

2/6^d

THE
INTERNATIONAL

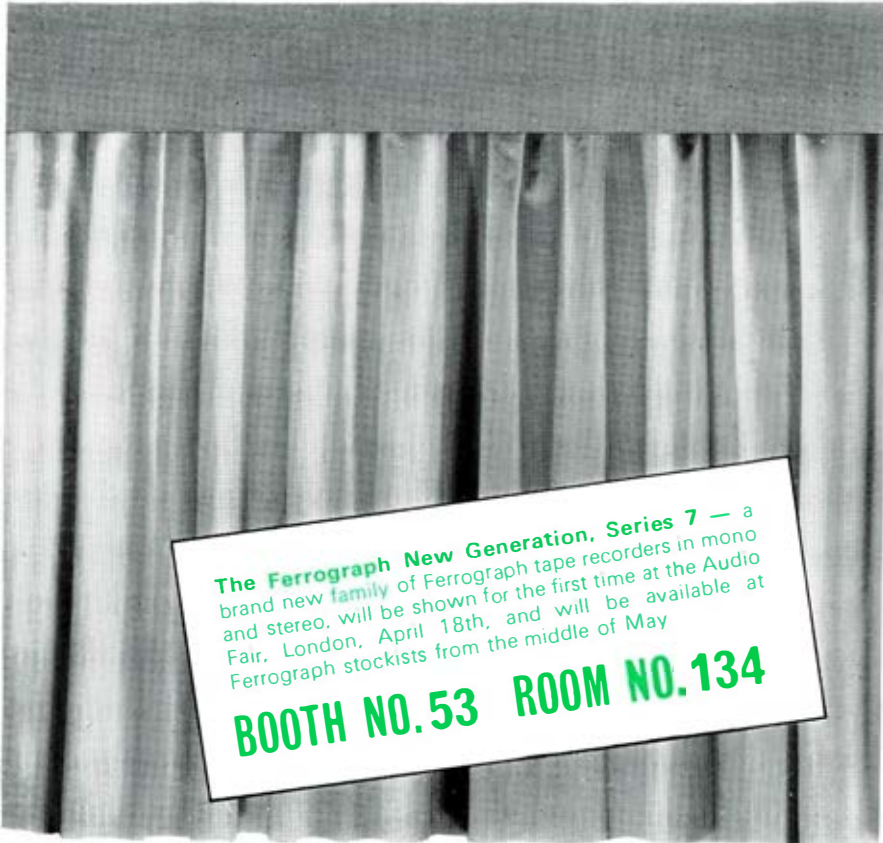
AUDIO
FESTIVAL
&
FAIR

APRIL
1968

Ferrograph, 1949-1967



Now, another major event



The Ferrograph New Generation, Series 7 — a brand new family of Ferrograph tape recorders in mono and stereo, will be shown for the first time at the Audio Fair, London, April 18th, and will be available at Ferrograph stockists from the middle of May

BOOTH NO. 53 ROOM NO. 134

See the new Ferrographs unveiled at the Audio Fair

The Ravensbourne at the Design Centre...



The 'Christmas Living Room', a room setting on display at The Design Centre, Haymarket from the 20th November to the 30th December, featured a complete Ravensbourne Stereo System. The illustration shows how well this equipment blends with a modern furnishing scheme.

The system comprised a Ravensbourne Stereo Amplifier, Ravensbourne '2' FET FM Tuner and two of the new Ravensbourne 'Compact' Speaker Systems. Both the amplifier and FM Tuner are available in chassis form for conventional cabinet installations as well as the free-standing teak cases shown in the illustration.

In addition to Ravensbourne units all items in the current range of Rogers High Fidelity equipment have been selected by The Council of Industrial Design for inclusion in Design Index.



STAND 48
DEM. ROOM 602
OFFICE 601

ROGERS

Rogers Development (Electronics) Limited,
4-14, Barmeston Road, Catford, London, S.E.6.
Telephone: 01-698 7424/4340.

EXPORT: K. H. Williman & Co., Ltd., Blackford House, Sutton, Surrey, England.

THE

Monitor

GOLD *

DUAL CONCENTRIC

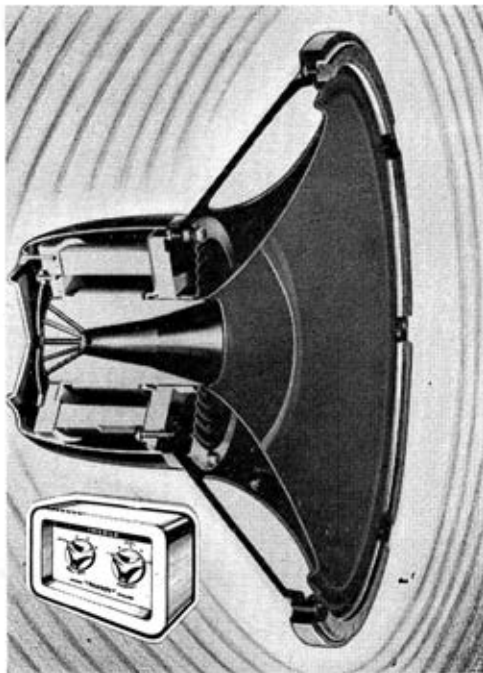
Change should be made for improvement—not just for the sake of change. This is why the TANNOY 'Monitor' Dual Concentric loudspeaker — accepted as the 'quality standard' most specified for professional use — has remained unchanged in basic conception for the past 21 years and in detail design for the past seven years. NOW, the gradual evolution of a perfected technical specification has resulted in the refinement of this supreme 'quality' speaker into a new design — "The Monitor GOLD" — a design which again will remain intact until a change can be proved worthwhile. Send now for leaflet giving complete details and full technical specification.

The new Monitor Gold now incorporates a Treble Roll Off Control and Treble Energy Control enabling precise adjustments to be made for room acoustics and programme material.

Frequency Response
30 — 20,000 cps

Power Handling Capacity
15" 50 watts
12" 30 watts
III LZ 15 watts

Impedance
8Ω Nominal
5Ω Minimum



TANNOY
PRODUCTS LIMITED®

West Norwood,
London, S.E.27, England.
Tel: 01-670 1131

A MEMBER OF THE TANNOY
GROUP OF COMPANIES

"The Lancaster"...

**A RANGE OF ENCLOSURES
COMBINING CONTEMPORARY
FINISH & STYLING WITH
ADVANCED TECHNICAL
FEATURES**

— FITTED WITH THE

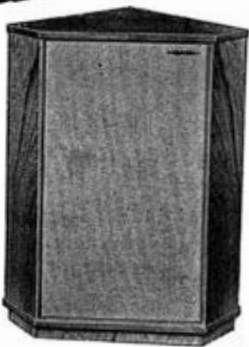
NEW

Monitor

GOLD *



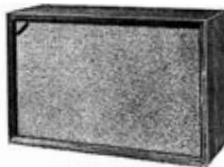
"Lancaster" free-standing fitted with 12" or 15" Dual Concentric.
Height 2' 9½" Width 1' 9½"
Depth 1' 0½"



"Lancaster" corner-mounting fitted with 12" or 15" Dual Concentric. Height 2' 9" Width 2' 1" Front to rear corner 1' 4¾".

TANNOY

"III LZ" Mk. II, Aperiodic enclosure with III LZ unit.
Height 1' 3" Width 1' 11"
Depth 9¾"



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PRODUCTS
LIMITED**

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One of the Tannoy Group of Companies

What's new in record-playing units? The Garrard AP75



An exciting single-play unit from the new Garrard range.

see it on booth 71

study it in demonstration room 234

buy it at your Hi-fi dealer!

Examine the other new models in the world's greatest range of record-playing units and talk to the men who design and make them. They will listen to your problem, and recommend the right Garrard unit for your installation.



Garrard

looks after your records



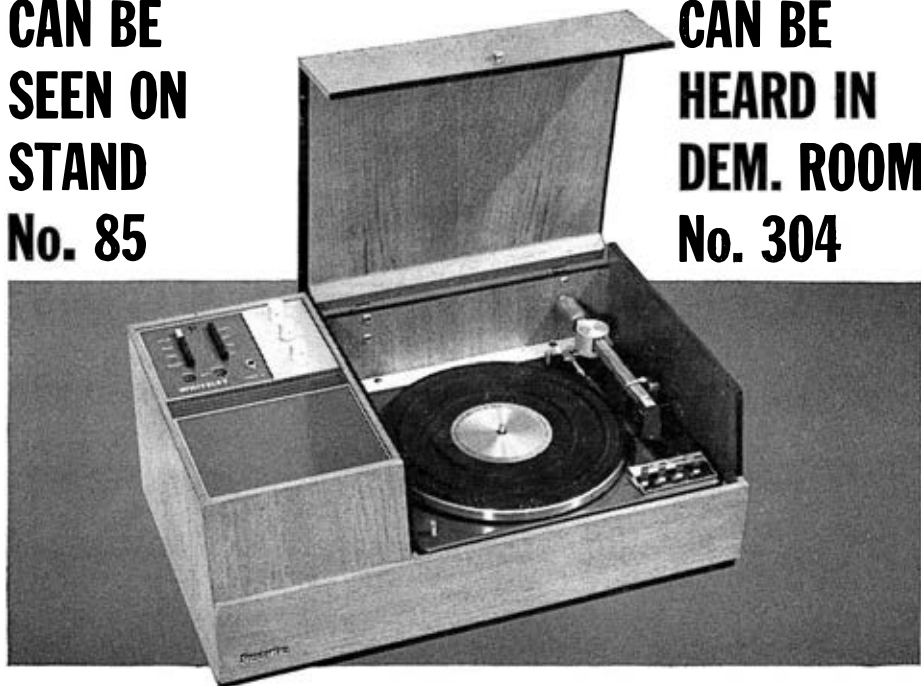
Garrard Engineering Limited, Newcastle Street, Swindon, Wilts, England. Telephone: Swindon 5381

 G207

THE NEW WHITELEY STENTORIAN INTEGRATED AMPLIFIER SYSTEM

**CAN BE
SEEN ON
STAND
No. 85**

**CAN BE
HEARD IN
DEM. ROOM
No. 304**



LOUDSPEAKER SYSTEMS

LC93—a bookshelf unit with a new 9" graded cone drive unit giving a flat extended frequency response.

LC94 has a new 9" unit enclosed in an acoustic labyrinth enclosure.

LC95 is a bass reflex system with a 12" unit and an 8" unit giving extended frequency response.

Available in either teak or rose-wood finish.

A fully transistorized integrated amplifier designed for use with all types of pickup cartridges, it has facilities for tape and microphone inputs and the bass, treble, volume and balance controls are included. Input selection and mode of operation is by push-button switches. Available in its own specially designed teak veneered cabinet for shelf or bookcase mounting or in the new compact equipment cabinet illustrated. Come and see the full range of Whiteley Stentorian speakers and cabinets and discuss your particular hi-fi problems with our technical representatives.

WHITELEY ELECTRICAL RADIO CO. LTD

Mansfield · Notts. Tel: Mansfield 24762 London Office: 109 Kingsway, W.C.2. Holborn 3074



**YOU'VE READ
THE REVIEWS—
NOW**



**HEAR THE 'DITTONS'
FOR YOURSELF**

AT THE AUDIO FAIR



BOOTH 22

**DEMONSTRATION
ROOM 534**

Celestion Studio Series

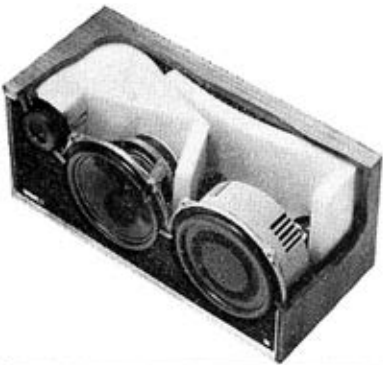
GD208

**Rola Celestion Ltd.,
Ferry Works, Thames Ditton, Surrey**
Telephone: 01-398 3402

If you have not had the stimulating experience of hearing either the Ditton 10 or 15 bookshelf loudspeakers, this is your chance. Hearing's believing! You'll be amazed at the sensitivity and range of response from such compact speakers.

DITTON 10

The most sophisticated mini-speaker on the market. Response from 35-15,000Hz, impedance 3/5 or 15 ohm versions, power handling 10 watts.
Truly bookshelf size: 12 3/4" x 6 3/4" x 8 1/4".



DITTON 15

Just listen to Gordon J. King's summary in a February 'Hi-Fi Sound' Review: "I have no reservations whatever in thoroughly recommending this outstanding loudspeaker to all wishing to obtain large-speaker sounds from a modest 21" x 9 1/2" x 9 1/2" of enclosure". Suffice it to add that this is a 3 drive unit incorporating the famous ABR (Auxiliary Bass Radiator), 8" bass unit and the HF 1300 for treble notes. Full power response from 15,000 right down to 30Hz—the threshold of audible sound.

NEW FROM CELESTION

We are demonstrating a remarkable new loudspeaker at the Fair. Be sure not to miss the opportunity of being among the first to hear this superb new addition to the Ditton range.

So now you have an even greater choice of superb Ditton loudspeakers, from miniature bookshelf to professional standard. For the home constructor, Celestion offer a wide range of drive units.



Celestion loudspeakers — for the perfectionist

Not even Fisher could write better reviews of Fisher equipment than these audio critics did.

T.J. and A.W. Wayne, High Fidelity News
John Gilbert, The Gramophone
P. Williams, High Fidelity News
David Phillips, Audio and Record Review
Review Panel, Audio and Record Review



For reprints of the complete equipment reviews by these critics, plus information on all Fisher components, *plus* a free copy of The Fisher Handbook 1968, visit the Fisher exhibit at the International Audio Festival.

Fisher Radio International, Inc.

c/o Getz Bros. & Co., Inc. 2 Harewood Place, London W.1.,



The ultimate in High Fidelity Systems



BOOTH 19

REVOX

DEM. ROOM 649

Please send me full details of the Revox 77.

