of his name, a good Irishman, takes over in Dublin.

For some time there has been speculation at Philips. What happens when Norris retires? N. C. Pratt, 'Norrie' to many in the 'Street' was Philips, and when he retires in November, he will be missed by quite a few. Philips went outside, to Rediffusion in fact, to find David Hughes, a man big enough to replace him. The man with one of the

largest jobs in publicity, and with a name as Welsh as Wales, joins Philips with a great fund of advertising and marketing expertise. Before Rediffusion, he was with Horlicks and Shell-Mex.

I've always liked the name MacKenzie. It's a good name. My first boss, Matthew MacKenzie taught me many things, especially when he caught me playing cards one day when I should have been entering the ledgers. 'MacKenzie's,' he once said, 'are the great doctors and teachers of this world.' From this nostalgic mood, let me quickly say how much I enjoyed hearing again from Keith MacKenzie. Keith was, if you remember,



the training and sales executive for the Telesurance Group. Now, he has joined The Periodical Publishers Association as training development officer. Although a Scot, Keith is not half as dour as my photograph suggests, even after some twenty years of commercial, industrial, and service training situations. Mac was right, the MacKenzie's make great teachers.

Last month, you may remember, I had the chance, through the courtesy of Mullard, to include a few chosen words about the distaff side of our Industries.



Now Mullard have done it again. This time it's Mrs. Anne Stokstad, and she is their representative up Cumberland and Westmorland way. The reason she is in the news this month is that she is no ordinary rep. No fear. She has carried off Mullard's title—Representative of the Year—no mean achievement. What

is more, I'm told that her 23 male colleagues on the Mullard sales team all approve.

On the subject of Mullard, I see they have a new Manager in the setmaker department, R. H. Manning. Most of the setmaker people will know Manning well, as he was deputy manager before taking over from F. K. Fraser, who retired recently.

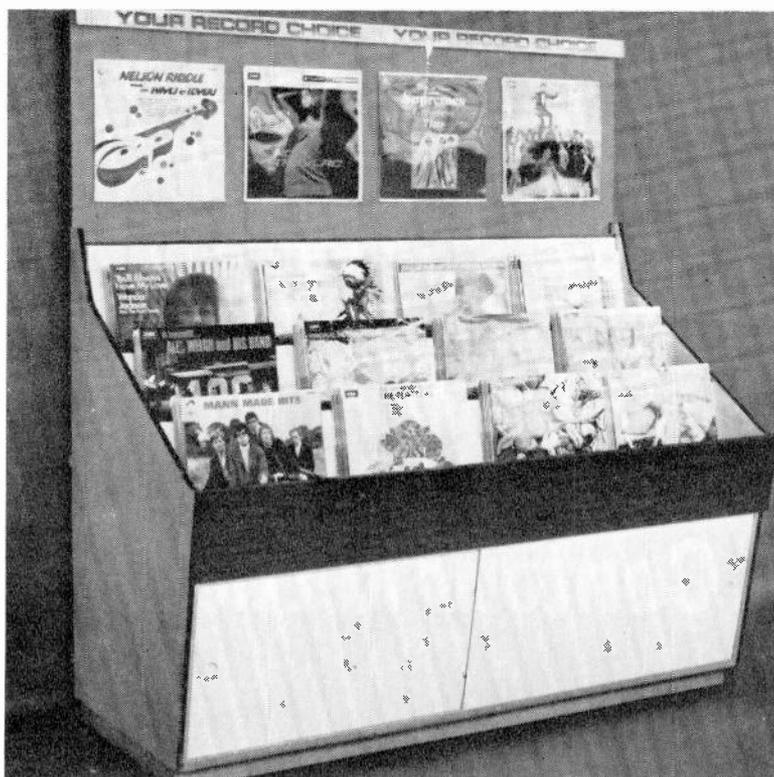
Antiference have been hinting for some little while that sales expansion plans were on their way, and now I hear of three important sales appointments. First, Mr. Branigan (what a wonderful bit of old Ireland that name conjures) takes over in the North and South (Ireland of course), Mr. B. R. Fowler in the North Midlands, the North West (including Manchester) and J. H. Brimble down Bristol and Cardiff way. A. B. Fowell (great names these Antiference boys have) becomes an area manager in the North West.

Ran into John Tucker in Kingsway early in the month. John had that sweet smile of success, as he told me he had joined the Dansette boys in Honeypot Lane. John who was marketing manager of Vidor after a spell with Hoover, is now looking after the Press and Public Relations side of the Dansette business.

At the conclusion of the six day conference of Union Internationale de l'Electrothermie (UIE for short) at Brighton, Cecil Melling, C.B.E. etc., was appointed the first British president. Because of this honour, Cecil Melling resigns the chairmanship of the British National Committee of UIE, and is succeeded by Big Bill Irens, chairman of the South Western Electricity Board. Bill Irens has come a long way since he was assistant to the Chief electrical Engineer of the Bristol Aeroplane Co. (as it then was) during the war.

From a bold but short official statement, I read that Lord Thornycroft, the chairman of Pye is the new president of BREMA. Sir Jules Thorn occupied the presidential chair for four successive years, Sidney Allchurch reminds me.

A note from Dave Pither of Heating Advisory Services tells me they are having one or two changes. Brian King has been appointed as commercial manager and John Beer as technical manager. In the meantime, Cyril Bell, who was general manager down at the Heating Centre has departed for pastures new. Only a very good offer could have tempted Cyril, I feel.



On July 1st a new company, **RECORD MERCHANDISERS**, a joint venture between EMI Records and Decca Records, starts operating a new rack-jobbing system which, it is claimed, 'will widen the availability of records to the public and help increase the overall record market.' The launch has been viewed with some apprehension by many conventional record dealers, so we asked **FRANK PEARCE**, general manager, Record Merchandisers, to explain the aims and philosophy of the new company.

DETAILED MARKET STUDY

E.M.I. has never envisaged a cheapjack racking operation. Before taking the decision to go into direct distribution with a centralised warehouse, they made a very detailed study of the market and the possible reaction. These plans worked well and the present distribution is both efficient and economic. The same type of detailed planning was put into their racking operation.

John Fruin, sales director, E.M.I. Records, studied the racking market in the U.S.A. and then an investigation was made into rack commodities in other consumer goods in the United Kingdom. This took nearly a year before E.M.I. decided on its pilot racking scheme, which has resulted in a sophisticated merchandising system which attracts the public on impulse to buy records. The systems and methods of merchandising are a credit to the record industry and not a 'cash in' operation.

The initial pilot scheme was launched in October, 1966, and the decision to expand into the second stage of the exercise, and run for a full year was made in January, 1967. A lot of lessons were learnt in this year, and streamlining and improvements have been made as the months have gone by. The decision has now been made to permanently enter the racking field as a supplement to the normal record business.

ADDITIONAL BUSINESS

Record Merchandisers firmly believe that racking is an addition to the existing business. Impulse sales attract non-record buyers to purchase gramophone records, and when they have bought some quality l.p.s on impulse from an efficient merchandising rack, they are much more likely to walk into an

IS RECORD RACKING FOR YOU?

attractive record store where they know the selection and service is better.

During the last 18 months Record Merchandisers have proved that where they have racks in a marketing area which contains existing record shops, the racks have sold well, and the dealers' turnover has risen in accordance with E.M.I.'s national average. The same conclusion has been reached in other countries.

Public interest in recorded music can be stimulated by attractive, well presented impulse racks, not by cheap units or so-called 'pop-bars' which merely cream a percentage of fast-moving business from the dealer. More people will buy records, and once their interest is roused, they will visit good record departments and shops to increase their range. They will not go into a bad shop or department because they have been used—on their first few occasions—to buying from attractive units.

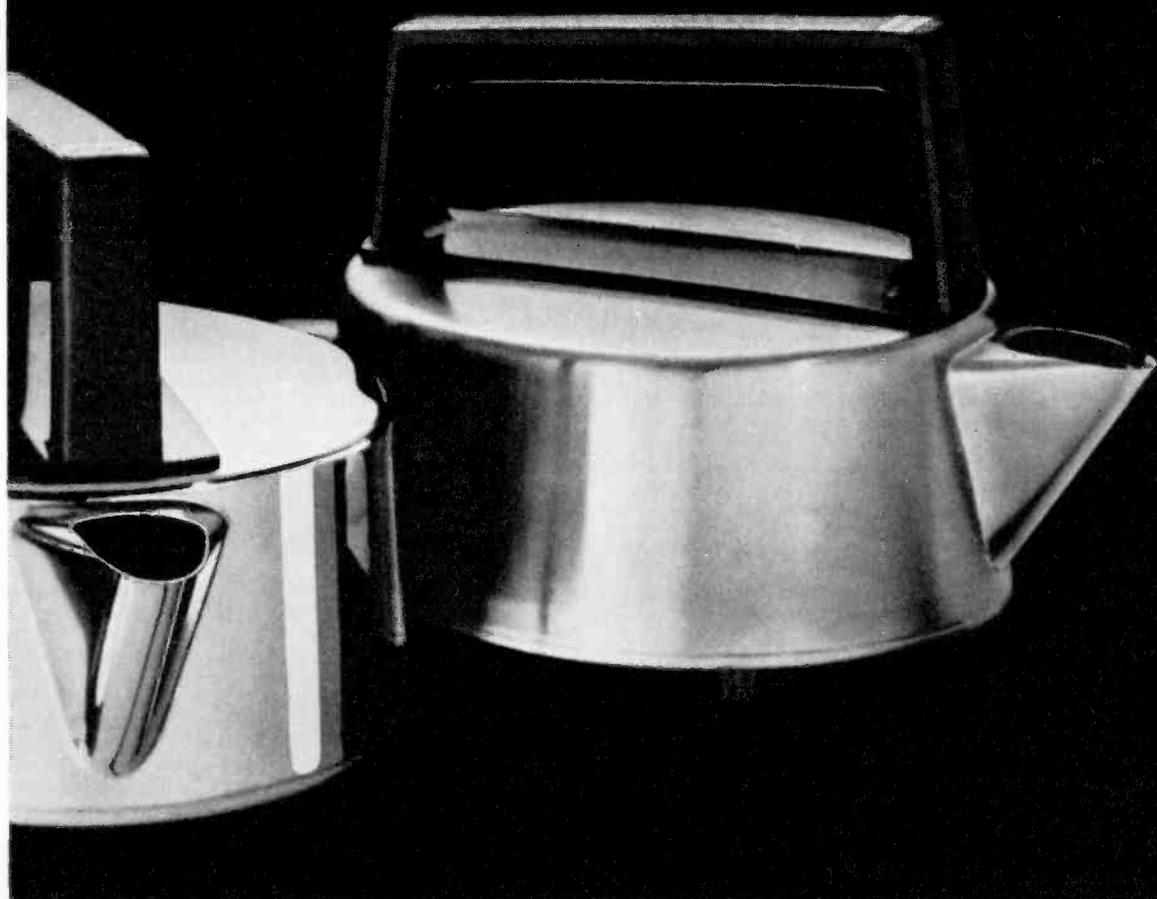
The majority of sales which are obtained will be for catalogue material and, this is a way of attracting the elusive adult market, the 25-45 age group. It is generally accepted that the hardest job for a record dealer is to get this group into a record shop.

BUYING POWER

Record Merchandisers do not intend to rush into outlets willy nilly. They will endeavour to open wherever their market surveys show there is an untapped market. They have a consistent market survey running which splits the U.K. into 230 marketing areas. On each of these areas they have a buying power index rating which tells what they should be getting out of that area. This was running for a year prior to going direct, and it was, incidentally, one of the side reasons why they took the decision to undertake direct distribution, as they needed to understand the retail market potential better.

E.M.I. offer this information to dealers through their shopfitting/display

**Hotpoint keep
kettle sales at
boiling point...
with the new Contour kettles.**



The Hotpoint Contour Automatic will surprise even you!

One and only kettle with a simmer programme

When boiling point is reached, the Contour Automatic heating element cuts out for a few seconds, automatically switches on to boil again, thus keeping water simmering. No boiling over. No steamed-up kitchens.

Safety first cut-out

Should the kettle be allowed to boil dry, an *automatic* safety cut-out comes into action.

Cool, new design

No-lid top and special, moulded plastic handle keep hands cool, safe from scalds.