Name.....

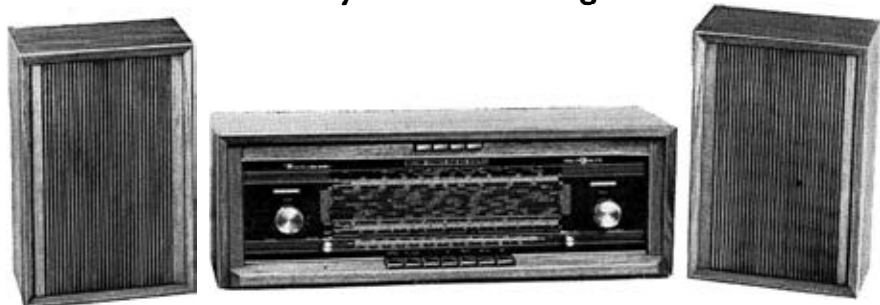
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Post to: Revox U.K. Sales and Service, 90, High Street, Eton, Windsor, Berks. Tel: Windsor 63388

RADI NETTE

RADIOS · STEREOGRAMS · TAPE RECORDERS
for the truly discriminating listener



KVINTETT STEREO COMPACT

Stereo Tuner Amplifier. 5 wavebands—long, medium, short, marine, FM. Duplex tuning. Stereo balance control. Range of matching speakers available.

MULTICORDER

Unique battery/mains portable 4 track 2 speed tape recorder with single 5" spool. 12 hours playing time. Track selector switch. Recording level meter. Pause control.



Every Radionette model has been specially developed to ensure the ultimate in sound perfection. Hear for yourself how the new Kurer Automatic battery/mains portable radio brings in the most distant stations with remarkable clarity; listen to the superb stereo of the elegant Kvintett floor-standing hi-fi radiogram; see a range of quality-built models—as beautiful to look at as they are to listen to!

SEE THEM ON BOOTH 31
HEAR THEM IN DEMONSTRATION ROOM 255

Sole U.K. Distributors

DENHAM & MORLEY LTD., Denmore House, 173/175 Cleveland Street,¹ London, W.1. Tel: EUSton 3656

OKI HAVE HI-FI TAPED



OKI 333 All-Transistorised Full Stereo 4-Track Tape Recorder

- 4-track stereo and monaural record playback
- Sound on sound and sound with sound
- FM Multiplex stereo recording
- Automatic shut-off
- Two record level meters
- Two record safety buttons

- Two volume controls with on/off switch
- Two speeds— $7\frac{1}{2}$ and $3\frac{3}{4}$ i.p.s.
- 7" spool
- Wow and flutter less than 0.15% at $7\frac{1}{2}$ i.p.s.
- Two sound monitor buttons
- Speed equalization button
- Two slim line 2-way speaker boxes

The Oki range of all-transistorised solid state tape recorders comprises complete monaural and stereo and stereo tape decks with pre-amps of professional quality and specifications. All in magnificently finished cabinets. Prices from 42 to 199 Guineas.



**LOOK AND LISTEN TO OKI ON STAND 33
AND IN DEMONSTRATION ROOM 256**



Sole U.K. Distributors

DENHAM & MORLEY LIMITED Denmore House, 173/175 Cleveland St., London, W.1. Tel: EUSton 3656

For high sensitivity at highly sensible prices . . .

MB ELECTRONIC MICROPHONES AND HEADSETS ON STAND 41 AND IN DEMONSTRATION ROOM 256

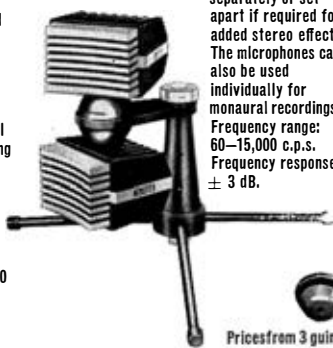


MB 190 Dynamic Miniature Pen Micro- phone

The luxury gold plated pen type housing encloses a miniature dynamic moving coil insert giving unique frequency range and response. Frequency range: 100—10,000 c.p.s. Frequency response: ± 3.5 dB.

MB 220 Dynamic Stereo Miniature Set

The well-styled design incorporates two directional microphones on a tripod table stand. Both can be rotated separately or set apart if required for added stereo effect. The microphones can also be used individually for monaural recordings. Frequency range: 60—15,000 c.p.s. Frequency response: ± 3 dB.



Prices from 3 guineas

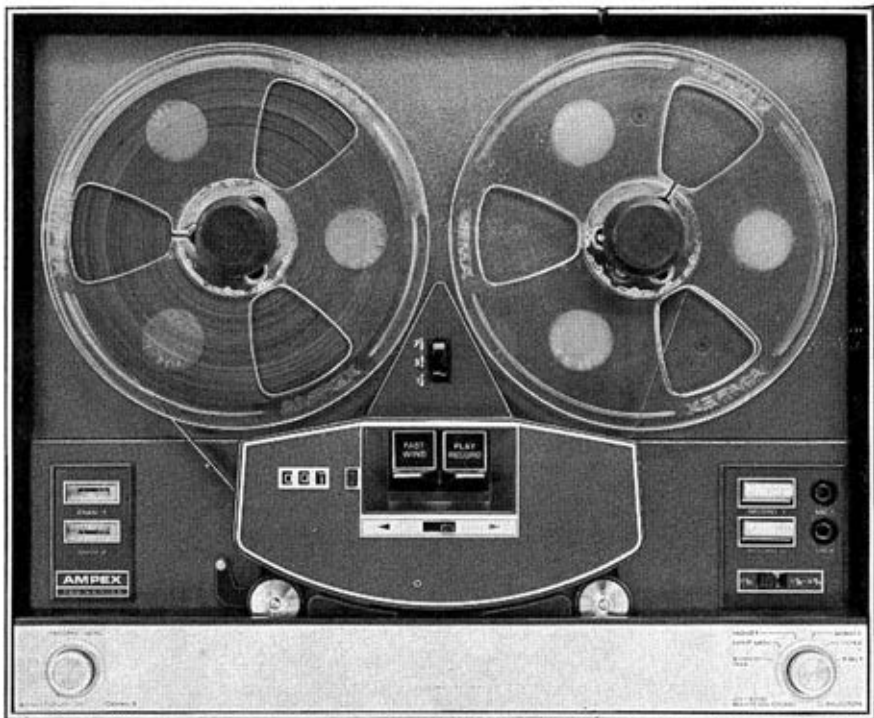
MBK 85 Dynamic Headset

De Luxe Stereo headset with boom microphone.



A brilliant headphone microphone combination with hardened steel headband, and cushioned foam rubber earpads. Fully adjustable Microphone which is an anti-poise microphone, designed for true fidelity pick-up. Approved by Language Laboratories and Aeronautical Boards. Frequency range (headphone): 20—17,000 c.p.s. Frequency range (microphone): 80—12,000 c.p.s.

Sole U.K. Distributors **DENHAM & MORLEY LIMITED**
Denmore House, 173/175 Cleveland Street, London, W.1. Tel: EUSton 3656



It's Ampex. It's 91 gns

It's here

The new Ampex 753 Tape Deck (complete with pre-amplifiers) gives you these important new features:

- off tape monitoring
- sound-on-sound
- sound-with-sound
- echo control

The 753 is specially engineered for sound-on-sound recording and monitoring. You can mix narration with music tracks—add sound and music to your home-produced programmes. You get the famous Ampex

stereo fidelity too. Precision engineering. And better performance than any price-range

competitor. Plus **rigid block construction**—tapes align with heads to one thousandth of an inch, and the 753 finds every sound on the tape. **deep-gap heads** give three years' peak performance—few other makes give more than one year. **stereo 4-track** **dual-capstan drive** **3 speeds** **digital counter** **fast wind** **solid state throughout** **vertical or horizontal operation** **available in teak case.**

HEAR AMPEX IN ROOMS 535 AND 536!

You can hear a demonstration of the Ampex 753 and other Audio Equipment from the Ampex range in room numbers 535 and 536. Or for further information on the complete range of Ampex Audio equipment write to: Ampex Great Britain Ltd., Dept. AFC 1, Acre Road, Reading, Berkshire.

what has changed?

Well, loudspeakers for one thing. Practically all loudspeakers designed in the last few years have (rightly) followed the trend towards lower efficiency and therefore require more power to drive them.

And pickups, too. The trend here is towards smaller and lighter moving parts producing lower outputs, requiring greater sensitivity and improved signal to noise ratio in the pre-amplifier.



QUAD 303



QUAD 33

QUAD has changed to accommodate both, and has also taken the opportunity of introducing other significant improvements in performance and facilities.

**Come and see the new QUAD—
STAND No. 90
DEMONSTRATION ROOM No. 604**

QUAD for the closest approach
to the original sound.

ACOUSTICAL MANUFACTURING COMPANY LTD.,
Huntingdon. Telephone Huntingdon (0480) 2561/2

LOOK AT THESE 4 NEW MICROPHONES FROM AKG



AKG D202E

New. Dynamic. Two-way cardioid design—separate high- and low-frequency systems in a single housing for powerful, directional performance, level frequency response.

Front-to-back ratio 20db at all frequencies ensuring minimum feedback. On-off switch. Good appearance. For stage work, recording, film and T.V.



AKG C61

Studio condenser microphone, developed for the stage and concert hall, for motion pictures, T.V. and radio. Highest studio quality, in spite of extremely small size.

Fine, natural sound owing to flat response curve; low non-linear distortion; Nuvistor preamplifier and bass attenuation with feedback. Rapid adaptation to recording conditions—two different directional characteristics (cardioid or omni-directional).



AKG microphones

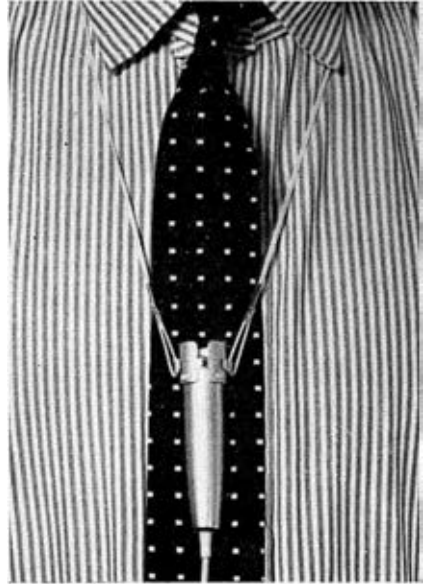
Politechna (London) Ltd. 182-184 Campden Hill Road, London W8
Telephone: Park 0711. Telex: 23894

see these and a dozen more – all types and kinds – the largest and finest range – from low-cost, relatively simple microphones for low-cost tape recorders up to the most superb, professional instruments for films and TV



AKG D14

High quality, dynamic, directional, dual impedance—60 Ohms and 50 kOhms—selected by switch—suitable for versatile matching. On-off switch on microphone. With 5 yards special cable. One of the most successful microphones for public address; very popular for semi-professional and amateur tape recording.



AKG D109

New. Dynamic. Lavalier. Available with 60 or 200 Ohm impedance. With 3 metres cable. The smallest Lavalier microphone on the market, plus high-quality reproduction that compares well with others costing several times more. Use it wherever a mike is to be heard but not seen—mainly for T.V., also for films, conferences etc.

BOOTH 88
ROOM 237



Better sound reproduction begins with BSR



BSR introduce the UA75 with heavy die-cast turntable — a further step to audio perfection. This advanced unit is exhibited for the first time at the Audio Fair.



See and hear the range of high quality turntable units exhibited by BSR on Booth No. 70 and in Demonstration Room 259.



BSR Limited,
Monarch Works, Cradley Heath, Warley, Worcs.

SANYO

hi-fi is
fantastic

see and
hear it in
demonstration
room 342

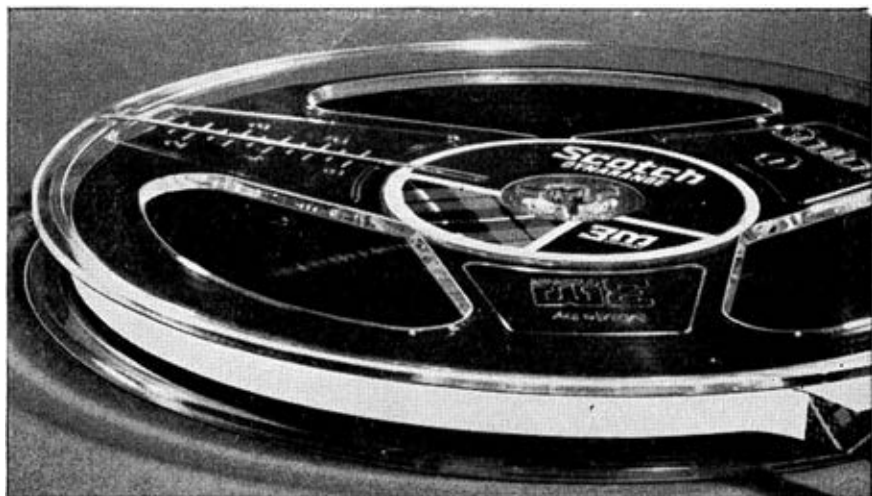
Or write for information about the full
range of Sanyo Hi-fidelity products to:

J. W. Cowley, Sales Manager, Electronic
Equipment Division, Marubeni-Iida Co. Ltd.,
164 Clapham Park Road, London, S.W.4.

SANYO

reliability is built in

Keep the quality at half the speed!