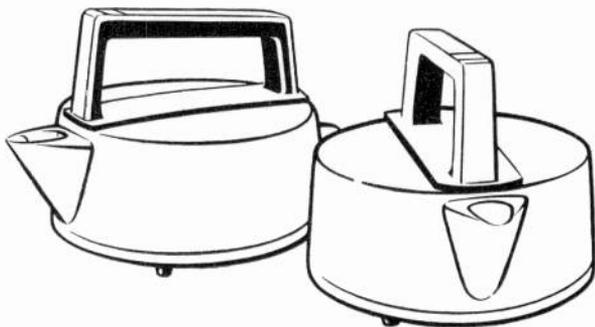
High-speed performance

1½ pints of water boils in 110 seconds.

Two finishes

Brushed stainless steel or high polished stainless steel.

Capacity - 3 pints. Two models.



Hotpoint Contour Automatic 2.6 kW. Rec. retail price £8.4.4.

Hotpoint Contour 2.75 kW. All the Hotpoint Contour features - except the simmer programme. Rec. retail price £6.19.8.

Telling TV advertising breaks October 13th.
Demonstrates this unique new kettle to millions of housewives.

GENEROUS LAUNCH OFFER FOR YOU.

Ask your wholesaler or Hotpoint Territory Supervisor for details.

RECORD RACKING

—continued

division. When they quote for a new shop or a re-design, they give the dealer the potential market and advise him of the stock turnaround which he can expect. E.M.I. do not just issue records they try to do the whole job.

Record Merchandisers do not intend to open where the buying power index shows the area to be fully exploited, and they feel there would be no point as distribution costs would increase and the business would merely be shared. They are prepared to consider racking any existing record shops if they are approached, providing there is a customer flow. The reason being the same as in their shop design service. Complete self service or personalised self-service is strongly recommended, where there is good customer flow. Where there is not, then personal attention to customers by dealers is much more successful.

The discount Record Merchandisers give, bearing in mind their investment in fittings and stock merchandise, is 13½% less than to a dealer. A good dealer, therefore, is very much better off than a rack outlet, as a good turnover can be maintained and a higher net realised.

The intention is to build steadily and carefully as it is in Record Merchandisers' interest to maintain a price structure, even if the r.p.m. case was lost.

MAIN OUTLETS

The main type of outlets will be departmental stores, walk-around variety stores, gift stores, book shops—in fact anywhere where there is a prolific flow of potential customers. These customers will be people who enter a shop without the desire to purchase anything in particular, and are attracted on impulse to buy gramophone records.

Food stores and supermarkets are not suitable outlets because, apart from possible pricing problems, the average amount spent in a supermarket is 15s. per visit, and the attraction of an impulse buy at 36s. 6d. is small. It must also be remembered that the customer in a supermarket psychologically believes he has obtained something 'cheap'.

Record Merchandisers will have some budget price material as lead lines, and may well offer deletions—again as pullers—but strictly under control, in exactly the same way as dealers can.

LABELS

Labels which will be available from the racks include: HMV, Columbia, Parlophone, Capitol, Tamla Motown, Stateside, Dot, Bell, Waverley, Regal Zonophone, Deram, RCA, London, Decca, CBS, United Artists, MGM, Immediate, Disney and MCA.

OUT-OF-HOURS

While the out-of-hours delivery scheme in London is coming to an end in the form in which it was devised by the Freight Group of the Transport Co-ordinating Council, this does not mean the end of the idea.

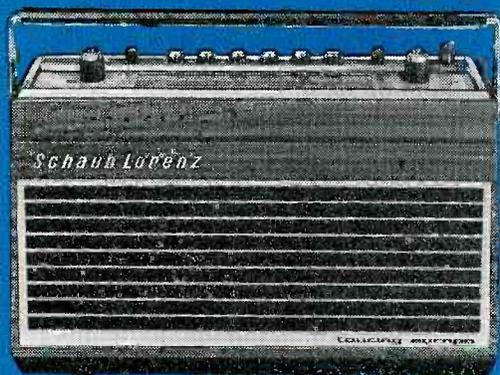
Despite the fact that half the major retailers involved in the plan decided to withdraw their support, they are continuing to make evening deliveries of their own, from their warehouses to their stores. Considerable interest is also being shown in early morning deliveries. This of course tends to suit shops which are open anyway for early deliveries of fresh foods.

Two reasons seem to emerge for the failure: not enough firms joined in and so volumes of deliveries were often low and thus uneconomic; and there was also a feeling that the scheme was too inflexible as constituted, not leaving enough opportunity for individual arrangements.

Still, we are likely to hear more of out-of-hours deliveries.

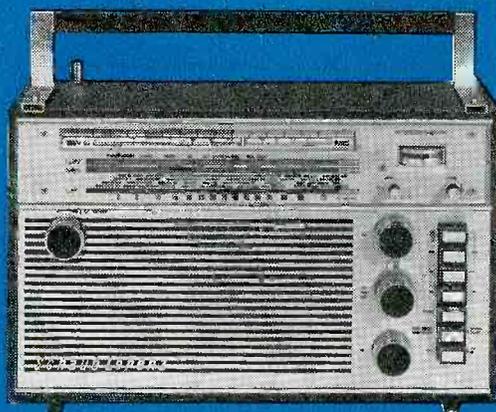
FOUR MORE BIG IDEAS

Europe's top



ITT SCHAUB-LORENZ

Touring Europa. VHF (with AFC) SW (49 metre band spread) MW, LW. Large p.m. dynamic loudspeaker. Duplex tuning. Push-pull output stage. Separate treble and base controls. Choice of colours. **52 GNS.**



ITT SCHAUB-LORENZ

Intercontinental. World wide reception on 5 short waves. VHF (with AFC), MW, LW. Tuned RF stages. FM and SW telescopic antennae. Two internal ferrite rods. Precision tuning with logging scale. Mains or battery. **107 GNS**

MORE PROFIT FOR KB 5-STAR DEALERS

With the hi-fi range from ITT Schaub-Lorenz you benefit even more from KB's 5 Star Programme; any item can be added to your other KB orders to make up your Star discounts.

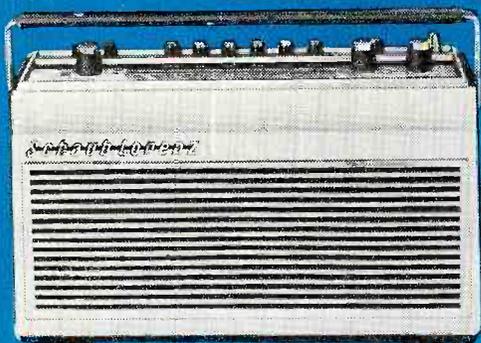
THE BEST IS BEST IN THE END

When people have got the idea of radio, they

begin to look for *better* radio. Surprisingly, we find that many go on to buy the best—which is where ITT Schaub-Lorenz started. When really superb reproduction and performance matter more than pennies—for both your customers and for you—then these four masterpieces from West Germany come into their own. Don't take our word for it alone—*just listen!* It's very profitable for you as well as your best customers.

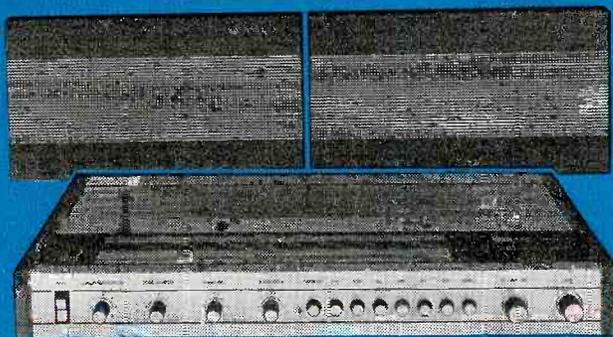
IN 1968

hi-fi from KB



ITT SCHAUB-LORENZ

WEEKEND UNIVERSAL. VHF, (with AFC), SW, MW, LW with bandspread 41 and 49 metre bands. Separate bass and treble controls. Separate VHF tuning. Choice of 3 cabinet colours. **46 GNS**



ITT SCHAUB-LORENZ

STEREO 4000. Stereo tuner amplifier. VHF (with AFC), SW, MW, LW. (Bandspread 41 & 49 metre bands). 29 transistors plus 17 semi-conductors. 7 AM and 15 FM tuned circuits. Output 2x15w. (High fidelity speakers available, 20 Gns. each). **115 GNS.**

FOR THE FULL PROFITABLE FACTS

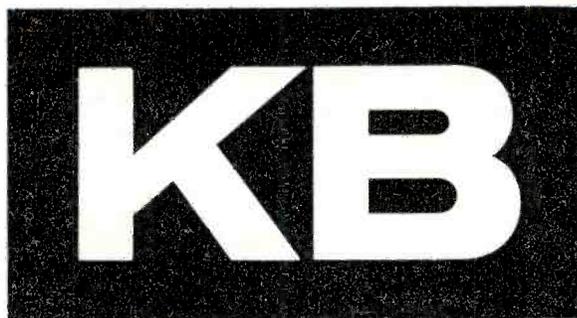
SEND THIS NOW. Please let me know all about the ITT Schaub-Lorenz range.

NAME

COMPANY

ADDRESS

POST TO—KB, FOOTSCRAY, KENT



AN ASSOCIATE OF ITT

We don't want to keep ourshelves to ourselves...

Join us!

Spur is the shelving system of all time. Precision made in high grade steel, Spur is simple to install, easy to adapt to meet changing needs. Spur is modern in appearance, incredibly strong and everlastingly durable.

Whether the problem is support or display, Europe finds the answer in Spur. In shops, stores and supermarkets. In libraries and factories. In hotels, hospitals, universities, holiday camps and garages. Wherever there's a need for a shelf, there's a call for Spur.

If you are still without a complete set of Spur literature, you're missing something good. Don't ignore that coupon. Fill it in . . . Cut it out . . . Send it off . . . Now.

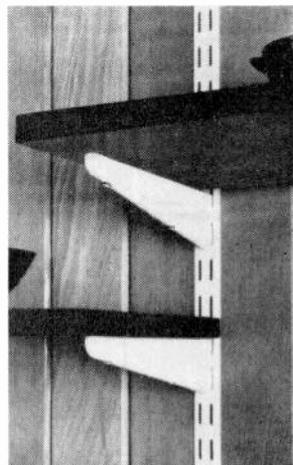
SPUR LTD: SAVAGE & PARSONS LTD · WATFORD · HERTS (TEL. WATFORD 26071)

Yes, I need you. Please tell me more about your shelves.

NAME _____ COMPANY _____

ADDRESS _____


Don't like cutting out complicated coupons?
Make it easier for yourself. Use the outer line.



SPUR

SSIC

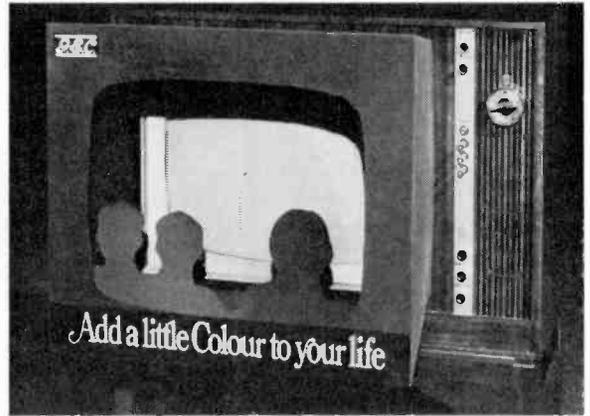
TO HELP YOUR SALES

manufacturers' advertising & sales promotion plans



PYE PROMOTE CAR RADIO

TO SUPPLEMENT the national advertising campaign which Pye have been running for their range of car radios, they are now offering 4in by 4in col. ads. for dealer insertion in local papers. New show-cards, in four variations, each take one car radio, and can be used in the window or on a counter. A polished wooden display stand simulating a car facia and complete with speaker fret, holds two car radios and enables on-the-spot demonstrations to be given. Also available is a light box for use in the shop or window, where it is particularly striking at night.



As part of their campaign, GEC are issuing the shield, shown above right, to fit on their 19in colour TV receiver to improve viewing conditions in shops.

MASSIVE GEC CAMPAIGN

NOW IN OPERATION and to continue throughout the summer months is GEC's biggest ever campaign for colour TV, radio and domestic appliances. Whole and half pages will feature across the range in the *Daily Express*. Double page spreads in full colour for colour TV, cookers and refrigerators will appear in the *Sunday Times Magazine*. This is the first campaign from the company's new advertising agency who have provided a new and aggressive treatment to GEC's appliance and home entertainment advertising.