Dynarange the new **Scotch** magnetic tape

New 'Dynarange' magnetic tape has revolutionised standards of sound quality on good home tape recorders. Most people are finding they can record at half the speed they used before—and still keep the same high quality. You could halve your costs on tape! You can have double the recording time at your disposal! However you look at it, this new magnetic tape outdates all others available today. Recommended by AKAI, FERROGRAPH, REVOX, TANDBERG



TEST IT YOURSELF:

- * greatly reduced background noise — signal to noise ratio improved by 3 to 5 db.
- * increased dynamic range.
- * improved frequency response, particularly in the higher frequency range.
- * exclusive 'Superlife' coating reduces magnetic oxide rub-off, so tapes (and recording heads) last longer at peak efficiency.

AVAILABLE IN STANDARD PLAY (TYPE 202): 5" 5½" 7" LONG PLAY (TYPE 203): 5" 5½" 7" 8½"

And now – Cassettes worth serious attention!



New **Scotch** magnetic tape cassettes

This very latest 'Scotch' magnetic tape development means that hi-fi enthusiasts will now want to take another look at cassette recorders. Because now you can get cassettes containing the brilliant 'Scotch' magnetic tape with 'Superlife' coating. This tape has a flawless mirror-smooth coating that gives improved frequency response and less wear on the delicate recording heads—so it keeps its high quality far longer. With 'Scotch' magnetic tape the cassette recorder becomes a serious possibility as a second, portable machine—and the recordings you make on it will merit playing on your full-scale home set-up.

Scotch 



Minnesota Mining & Manufacturing Co. Ltd., 3M House,
Wigmore Street, London W1. Telephone: HUNter 5522

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Mining and Manufacturing Company*

UHER

the ONLY tape recorder for YOU...

4000 REPORT SERIES

4000 Report—L

As illustrated. Specification: 2 Tracks conforming to international standards-2; Tape reels diam.—5"; Tape speeds (ips) 15/16, 1 $\frac{1}{2}$, 3 $\frac{1}{2}$, 7 $\frac{1}{2}$; Frequency range (cps) 40-4,500/40-10,000 and 40-16,000/40-20,000; Dynamic volume range (db) 40 at 15/16 ips, 46 at 1 $\frac{1}{2}$ ips, 50 at 3 $\frac{1}{2}$ ips, 52 at 7 $\frac{1}{2}$ ips; Wow and flutter (max \pm %) 0.2% at 7 $\frac{1}{2}$ ips; Recording mono; halftrack; playback mono halftrack; Power output one watt.

Monitoring via headphones or speaker; VU meter + three digit tape counter; tape stop-start remote control, collectorless motor controlled by 8 transistors; power supply from 6V, 12V, 24V car battery, from rechargeable accumulator or 5 flashlight cells 1.5 volt; 17 transistors.

Microphone, radio, pick up input; 1V at 15 Kohms and 2V at 4 ohms; weight 6lbs (approx). Price 99 gns.

4200 Report Stereo

Affording all the advantages of the successful 4000 Report-L in size, style and specifications—plus stereo. Price 119 gns.

4400 Report Stereo

Again with all the advantages of the 4000 Report-L—plus stereo and maximum economy of tape on four tracks without deterioration of reproduction quality. Price 119 gns.

Recommended Retail Prices

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BOSCH

...when quality is your first concern

... always ask for UHER tape recorders and accessories. Quality is the simple, single aim behind their manufacture. Their production is also the sole pre-occupation of the UHER Company, whose specialisation has led to many outstanding developments, including the first application of printed-circuit techniques in tape recorder manufacture. For further details contact BOSCH LIMITED, UHER Division, 205 Great Portland Street, London W.1. Telephone 01-580 2672/5.

BOSCH has established a universal reputation for quality backed by continuous research, development and over 80 years of manufacturing experience. 85,000 BOSCH employees are universally engaged in the research, manufacture, distribution and service of BOSCH products. These include an impressive range of domestic appliances; radios; stereograms; tape recording equipment; automotive accessories and safety equipment; electric tools; hydraulics; language laboratory and closed circuit television systems . . . all of which are marketed in the U.K. by BOSCH LIMITED . . . a member of the BOSCH GROUP.

Three different models of the UHER 'Report' are now available:



724 L Stereo

Specification: 4 Tracks conforming to international standards-4; Tape reels diam. 7"; Tape speeds (ips) 3 $\frac{1}{2}$, 7 $\frac{1}{2}$; Frequency range (cps) 40-14,000, 40-18,000; Dynamic volume range (db) 45 at 3 $\frac{1}{2}$ ips, 46 at 7 $\frac{1}{2}$ ips; Wow and flutter (max \pm %) 3 $\frac{1}{2}$ ips 0.2, 7 $\frac{1}{2}$ ips 0.15.

Microphone, radio, pick up inputs, output 1V at 15 Kohms and 2.8V at 4 ohms.

Recording mono & stereo; Playback mono & stereo; Power output 2 x 2 watts; Weight 20 lbs (approx). Price 79 gns.

The range of UHER tape recorders and accessories available in the U.K. satisfy the requirements of every amateur and professional enthusiast.

Sounds Original



In Room 355 visitors will be able

to hear original stereo recordings being played through studio reproducing equipment. These original stereo recordings were made under domestic conditions using various pairs of Sennheiser microphones with a B and O tape recorder. By changing the microphones at regular intervals during the recordings sensible comparisons can be made regarding the quality and characteristics of these microphones. Visitors will be welcome to ask any questions they wish regarding these recordings which will be answered by our sound engineers. A visit to Booth will enable the visitor to hear similar original recordings to those mentioned above, but this time the quality will be judged on a new pair of Sennheiser headphones.

Audio Engineering Limited
33 Endell St. London WC2 01 836 0033

**Wait till you hear what
Tandberg have to play
on Stand 24
Demo Room 504**

**The fabulous new
Tandberg
Series 15**



2 Hours of music with the first sextuple-play cassette from BASF



With the BASF Compact Cassette C.120 you can record 2 hours of music—an hour on each track. Beat, Jazz, Pop—anything you like! You could, for example, make up a small tape library like this:—

5 BASF Compact Cassettes C.60=5 hours playing time. 5 BASF Compact Cassettes C.90=7½ hours. 5 Compact Cassettes C.120=10 hours.

You can then have 22½ hours of music filed together—Music as you like it. A cheap and practical tape library in the minimum space.

Ask your dealer about the new BASF Compact Cassettes C.60, C.90 and C.120. And remember, every cassette comes with a handy reference index which enables you to make a note of each recording—and quickly find it when you want to play it.



BASF are exhibiting at Booth 55, and screening the new BASF film "The Timeless Track" in Demonstration Room 149. BASF personnel will be available during the duration of the fair to discuss any problems.

TAPE

RECORDING MAGAZINE

MONTHLY

2/-

Room 343 (3rd floor) at the Audio Festival

**The recognised leader in its field,
catering for every type of tape
recording enthusiast**

TAPE RECORDING MAGAZINE is published on the third Wednesday in each month, price 2s., and is obtainable at all bookstalls and newsagents. Place an order today, or fill in the coupon below and hand it in at the TAPE RECORDING MAGAZINE office in Room 343 at the Audio Festival.

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To TAPE RECORDING MAGAZINE, Prestige House, 14-18 Holborn, London, E.C.1.

I enclose my subscription for 25s. (U.S.A., \$3.75) for one year, post paid, beginning with the issue dated _____

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WHARFEDALE HIGH FIDELITY LOUDSPEAKERS

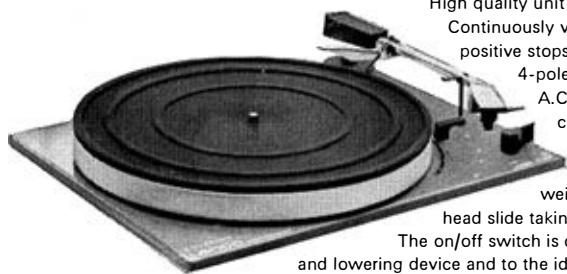
Demonstrations daily in room 502. Admission by ticket only—available from the Wharfedale stand (ground floor) or from the commissionaire on duty at the dem. room (5th floor).



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GOLDRING AUDIO EQUIPMENT

GOLDRING-LENCO GL 68 TRANSCRIPTION UNIT



High quality unit with integrally mounted pick-up arm. Continuously variable speed control, with adjustable positive stops for the four standard playing speeds.

4-pole constant velocity motor (200/250 V. A.C., 50 Hz, 15 VA). Less than 1% speed change for 13% mains voltage change.

Wow and flutter less than 0.2%.

Pick-up arm has adjustable counterweight and is fitted with interchangeable head slide taking all modern cartridges on $\frac{1}{2}$ " centres.

The on/off switch is coupled to a hydraulic pick-up raising and lowering device and to the idler wheel disengagement mechanism.

Dimensions: 13" x 15". Clearance above motor plate 3". Below motor plate 2 $\frac{3}{4}$ ".

Price: £18. 7. 6. plus £3. 5. 8. P.T.

GOLDRING G 99 TRANSCRIPTION UNIT



A transcription unit for those who prefer to mount, separately, an arm of their own choice. Incorporating the unique

Goldring-Lenco continuously variable speed and vertical drive features, with less than 1% speed

change for 13% mains voltage variation, this unit has an 8 lb. non-magnetic turntable and built-in

neon-lit stroboscope. It is switched by push-buttons coupled to the idler disengagement mechanism. There are

adjustable click-in positions for the four standard playing speeds.

200/250 V.A.C. 50 Hz, 15 VA.

Dimensions: 14 $\frac{1}{4}$ " x 13 $\frac{1}{4}$ "

Price: £19. 19. 0. plus £3. 11. 4. P.T.

GOLDRING-LENCO GL 75 TRANSCRIPTION UNIT



Constant velocity 4-pole motor (200/250 V.A.C., 50 Hz, 15 VA) with less than 1% speed variation

for 13% mains voltage change. Vertical drive to 8 lb. non-magnetic turntable,

with continuously variable speed control and positive (adjustable)

settings for the four standard speeds.

Wow and flutter—max. 0.2%. The on/off switch is coupled to the idler disengagement mechanism. This unit incorporates an

entirely new Goldring-Lenco transcription arm which is fully adjustable for stylus pressure, includes

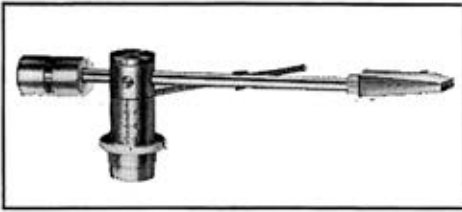
a bias compensator ("anti-skating" device) and is raised and lowered hydraulically by a conveniently placed lever. The head shell is interchangeable, with positive

fixing, and allows $\frac{1}{2}$ " movement of any standard cartridge to achieve accurate position of stylus. (The arm fitted to this unit is also available as a separate item.)

Price for Complete GL 75 unit £29. 8. 0. plus £5. 5. 1. P.T.

For L. 75 arm only £10. 2. 6. plus £1. 16. 2. P.T.

GOLDRING-LENCO P 77 TRANSCRIPTION ARM



Precision-engineered transcription arm with provision for balancing in every plane. Interchangeable head shell with locking collar takes all modern cartridges and allows $\frac{1}{2}$ " for accurate positioning of stylus. Height, balance and stylus pressure adjustments are all calibrated to simplify use of alternative cartridges. Hydraulically damped positioning and lowering device. A bias compensator is available as an extra.

Price for Arm: £30. 0. 0.
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Bias Compensator: £3. 0. 0. plus 10/8 P.T.

A complete transcription unit (GL 77) basically similar to the GL 75 but with the P 77 arm fitted, is available. Price: £51. 10. 0. plus £9. 4. 1. P.T.



GOLDRING G 65 TRANSCRIPTION ARM

Low mass tubular construction. Miniature ball-race bearings. Stylus pressure adjustment by sliding counterweight. Full height adjustment. Interchangeable head slide, with self-cleaning wiper contacts, takes all standard fitting cartridges.

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GOLDRING CS 90 and CS 91E CARTRIDGES

These are stereo ceramic cartridges with excellent frequency response and cross-talk separation. Low tip mass, replaceable diamond stylus (CS 90-0.0005" or 0.0007" tip radius; CS 91E-elliptical) coupled with high compliance enables these cartridges to be played at light tracking weights.

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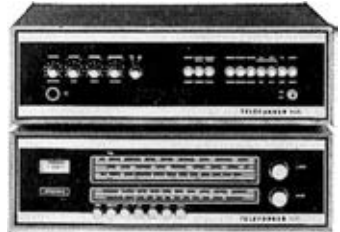
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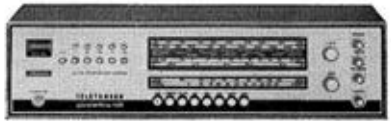
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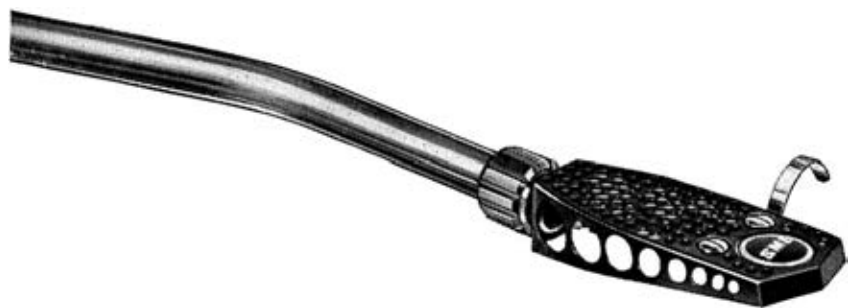
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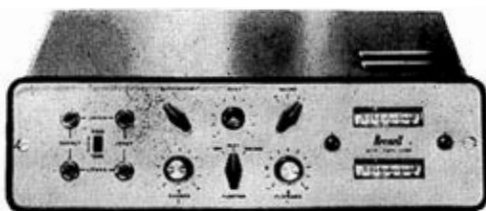
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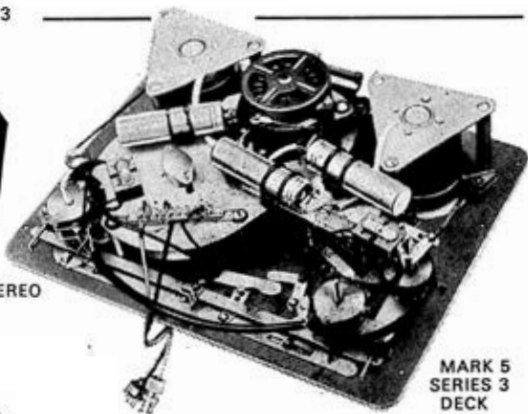
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Now University Recording have developed not only an improved car unit with superb performance but also two home units. One is self contained, the other a satellite to link with existing disc stereo. This new product family is British designed and British made.