NEW SOLDER PACK

ERSIN MULTICORE SOLDER is now available on a 2in diameter metal spool holding 30ft of 40/60 alloy, 18s.w.g. The spool is in an attractive pack suitable for peg-board display. The carton can be used as a counter display.

HANDY FREEZE-IT

SERVISOL have introduced a smaller 6oz aerosol container of Freeze-It at 9s. 6d. per tin. Freeze-It is invaluable in helping to locate faults in transistors, resistors, capacitors, etc.

NEW PRESENTATION FOR WIRESTRIPPER

THE Bib model 8 wirestripper made by Multicore Solders is now supplied skin-packaged for peg-board display. Instructions for use are given on the back of the pack (see right).



TWO-DRAWER HANDIPAK

THE SUCCESS of the Philips Handipak has led to the introduction of a two-drawer version. Contents include 40 each of Philips auto bulbs types 987 and 989. The new pack will interlock with the older single drawer units. Purchasers of the new Handipak are eligible to enter a competition in which the prize is a three-day holiday at next year's Monte Carlo Rally in which for the first time there is an official entry from Philips.

TWO IN ONE RADIO

TO SUPPORT the introduction of the KRO28 car portable radio, KB are providing the illustrated dual purpose stand. It takes two radios, one in each of the recommended positions for operation.





This symbol is worth money to you

Housewives trust the Hoover symbol—so turn it into profitable electric cooker sales by stocking the Hoover Four Plus.

The big market!

The overall cooker market is big, very BIG! And electric cooker sales increase every year. Over 500,000 electric cookers will be sold this year.

50 million meals a day!

Remember—there are 18 million homes in this country. That means 18 million housewives using 18 million cookers to prepare over 50,000,000 meals *every day*.

Features all the way!

The Hoover Four Plus cooker goes all-the-way. Dual ring, easy-clean hob and oven, auto timer, built in hob and oven lights—Hoover features that capture the housewife's interest. You can convert that interest to hard cash.

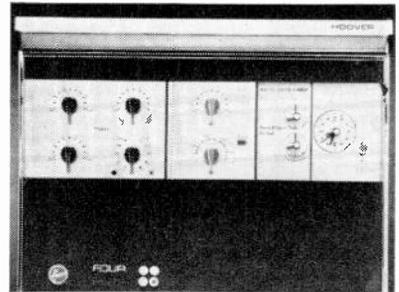


Get full details from: HOOVER LIMITED, Greenford, Middlesex

COOKER TRENDS in 1968

Mrs TUI BOLD, Head of the BEAMA Domestic Appliances Information Centre, discusses some of the design trends in today's electric cookers . . . all of which make admirable selling points. In the following pages we list all the currently available Domestic Electric Cookers.

THE SAME ONLY DIFFERENT



Cooker controls are simple to use and easy to see—as exemplified by the Revo (left) and Hoover panels shown here.

THE number of functions which any cooker can perform is strictly limited. Food must be heated before being eaten and basically it can only be baked or boiled (which includes grilling, casseroles, roasting on a rotisserie and steaming). The facilities found on current electric cookers make it possible to do all these things better than before.

The cooker market on the whole is consolidating in 1968. Gone are the

'gimmick' cookers of a few years ago. Present models concentrate on giving the housewife the most useful features at a price she can afford.

Most of the improvements of the past year or two have resulted in redesigned and more functional hobs. Heavy solid plates have now completely disappeared and been replaced by radiant rings (or the special solid 'speeding' type).

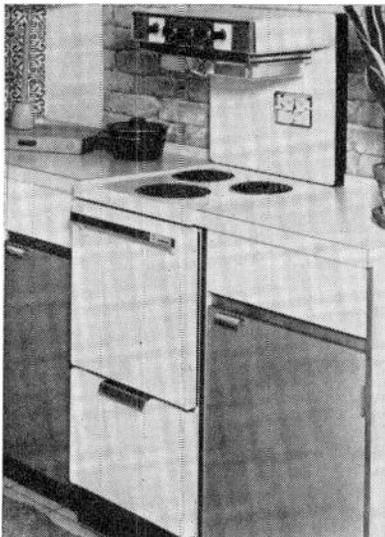
Most cookers have four cooking sur-

faces on the hob and many in the medium price range have either a dual element ring (which can be heated at the centre only if required) or a permutation of ring sizes. Both of these features cope well with the problem of small sized pans. The pan temperature control is still standard on many of the medium price range and a cooker with this feature costs about £60.

One of the most noticeable changes in cooker design has been the general move among manufacturers to simplify controls. The newest cookers have controls that are simple to use and easily visible—even from some distance away.

Another interesting development is the increasing number of electric cookers with hob lights. This is an extremely useful feature, especially for kitchens where the cooker has to be placed in an awkward position with little or no direct light. Good lighting from above also makes it easier to see what is going on in the cooking pot. Cookers with hob lights retail from about £50, so this is not a feature confined to the higher price range.

Increasingly included in cookers are double ovens (the second oven sometimes doubling as a grill compartment) and heated drawers. Most cookers in the



For the smallest kitchens there are a number of compact 18in wide cookers, offering many of the features of their larger relations. Left, the Jackson Trimline; right, the Belling Compact 3.

COOKER TRENDS in 1968

continued

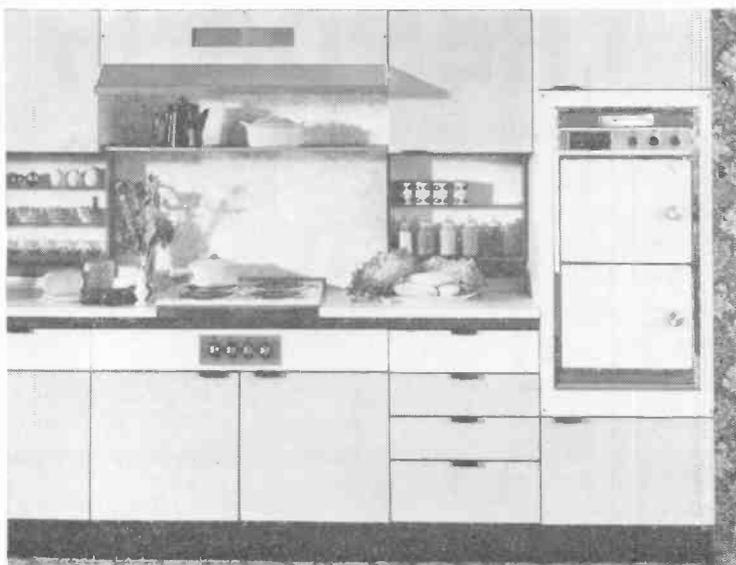
company has recently brought several new kitchen items into its already extensive range and now boasts a complete Hoover kitchen, containing everything from a cooker right down to an electric carving knife.

FOR THE FUTURE

One bit of the future that is already with us is the self cleaning oven—introduced by Creda in their 'Autoclean'. This cooker, which will be available in the autumn, will provide a good focal point for any display of electric appliances. Creda expect it to retail at about £110.

Hard on the heels of Creda are Moffat, who will begin to market their imported self cleaning model later this year and English Electric who promise great things by early 1969. There is also the Westinghouse 30in model selling at 282 gns.

With the continued growth in the electric cooker market (which has been maintained at 1% per annum) over other forms of cooking there are definite possibilities for the enterprising retailer to build up good business in cookers which can also provide a lead-in to the sale of other electrical appliances for the home.



Selling split level cookers is a specialised job. The Tricity model 800 features two independent ovens and a four-ring hob with independent controls.

medium and upper price range also have autotimers, which are very popular with housewives, although it is doubtful whether they use them to the full.

SPLIT LEVELS

Split level cookers are very much specialised equipment and an installation needs a certain amount of pre-planning. As most of them need to be built-in in some way, they can usually only be installed in a brand new kitchen or when a major reorganisation is planned. Here is a great opportunity for the retailer to supply a 'complete kitchen' service; either by using part of his own showrooms to become a kitchen specialist or by having an arrangement with a local kitchen planning firm for the supply and building-in of units. One of the major stumbling blocks to a decision to buy split level cookers is the lack of local knowledge and facilities for fitting.

MINI COOKING

The number of small table cookers has declined over the past few years. It was thought at one time that these could be promoted as second cookers but the housewife has stuck to the idea that the place for cooking is a stove in the kitchen and small cookers have therefore not become very popular. They still sell well for use in bed-sitters and flatlets.

With the increasing trend—especially among the younger generation—towards the preparation of more exotic foods like kebabs, the rotisserie is coming into its own both as a separate item and as an extra on standard cookers. The rotisserie makes a very good job of joints and chicken, and is well worth recommending to customers who like roast dishes.

For those with very small kitchens and limited space, several manufacturers have recently introduced 18in wide cookers. These are floor standing and have all the

features of their larger sisters, but the floor area they occupy is much less.

NEW TO COOKERS

A newcomer to the ranks of cooker marketing is Hoover, who introduced their Four Plus in September 1967. This



The future is with us now—in the form of the self-cleaning oven. Several manufacturers are interested. The first British model is the Creda Autoclean from Simplex Electric shown here.

DOMESTIC ELECTRIC COOKER Survey

models . . . features . . . prices

Model	Dimensions (w x h x d in)	Hob	Oven (w x h x d in)	Grill	Features	Price
ADVANCE DOMESTIC APPLIANCES LTD.						
Westinghouse						
KHH3A	30x47x26	1-6in 1-6kW 1-6in 1-6kW auto 2-8in 0-6kW as above		In oven 3-12kW	Self-cleaning oven. Auto timing centre. Rotisserie.	296 2 0
KFG3B	30x47½x26½			as above	As above, but not self-cleaning.	203 14 0
KDG4A	40x47½x26½	2-8in 2-6kW 1-6in 1-6kW 1-6in 1-6kW auto	Main 22½x15½x18 Small 11½x15½x18	In both ovens	Double oven. Auto timing centre. Auto stirrer. Oven cooking selector	306 12 0
Build-in:						
OG21F	23x28x23	—	3-28kW	In oven 3-12kW	Auto control. Rotisserie	129 3 0
OG21A	23x48x23	—	3-28kW each	as above	Double ovens—as above.	187 19 0
OG25F	26½x28½x23	—	3-28kW	6-24kW	Auto timing centre. Rotisserie. Roast guard.	163 16 0
OG25B	26½x49½x23	—	3-28kW each	As above in top oven.	Double ovens as above.	263 11 0
Scholtes						
Build-in:						
F68E	23½x25½x23½	—	15x12½x16½ 2kW	In oven. 2kW	Auto timer. Rotisserie.	86 18 0
F64E	23½x16½x21½	—	14½x11x15 1-3kW	Infra red in oven. 1-5kW	As above. Can also be wall mounted. (non-auto)	64 18 0 53 18 0
BELLING & CO. LTD.						
Wee Baby Belling	13½x12x11½	1-9x7in 1-5kW grill boiler	9x9½x9½ 0-6kW	1 grill boiler	Table model.	11 11 0
Baby Belling 45A	18x21x15½	1-10½x8in 2kW	13x11½x13 1-2kW			19 19 6
Twin Baby	21x18x13	1-grill boiler 1-5kW 1-6½in plate 1kW	9x9½x9½ 600W	1 grill boiler	Table model. (With stand.)	20 14 0 23 9 6
Compact 3	18½x49x21	3-7in 2kW	14½x12½x14	Under hob	Inner glass door. Removable oven roof and sides. Loop for joint.	39 19 0
Compact Super Four	18½x51½x21	4-7in	12½x14½x14 2kW	Under hob		49 19 6
Classic Super 50	21x52x24	4-7in 2kW	14½x16x15 3kW	Under hob 2-75kW	Reversible oven door. (with Autotimer)	54 17 6 59 17 6
Classic Super 60	21x54½x24	4-7in 2kW	14½x16x15 3kW	Under hob 2-75kW	Hot cupboard. Fluorescent hob light. Four rollers. indicator lights.	69 17 6
ELECTRICAL DIVISION OF RADIATION LTD.						
Jackson						
Topline 706	22x57½x23½	4-7in 2kW	13½x14½x16½	Top level	Autotimer. Rotisserie.	73 10 0
Highline Radiant 670T	22x53½x24½	4-7in 2kW	13½x14½x16½	Top level	Autotimer.	59 17 0
Trimline Radiant 595T	18x51½x23½	1-7in 2kW 2-6in 1-65kW	12½x12½x13½	Top level	Autotimer.	45 10 0
Trimline 594(B)	18x51½x23½	1-7½in 2-2kW 2-5½in 1-2kW plates	12½x12½x13½	Top level		34 13 0
Hallmark 650	20x52½x21	2-7in 2kW 2-6in 1-65kW	14½x14½x15½	Under hob	Autotimer	53 10 0
ENGLISH ELECTRIC CO. LTD.						
Rapide 50 2050	18x50½x22	4-7in 2kW 1 2-in-1 Duplex control	12½x14½x15½	Under hob	Auto timer. Cooker can be lowered 2 inches	47 5 0
Rapide 51 2051	18x50½x22	3-7in 2kW	12½x14½x15½	Under hob	Cooker can be lowered 2 inches.	39 19 6
Rapide 52 2012	21x51x25½	3-7in 2kW	13½x13½x17½	Under hob		50 7 0
Rapide 53 2013	21x51x25½	3-7in 2kW 1-7in 2-2kW with 2-in-1 control	13½x13½x17½	Under hob		58 2 0
Rapide 54A 2014	21x51x25½	3-7in 2kW 1-7in 2-2kW with 2-in-1 control	13½x13½x17½	Under hob	Auto timer.	63 14 0
Rapide 56 2015	21x52½x25½	3-7in 2kW 1-8in 3kW with 2-in-1 control	13½x13½x17½	Under hob. Doubles as 2nd oven	Double - oven. Automatic. Superfast 3kW plate; hob light; cooking guides for ovens.	72 10 0

DOMESTIC ELECTRIC COOKER Survey

continued

Model	Dimensions (w x h x d in)	Hob	Oven (w x h x d in)	Grill	Features	Price
ENGLISH ELECTRIC LTD.—continued						
Rapide 57 2016	21x52½x25½	3-7in 2kW 1-8in 3kW with 2-in-1 control	13½x13½x17½	Under hob. Doubles as 2nd oven	As above plus 'Sentry Disc'. auto control on 1 plate	74 11 0
Build-in:						
Hob unit 2154	23x4x20	4-7in 2kW				39 0 0
Oven/Grill 2155	23x42½x23½		15x15½x15½	Below oven	Auto clock / timer. Spit - roaster.	61 0 0
S. I. ENGEL & CO.						
VF3	9½x8	0.75kW	—	—	White vitreous enamel	1 19 6
Robusta Single	9½x3x9½	1.2kW 7½in plate	—	—	—	5 10 0
Robusta Double	19x3x9½	2.5kW 1-7½in; 1-6½in	—	—	—	10 10 0
G.E.C. (DOMESTIC EQUIPMENT) LTD.						
DA.2519B	18½x48½x23½	2-7in rad. 2kW 1-6in rad. 1.3kW	12½x13½x14½ 2-3kW	Under hob 1.8kW	Auto-timer. Minute minder.	41 9 6
Carlton 3 de luxe						
DA.2521B	18½x48½x23½	2-7in rad. 2kW 2-6in rad. 1.3kW	as above	as above	as above	49 7 0
Carlton 4 de luxe						
DA.2624B	21x51x24½	4-7in rad. 2kW	14½x14½x15 2.6kW	Under hob 2.2kW	Auto-timer. Minute minder. Oven light. 5-piece re- movable oven.	61 19 0
Dorchester						
DA.2613B	21x56½x24½	as above	as above	Eye-level 3kW	As above plus gliding grill carriage.	71 8 0
Haute Cuisine						
DA.2615B	21x56½x23½	as above	as above	as above	As above plus Rotoroast	77 3 6
Haute Cuisine						
DA.2626	21x57x24½	as above	14½x15½x15½ 2.4kW	Eye-level 2.1kW	Grill, spit and kebab attach- ment. Auto-timer, Minute minder. Drop down door.	92 8 0
GEC Cannon						
DA.2704	42½x47½x24½	4-7 rad. 2kW	Two 14½x14½x15 2.6kW	Under hob 2.2kW	Auto-timer. Minute minder. Panostat Roastmaster probe. Rotoroast. Hob light. Oven lights.	126 0 0
Cavalcade						
DC.1	18½x20½x16½	2-6in rad. 1.1kW	13x11x12 1.5kW	Under hob	For use from 13/15A socket.	24 19 6
Little Treasure						
DC.1/2	18½/39/16½	as above	as above	as above	As above plus cabinet stand	29 14 6
Little Treasure with cabinet						
DA.2905	21x15x4½	—	—	2.1kW	Portable grill/spit	31 10 0
Foldaway	(closed)					
HOOVER LTD.						
Plus Four	21x54x26	4-7in	15½x15½x16 2.4kW	Under hob	One ring with dual circuit. Extras: Roasting spit, hob light	68 5 0
HOTPOINT LTD.						
6105	18x50½x23½	1-8in 2.6kW 1-7in 2.1kW 2-6½in 1.4kW	12½x14½x15½	Under hob	Autotimer/ring timer/clock. Lift up hob. Heat view controls	45 10 0
6112	21x51x26½	As above	13½x13½x17½ 2.6kW	Under hob	Lift up hob. Oven light.	49 0 0
6126	21x51x26½	1-8in 2.6kW 2-7in 2.1kW 1-6½in 1.4kW	As above	Under hob	Autotimer/ring timer/clock. Lift up hob.	62 10 0
6142	21x53½x26½	1-6½in 1.4kW 1-7in 2.1kW 1-7in 2kW 1-8in 2.6kW	As above	Under hob	Fluorescent hob light. Auto- timer/ring timer/clock	71 10 0
MOFFATS DOMESTIC APPLIANCES LTD.						
110	30x34½x26	4-7in 2kW	24x15½x20	Eye level 1.85kW	Heated drawer	115 10 0
95	24x58x26	As above	21x15½x20 2.25kW	As above	As above	99 15 0
99 and counter units		2-6½in 1.5kW 1-8in 2.25kW 1-6½in 1.3kW	21x15½x20 2kW	In oven	Counter Oven	116 11 0 46 4 0
150 Fiesta	30x65½x26	4-7in 2kW	Upper 21x14x14½ 2.2kW Lower 24x15½x20 2.5kW	In upper oven	Storage drawer	194 5 0
Self cleaning	30x48x28	2-8in 2.125kW 2-6½in 1.5kW	24x15½x19½ 2.5kW	In oven	Heated drawer	app. 200 0 0

DOMESTIC ELECTRIC COOKER Survey

continued

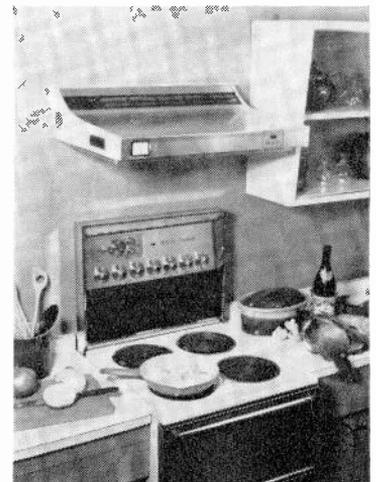
Model	Dimensions (w x h x d in)	Hob	Oven (w x h x d in)	Grill	Features	Price
REVO DOMESTIC APPLIANCES LTD.						
2352 Masterchef	21x54½x25½	4-7in 2kW	13½x13½x17½ 2.6kW	Under hob	Two ovens. Hob light. Pan minder. 2 in 1 plate. 'Clean-grill' tray. 'Clean-roast' tray. Oven light.	72 0 0
2351 Revochef	21x49½x25½	4-7in 2kW	13½x13½x17½ 2.6kW	Under hob	'Clean-grill' tray. 'Clean-roast' tray. Oven light	59 17 6
2353 Chef	21x51x25½	4-7in 2kW	13½x13½x17½ 2.6kW	Under hob	As above	61 10 0
2358 Minichief	18x48x22	4-7in 2kW	12½x14½x15½ 2kW	Under hob	'Clean-grill' tray. 'Clean-roast' tray	48 5 0
2341 Reliant Standard	21x45x21½	2-7in 2kW 1-10½inx8in 2-2kW grill boiler	14½x14½x15 2.1kW	Under hob	'Clean-roast' tray	36 10 0
2342 Reliant Deluxe	21x45x21½	2-7in 2kW 1-10½inx8in 2-2kW grill boiler	14½x14½x15 2.1kW	Under hob	'Clean-roast' tray. Utensil drawer	39 19 0
SELEX ELECTRIC (KIRKBY) LTD.						
Minicook	10x6x12	—	None	1.8kW	Table top cooker. Variable heat control. Grill pan included	7 15 0
SHARP SALES AND SERVICE						
KF-659	12½x9½x6	—	None	0.8kW	Frys and grills simultaneously	6 10 0
SIMPLEX ELECTRIC CO. LTD.						
Creda						
Commodore	20x34½x23½	2-7in rad 2kW 1 grill/simmer plate 1.5kW 13inx7in	14x14½x15½	Under hob	Lift up hob. Thermostatic oven control. Removable oven sides	32 0 0
Cameo	20x34½x22½	2-7in rad. 2kW 1 grill/simmer plate 1.5kW 13inx7in	14x14½x15½	Under hob	As above	39 19 0
Horizon 3	20x34x23½	3 rad. 2-7in 2kW 1-5½in 1.65kW	14x14½x15½ 2.5kW	Eye level	Lift-up hob, oven sides and top and shelf under grill removable. Folding plate rack—optional	42 10 0
Horizon 4	20x34x23½	4 rad. 1-7in 2.4kW 1-7in 2 kW 2-5½in 1.65kW	14x14½x15½ 2.5kW	Eye level	As above plus oven timer	55 10 0
Curzon	20x36x24	4 rad. 1-7in 2.4kW 1-7in 2kW 2-6in 1.65kW	14x15x14½ 2.5kW	Under hob	Large grill. Automatic oven timer. Removable inner glass door panel, sides and top of oven	58 10 0
Consort	20x36x24	4 rad. 1-7in 2.4kW 1-7in 2kW with pan temp. control 2-6in 1.65kW	14x14½x14½ 2.5 kW	In top oven	Colour glance controls. Automatic oven timer both ovens. Minute minder. Rosta-spit in top oven optional	70 0 0 76 0 0 (with Rosta-spit)
Constellation	40½x33½x23½	4-7½in Quick discs 1.6kW	Two ovens 14x15x15½ 2.5kW	One in each oven. 2.25kW	Full-width hob light. Rosta-spit in right oven. Sealed hob. Oven sides remove	99 15 0
Autoclean	24x34x23½	4 rad. 1-7in 2.4kW 1-7in 2kW with pan temp. control 2-6in 1.65kW	14x15x15½ 2.25kW	Eye level	Colour-glance control. Self-clean oven. Hob, grill and warming drawer can be used during oven cleaning. 60W full-width hob light. Automatic oven timer	110 0 0
Cavalier (four-plate)	20x36x22½	4 rad. 2-7in 2kW 2-6in 1.65kW	14x15x15½	Under hob	Automatic oven timer. Black glass control fascia. Two-level, slide-away grill. Deep storage compartment	49 0 0
Cavalier (three-plate)	20x36x22½	3 rad. 2-7in 2kW 1-6in 1.65kW	14x15x15½	Under hob	As above	43 10 0
Build-in: Credaplan	Oven: 21x32x21½	—	14x14½x14½	Separate comp. over oven. 2kW	Optional extras: Oven timer: £7.5.0. Rosta-spit £5.5.0 Can be mounted in work surface of choice	52 10 0 Discs only 4.15.0 each