Slot's not a tape recorder, it's a player. The sound emanates from a 5 oz. cartridge containing

a continuous loop of eight-track tape. Two tracks for each of the four stereo programmes.

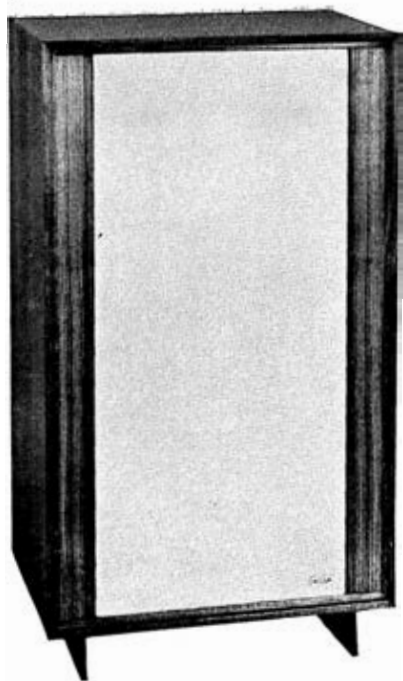
Slot's range of programmes is already impressive. Drawn from major record companies, including E.M.I., C.B.S. and R.C.A. it includes such names as The Beatles, Sinatra, Conniff, Brubeck, Monk and Sammy Davis. Most modern musicals, with the original casts. Classical music consists of symphonies, concerti and a wide range of Opera.

If you wish to find out more about the complete Slot Stereo family, the **Information Booth** is No. 52. Or if you really

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The Concerto is more than a new KEF speaker system. It rounds out a range designed to suit every taste and fit every budget. For a remarkably low price Concerto offers you superb response over a very wide frequency range, and ultra-smooth mid-range surpassed only by the more expensive Carlton – also by KEF. With a Concerto you can look forward to very wide dispersion at all frequencies with no off-axis dimness.

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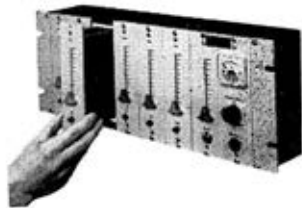
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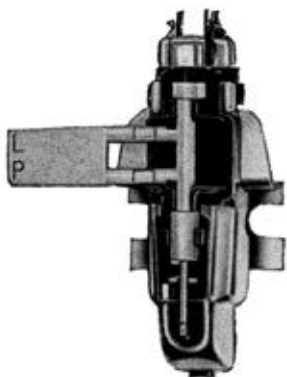
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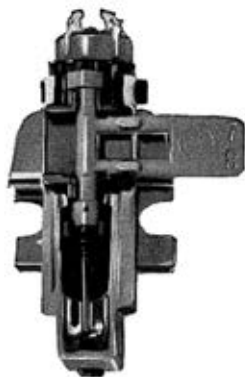
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The new big gun from Leak. The amplifier in which distortion dies of fright. The Leak Stereo 70 will thrill you with the clearest, most exciting sound ever reproduced by an amplifier.

It is full of latent power—up to 35 watts r.m.s. per channel. This is not power for power's sake, (though there may be times when you'll need it) but rather the means to perfect reproduction.

In addition, this extra output enables a pair of loudspeakers to be connected

apart from the two in the main listening room. Other brand-new features are a stereo headphone socket for personal listening as an alternative to loudspeakers, a DIN record/replay socket for a portable tape recorder and facilities for the use of two selection pick-ups with front panel selection.

All this, backed by the famous Leak craftsmanship and reliability makes the Stereo 70 the most technically advanced amplifier available.

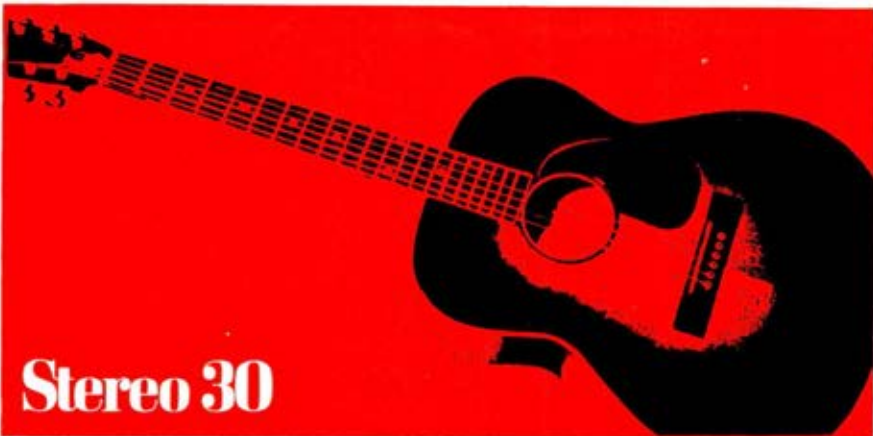
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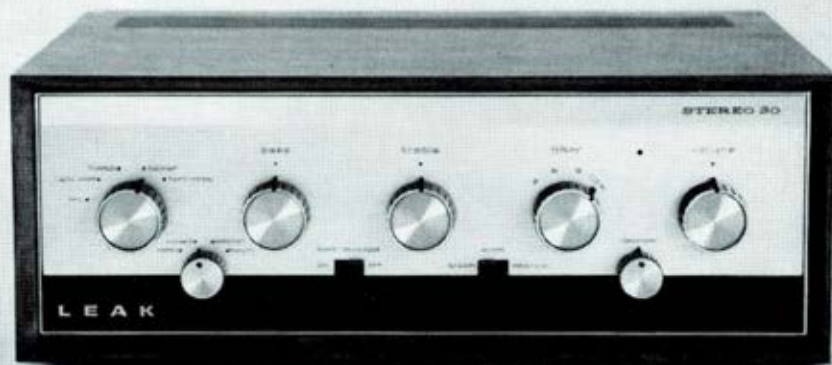


Stereo 30

30,000 models ago we sold the first Stereo 30. Today it remains unaltered, and is the best proven transistorised amplifier available. Proof—if it were needed—that Leak design and quality sets the standard and leads the field. Performance figures, revolutionary when the Stereo 30 was introduced in 1964, are still outstanding. An output of up to 15 watts per

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It has a frequency range of 88 - 108 MHz. and is exceptionally easy and accurate to tune. What is more, there is no drift as the set warms up. There is a special control switch to ensure first class reception, even in areas far from

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Leak Trough Line Tuner and Stereo 30 Amplifier get together to form the finest stereo partnership ever. Both are stylish, absolutely reliable and produce superb hi-fi reproduction. Now they can be combined in this attractive wood cabinet* to form the best Tuner/Amplifier ever.

The Trough Line F.M. Stereo Tuner: Has a frequency range of 88-108 MHz, is easy and accurate to tune, and has minimal drift.

The Stereo 30 Amplifier: All transistor, with an output of up to 15 watts per channel, and is without question the best proven amplifier on the market today.

*Available separately
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This new pick-up is the result of several years of research, and despite its appearance of simplicity, incorporates every feature required to minimise distortion. The arm and cartridge are designed as an integrated system, avoiding the usual clumsy mass at the head. The design reduces friction to 10

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£27. 4. 4 inc. P.T.



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H. J. Leak & Co. Ltd.

Lowther Manufacturing Co.

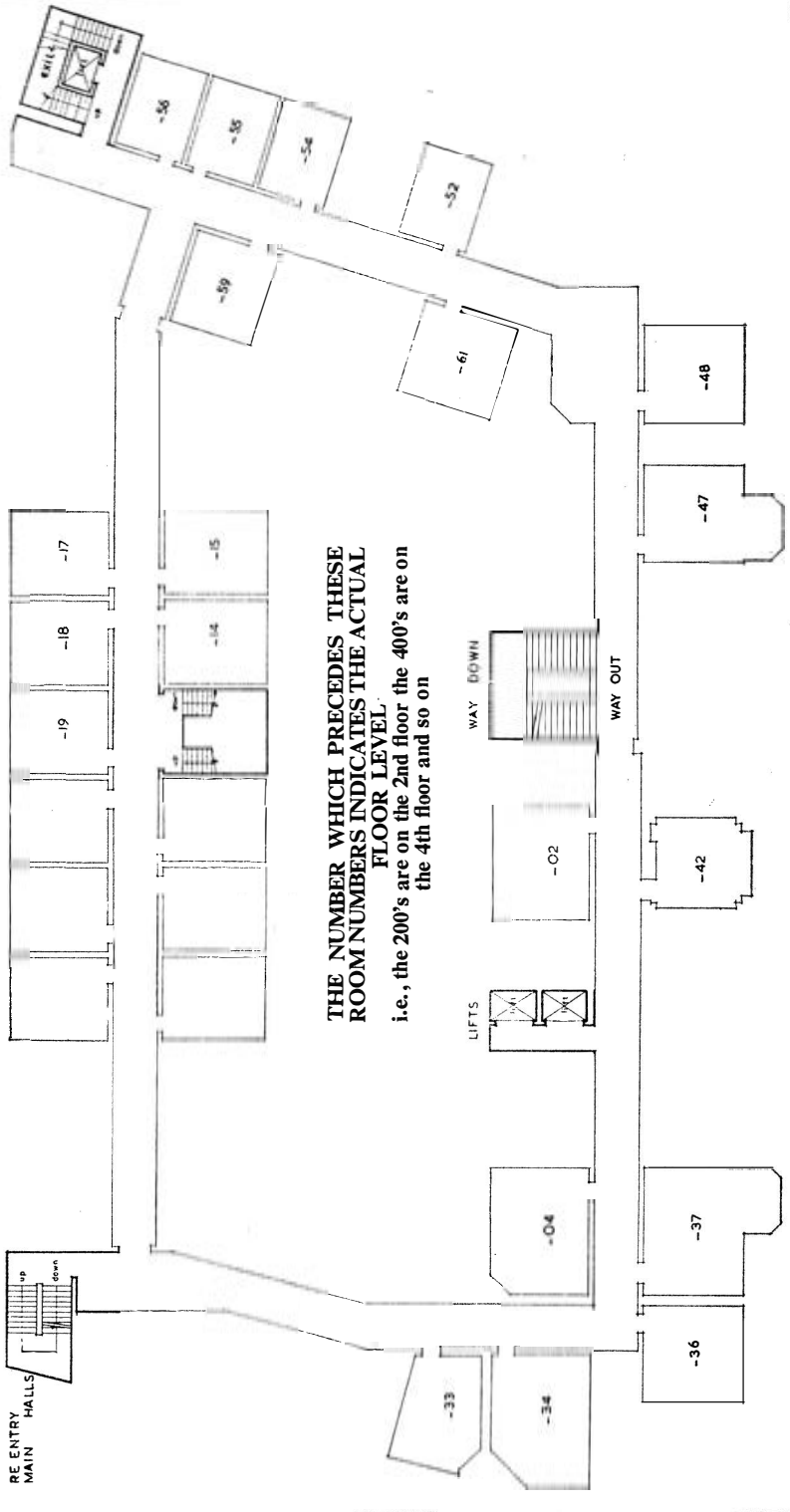
Rogers Developments (Electronics) Ltd.

Tannoy Products Ltd.

Overseas Exhibitors Representative

Shure Electronics Ltd.

INDICATION PLAN OF THE DEMONSTRATION FLOORS



... FOR THE GUIDANCE OF VISITORS

*In this blue section of the Catalogue will be found a complete Index of Exhibitors. This is followed, in turn, by a complete **Products Guide** containing a write up of what each Exhibitor is showing. Exhibitors are placed in this guide alphabetically by their Trade names—beneath which is their full title and address and below that the type of products manufactured—then comes an article containing details, both technical and explanatory.*

This International Audio Festival and Fair, is divided into two distinct Sections.

In the **First Section** on the ground floor in the Exhibition Halls are Booths on which Exhibitors are displaying their products. These Booths are manned by expert personnel who are able to discuss any aspect of their equipment, except in the Audio Arcade where there is a central information desk.

The **Second Section**, and the one which is considered the most important, is on the First, Second, Third, Fourth, Fifth and Sixth floors of the Hotel.

On these floors the manufacturers who are exhibiting are giving live demonstrations. The way up to their demonstration rooms is by means of the main Hotel staircase situated straight on through the Halls or by express passenger lifts going direct to the 6th floor only. There are other staircases for visitors to circulate around and down and a special staircase from the demonstration floors allows re-entry into the Main Halls.

AMENITIES

There are ample cloakroom facilities in the Hotel for visitors who would like to leave their hats, coats and parcels.

A large bar is situated near the front Hotel entrance, and there are also spacious lounges. There are excellent restaurants adjacent to the centre Exhibition Hall, where either Table d'hote or a la carte meals can be obtained. Light refreshments are available throughout the opening times of the Exhibition, and there is an extension of licence for alcohol during the afternoon hours.

An Information Bureau is situated in the Glass Hall with courteous staff who will be pleased to answer any queries and offer any guidance required.

The layout, design and decor of this Festival is by Cyril Rex-Hassan

INDEX of EXHIBITORS

Against each Trade name below is indicated the Booth position number for the main halls and the Demonstration or Lounge number of the Room. The initial number of each room indicates the floor.

All Exhibition Rooms are clearly numbered and also have a pennant protruding out from the doorway on which is written the Exhibitor's Trade name. This is readily viewable as you walk along the corridors.

Note that in some instances Exhibitors only have Booths and are not themselves demonstrating, although their goods may be heard in conjunction with the demonstrations of other Exhibitors.

A complete International cross-section of the Audio Industry is represented in this Audio Fair including specialised periodicals, who have comfortable lounges where visitors are welcomed and where they may meet Editors, Staff and contributors.

There are also lounges for the Wholesale and Export Trades. Other lounges are occupied by Clubs and Societies.

Due to Budget changes and Devaluation, some of the prices shown against Goods in both the Advertising and Editorial parts of this Catalogue may be subject to some variation.

TRADE NAME	BOOTH	ROOM NO. or LOUNGE
ACOS - - - - -	77	461
AGFA-GEVEART - - - - -	37	353
AKAI - - - - -	—	563
AKG - - - - -	88	237
AMPEX - - - - -	—	536
ARENA - - - - -	34	156
ARMSTRONG - - - - -	80	538
AUDIO & DESIGN - - - - -	65	356
AUDIO RECORD REVIEW - - - - -	—	246
AUDIO TECHNICA - - - - -	43	202

<i>TRADE NAME</i>	<i>BOOTH</i>	<i>ROOM NO. OF LOUNGE</i>
BASF - - - - -	55	149
BEYER - - - - -	58	215
BRAUN A.G. - - - - -	57	253
BRENELL - - - - -	89	240
BSR - - - - -	70	259
CELESTION - - - - -	22	534
CHILTON - - - - -	59	354
CONNOISSEUR - - - - -	83	548
DECCA - - - - -	—	648
DESIGN FURNITURE - - - - -	10	140
DIAMOND STYLUS - - - - -	40	450
DUAL - - - - -	72	147
DYNATRON - - - - -	35	236
ELCOM - - - - -	78	249
ELIZABETHAN - - - - -	68	358
E.M.I. - - - - -	21	302
FERRANTI - - - - -	76	261
FERROGRAPH - - - - -	53	134
FISHER - - - - -	—	637
GARRARD - - - - -	71	234
GOLDRING - - - - -	93	402
GOODMANS - - - - -	45	434
THE GRAMOPHONE - - - - -	—	—
GRAMPIAN - - - - -	38	—
GRUNDIG - - - - -	69	634
HI-FI NEWS AND TAPE RECORDER -	81	244
HI-FI SOUND - - - - -	56	334
HIGH FIDELITY - - - - -	86	—
JORDAN-WATTS - - - - -	30	448
K.E.F. - - - - -	92	542
KIRKSAETER - - - - -	42A	561
LEAK - - - - -	54	107
LOWTHER - - - - -	—	204
LUGTONS - - - - -	250	—
LUSTRAPHONE - - - - -	79	145
MB MIKROFONBAU - - - - -	41	—

<i>TRADE NAME</i>	<i>BOOTH</i>	<i>ROOM NO. or LOUNGE</i>
MEDLEY MUSICAL - - - - -	39	—
MINICONIC - - - - -	26	540
MULLARD - - - - -	36	350
MULTICORE - - - - -	62	—
OKI - - - - -	33	255
ORTOFON - - - - -	51	647
PARMEKO - - - - -	82	358
PHILIPS - - - - -	23	336
PHILIPS - - - - -	25	337
PIONEER - - - - -	9	316
QUAD - - - - -	90	604
RADIONETTE - - - - -	31	256
RECORDAWAY - - - - -	20	—
RECORD HOUSING - - - - -	29	442
RECORDS AND RECORDING - - - - -	66	—
RESLO - - - - -	15	348
REVOX-STUDER - - - - -	19	649
RICHARD ALLAN - - - - -	27	642
RICHARDSON - - - - -	74	359
ROGERS - - - - -	48	602
SANSUI - - - - -	28	159
SANYO - - - - -	73	340
SCOTCH - - - - -	60	342
SENNHEISER - - - - -	63	355
SHURE - - - - -	91	404
SINCLAIR RADIONICS LIMITED - - - - -	46	248
SLOT STEREO - - - - -	52	661
SONOTONE - - - - -	49	154
S.M.E. - - - - -	61	—
S.T.C. - - - - -	6	—
STEREOSOUND - - - - -	32	155
TANDBERG - - - - -	24	504
TANNOY - - - - -	67	547
TAPE RECORDER SPARES - - - - -	84	160
TAPE RECORDING MAGAZINE - - - - -	343	—
TEAC - - - - -	7	349
TELEFUNKEN - - - - -	47	247
TELETON - - - - -	64	158
THORENS - - - - -	50	—

<i>TRADE NAME</i>	<i>BOOTH</i>	<i>ROOM NO. of LOUNGE</i>
TRANSCRIPTORS - - - - -	17	—
TRD - - - - -	16	447
TRIO - - - - -	42	260
TRUVOX - - - - -	94	636
UHER - - - - -	44	361
VORTEXION - - - - -	2	334
W.B. STENTORIAN - - - - -	85	304
WHARFEDALE - - - - -	87	502
WILLIMAN - - - - -	346	—
WILMEX - - - - -	363	—
WIRELESS WORLD/ELECTRICAL AND ELECTRONIC TRADER - - - - -	75	—
YAMAHA - - - - -	18	153

P R O D U C T S G U I D E

BBC

British Broadcasting Corporation,
Portland Place,
London, W.1

**Ground
Floor**

The BBC has an Information Bureau at the Fair. It is in the Glass Hall —on the right-hand side. Technical information will be available about all the BBC's services and BBC engineers will be pleased to discuss new developments in broadcasting and advise on reception problems.

The times of stereo transmissions from Wrotham during the hours of the Audio Fair are available on the BBC stand.

F.B.T.R.C.

The Federation of British Tape Recording Clubs,
33 Fairlawnes,
Maldon Road, Surrey

**Lounge
141**

The Federation of British Tape Recording Clubs is the national organisation representing all amateur tape recording interest in this country and has a membership class for individuals as well as Clubs. It was formed in 1957 and is affiliated to the International Federation of Sound-hunters. It is thus able to further British interests on an International level. The Federation publishes a Quarterly Bulletin free to all its individual members and maintains a Sound Archives containing all the British and International winning tapes from past Contests. The British Amateur Tape Recording Contest has been a special concern of the Federation since the beginning and it has played its part in the organisation of that annual event, selecting from the winning tapes, the British entries for the International Contest. Membership for one year is £3.3.0d. for a Club and £1.1.0d. for an individual Associate Member.

ACOS

Cosmocord Ltd.,

Eleanor Cross Road,
Waltham Cross, Hertfordshire
Waltham Cross 27331

Booth 77

Demonstration

Room 461

Cartridges, Microphones and Styli

Announced at last year's Audio Fair and now shown in a new and improved version, the **Acos GP 91 SC, Stereo Compatible Cartridge**. This cartridge is intended for those who wish to retain a mono playing unit, but require the facility for playing stereo records—in mono of course.

Brief specifications for the range of Acos Cartridges are as follows :

Mono Crystal	GP 91-1 SC	Output 200 mV at 1.2 cm/sec.
	GP 91-2 SC	Output 350 mV at 1.2 cm/sec.
	GP 91-3 SC	Output 640 mV at 1.2 cm/sec.
Mono Ceramic	GP 92-1	Output 140 mV at 1.2 cm/sec.
Stereo Crystal	GP 93-1	Output 280 mV at 1 cm/sec.
	GP 95-1	As above (fine groove records only)
Stereo Ceramic	GP 94-1	Output 100 mV at 1 cm/sec.
	GP 96-1	As above (fine groove records only)
Stereo Ceramic (High Capacity)	GP 94-5	Output 60 mV at 1 cm/sec.

Detailed information on the complete range of Acos cartridges, styli and microphones will be available from our booth, where our engineers will be pleased to answer your queries.

Demonstrations of cartridges will be given continuously in Room 461

AGFA-GEVAERT

Agfa-Gevaert A.G.,
Leverkusen-Bayerwerk,
Western Germany

Booth 37

Demonstration

Room 353

Magnetic Tape and Accessories

In addition to seeing the extensive range of Agfa Magnetron Recording Tapes and Accessories, visitors to the exhibition will be able to hear superb quality recordings made on these tapes when visiting the "Magnetron Bar" in our demonstration room on the third floor.

Visitors can also make a copy of these excellent recordings for themselves. Select the music of your choice and whilst you are listening make a copy to take away with you free of charge. The choice of music available will include classical, jazz and beat.

Each day, two copy tapes will contain a length of gold coloured leader tape and the recipients of these tapes will also be awarded a 7 in. reel of PE.31 long-play recording tape or the equivalent length on smaller spool sizes of their own choice.

Agfa-Gevaert's recording staff will be available to answer any enquiries on Stand 37 or in the Demonstration Room 353.

U.K. Address : Agfa-Gevaert Limited, Magnetic Tape Division, Great West Road, Brentford, Middlesex. Telephone : 01-560 2131.

AKAI

Akai Electric Corporation,
883, 3-Chrome, Kojiya-Cho,
Ohta-Ku, Tokyo, Japan

Audio Arcade
Display 8
Demonstration
Room 563

Tape Recorders and Accessories

The complete range of **Akai** professional and amateur stereo/mono tape recorders, accessories and speakers will be on show.

The **Akai** range of tape recorders has fast become established as one of the leaders in the field of Hi-Fi. The range now extends from £86 for a stereo tape deck to a £600 Studio Console unit. All **Akai** recorders are designed for stereo/mono operation to the highest specification. Their versatility is greatly increased by the exclusive **Akai Crossfield Head** which increases frequency response by reducing the adverse effects of the AC bias. This unique feature permits operating speeds as low as 15/16th i.p.s. with a frequency response of 30 to 5,500 c.p.s. \pm 3 db (the lowest running speed of the **Akai X-IV**).

Three new items from **Akai** will be on view, the **3000D** tape deck, the **M-9** stereo/mono recorder with 20 watts per channel, solid state amplification and the **X-150D** tape deck with Crossfield Head. Also a new version of the **1710** tape recorder will be on show which is now called the **1710W** which offers the choice of a walnut cabinet. Other items on display will be the **X-IV**, **X-300**, **X-355** and the **Akai** speakers.

U.K. Distributors : Pullin Photographic, The Rank Organisation, 11, Aintree Road, Perivale, Middx. Tel. No.: Alperton 1541.

AKG

Akustische u. Kino-Geräte Gesellschaft m.b.H.,
Nobilegasse 50,
Vienna, Austria
Tel.: (0222) 92 16 47

Booth 88

Demonstration

Room 237

Microphones

Microphones

A new release is the type D.1000 which has a 24 carat gold finish. This is an ideal musician's single system cardioid microphone. It provides a first-class cardioid to reduce feed-back, and incorporates a three-position switch providing three different sounds. The frequency response is actually tilted from about 4 kHz and another important feature is its easy serviceability. The capsule can be replaced within minutes as the top grill unscrews to expose the capsule. There is another version in an elegant studio silver grey finish.

We announced last year the first dynamic microphone adopting the two-way system principle, this is where two capsules are employed together with a cross-over network which provides a wide and even frequency response as well as a back-to-front ratio of 20 db average over the entire band. This range is now extended with the new very elegant type D.224. Like others in the range, this is a dynamic cardioid, however it looks and sounds like a condenser microphone. Bass attenuation is achieved by a three-position step switch giving cuts of 0, -7 and -20 db.

Another newcomer is the type D.202 E1, and this differs from the D.202 ES as the "on"/"off" switch is deleted, and the same step switch as used in the D.224 replaces the potentiometer. Both microphones are delivered with individual calibrated frequency response curves.

Headphones

A.K.G. have augmented their range of headphones by introducing two new types. These are the K.20 and K.60. Both use moving coil earpieces separately terminated to cater for stereo listening, and are supplied in two impedances viz., 75 ohms or 600 ohms per earpiece. Our demonstration will include a "Listening Bar" where visitors can compare these new headphones, together with the very popular K.50 type which has been very successful over the past years.

**Distributors for U.K. and Commonwealth : Politechna (London) Ltd.,
182-184, Camden Hill Road, London, W.8. Tel.: Park 0711.**

AMPEX

Ampex Corporation,
Redwood City,
California, U.S.A.
(Calif) 4153672011

Audio Arcade
Display 5
Demonstration
Room 536

Precision Magnetic Tape Recorders

Ampex are exhibiting a wide selection from their comprehensive range of tape-players/recorders for professional and home use.

Ampex Model 753

Demonstrated to the public for the first time at this year's Audio Fair, the 753 stereo 4-track recorder/player deck is the lowest-priced Ampex "domestic consumer" model. It features sound-on-sound and sound-with-sound facilities, off-tape monitoring and echo control. A teak case with plexiglass cover is an optional extra for the 753.

Ampex 2100 Series

The 2100 Series is designed to play and record in both directions, providing up to four hours high quality stereo recording without changing reels. Automatic reverse and simple automatic threading, plus a monophonic mixing feature make this Ampex's finest recorder/player.

The Ampex 2100 Series is available in two models :

Ampex Model 2153. An uncased deck with stereo pre-amplifiers.

Ampex Model 2163. A portable recorder/player complete with pre and power amplifiers, capable of straight-through amplification, and supplied with one Ampex 2001 dynamic microphone and dustcover.

Ampex Model 1153. A deck-unit with 2-second automatic loading and automatic tone-operated reverse. Designed for incorporation in systems already equipped with power amplifiers and speakers, the Model 1153 can be mounted either vertically or horizontally or at any angle.

Ampex Model 1163. The same advanced tape transport as the Model 1153 but mounted in a reinforced carrying case and complete with power amplifiers giving 16 watts (4 watts RMS per channel).

Ampex Home Speakers

Ampex speakers are designed to take full advantage of the superb reproduction capability of Ampex home recorder/players.