DOMESTIC ELECTRIC COOKER Survey continued

Model	Dimensions (w x h x d in)	Hob	Oven (w x h x d in)	Grill	Features	Price
SIMPLEX ELECTRIC CO. LTD.—continued						
Creda Composite	Oven : 23½x81x21 Hob : 42x36x21	4 Quick Discs 7¼in 1.6kW Controls mounted on front of unit	14x14½x14½ 2.5kW	Separate comp. over oven 2kW	Four cupboards in complete unit. Quick Discs in anti- spill tray. Sides and roof of oven removable. Rosta-spit optional 5 gns.	126 0 0 including cabinets
TRICITY COOKERS LTD.						
Popular 628	18x42x23½	2-1kW	14x12¼x15½	Under hob	Convertible to three-plate hob	30 5 0
Electra 670	18x36x23½	3-7in 2kW	14x12¼x15½	Under hob	Extra: Stowaway fan heater	35 0 0
Contessa 3 673	18x33½x23½	3-7in 2kW	14x12¼x15½	Under hob	Trivit surplus fat drainer. Stowaway fan heater extra	42 0 0
Contessa 4	18x51x23½	4-7in 2kW	14x12¼x15½ 1.8kW	Under hob	Extra: Stowaway fan heater	49 12 6
Viscount 676	21x51½x26	4-7in 2kW	15x15½x15½	Under hob	Extras: Stowaway fan heater. Auto oven timer	58 17 6
Caprice 2667	21x60x24¾	4-7in 2kW	15½x15½x16	Eye-level		79 17 6
Marquis 674	21x53x26	4-7in 2kW	15x15½x15 2.4kW	Under hob	Hob lighting, Stowaway fan heater extra	67 10 0
President 674A	21x52¾x26	4-7in 2kW	15x15½x15	Under hob	Extras: automatic Rotis- series with kebab and skewer attachments. Built-in auto- timed fan heater	74 19 4
Build-in:						
800 (Oven)		—	Two 20½x38¾x21½	In upper oven		50 0 0
2128/2138 with 2248 Hob	23x42½x20	4-7in 2kW-1 with pan watcher	15x15½x15½	Below oven 2kW		61 10 0
UPO (UK) LTD.						
4POFL	35½x23¾x24½	2-1.5kW 1-2kW 1-2kW thermostatic	2.05 cu ft 2.4kW	In oven	Choice of upper or lower heat. Rotisserie. Auto timer	72 9 0
Build-in:						
2PT	4½x21x13	1-1kW 1-1.2kW	None	—	High-speed plates	On application

and where there's a Cooker, there's need for a
COOKER HOOD from this list

Model No.	Type	Light incl.	Finish and Special Features	Price £ s. d.
ADVANCE DOMESTIC APPLIANCES LTD.				
Scholtes				
6560 24in	I		} Stainless steel	67 2 0
6580 32in	I			73 3 0
6590 36in	I			75 18 0
65100 40in	I			80 6 0
ANDA LTD.				
D.6 24in	C/F	Yes	White enamelled	29 0 0
D.6 30in	C/F	Yes	White enamelled	29 0 0
AUTOCON MFG. CO.				
Univent	C/F	Yes	White painted aluminium	19 19 6
BAHCO LTD.				
FTG-016	D/F	Yes	White stoved enamel. 27¾in or 23¾in wide; two speed fan; automatic back-draught dam- per; washable filter.	41 15 10



Tricity model CH.1.

stock the cooker hood with the big name behind it!

TRICITY

Here is a cooker hood that really deals with steam and cooking smells—fast and effectively. And at a price everyone can afford. Beautifully styled for the modern home, the Tricity Cooker Hood is a real technical and design break-through. Just look at the facts.

Tangential fan principle—

2-speed motor

The powerful tangential fan draws air into the *whole* area—so there's no concentration points to become clogged and choked. Boost switch to deal with particularly strong cooking smells.

Up-to-the-minute styling

Tricity Cooker Hoods come in 2 distinctive stylings. Model CH.1. with brushed aluminium finish and white moulded end-pieces. Model CH.2. with anodised copper finish and charcoal end-pieces. They add elegance to any kitchen.

Light-weight—no ducts—

and so simple to install

The Tricity Cooker Hood is a little over half the weight of ordinary cooker hoods and carries nearly all its weight at the back of the unit, against the wall. And it's so simple to install. No ducts or open-air vents are required (no loss of house warmth). Four wall screws fix into the back of the unit to ensure perfect balance and stability.

Dual filters—one for grease, one for odours

Nearly twice the normal filter area for the same filter thickness. The activated filters are charcoal and silica-gel for maximum steam and smell absorption.

Ideal for all cookers—

built-in hob light

The cooker hood operates perfectly with all cookers—gas, solid fuel, or electric. And the built-in floodlight throws an ideal working light on the hob.

A choice of perfume pads for fragrance

The hood comes complete with two perfume pads for sweetening the kitchen air. Any fragrance sprinkled on these pads will circulate the aroma.

All this for just

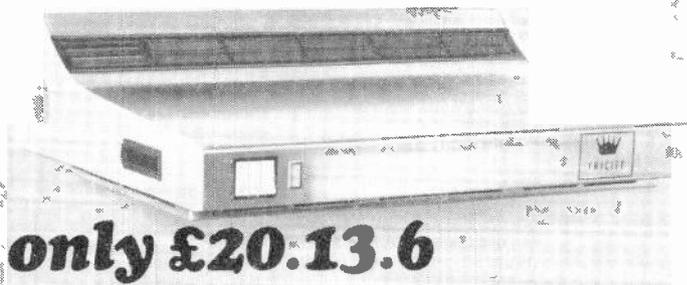
Model CH.1. **£20. 13. 6**

Model CH.2. **£23. 19. 4**

Recommended retail prices

Big promotion

The Tricity cooker hood will be advertised in the national newspapers and leading home interest magazines—eye-catching point-of-sale and full colour literature is available in quantity. Contact your usual Tricity supplier for supplies of the Tricity Cooker Hood now!



only £20.13.6



Tricity Cookers Ltd.,
Apex House, Twickenham Road,
Feltham, Middlesex.

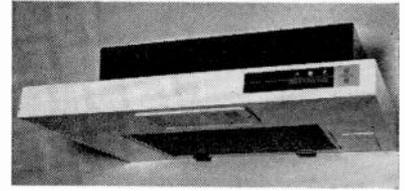
Firth Cleveland Licence—Eck Laing

COOKER HOODS—continued

Model No.	Type	Light incl.	Finish and Special Features	Price		
				£	s.	d.
GEC (DOMESTIC EQUIPMENT) LTD.						
DA 2401	C/F D optional	Yes	White stove enamel. Fire prevention device; 24in wide.	31	10	0
DA 2402	C/F D optional	Yes	As above, 28in wide.	33	12	0
GOLD STAR DOMESTIC APPLIANCES LTD.						
Popular 24in	C/F	Yes	White stove enamel or copper-tone finish.	32	11	0
De luxe 24in	C/F	Yes		39	12	0
De luxe 36in	C/F	Yes		48	3	0
HOOVER LTD.						
4704	C/F	Yes	White/charcoal grey	30	9	4
POWER-LECTRIC LTD.						
H8A	Recirculatory C/F	Yes	Anodised aluminium, white sides.	20	12	0
H8C	Recirculatory C/F	Yes	Anodised copper, black sides.	23	18	8
H8S	Recirculatory C/F	Yes	Stainless steel, black sides.	26	3	0
H8O	Recirculatory C/F	Yes	Oak veneer, black sides.	On app.		
H8T	Recirculatory C/F	Yes	Teak veneer, black sides.	On app.		
RIMA ELECTRIC LTD.						
521	D/F + grease filter	Yes	White 24in Ductless. Flat top for fixing beneath fitted cupboards.	20	12	11
161	As above	Yes	24in Ductless	28	13	10
162	As above	Yes	30in Ductless	29	15	10
163	As above	Yes	36in Ductless	30	17	11
501	F + grease filter	Yes	24in Ducted	28	13	10
502	As above	Yes	30in Ducted	29	15	10
503	As above	Yes	36in Ducted	30	17	11
THERMOR ELECTRICAL APPLIANCES LTD.						
CF10	F/D	No	White plastic	15	16	4
TRICITY COOKERS LTD.						
CH1	C/F	Yes	Brushed aluminium with white end pieces. Dual filter; perfume pads.	20	13	6
CH2	C/F	Yes	As above but anodised 'copper' with black end pieces.	23	19	4
UPO (U.K.) LTD.						
20 Ext 20in	D	Yes	White stove enamel. Functions as (a) room extractor (b) split level installation extractor (c) cooker extractor.	37	16	0
24 Ext 24in	D	Yes				
28 Ext 28in	D	Yes				
UTILAIR LTD.						
Condense	—	No	White or cream polyurethane paint.	4	19	6
Extract	F/D	No	As above; 2-speed fan.	12	15	0

In the column *Type*: C=charcoal filter; I=negative ion;
F=fan assisted; D=ducted.

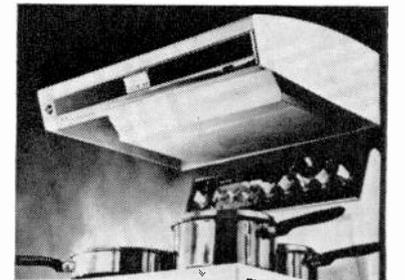
Next month: our regular annual survey of
the Electric Blanket Market
Also—a pre-view of the August Trade Shows



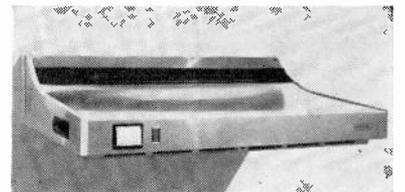
Bahco model FTG-016.



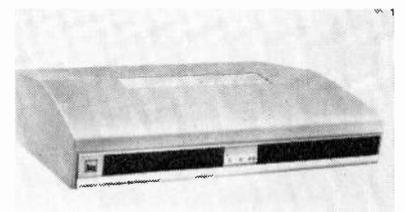
Gold Star de luxe 24in ductless.



Hoover model 4704.



Power-Lectric model H8A.



Rima model 521.

HAVE YOU HEARD ABOUT



MOBILE WHOLESALE E383

WILLOW VALE ELECTRONICS, the service department wholesaler, has recently fitted out a special van as a complete mobile wholesaler with a full range of



spares, valves, transistors and components. The van is at present operating in Scotland and dealers who wish to see it should contact the company's representative, R. G. Keillar, 2 Chestnut Place, Johnstone, Renfrew. Tel: Johnstone 23619.

HEATSTORE HAVE MOVED E384

AS FROM JUNE 1st last the sales order office, service department and the spares department of Heatstore have moved from Northampton to P.O. Box 64, Manchester Road, Higher Ince, Wigan, Lancs. Tel: Wigan 43221. The marketing department will remain at Northampton until September 1st.

FYNA MACHINE TOOLS E385

A NEW COMPANY, trading as Fyna Machine Tools is manufacturing and marketing small machine tools, various household appliances and battery operated low-voltage equipment for both domestic and industrial usage. Enquiries from dealers are invited.

LIGHTSHOW 69 E386

MORE THAN 130 companies in the lighting industry have already applied for a total of over 50,000sq ft of display space at the 1969 Lightshow International which is scheduled to be held at Olympia from January 13-17. The exhibition is sponsored by ELFA, and in conjunction with CoID the Association is sponsoring a design competition for lighting fittings to be shown at Olympia. BLC will organise a major international conference on lighting to be held concurrently with the show.

GOING METRIC E387

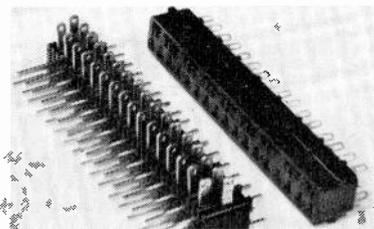
AS PART of the national plan for the adoption by industry of the metric system, a two-day national conference: The Change to the International System (SI) Units for Energy, is to be held at Church House, Westminster on October 31st and November 1st. The conference will be specifically designed for senior engineers, technical directors and senior designers. Amongst specialist supplementary papers will be ones dealing with refrigeration, the electricity supply industry, and heating, ventilation and air conditioning.

PERSONALISED TRAINING E388

THE SUCCESS of their one-day *Managers as Trainers* courses throughout the country, has prompted the Retail Trades Education Council to offer an extension of the scheme whereby if any organisation has 15 or more managers wishing to take part, the RTEC will present the programme, tailored if necessary to the firm's requirements, on the firm's own premises.

VERSATILE EDGE CONNECTOR E389

MAKING external connections to printed wiring boards is simplified by the use of a moulded strip containing 33 terminals



which can be cut into lengths of four terminals upwards. The connector is made by McMurdo Instruments.