Model 815. Perfect stereo sound from a very small enclosure, only 9½ in. x 13½ in. x 7½ in. Each enclosure contains a 6 in. woofer and a 3½ in. tweeter, infinitely baffled for full response.

Model 915. Brilliant sound reproduction. Extended range 8 in. woofer and 3½ in. tweeter, matched to give excellent frequency response from 50 to 15000 Hz. Size, 18 in. x 13½ in. x 9½ in.

Ampex Stereo Tapes

Mastered, duplicated and quality-audited exclusively with Ampex professional recorders on Ampex tape, to give the finest possible listening quality available in pre-recorded music. A very wide selection of 4-track pre-recorded stereo tapes is now available in the United Kingdom from Ampex.

Ampex professional audio equipment will be represented by an AG-20 portable recorder (this gives broadcast quality replay yet weighs less than 12 lbs.) and an AG-440 broadcast recorder.

Footnote : The specifications which Ampex quote are "unweighted": they equal or exceed those of other manufactures in any comparable price-range.

U.K. Distributors : Ampex Great Britain Limited, Acre Road, Reading, Berks. Tel.: Reading 84411.

ARENA

Hede-Nielsen Fabriker A/S,
Horsens,
Denmark

Booth 34

**Demonstration
Room 156**

Sound Equipment

The Hede-Nielsen Group of Companies was founded in 1908 and has many interests and factories. The branch covering their Radio and Hi-Fi equipment was established in 1928 and is consistently expanding. This is the biggest single manufacturer in Denmark in this field. They are appearing in a British Audio Fair for the third time and have much to introduce to the enthusiast.

The factories are situated in the beautiful town of Horsens in Jutland. In close conjunction with their highly advanced laboratories, they utilise the latest technology known to produce the most advanced circuitries and chassis designed to rigid quality control.

A constant flow of high class products has assured Hede-Nielsen Fabriker a constant growth. This reputation will undoubtedly make its mark on the British retailer, who will enjoy pleasure and pride from the sale of Arena products.

Our present range of Arena tuner amplifiers and record players, all of module construction, include the following :

1. T2400 FM stereo tuner amplifier.
2. T2500 H and F stereo tuner amplifier.
3. F210 stereo amplifier.
4. F211 stereo FM tuner.

We are further showing for the first time our new T1500 series in tuner amplifiers as well as our new range of speakers which are available and the complete range of Garrard turntables (of higher quality) on Arena bases and covers.

U.K. Distributors : Highgate Acoustics, 184/8 Great Portland Street, London, W.1.

ARMSTRONG

Armstrong Audio Ltd.,
Wartlers Road,
London, N.7
Tel.: 01-607 3213/4

Booth 80
Demonstration
Room 538

Tuners, Amplifiers, Tuner-Amplifiers

Armstrong, one of the best known names in British Audio equipment are showing their **Series 400**, as follows,

- 421 Stereo Amplifier**
- 423 AM-FM Tuner**
- 424 FM Tuner**
- 425 FM Stereo Tuner-Amplifier**
- 426 AM-FM Stereo Tuner-Amplifier**

and optional, with any of the Tuners and Tuner-Amplifiers, is the
M4 Stereo Radio Decoder

The whole series is designed for either shelf-mounting or easy cabinet fitting. Power outputs are of the order of 15 watts RMS per channel and FM and AM sensitivity and performance are high, there being an RF stage and four IF stages on FM and an RF stage and two IF stages on AM which covers long and medium wavebands. Inputs are provided for magnetic pickups, ceramic pickups, tape playback and radio. Facilities include rumble filter, two treble filters, loudness control, tape monitor switching, headphone listening and inter-station quieting on FM.

Series 27

Suitable for those who are looking for exceptional value for money on a modest budget,

- 127 Stereo Tuner-Amplifier**
- 127M Mono Tuner-Amplifier**
- 227M Mono Tuner-Amplifier**

and optional, with the 127, is the

- M5 Stereo Radio Decoder**

AUDIO & DESIGN

Audio & Design Ltd.,
40, Queen Street,
Maidenhead, Berks
Maidenhead 25204

Booth 65

**Demonstration
Room 356**

Loudspeakers, Pick-up Arms and Cleaning Equipment

New to the Fair is our Induced Field Cartridge which will become one of the very few high quality British cartridges. The performance of this can be heard used in conjunction with our "mercury contact" pick-up and the T.C.L. systems and provides a highlight to this year's Audio Fair.

Audio & Design is demonstrating two already known products, namely the Titanium Cone Loudspeakers and the Laboratory Pick-up Arm. Demonstrated is our latest system designs for these loudspeaker modules, which includes the new **Titan Minor**. Also exhibited are enclosures made up by an enthusiast from our "do-it-yourself" instructions and a cross-section shows how easily and inexpensively such high quality systems can be constructed.

Also for demonstration to the Trade in our Trade office is the production version of our professional record cleaning machine which is of use and interest to record dealers and libraries in particular.

AUDIO RECORD REVIEW

Heathcock Press Ltd.,
Heathcock Court,
Strand, London, W.C.2
Tel.: 01-836 0716

Press
Lounge
246

Monthly Magazine

Audio Record Review—founded by Leonard Hibbs in 1933 as *The Gramophone Record*—has tried in recent years to introduce a fresh approach to the appreciation and documentation of recorded music by its comprehensive coverage of record releases, not only classical, but jazz, light, popular, curiosa, folk and spoken word issues. *ARR* offers the record enthusiast a complete picture of the record scene month by month, surveyed by eminent writers in this field. Collectors find the feature articles on personalities in the record world, and accompanying discographies, of especial interest. Historic records are also covered.

Our reviewing panel includes Peter Aston, Peter Branscombe, Christopher Breunig, Bryan Corrie, Kenneth Dommatt, John Freestone, Christopher Grier, Max Harrison, A. K. Holland, Peter Le Huray, Arthur Jacobs, Burnett James, Robert Sherlaw Johnson, Charles Osborne, Malcolm Rayment, Isla Tait, Cedric Wallis, Stephen Walsh, and John Warrack. Peter Clayton has recently joined Paul Oliver in reviewing **Jazz and Blues** records. **Folk**: Madeau Stewart. **Popular Albums** (including Stage and Screen items) by Arthur Jackson. The knowledgeable Ralph Harvey tackles the **International Market** in his reports on Continental releases, with Mary Postage dealing with **Poetry and Drama** material.

ARR has initiated a scheme for National Record Awards (to be known at the AUDIO AWARDS) for recordings of exceptional merit originated and produced by a British or British-based company. The yearly number of records is at the discretion of the Awards Committee and jury, and records will not be forced into categories so that awards can be given purely on merit and for any type of recording. The ten discs selected for the 1967 Audio Awards were listed in the February, 1968, *ARR*, and the winners were announced for the first time on the BBC-2 TV programme "Music International" on December 31st.

ARR's **Editor** is Peter Gammond, a widely recognised authority on recorded music, author of many books on music and the record repertoire (e.g., *A Guide to Popular Music*, the five-volume *Music on Record*, the best-selling *Bluff Your Way in Music*, and several books on jazz themes).

The sound equipment for high-quality reproduction is discussed in depth by *ARR's* **Technical Editor**, Donald Aldous, long renowned for his work, writings and broadcasts on high-fidelity topics. Full-scale test reports of the latest audio products and up-to-the-minute news of developments appear every month, written in a readable style so that readers can have independent assessments of all the best audio systems and accessories. Magnetic recording (tapes and cassettes) is not neglected and stereophony—from records and radio—gets full treatment.

ARR's purpose can best be summarised as "Audio in the service of Music", all for the price of 2s. 6d. per copy.

AUDIO TECHNICA

Audio Technica Corpn.,

2206 Naruse,

Michida,

Tokyo, Japan

Booth 43

Demonstration

Room 202

High Fidelity Stereophonic Cartridges

Once again, Shriro (U.K.) Ltd., are demonstrating the outstanding products of the Audio Technica Corporation, and extend a sincere welcome to all visitors. Audio Technica are precision engineers in the audio field and have applied their specialist techniques and extensive experience in miniaturisation, to the manufacture of a range of cartridges even more advanced than that introduced with overwhelming success last year.

The range now consists of the following :—

	Specifications			
	At 66	At 33	At 21	At 35
Frequency Response ± 2 db	10-20,000	10-20,000	10-25,000	10-25,000
Channel Separation at 1 kHz	25 db	27 db	30 db	30 db
Output Voltage at 1 kHz 5 cm/sec.	4 Mv	5 Mv	4 Mv	5 Mv
Static Compliance cm/Dyne	30 x 10-6	23 x 10-6	30 x 10-6	23 x 10-6
Tracking Force gms	0.5-2.0	0.5-2.5	0.5-2.0	0.5-2.5
Tracking Angle	15°	15°	15°	15°
Principle of Operation	Duexciting	V-Magnet	Duexciting	V-Magnet

Much of the outstanding performance of these new cartridges is due to a reduction of the effective moving mass, and a cantilever consisting of a Duralamin tube only 50 microns thick. Audio Technica have developed a revolutionary technique of inserting an extremely fine wire at right angles to the permalloy tube and of affixing this tube to the cantilever without deformation, resulting in minimum distortion and extremely low crosstalk.

These features are the result of painstaking research, culminating in an extremely sophisticated design and provide a world of audio realism belonging only to the Audio Technica cartridge. This, coupled with the very modest price asked for these cartridges must undoubtedly represent the finest value available to the discerning audiophile. Continuous demonstrations will be carried out using well known equipment of the highest quality, and on display will be a prototype of an Audio Technica pick-up arm to be introduced shortly. Full technical assistance and literature will be on hand throughout the exhibition.

U.K. Importers and Distributors : Shriro (U.K.) Ltd., 8, Bush Lane, Cannon Street, London, E.C.4. Telephone No. 01-626 4711.

BASF

Badische Anilin-& Soda-Fabrik A.G.,
Ludwigshafen am Rhein,
Federal Republic of Germany

Booth 55

**Demonstration
Room 149**

Magnetic Tape, Library Boxes and Accessories

In the BASF Demonstration Room frequent screenings will be given of the new BASF colour film "The Timeless Track". Accommodation is limited and tickets for admission for each performance should be collected in advance from Booth 55.

Displayed on Booth 55 will be a full range of BASF Tapes and accessories, among which will be a number of new lines, including :

BASF PES 35 LH Tape—the new BASF low noise high output tape specially suitable for amateur users, which is available in spool sizes of from 5 in. to 10½ in.

The **BASF Hobby Box**, containing Splicer; marking pencil; cutting blade; 33 ft. of splicing tape 0.7 in. wide; 80 ft. lengths of each of red, white and green leader tapes; 50 pieces of 6 in. metallised foil; 25 spool labels in green and red; 3 tape clips.

Also on display is the **BASF Compact Cassette C 120**, the first sextuple play compact cassette, providing 60 minutes playing time on each track.

BASF personnel will also be available in Room 149 to discuss any special problems.

U.K. address : BASF United Kingdom Limited, 5a Gillespie Road, London, N.5. Telephone : 01-226 2011.

BEYER

Eugen Beyer Elektrotechnische Fabrik,
71 Heilbronn Neckar,
West Germany
Heilbronn 82348

Booth 58

**Demonstration
Room 215**

Microphones, Headsets, Stands, Booms, etc.

In addition to a full range of Beyer microphones, the company will also be exhibiting for the first time the latest model: the new Soundstar dynamic moving coil microphone. The unit is of a slim, streamline design and is for use by both professionals and amateurs and has a pop filter and hum compensation.

Specifications :

Version **N**

Frequency response : 30-18,000 Hz

Polar Pattern : Cardioid

Output level : 0.2 mV μ bar (-52 dbm)
0 dbm 1mW μ bar

Output impedance : 200 Ω

Hum induction factor : 5mV/50 mG (50 Hz)

Connections : 3-pin plug T 3262 1 + 3 = 200 Ω 2 = ground

HLM

Same as above but with impedance selector switch

200 Ω — 500 Ω — 25k Ω

Connections : 3-pin plug T 3262, 2 + 3 = 200 Ω
2 + 1 = 500 Ω and 25k Ω
2 = ground

All versions also available with Cannon plug XLR—
3—50 T or Tuchel T 3007 spec.

Other units form the Beyer range exhibited include :

M 55—dynamic moving coil microphone—omni-directional

M 64—moving coil dynamic microphone—uni-directional

M 67—dynamic moving coil cardioid

M 69—dynamic moving coil cardioid

M 80—dynamic moving coil microphone—cardioid

M 88—dynamic moving coil cardioid

M 100—dynamic moving coil omni-directional

M 110—dynamic la Vallière omni-directional

M 130—dynamic double ribbon microphone—bi-directional

M 160—dynamic double ribbon cardioid

M 260—dynamic single ribbon cardioid

M 320—dynamic ribbon supercardioid

M 360—dynamic ribbon cardioid

M 610—dynamic moving coil cardioid

M 808—stereo microphone set, complete with stereo bar and clamps

DT 48—headset, dynamic earphones. 5 or 25 ohms each earpiece

DT 96A—dynamic headphones. 50 or 400 ohms earpiece.

U.K. Distributors: Fi-Cord International, Charlwoods Road, East Grinstead. East Grinstead 21351.

BRAUN A.G.

Braun A.G.,

Russelsheimer Strasse 22,

Frankfurt/Main,

Western Germany

Booth 57

Demonstration

Room 253

*Hi-Fi Stereo, Amplifiers, Tuners, Deck, Speakers,
Record Players, Tape Recorders*

In addition to the full range of Amplifiers, Table Radio Gramophones, Tuners and Speakers featured at the last Audio Fair, a new stereo control unit (Audio 250), a new amplifier (CSV 500) and tuner (CE 250) and a new loudspeaker (L 600) will be shown.

Audio 250 Stereo Control Unit

The new hi-fi stereo control unit, the Audio 250, has a white or charcoal lacquer base with a plexiglass lid, and is equipped with a PS 410 turntable, tuner which incorporates a stereo decoder, and amplifier section. The improved pick-up arm is fitted with a Vernier scale for correct stylus pressure adjustment and is equipped with a M 75-6 cartridge. The player has a fine speed control and a semi-automatic cueing device. There is also a tuner section for the reception of FM, FM stereo, SW, MW and LW broadcasts. The unit gives genuine high fidelity reproduction.

New Amplifier (CSV 500)

The new stereo amplifier (CSV 500) is housed in steel plate with a charcoal grey crinkle finish and aluminium front panel, and is a compact unit, attractive in both style and appearance. It has a well co-ordinated instrument panel, comprising rumble filters, treble filters, presence boosting, volume control, tape monitoring control and separate bass and treble controls for each channel.

New Tuner (CE 250)

The new tuner (CE 250) is clad in a similar cabinet and is a fully transistorised receiver unit, designed for those primarily interested in the high quality reception of FM and FM stereo broadcasts.

New Speaker (L 600)

The latest in the Braun range of hi-fi speakers, the L 600, was developed as a high-performance unit, in particular for stereo components such as the Audio 250 and CSV 250. Clad in wood, finished in laminated white plastic or walnut veneer with an anodised aluminium front grille, the unit measures 17 $\frac{3}{4}$ in. x 9 $\frac{5}{8}$ in. x 8 $\frac{3}{8}$ in. (width x height x depth).

Other units from the Braun range to be exhibited include :

PS 1000 turntable	L 300 speaker
PS 410 turntable	L 450 speaker
CSV 1000 amplifier	L 700 speaker
CSV 250 amplifier	L 800 speaker
CE 1000 tuner	SK 55 radiogram
CE 500 tuner	T 1000 communications receiver
TG 60 tape recorder	

Full demonstrations given in Room 253.

U.K. Distributors: Fi-Cord International, Charlwoods Road, East Grinstead. East Grinstead 21351.

BRENELL

Brenell Engineering Co. Ltd.,

231-235 Liverpool Road,

London, N.1

NORTH 8271

Tape Recording Equipment

Booth 89

Demonstration

Room 242

A full range of Mono and Stereo tape recording equipment will be exhibited and demonstrated.

Recording enthusiasts will undoubtedly pay much attention to the design details of the latest Brenell deck which has three outer rotor motors, a self-compensating braking system, large balanced flywheel to ensure minimum "wow" and "flutter" and a capacity to accommodate up to four heads.

A stereo version of the Brenell deck and the new Hi-Fi Tape Link will be a worthy addition to the best of Hi-Fi installations.

Specifications: Brenell Mark 5 Series 3 Deck: 3 motors (synchronous type for capstan drive). Large flywheel (statically and dynamically balanced). 4 tape speeds (15, $7\frac{1}{2}$, $3\frac{3}{4}$, $1\frac{7}{8}$ i.p.s.). Low "wow" and "flutter", less than 0.05% at 15 i.p.s., 0.1% at $7\frac{1}{2}$ i.p.s., 0.15% at $3\frac{3}{4}$ i.p.s., 0.25% at $1\frac{7}{8}$ i.p.s. Spool sizes up to $8\frac{1}{2}$ in. Accommodation for 4 heads—mono or stereo. Digital revolution counter.

Brenell Mark 5 Series 3 Amplifier: Designed to match the $\frac{1}{2}$ track Erase and Record/Playback heads fitted to the standard 2 headed mono deck. For use as: (a) Recording Amplifier; (b) Replay pre-amp. into external Hi-Fi equipment; (c) Replay into 15 ohm speaker; (d) "Straight" amplifier.

Switched frequency correction for 4 speeds. Microphone and Radio input sockets, monitoring of input signals on headphones, plug and socket coupling to associated equipment. Available with magic eye or meter.

Brenell Mark 5 Series 3 Tape Recorders: High quality mono ($\frac{1}{2}$ track) recorder incorporating above deck and amplifier. Wooden cabinet. 9 in. x 5 in. internal speaker.

Brenell Mark 5 Type "M" Series 3 Tape Recorder: Special Mono ($\frac{1}{2}$ track) recorder fitted with **Separate Record and Playback Heads and Amplifiers**. 4 Tape speeds—Low "Wow" and "Flutter" (to above deck specifications). Mixable inputs, Bass and Treble controls, Outputs to headphones, External amplifier and External speaker.

Brenell STB2/5/2 Stereo Unit: A top quality stereo unit incorporating **Separate Record and Playback Pre-amplifiers**. Designed for the Hi-Fi enthusiast desirous of adding really high quality Mono/Stereo recording facilities to his present installation. 4 speed deck, 4 heads, Replay facilities for 1/4, 2/4, 1/2 and 2/2 track tapes and recording facilities for 1/2 and 2/2 track. Variable bias. Mixing of 4 input signals. "A.B." switching. Cathode follower outputs to suit any External amplifier. Special feature—Sensitivity of the 4 recording amps may be adjusted to match any make of Hi-Fi Amplifier. STB2 Monitor Amplifier and speakers available as optional extra (mount inside STB2 cabinet).

Brenell Hi-Fi Tape Link: The most recent addition to the Brenell range. This unit is designed to match a 3-headed Stereo deck to any make of High Fidelity amplifier. It contains two identical recording amplifiers, with equalisation circuits for 4 tape speeds and a Push-Pull Bias/erase oscillator, which may be used for Mono or Stereo recording purposes. Twin replay tape pre-amps give equalisation at 4 tape speeds and adjustable output levels for feeding to associated amplifiers. Two edgescala meters indicate the recording level and all valves are DC heated to eliminate the possibility of hum in the heater circuits. A.B. switching enables the recorded material to be checked against the original.

Brenell Mark 510 Series 3 Deck: Contains all the Mark 5 Series 3 deck features but accommodates reels up to $10\frac{1}{2}$ in. diameter. (All recorders can be supplied with this deck at extra charge.)

BSR

BSR Limited,
Cradley Heath,
Warley,
Worcs.

Booth 70

**Demonstration
Room 259**

*Record Changers, Record Players, Tape Decks,
Cartridges, Tapeheads*

An entirely new unit is the principal feature of the BSR exhibit.

The new changer is the **UA75** automatic/manual turntable unit, introduced as an extension to BSR's most recent range of equipment designed for the discriminating audio enthusiast. Other models in the range are the **UA65**—launched at last year's Audio Fair, and the **UA70** launched at the previous year's show. Both the **UA65** and **UA75** are shown again this year.

The **BSR UA65** was launched at the 1967 Audio Fair. It features a low mass tubular aluminium pick-up arm. Stylus pressure is easily adjustable, and a pick-up arm bias control which applies continuously corrected degrees of compensation is also adjustable. The **UA65** can be used either manually or automatically and interchangeable spindles are provided.

The **BSR UA70**, launched two years ago has a calibrated stylus pressure adjustment which permits third of a gramme settings from zero to six grammes. A fully adjustable, bias control applies continuously corrected degree of compensation as required to neutralise any tendency towards inward skating and there is a cue and pause lever. The tubular pick-up arm is finely counterbalanced and the turntable measures 11 in. diameter.

The **BSR UA75** reflects the success of the **UA65** and **70** in its similarity of style and incorporation of all the features of those two models. Further refinements include a heavy cast non-magnetic machined turntable, which provides optimum flywheel action. Additionally a muting switch provides complete silence from the unit during the record changing cycle and a "pop" filter suppresses switch arcing when the unit shuts off. In common with the **UA65** and **UA70** models the new unit can be operated manually if desired, and alternative spindles are provided. A special bias control ensures positive stylus set down and eliminates distortion resulting from side pressure. Other features include: calibrated stylus pressure control for precise low-pressure tracking and coarse and fine counter balance adjustment of pick-up arm; automatic lock which secures arm to rest after record has been played; integral mechanical cueing lever allowing the pick-up arm to be raised and lowered at any selected point; low-mass pick-up shaft; lightweight cartridge shell which permits all standard cartridges to be clipped-in; dynamically balanced, dual voltage 4-pole induction motor.

The **UA75** is being demonstrated throughout the period of the Audio Fair in Room 259.

CELESTION

Rola Celestion Limited,
Ferry Works,
Thames Ditton, Surrey
01-398 3402

Booth 22
Demonstration
Room 534

Loudspeakers

Celestion will be demonstrating for the first time a new loudspeaker in the highly successful **Ditton** range. Full details will be released at the Audio Fair. Known as the **Ditton 25** it will have an extremely wide and smooth frequency response and will handle up to 25 watts R.M.S. with ease.

The now famous **Ditton 15** which was introduced last year will also be demonstrated for the benefit of those who have not already heard this remarkable compact reproducer. Acclaimed by reviewers in the technical Press, this is an ideal speaker where very high sound quality is desired and where moderate size and cost are important. This speaker incorporates the exclusive A.B.R. (Auxiliary Bass Radiator) which improves bass response and sensitivity to a point unknown in conventional speakers of this size. Hear and see the "A.B.R. IN ACTION"—electronic demonstration, fifth floor, Rooms 533 and 534.

Celestion will demonstrate the **Ditton 10**, first released in 1965 and still the foremost mini speaker obtainable. Measuring only 12¼ in. x 6¼ in. x 8¼ in., response 15 kHz down to 35 Hz and handling up to 10 watts R.M.S.

Celestion also manufacture a range of high fidelity units for the home constructor.

Rola Celestion Ltd. welcome friends old and new to a new experience in the field of sound reproduction.

CHILTON

Magnetic Tapes Ltd.,

Chilton Walk,

Garden Road,

Richmond, Surrey

Tel.: 01-979 1316

Booth 59

Demonstration

Room 354

Tape Recorders

The **Chilton 100 S Tape Recorder** is a new solid state Stereo two- or four-track solenoid operated machine, manufactured by a company with specialised knowledge in the design and production of semi-professional tape recorders for the quality-conscious market.

Every effort is made to consistently maintain a high standard during production and testing, and this is assisted in no small measure, by extensive tooling and attention to detail throughout the entire design. Much thought has been given to the integration of both mechanical and electronic controls in a logical manner, with the aim of simplifying and so reducing, incorrect operation.

This 100% British product is manufactured in its entirety at our Chilton Works in Richmond, Surrey, with a floor area of 10,000 sq. ft. Full remote control facilities are possible with the **Chilton 100 S**, including pause and rewind, and is therefore, suitable for industrial and language laboratory use.

Although not a large company by present standards, the efficient utilisation of modern machinery, including an automatic wave solder plant, the production of our chassis work, solenoids and turned parts, etc., enables us to compete very favourably in home and world markets.

Brief Specification :

Power : 200/250 V. 50 Hz. or 190/120 V. 60 Hz.

Finish : Satin Chrome and Charcoal Grey deck with oiled Teak Cabinet.

Tape Speeds : $7\frac{1}{2}$ (19); $3\frac{3}{4}$ (8.5); $1\frac{1}{2}$ (4.8).

Inputs : Microphone—150 μ /V 50-200 ohms.

Radio—5 m/V at 47k adjustable.

Gram—5 m/V at 47k R.I.A.A.

Alternative available for crystal P.U.

Outputs : 2 x line output at 1 V. 600 ohms.

2 power output 10w RMS. at 8 ohms.

or 7w RMS. at 15 ohms.

- A. Two illuminated peak programme meters calibrated in dBs.
- B. Light pressure push buttons operate solenoids. All interlocked except pause and stop.
- C. Two tension rollers ensure neat tape wind and prevent tape bounce when operating pause.
- D. Automatic stop operates during rec./play wind or if tape breaks.
- E. Heavy steel flywheel nickel-plated. Flywheel shaft of high chrome steel, ground between centres to less than 25 μ inch roundness. This together with Polyurethane pinch and idle wheels ensures low wow and flutter with prolonged use.
- F. Stabilised power supply with positive cutout if L/S or supply is overloaded or shorted. Reverts to normal with short removed.
- G. Provision for multi-play and echo.

Recommended U.K. selling price : **£120 15s. 0d.**, less tape and microphone.

CONNOISSEUR

A. R. Sugden & Co. (Engineers) Ltd.,
Market Street,
Brighouse,
Yorkshire
Brighouse 2142

Booth 83
Demonstration
Room 548

*Sound Reproducing and Recording Equipment, High Fidelity
Equipment—Turntables, Pick-up Arms and Cartridges,
Speakers and Disc Recording Equipment*

Of special interest is our new belt-drive turntable, the **Connoisseur BD1** which is on exhibition for the first time. The **Connoisseur BD1** is a precision engineered product designed to provide top performance at a modest cost. Operating at the two present-day standard speeds of $33\frac{1}{3}$ and 45 rpm it incorporates a unique flexible belt-drive system which provides almost complete absence of vibration and transmission noise. The drive motor employed is a precision synchronous slow speed component having a minimum hum field thus making the unit suitable for use with even the most sensitive of pickups.

The now well favoured SAU2 arm which possesses all the worthwhile features called for in modern pickup design, its unique feature being the special gimbal mounting at 45/45 to permit an adjustable bias weight to be attached without threads or levers, will be shown and used in demonstration.

The Classic turntable system is available with various pickups. Compact in design it employs two slow speed synchronous motors, one for each speed and is mounted on a shallow plinth only $1\frac{1}{4}$ in. deep with either the Classic pickup complete with integrated head, the SAU1 or SAU2 arms with or without the SCU1 cartridge.

The well tried Craftsman turntables are still available, 2- and 3-speed models in chassis form or mounted on teak plinth again with either the SAU1 or SAU2 arms, the assembly complete with a Perspex Dust Cover.

The Craftsman omni-directional speakers, Major or Minor, complete our equipment.