TEST FOR TRANSWORLD RADIO E390

A PHILIPS Transworld a.m./f.m. portable radio will undergo a gruelling test when it is taken on the Single-Handed Transatlantic race by South African entry Bruce Dalling sailing a 50ft ketch, *Voortrekker*. He will use it particularly to obtain meteorological reports and time checks put out on the long-wave band.

FAST LETTERING E391

GRAFOREL INSTANT LETTERING provides an easy way to make up attractive display signs such as the one seen above. The letters are in self adhering vinyl, black or white, and are simply peeled off their wax paper backing. They will adhere to almost any clean surface but can be easily removed without damage. Stock sizes vary from 3/4in to 4in, in a choice of type faces.

B & O TRAINING COURSES E392

THE UK DIVISION of Bang & Olufsen has embarked on a programme of one day service and sales training courses aimed at increasing the knowledge and understanding by their dealers and service agents of the Beolab high fidelity system. Full details are available from the company.

20,000 COLOUR SETS E393

FIGURES issued by the GPO showed that up to the end of March this year some 20,428 colour TV licences had been taken out in addition to the total of well over 15 million ordinary TV licences. Dealers' demonstration licences now total 5,064. During February and March dealers notified the GPO of nearly a quarter of a million television sales and rentals.

MUSICAL SPLENDOUR E394

THE RECENTLY CONCLUDED series of concerts, designed to demonstrate the full musical potential of Philips Philicordas, proved such a success that many requests have been received for a follow-up series. A souvenir of the series is available in the form of a new lp recording of the highlights of the concert given at the Albert Hall, Nottingham. The disc is called 'An evening of musical splendour' and features Dr Handel Evans, George Blackmore, Kenneth Baker and his jazz trio, amongst others.

RADON DISTRIBUTORS E395

RADON INDUSTRIAL ELECTRONICS have appointed Geoffrey Wood, wholesalers of Abernethy, as sole distributors for their products in Scotland. Main distributors for London, Essex, Surrey and Kent will be Edmundsons Electrical Wholesalers of Croydon.

MORE OVERLEAF

HAVE YOU HEARD ABOUT continued

If you know which end of this thing to hold...

...you're all set to enjoy Britain's only true 'fit-it-yourself' car radio!

Price 19 gns.

ELPICO
LEE PRODUCTS LTD
10-18 CLIFTON STREET, LONDON EC2

If you know which end of this thing to hold...

all set to enjoy Britain's only true 'fit-it-yourself' car radio!

ELPICO
LEE PRODUCTS LTD
10-18 CLIFTON STREET, LONDON EC2

If you know which end of this thing to hold...

all set to enjoy Britain's only true 'fit-it-yourself' car radio!

ELPICO
LEE PRODUCTS LTD
10-18 CLIFTON STREET, LONDON EC2

Britain's only 'fit-it-yourself' car radio—these ads sell it!

For the first time, you can supply a real 'fit-it-yourself' car radio—needing only the ability to use a screwdriver to fit.

The Elpico gives the finest reception a car radio ever provided. Why...? Because every British-made Elpico is fitted with space-tested silicon transistors, for absolutely faultless noise-free reception. The world's finest car aerials are available to match the world's finest fit-it-yourself car radio: four Elpico car aerials, from the Concorde roof-mounting aerial at £2 5s., to the C.A. 55E fully automatic electric aerial at £9 9s.—the very last word in car aerials.



19 gns retail (tax paid)

All prices recommended retail.

ELPICO

Lee Products Ltd., 10-18 Clifton Street, London EC2

SPARES FOR HOTPOINT SUPERMATIC E396

DOMESTIC ELECTRICAL COMPONENTS of Southgate, London, specialists in the manufacture and distribution of washer and vacuum cleaner spares, have recently added a wide selection of parts suitable for the Hotpoint Supermatic to their list. Copies of their current list are available on request.

BAIRD GO NORTH E397

BAIRD TV DISTRIBUTORS have left their London office and moved to the Baird factory at Bradford. The new address is Beckside Works, Lidget Green, Bradford 7. Tel: Bradford 75555.

MULLARD MEETINGS E398

THE 1968/69 season of Mullard Meetings is now under way. The series which was started in 1953, last year attracted a record audience, and the total audience since 1953 is approaching a quarter of a million. The present series continues the colour TV theme of last year with a talk on setting-up procedure in which degaussing, purity convergence and grey scale tracking are dealt with in detail. Basic principles are explained rather than techniques for individual sets since these vary according to the maker's recommendations. The talks give vital information which the colour service engineer needs to have over and above that he already possesses on b & w TV. The talks are staged by Ian Nicholson, manager of Mullard Films and Lectures, with his assistant Philip Hunt. Between them they travel over 50,000 miles a year throughout the country.

TELERECTION EXPAND E399

MODULAR CONSTRUCTION of the assembly plant and an increase in floor space has achieved a 30% increase in productivity for Telerection Products. Full air conditioning, up-to-date machine tools and programmed machinery have been installed.

SONY GO IT ALONE E400

AS FROM JULY 1st the Sony Corporation will maintain its own marketing facilities in the UK, and the trading relationship previously existing with Technomark will be dissolved.

DECIMALISATION AND THE RETAILER E401

THE RETAIL TRADES EDUCATION COUNCIL has arranged a series of one-day seminars under the above title to be held throughout the country in the second half of this year and early in the new year. The subjects covered will include: a general description of the new currency and the changeover plan; pre-preparation of equipment, forms and systems; customers' reactions based on experience abroad; supplier co-operation; how the banks can help; training for decimalisation. The first course will be held at Kingston-on-Thames on July 3. Other courses are planned for Manchester, Leeds, Birmingham, Ipswich, Bristol and Bournemouth.

DEE DISCS E402

A NEW BRAND NAME appears in the pop record scene—it is Flair released by Hi-Fidelity Musical Products. The discs are mini-lp's each carrying 6 titles and selling for 8s. 6d. The announcement states that every record will carry the personal endorsement of Simon Dee on the sleeve, but the sample sleeve we received showed no signs of this.

USE THE PRE-PAID FORM ON PAGE 296 TO OBTAIN FURTHER DETAILS OF ANY OF THE ABOVE ITEMS, QUOTING THE REFERENCE NUMBER.

CROXLEY'S COLUMN

A PROBLEM FOR INDEPENDENTS

THE WIDESPREAD GROWTH of h.f. multipair relay systems is becoming a real problem for the independent retailer. Results of the survey, recently carried out by the RTRA among dealers in areas where these systems are installed, seem to make this abundantly clear. Three key questions in the survey show the position.

Asked whether the h.f. relay system caused any loss of trade to their own shops, 55 said yes and only three said no.

When asked whether they considered there was equal trading opportunity between the independent dealer and the h.f. relay company, the proportion was 53 noes to only five who replied yes.

A similar disparity was apparent when retailers were asked whether they considered the system allowed freedom of choice to the customer, with 51 dealers against and only six for.

Most retailers—44 to seven, with eight don't knows—thought that an insufficient range of terminal units was available. A majority thought that the picture quality from the system, with an average terminal unit, was not comparable with reception from a standard off-air receiver. The proportions were 35 against, 22 for and two don't knows.

A total of 29 thought inverters provided pictures of good quality and sufficient bandwidth on standard receivers but 22 did not, with eight don't knows. Only one dealer said that he had found it possible to operate a standard receiver on the h.f. relay system without using an inverter unit.

Only six dealers stated that inverters were available to them (in one case the retailer was charged 12 gn) and 46 said that inverters were available direct to the customer. There were four replies to the effect that inverters were available both ways, and three don't knows. 31 dealers said delays were experienced in obtaining

inverters from the relay company, 15 said they were not, and 13 did not know.

It was certainly not universally considered that inverters were reliable in operation. While 36 thought they were, 11 thought they were not, with 12 don't knows. Incidentally, the respondents to the survey indicated that in twice as many cases the relay company charged for the inverter as supplied it without charge.

Retailers also found, by a majority of 29 to 22, that the use of an inverter caused servicing problems.

A majority of dealers said they did not have to obtain system connection leads from the relay company in order to connect a terminal unit to the system and a small minority experienced difficulty in obtaining supplies of leads or had to manufacture their own from component parts purchased from the company.

WEIGHT TO BEAR

At the RTRA conference at Bournemouth it was clear that the problem of the expansion of h.f. multipair relay systems was being taken very seriously. It is another instance of the large organisation bringing its weight to bear and thereby being likely to cause suffering to the smaller units.

The big h.f. relay companies fully realise the potential power which they are able to exert. They have a very strong lobby. It is alleged that they are able to bring great pressure to bear on the local authorities responsible for letting the contracts.

We have become used, over recent



Susan the elephant was borrowed from a visiting circus to parade through the streets of Cardiff to advertise a sale of Hoover products at the Mackross store.

years, to seeing more and more large organisations emerge, not only in the radio and television field. Surprisingly, perhaps, the present government has encouraged this trend. The independent everywhere is being more and more squeezed and in many cases squeezed out of existence altogether.

This may be a tidy arrangement, but it cannot be good for the general economic health of a country, stifling initiative and individual development and growth. At the same time it ominously restricts the choice of the public and can lead to the customer getting a much worse deal.

Not only have larger and larger organisations begun to get the praise at the expense of the smaller free enterprise businesses, but even the concept of lobbying is becoming considered increasingly respectable in official and government circles.

PRESSURE GROUPS

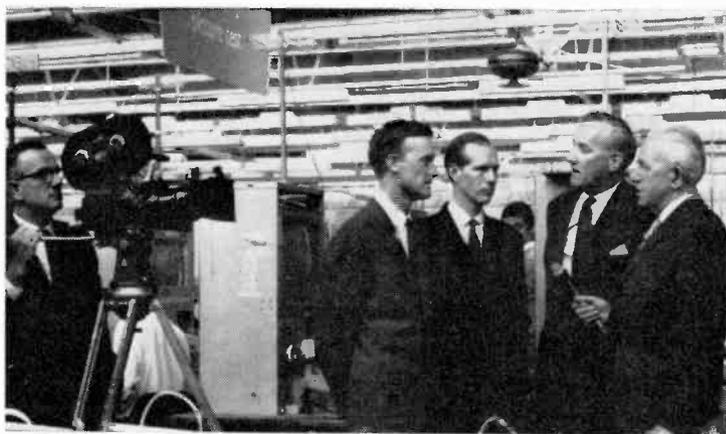
Always previously, pressure groups, if not actually looked on with disfavour, were taken for what they are—attempts to over-ride other interests. Now they are regarded as convenient in that they put forward a group point of view, suggest ideas and so on.

Independent dealers do not have a strong lobby; there is no comparable corporate voice to speak for them in the same way. One's first reaction is that there should be no need for them to lobby. It may be difficult for local authorities to search out the facts for

themselves and give the small dealers fair shares but that is surely what should be done. As we do not live in an ideal world it tends, of course, not to happen.

Apart from lying down and accepting the circumstances, the independents are therefore put in a position where they have to consider what possibilities there may be of expressing their own views strongly. They have to make themselves known from the beginning; it is no good if they do not know the situation until it is too late anyway for effective action to be taken—the kind of situation which arises so frequently nowadays.

Taking steps in this direction will not be easy; but where action is necessary strenuous attempts are worth making.



The BBC's Made in Britain programme—which spotlights export success stories—recently featured the Pye Group's Lowestoft factory. Before the camera here are W. Reid, T. Sullivan and J. T. Griffiths of Pye with Bertram Mycock of the BBC.

PROGRESS AT BEAB

PROGRESS CONTINUES at the British Electrical Approvals Board for Domestic Appliances. In the report and accounts for 1967 it is stated the rate of application received has been maintained, though not increased to any

marked degree. Changes in procedure are intended to reduce the time taken to approve appliances.

Of 508 applications during the year, 330 were accepted, but more certificates will be granted with the completion now of the testing programme for thermal-storage room heaters.

To help manufacturers, a 'pre-production' model which may not yet be fully complete, can be tested, and

production models will then later be checked.

Far sightedly, the BEAB, though it works to recognised published standards only, is to recognise radical developments as well, if a comparable standard of safety and durability is achieved. Otherwise the most original designs could fall by the wayside.

More and more categories of appliance are being brought within the scope of the BEAB, including electric



We stacked 220 bottles of scotch on our STRONGHOLD steel shelving

THINK WHAT YOU COULD PUT ON IT!

Shelf-room. As much as you need, for a thousand things you stock: steel bearings; steam irons; fashion shoes; name it! Six rugged shelves, adjustable every inch, for all-size-of-stock storage. Heavy stove enamelled, grey or good-service green. In 6ft. 1in. high, 34in. wide, 1ft. deep bays, delivered ready for assembly (even the spanner provided!) in 20 minutes. See the rest of the N. C. Brown range!



N.C. BROWN LTD.

pacesetters in storage equipment

Send your FREE BROCHURE or Send
(how many) bays of
steel shelving @ £3.15s.
in green grey (tick
which)

NAME
ADDRESS

Dept. REREagle Steelworks, Heywood, Lancs.
Tel: 69018. London: 25-27 Newton St., W.C.2.
Tel: 01-405 7931



£3.15s

BRAND NEW

carriage free
on mainland

CASH WITH ORDER

knife sharpeners and carving knives, waste disposal units and kitchen utensils such as frypans and saucepans.

On the publicity side, BEAB is also expanding, making the public increasingly aware of the scheme, particularly through the booklet, *Shop Safe—Let BEAB Protect Your Family*.

A DREAM COMING TRUE

IN THE EARLY DAYS of nuclear power it seemed a very reasonable dream that atomic energy would have extensive peaceful uses and could indeed perhaps revolutionise our supplies of domestic fuel. Long years went by, and despite pronouncements that nuclear power stations were being set up, the dream faded somewhat. There were many difficulties, and the small quantities of electricity generated were very costly.

At the sixth International Congress on Electro-Heat, R. V. Moore, managing director of the Reactor Group of the United Kingdom Energy Authority, seemed, however, very hopeful. He reassured that the cost of electricity from nuclear power was low in itself, "about one-third to a quarter of that possible from coal or oil."

The obstacle all along has been the high cost of capital equipment, particularly when such equipment must inevitably still be at something of an experimental stage.

Mr Moore said, "As technology advanced and experience grew, the capital cost of successive nuclear power stations fell. Costs are still falling and fast breeder stations are introduced there will be a further reduction in fuel costs by a factor of about two, due to the fact that while operating they breed more new fuel than they themselves consume."

The future, so far as can be seen at present, certainly lies with the fast breeder reactors. Costs might indeed be brought down so far that it would be profitable to utilise the more expensive sources of uranium, including recovery from sea water, which contains about three micrograms per litre. Nuclear power from the sea would certainly be interesting—a rival to North Sea gas.

It looks as if after all the dream may eventually come true, and everyone whose business depends on electricity will vastly benefit from the development of nuclear power.

SORRY—OUT OF STOCK

ALMOST ONE in a dozen dealers—eight per cent—had no TV sets in stock, and 39 per cent held less than five units when the RTRA recently surveyed 1,736 outlets to ascertain stocks held. The Association comments that "whilst we hope that this unusual state of affairs will not happen again, no one can guarantee in an industry like ours that this is the case."

This suggests a serious reflection on the industry. The Association points out, "with increasing mergers and takeovers in the industry it would seem that even with the best of intentions by all concerned shortages are likely to occur in the future."

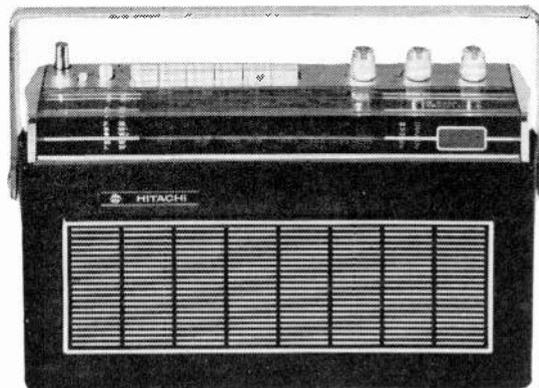
The best of intentions are not good enough, and we all know the road which is paved by good intentions. Whether so many mergers are a good thing or not, and there is at least as much evidence that they are not as that they are, it is clear that the prime need under all circumstances is to keep the flow of products moving.

Mergers and takeovers are intended to produce benefits and the main benefits should be production of better designed models at better prices and, above all, in the quantities in which they are needed when they are needed.

Even at 39 gns HITACHI stays in the best-seller class

People who *know* a first-class transistor radio when they see one—people who don't mind paying extra money for extra quality—these are the people who have put and kept Hitachi in the best-selling class, despite the fact that the Hitachi KH.1325 runs as high as 39 gns, tax paid. Of course, there are Hitachi models considerably less expensive—but all are distinguished in design no less than in appearance: and so far as quality is concerned, Hitachi well deserve their slogan —"the most wonderful radios in the world!"

Look at these five Hitachi models for style!



KH.1325 Illustrated above. With 13 transistors and 5 wavebands, this is the most fantastic Hitachi quality ever! Includes radar tuning and auto button for car use.

39gns tax paid

WH.1160 Compact, fully-transistorized multi-purpose receiver, in durable genuine leather cover. Four bands: Standard Broadcast, Long Wave, Marine, Short Wave. Plus D.F. Loop Aerial and beat frequency oscillator.

29gns. tax paid

WH.837E 8-transistor portable. Long, Medium and Short Wave. Telescopic aerial. Complete with personal earpiece and car aerial socket. **15½gns.** tax paid.

KH.980L 9-transistor portable. Super-elegant appearance. Long, Medium and FM Wavebands. Cut-away leather case and leather pouch for earpiece **18gns.** tax paid.

KH.920L Luxurious portable, covering Long, Medium, Short and FM wavebands. For both home and outdoor reception. In super-durable case, it represents today's finest value for money **26gns.** tax paid.

All prices are recommended retail.



HITACHI

Lee Products (Gt. Britain) Ltd. 10-18 Clifton Street, London EC2
Sole United Kingdom Distributors

WITWORTH TRANSFORMERS LIMITED
Dept. R.E.R. *, 26 All Saints Road,
North Kensington, W.11.

Telephone: 01-229 9071 9 a.m. till 5.00 p.m.

LIST OF LINE OUTPUT TRANSFORMERS IN STOCK

EKCO U25 TYPE
TC208 TU209 T209/1 T221 T231 T231F T248
TC267 TC267/1 T283 T284 T293 T310 T311
TGC316 T326 T327 T330 T330F T331 TCG337.
All at £2 10s. Od. each.

EKCO U26 TYPE
TMB272 at £2 10s. Od. each.

FERRANTI U25 TYPE
T1001 T1002 T1004 T1005 T1011. All at £2 10s. Od. each.

FERRANTI U26 TYPE
TC1012F T1027 T1027F TC1028 T1023 T1023F
T1024 T1025. All at £2 15s. Od. each.

FERGUSON
305 306 307T 308 315317 406 408 416T 436 438. All
at £2 10s. Od. each.

H.M.V.
11865 1866 186 1868 1869 1870 1872 1874 1876
895. All at £27 10s. Od. each.

PYE
17TCDL CS17 CS17F 17CS. All at £3 0s. Od. each.

PYE 200 & 400 at £2 10s. Od. each.

LIST OF INSERTS IN STOCK

BUSH
TV53 TV56 T57 TV57 TUG58 M59 TUG59 TU62
TU63 TV66 TU67 TUG68 M69 TUG69. All at
£1 10s. Od. each.

COSSOR
R17A 930 931 933 935 937 938 938A 939F.A.
940 942 942B 943 944 946. All at £1 15s. Od. each.

EMERSON
E700 E701 E704 E707 E708 E709. All at 30s. each.

FERGUSON
203 204 205 206 214 235 236 244 245 246. All at
£1 10s. Od. each.

FERRANTI
14T5 14T6 17K5 17K6 17SK5 17SK6 17T5 17T6. All
at £1 15s. Od. each.

K.B.
PV40 PV100 NF70 OV30 QV10 QV30. At
£1 15s. Od. pair.

PYE
VT4 V4 VT7. At £2 0s. Od. each.

REGENTONE
10-6F.M. 10-17F.M. 1021 F.M. T21. At £1 10s. Od.
each.

INVICTA
T118 T119 T120. At £2 0s. Od. each.

PHILIPS STELLA
1768U 2168U. ST8617 ST8521 ST8917.

We can exchange these for reconditioned units at
£3 0s. Od. each

TERMS: Cash with order or C.O.D. Please add
4s. for postage. C.O.D. orders will be charged
6s. extra.

Transformers guaranteed 3 months from date of
invoice.

SERVICE DATA SHEET BINDERS

BINDER No. 1 (small size)	BINDER No. 2 (large size)
10/6	12/6
post free	

* Simple spring clip action * No need to punch holes
* Sheets can be easily removed * Dark red binding with gold titling

RER, 46 Chancery Lane, W.C.2

CLASSIFIED ADVERTISEMENTS

Rates: 1/- per word (minimum 12 words) per insertion. Box Number 2/6 extra. Series rates on application. Copy and remittance should be sent to Classified Advertisement Manager, RADIO and ELECTRICAL RETAILING, 46 Chancery Lane, W.C.2, before the 10th of each month preceding publication. Classified advertisements must be prepaid.

FOR SALE

ALUMINIUM Extension and Roof Ladders for aerial riggers, finest obtainable. Illustrated catalogue from Lyte Industries Ltd. (Dept. RE), Rogerstone, Newport, Mon. Tel: Newport 58351.

AVO ALL MODELS, TAYLOR, PULLIN and WESTON, INDUSTRIAL and PRECISION MULTI and SINGLE range ELECTRICAL MEASURING INSTRUMENTS REPAIRED. Competitive Prices. Quotes given. **COATES-CLARKE (SERVICES) LIMITED, 110a ST. MARGARET'S ROAD, HANWELL, LONDON W.7.** Tel. 01-567 6972. Formerly of 59 Abbots Road, Southall, Middx.

COMPONENTS galore. CRTs, valves, transistors, tools, Electrolube. All your service requirements at Willow Vale, "The Service Wholesalers", 69 Station Road, Hanwell, London, W.7. Free catalogue.

ENGLAND'S Largest Washer Stocks—Second-hand and Reconditioned. Delivered anywhere. Washers bought. Trade visitors welcome. Price list: Washing Machine Company, Roach Mill, Heywood, Lancashire. Tel: 60638.

KARDEX, Roneo-Dex, Shannovue, etc., as new.—J. H. Weston Co., 9 Mountfield Road, London, W.5.

KARDEX, Roneo-Dex. Office and domestic equipment, new reconditioned.—Bradley, 184A Landseer Avenue, Manor Park, E.12. 478-5157.

PHILIPS 625 UHF Conversion Kit. Complete panels Escutcheon Kit and Knobs, 17s. 6d., plus 2s. 6d. postage.—Willow Vale, "The Service Wholesalers", 69 Station Road, Hanwell, London, W.7.

TELEVISIONS. 80 Pye C10 LB first £100. 500 miscellaneous. Sets from 30s. each. 17-inch slimline TVs working from £9. Over 100 19-inch sets of all makes mostly working from £16 each. Quantity delivery arranged. Tel: Bradford 65670. Thornbury Trade Disposals, 1043 Leeds Road, Bradford 3.

UHF TUNERS 30s., brand new, exact replacements. Why bother to repair when you can buy new at 30s.—Willow Vale, "The Service Wholesalers", 69 Station Road, Hanwell, London, W.7.

WASHING MACHINE PARTS. Return of post service. Send for lists.—Washer Spares Limited, 189 Halliwell Road, Bolton. Tel: 26620.

WANTED

GARRARD AND B.S.R. Changers urgently wanted; also Cartridges. No quantity too large. Tel. CROYDON (Surrey) 5974.

WANTED—S/H TVs. Complete warehouses, factories cleared. Spot cash paid. Unwanted stock or spares, etc. Bulk buying is our speciality. We clear completely within 24 hours.—C. & C. Domestic Appliances, 44 St. Peter's St., N.1. 01-226 0467.

AGENTS REQUIRED

RELIABLE AGENTS required calling on the Electrical and/or Hardware Trades covering the following areas: (a) Somerset, Devon and Cornwall; (b) North Wales. Box 419.

EXHIBITION FACILITIES

GRAND HOTEL, HARROGATE. The North's pre-eminent trade fair hotel; 200 rooms, vast lounges and car parks, fully licensed. Ideal for Radio, TV and Audio Exhibitions. 60,000 sq. feet carpeted and curtained. Exhibition Rooms may be rented 'en bloc'. Tel.: 4631.

SALES REPRESENTATIVE

DECCA RADIO and Television require a Sales Representative to cover North and North West London, Bucks., Herts., Middlesex, Oxford and Northants. Full details of past experience should be sent to Personnel Office (RT/97), Decca Radio and Television, Ingate Place, Battersea, London, S.W.8.

REPAIRS

ALL MAKES OF ELECTRIC BLANKETS & PADS REBUILT, REPAIRED, SAFETY CHECK - OVERS, VOLTAGE - CHANGE-OVERS, PERFORMANCE - IMPROVEMENTS

(No American style Overblankets, please)

CENTRAL ELECTRIC BLANKET REPAIR AGENCY
TODMORDEN, LANCS.
Tel.: Todmorden 3151

FREEZE-IT



FOR SPEEDY TRANSISTOR REPAIRS

6oz. Aerosols with Applicator **9/6**

From your wholesaler, or write to:-
SERVISOL LIMITED
Coopers Building, Church Street, Liverpool 1.

SERVICES

ALWAYS DEPEND ON STAR for your aerial installations. 12 months absolute guarantee assures you of the best.—Star Aerial Services Ltd., 63 Harmood St., N.W.1. Gul. 7686/6729.

ELECTRIC BLANKETS repaired or rebuilt to latest British Standards.—Johnson & Calverley, Crescent Buildings, 1 Half Moon Street, Huddersfield, Yorks.

NATION WIDE DEBT RECOVERY. Reasonable commission payable on amounts recovered only.—S.P.D.A., 118 Colin Gardens, London, N.W.9.

RADIO & ELECTRICAL RETAILING

Information Service

To obtain further information on any product or service mentioned in the Editorial or Advertisement pages of R.E.R. simply place a tick in the appropriate box on the list overleaf. Complete the form with your name, address and status, fold and post to us. We will do the rest.

Second fold

No Postage
Stamp
necessary if
posted in
Great Britain
or Northern
Ireland

First fold

Postage
will be
paid by
Licensee

BUSINESS REPLY SERVICE
LICENCE NUMBER WC 1958

FOUNTAIN PRESS LIMITED
RADIO & ELECTRICAL RETAILING
46-47 CHANCERY LANE
LONDON WC2
ENGLAND

Fold and tuck in

THE SERVICE ENGINEER

supplement to RER—full of vital technical information including 3 Service Data Sheets—is an essential tool for all members of the trade. Available to Subscribers only—one year, 40s.; two years, 75s.; three years, 110s.

Make sure of your copy every month by ordering now

Please send RER including the Service Engineer every month

commencing with the.....issue for.....year(s).

Complete your name and address overleaf

R.E.R. Information Service

Mark with a tick those items on which you would like to receive additional information

This form is not valid after December 31st, 1968

ADVERTISERS' ANNOUNCEMENTS

Ref. No.	Page	Ref. No.	Page
A			
<input type="checkbox"/> 449	Alba (Radio & Television) Ltd.	265, 267, 269, 271	
<input type="checkbox"/> 453	A.E.I. Hotpoint Ltd.	274	
<input type="checkbox"/> 454	A.E.I. Hotpoint Ltd.	275	
B			
<input type="checkbox"/> 460	Brown N. C. Ltd.	292	
E			
<input type="checkbox"/> 447	English Electric Ltd.	258	
F			
<input type="checkbox"/> 462	Fidelity Radio Ltd.	iii	
H			
<input type="checkbox"/> 457	Hoover Ltd.	280	
L			
<input type="checkbox"/> 448	Labgear Ltd.	262	
<input type="checkbox"/> 459	Lee Products Ltd.	290	
<input type="checkbox"/> 461	Lee Products Ltd.	293	
M			
<input type="checkbox"/> 463	Mullard Ltd.	iv	
P			
<input type="checkbox"/> 445	Philips Electrical Ltd.		ii
R			
<input type="checkbox"/>	Radio & TV Servicing		Inset
S			
<input type="checkbox"/> 456	Savage & Parsons Ltd.		278
<input type="checkbox"/>	Servisol Ltd.		294
<input type="checkbox"/> 444	Standard Telephones & Cables Ltd.		i
<input type="checkbox"/> 455	Standard Telephones & Cables Ltd.		276, 277
T			
<input type="checkbox"/> 446	Thermair Domestic Appliances Ltd.		257
<input type="checkbox"/> 458	Tricity Cookers Ltd.		287
W			
<input type="checkbox"/>	Witworth Transformers Ltd.		294
Service Engineer			
<input type="checkbox"/>	M.E.L. Electronics & Control Div.		80
<input type="checkbox"/>	Radiospares		83
Service Data Sheet			
<input type="checkbox"/>	Radiospares		

EDITORIAL ANNOUNCEMENTS

Ref. No.	Name	Page	Ref. No.	Name	Page
<input type="checkbox"/> E340	AEG (GB) Ltd.	259	<input type="checkbox"/> E375	Radford Marketing Division	271
<input type="checkbox"/> E341	Pifco Ltd.	259	<input type="checkbox"/> E376	Conelight Ltd.	271
<input type="checkbox"/> E342	English Electric Ltd.	259	<input type="checkbox"/> E377	Thorn-AEI Radio Valves and Tubes Ltd.	271
<input type="checkbox"/> E343	British Lighting Industries Ltd.	259	<input type="checkbox"/> E378	Multicore Solders Ltd.	271
<input type="checkbox"/> E344	Loblite Ltd.	260	<input type="checkbox"/> E379	Thorn-AEI Radio Valves and Tubes Ltd.	271
<input type="checkbox"/> E345	STC Consumer Products Division	260	<input type="checkbox"/> E380	Mullard Ltd.	271
<input type="checkbox"/> E346	Grundig (GB) Ltd.	260	<input type="checkbox"/> E381	Ronson Products Ltd.	271
<input type="checkbox"/> E347	UPO (UK) Ltd.	260	<input type="checkbox"/> E382	Mullard Ltd.	271
<input type="checkbox"/> E348	STC Consumer Products Division	260	<input type="checkbox"/> E383	Willow Vale Electronics Ltd.	289
<input type="checkbox"/> E349	British Radio Corp. Ltd.	260	<input type="checkbox"/> E384	Heatstore Ltd.	289
<input type="checkbox"/> E350	Highgate Acoustics	261	<input type="checkbox"/> E385	Fyna Machine Tools Ltd.	289
<input type="checkbox"/> E351	Radon Industrial Electronics Ltd.	261	<input type="checkbox"/> E386	Technical Exhibitions Ltd.	289
<input type="checkbox"/> E352	GEC (Radio & TV) Ltd.	261	<input type="checkbox"/> E387	Ministry of Technology	289
<input type="checkbox"/> E353	H. O. Thomas Electronics Ltd.	261	<input type="checkbox"/> E388	Retail Trades Education Council	289
<input type="checkbox"/> E354	GEC (Radio & TV) Ltd.	261	<input type="checkbox"/> E389	McMurdo Instrument Co. Ltd.	289
<input type="checkbox"/> E355	Pye Radio & TV Ltd.	261	<input type="checkbox"/> E390	Philips Electrical Ltd.	289
<input type="checkbox"/> E356	Baird TV Distributors Ltd.	261	<input type="checkbox"/> E391	London Industrial Art	289
<input type="checkbox"/> E357	British Radio Corp. Ltd.	261	<input type="checkbox"/> E392	Bang & Olufsen UK Division	289
<input type="checkbox"/> E358	Denham & Morley (Overseas) Ltd.	261	<input type="checkbox"/> E393	GPO	289
<input type="checkbox"/> E359	Sharp Sales & Services Ltd.	263	<input type="checkbox"/> E394	Philips Electrical Ltd.	289
<input type="checkbox"/> E360	Pye Radio & TV Ltd.	263	<input type="checkbox"/> E395	Radon Industrial Electronics Ltd.	289
<input type="checkbox"/> E361	Radon Industrial Electronics Ltd.	263	<input type="checkbox"/> E396	Domestic Electrical Components Ltd.	290
<input type="checkbox"/> E362	Teleton Elektro (UK) Ltd.	263	<input type="checkbox"/> E397	Baird TV Distributors	290
<input type="checkbox"/> E363	Morphy Richards Ltd.	263	<input type="checkbox"/> E398	Mullard Ltd.	290
<input type="checkbox"/> E364	Burco Ltd.	263	<input type="checkbox"/> E399	Radio Rentals	290
<input type="checkbox"/> E365	Heatstore Ltd.	263	<input type="checkbox"/> E400	Technomark Ltd.	290
<input type="checkbox"/> E366	Thorn-AEI Radio Valves and Tubes Ltd.	263	<input type="checkbox"/> E401	Retail Trades Education Council	290
<input type="checkbox"/> E367	SGS-Fairchild Ltd.	263	<input type="checkbox"/> E402	Hi-Fidelity Musical Products Ltd.	290
<input type="checkbox"/> E368	Peto-Scott Ltd.	263			
<input type="checkbox"/> E369	Rowen Industries (GB) Ltd.	263			
<input type="checkbox"/> E370	Philips Electrical Ltd.	263	<input type="checkbox"/> S61	Thorn-AEI Radio Valves and Tubes Ltd.	76
<input type="checkbox"/> E371	Europa Electronics Ltd.	263	<input type="checkbox"/> S62	Radon Industrial Electronics Ltd.	76
<input type="checkbox"/> E372	Grundig (GB) Ltd.	271	<input type="checkbox"/> S63	International Rectifier Corp.	76
<input type="checkbox"/> E373	English Electric Co. Ltd.	271	<input type="checkbox"/> S64	International Rectifier Corp.	76
<input type="checkbox"/> E374	ASEE	271	<input type="checkbox"/> S65	Avoncel Ltd.	76

NAME
BLOCK CAPITALS PLEASE

ADDRESS
.....
.....

BUSINESS (check appropriate box)

- | | | | |
|------------------|--------------------------|------------------|--------------------------|
| Retailer | <input type="checkbox"/> | Wholesaler | <input type="checkbox"/> |
| Manufacturer | <input type="checkbox"/> | Contractor | <input type="checkbox"/> |
| Department Store | <input type="checkbox"/> | Service Engineer | <input type="checkbox"/> |

Other (please state).....

Stock RAD 12- Fidelity's 2 band, 6 transistor, luxury styled, 9½ guinea hotcake

For moaners—who probably constitute a fair proportion of your customers. You know, the ones who are always moaning that a radio should be substantially cased for really good sound (Rad 12 is). And moaning that it should be elegantly styled, and even padded. (It is—in black leathercloth—with polished aluminium grille). Moaning, too, that controls should be easily accessible while the radio is on a car's parcel shelf. (They are. We've put them on top). Moaning that high quality radios are too expensive. (Not Rad 12. It's 9½ gns.) Or moaning that it's not always easy to buy British.

(You know we're British. So do your moaners).

Order now. Next thing you know, they'll all be moaning that you've sold out.

Fidelity Rad 12. Long and Medium bands. 6 transistor circuit, using latest silicones. Internal aerial, sockets for car aerial, earphone and tape.

Size 9½" x 5½" x 3". Weight 2 lb. net.

9½ gns. (inc. P.T. Battery extra)



Fidelity Radio Limited · London W.11 · 01-727 0131
Tape Recorders · Transistor Radios · Record Players · Radiograms



...and it's British!

Ref. Ad. No. 463

Published by the proprietors, Fountain Press Ltd., 46-47 Chancery Lane, London, W.C.2. (Telephone: Chancery 1411).
Printed by The Legrave Press Ltd., Luton and London.

For PROFITABILITY it pays to ask for Mullard by name

And this is why

Mullard support to retailers is unique. Remember these major Profitability Points introduced over the last few months.

Bigger valve discounts for mixed types

33 $\frac{1}{3}$ % and 7 $\frac{1}{2}$ % for 36-47.
33 $\frac{1}{8}$ % and 7 $\frac{1}{4}$ % and 2 $\frac{1}{2}$ % for 48 or more.
Plus purchase tax savings on 36 and over.

Better picture tube prices

The Mullard Mix for better prices on orders for 3 or more of any type.

Mullard tube equivalent service

21 Mullard tubes replace 125 other types.

Savings on capacitors

Buy in hundreds—save up to 1s 3d each.

Are you taking advantage of all this and the many other Mullard services? Let us, through your local wholesaler, help make this *your* big profit year.