DECCA

The Decca Record Company Limited,
(Special Products Division),
Ingate Place,
Queenstown Road,
London, S.W.8
MACaulay 6677

Audio Arcade
Display 3
Demonstration
Room 648

Pick-ups, Styli, Loudspeakers

New products from Decca this year include an additional magnetic cartridge in the ffs Mark 4 range. Designated the ffs Mk. 4 RC, this version is intended for those people who feel they cannot afford the extra cost of an elliptical stylus; it is fitted with a spherical point. There will also be on display, and being demonstrated, a new 30 watt loudspeaker enclosure, the Kardiod Thirty, which incorporates the new DK 30 ribbon high-frequency speaker.

These new products will be demonstrated in Room 648 on the sixth floor. Information and enquiries, Room 650.

DESIGN FURNITURE

Design Furniture Ltd.,

Calthorpe Manor,

Banbury, Oxon.

OBY5 4726

Booth 10

Demonstration

Room 140

Furniture for Hi-Fi

The Design Furniture range consists of a wide selection of cabinets made to extremely high standard of design and craftsmanship to meet the practical demands of the Hi-Fi enthusiast and, at the same time, to become a piece of home furnishing which the owner may be proud to possess.

The range of equipment cabinets embraces sizes varying to accommodate the minimum or the maximum of equipment required. The choice of design and finish should enable everyone to obtain a blend with existing furnishings from modern, period, colonial to country-style.

This year's Fair sees the introduction of five new equipment cabinets in the Design Furniture range, ranging from the ultra-modern EQC24, designed to appeal to the lover of contemporary furniture, right to the traditional EQC23, a cabinet capable of housing virtually any combination of Hi-Fi equipment available today, with the additional advantages of providing record storage for a substantial quantity of records and presenting the appearance of high quality furniture for which the Company has become known. The EQC25 and 26 cabinets are a new family of cabinets, with the same basic dimensionally aesthetic qualifications. The EQC22, possibly the most interesting cabinet unit to be seen for some years, has been designed in co-operation with Messrs. Acoustical Manufacturing Company specifically to provide the optimum accommodation for their new products in conjunction with a selection of high quality transcription units.

Temporarily absent from the Design Furniture stand are the range of record cabinets for which this Company has previously been well-known. In order to release maximum capacity for the production of the new range of equipment cabinets, the Company has temporarily discontinued the production of record cabinets, although old and new customers may rest assured that when we re-introduce our record cabinet range, the design and manufacture will be to the same high quality for which we have become well-known.

After the Fair

We have showrooms at our works in Banbury—we appreciate that few dealers can display our whole range—where cabinets (some fully equipped for demonstration) can be inspected. By prior arrangement the showroom can be visited either on Saturday morning or any evening during the week.

DIAMOND STYLUS

The Diamond Stylus Co. Ltd.,

Mochdre, Colwyn Bay,

Denbighshire,

North Wales

Colwyn Bay 49272

Booth 40

Demonstration

Room 450

Stylii

The rapidly increasing development of High Fidelity in the field of gramophone record reproduction, implies great care in choosing components for reproducing equipment.

Any chain is only as strong as its weakest link, and given that the links, represented by turntable, pick-up, amplifier and speaker, are as good as any compromise which price and quality will allow, there still remains that very important mechanical link between record and pick-up—the reproducing stylus.

To qualify any reproducing equipment as high quality, the stylus must be diamond.

There are three very definite reasons for this. The order in which we give them would, of course, vary according to taste, but the facts remain true.

These facts are based upon statements by technical experts of high repute and experiments made in our own factory:—

- (a) Diamond will wear fifty times longer than sapphire, extending by fifty times the period of distortion-free playing.
- (b) It is virtually unbreakable and is, in fact, guaranteed against this.
- (c) Record wear is reduced by at least one-half as compared with sapphire points.

And, finally, by simple calculation, with diamond stylii at the price they can be purchased at today, it is definitely not economical to use sapphire or any other material.

We believe in giving good service and high quality, courtesy and assistance in any specific stylus problem you may have, not only because it is good business, but because these elements engender strong and trusting associations.

If your equipment includes Diamond Stylii, you can be absolutely certain in that part of your equipment you are as near perfection as it is possible to get.

DUAL

Dual,

Gebrüder Steidinger,

St. Georgen,

Western Germany

Booth 72

Demonstration

Room 147

1st Floor

*Transcription Turntables, Tuners, Amplifiers, Speakers,
Stereo Systems and Accessories*

Not all Audio Components approach the goal of the term "High Fidelity" and convey the true sound of music, but outstanding amongst those that do is the name **Dual**, Europe's largest manufacturer of transcription turntables and other High Fidelity equipment.

Dual genius in tonearm and turntable design has raised the standard of sound reproduction, extending man's enjoyment of fine musical recordings.

Dual 1019 Transcription Turntable acclaimed by critics and enthusiasts as "The most sophisticated record playing instrument in the world today".

High performance and flawless tracking down to $\frac{1}{2}$ gram; tubular metal/low mass tonearm; continuously variable tracking force from 0 to 5 grams; vibration-free cue control; rotating single play spindle; 6% variable speed control; continuous pole motor with low stray field; constant speed stability resulting from dynamically balanced non-ferrous turntable, weighing over $7\frac{1}{2}$ lb. These are just a few of the technical features that make the **Dual 1019** the leader that it is.

Dual 1015F Transcription Turntable. Outstanding features in common with the **Dual 1019** include: low-mass, dynamically balanced tonearm; direct dial anti-skating compensation; cue-control; continuously-variable tracking force 0 to $5\frac{1}{2}$ grams; variable speed control.

Dual CV 40 Stereo Amplifier using all silicon transistors, giving an output 2 x 20 watts at 5-16 ohms and a frequency response range that goes far beyond both thresholds of audibility. Due to advanced circuitry, reproduction is remarkably free from distortion. The CV 40, equipped with equaliser-preamplifier, is distinguished by the most sophisticated switching technology.

Dual CT 12 AM/FM Tuner with built-in decoder. Functional design with large dimension dial and rationally placed control knobs. Various wavebands are selected by push-buttons and are also provided for AFC (Automatic Frequency Control) and for stereo/mono switchover.

An indicator registers field strength and optimum tuning. The sensitivity of the CT 12 tuner equals that of the high fidelity stereo amplifiers ensuring the full drive of the latter.

Dual CTG 27/2 Stereo Tape Unit, a modern 4-track stereo tape deck for recording and playback. **Dual CTG 27/2** gives outstanding reproduction combined with a control system which precludes operational errors. Simple to operate with push-button controls, there is every facility for the stereo enthusiast. One switch gives instant selection of either mono, stereo or multi-playback and, by means of an exclusive synchro-mechanism, volume controls for both channels operate either separately or coupled.

Dual HS 31 combines the control unit of the **Dual 1015/F** transcription turntable, fitted with the Pickering **V15/DAC** magnetic stereo cartridge, and two stereo speakers **CL 9**.

Dual HS 31, with 2 x 6 watt stereo amplifier, is attractively designed in walnut or rosewood, surmounted by dust cover in lightly tinted plexiglass. Inputs for tuner and tape.

U.K. Distributors: Dual Electronics Limited, Radnor House, London Road, Norbury, S.W.16. 01-764 9465/6.

DYNATRON

Dynatron Radio Limited,

St. Peter's Road,

Furze Platt,

Maidenhead,

Berkshire

Maidenhead 23331

Booth 35

Demonstration

Room 236

*Tuner/Amplifiers, Loudspeaker Enclosures,
Record Playing Decks*

The complete range of Dynatron Audio Separates are being displayed and demonstrated.

Tuner/Amplifier TRV17

High power output of 25 watts from twin amplifiers with wide range bass and treble controls, loudness control, comprehensive input and output sockets. Ultra sensitive radio tuner gives reception of LW, MW and VHF, and is fitted with Multiplex decoder for reception of stereo radio broadcasts. Has tuning meter for all wavebands and flywheel tuning with cursor pointer.

Record Play Deck P80

The unique Garrard Lab. 80 Mk. II manual/auto transcription record player fitted with the Pickering magnetic cartridge and diamond stylus. Heavy cast turntable, counterbalanced pick-up arm, with cables for stereo connection. Smoke grey tinted cover.

Record Playing Deck P25

Attractive record playing deck mounted on Teak plinth with smoke grey tinted cover. Fitted with the Garrard SP25 single record playing unit with heavy turntable, counterbalanced pick-up arm fitted with Pickering magnetic cartridge and diamond stylus and a cueing device. 5-pin DIN socket for stereo connection.

Record Playing Deck P60

The superb Garrard AT60 Mk. II record playing unit is fitted to this plinth. It features a 4-pole motor, heavy turntable, counterbalanced pick-up arm fitted with Pickering magnetic cartridge and diamond stylus and a cueing device. The plinth is finished in Teak veneer with a smoke grey tinted cover.

Loudspeakers LS100, LS200, LS300

LS200 is a floor standing bass reflex enclosure incorporating 8 in. and 3 $\frac{5}{8}$ in. round loudspeaker units combined with a high-pass filter. The frequency range extends up to 20 kHz and down to 40 Hz. LS100 "Fly-Away" speaker for shelf or wall mounting is a sealed pressure chamber enclosure fitted with 6 $\frac{1}{2}$ in. and 3 $\frac{3}{8}$ in. round loudspeakers. It has a frequency response of 40 Hz to 20 kHz. The LS300 is a high quality floor standing bass reflex enclosure incorporating a 12 in. low resonance loudspeaker unit and two high frequency units combined with a high-pass filter. The enclosure is in Teak veneer with a high quality fabric speaker fret.

Tuner/Amplifier/Record Player HFC3A and HFC3M

Incorporating tuner/amplifier SRX24 and the Garrard Model 50 Mk. II autochanger or SP25 single record playing deck with Sonotone 9TA HC cartridge and diamond stylus. The HFC3 offers a compact presentation which with the LS100, LS200 or LS300 loudspeaker enclosures offers a complete high fidelity radio and record stereo combination in three units. The cabinet is finished in warm oiled Teak veneer with smoke blue tinted cover. A highly functional and up-to-the-minute column stand in chromium and black is available as an optional extra.

ELCOM

Elcom (Northampton) Limited,
Weedon Road Industrial Estate,
Northampton
Northampton 51873/5

Booth 78
Demonstration
Room 249

Sound Equipment

Elcom are once again exhibiting samples from their range of varied sound equipment. Over the past twelve months this equipment has been installed in Theatres, Recording and Television Studios, Outside Broadcast units and many other places where sound quality is of the highest importance. The equipment on show includes several of the new modules developed by the laboratories of the Painton Group of Companies.

The main feature of the display is a range of sound mixers including a Six channel modular unit which can be built up to customers' requirements from standard units, with particular application to education authorities and those with smaller budgets.

A full range of broadcast type quality modules will be on show, from input modules to output units. All modules have been designed to I.S.E.P. mechanical standards on a plug-in basis.

Component exhibits include faders and attenuators, plugs and sockets, printed circuit connectors and switches.

ELIZABETHAN

Elizabethan Electronics Ltd.,

10/18 Clifton Street,

London, E.C.2

Booth 68

Demonstration

Room 258

Amplifiers, Tuners and Tape Recorders

The "**Elizabethan**" range for 1968 includes two new amplifiers and two FM tuners marketed under the well-known name of "**Dulci**".

The "**Dulci-220**" is a development of the earlier "**Princess**" model. With an optimum output of 17 watts per channel, it is bound to create great interest.

The new "**Dulci-207**" is being marketed in two versions, one suitable for high sensitivity input and the other for magnetic or ceramic cartridges.

The "**Dulci-FMT-7**" mono tuner will be on display and also its sister stereo version.

The associated equipment for these amplifiers and tuners will include two new playing desks and matching loudspeaker housings.

The tape recorder range will include the well-known **LZ-34 Mk. II** and the new **LZ-614 "Cameo"** cassette recorder.

E.M.I.

E.M.I. Electronics Ltd.,

Hayes, Middx.

Hayes 3888

Booth 21

Demonstration

Room 302

Loudspeaker Systems, Magnetic Recording Tape and Film, Laquer Recording Discs, Tape Accessories, Professional Tape Recorders

A wide range of EMI audio equipment will be presented at this Audio Fair on Booth No. 21 and in Demonstration Room No. 302.

As the world's largest recording organisation, EMI have developed a range of unrivalled products to their own exacting standards. These include professional tape recorders, high-quality recording tape, loudspeakers and hi-fi components.

Stereo and mono versions of the EMI BTR4 studio recorder, used in recording and broadcasting studios all over the world will be demonstrated in Room 302. Three versions of the L4 portable recorder, half-track, full-track and full-track with film synchronisation facility, will also be shown. EMI market a range of professional microphones and will be showing a studio condenser microphone, type C.38.

Emitape will be showing a wide range of audio recording tape, including a new professional standard-play tape, improved quality domestic tapes and the C.60 and C.90 cassettes.

EMI matched loudspeaker sets, launched with great success at last year's Fair, will be demonstrated this year using Bowers & Wilkins enclosures. There will also be a special demonstration of the EMI high-frequency 13 in. x 8 in. elliptical speaker. EMI matched loudspeaker sets comprise complementary speakers and crossover units, each item selected with the aid of EMI's anechoic testing chamber to give smooth reproduction over the entire audio spectrum. The seven different sets range from the "250" with 5 in. woofer for an enclosure of .4 cu. ft., up to the "950", with 19 in. x 14 in. woofer for a 4 cu. ft. enclosure.

FERRANTI

Ferranti Ltd.,

Hollinwood, Lancs.

FAIlsworth 2000

Booth 76

Demonstration

Room 261

*Semiconductors, Amplifiers, FM Tuners,
Microphone/Amplifiers*

The equipment to be demonstrated consists of two stereo amplifier channels each with a power output of 30 watts. The preamplifiers driving each channel can accept up to 6 different inputs, including FM tuner.

The main amplifiers, incorporating silicon transistors throughout, each give 30 watts continuous rms power into $7\frac{1}{2}$ loudspeakers. A unique feature of the design eliminates the use of preset potentiometers for setting up. This feature is the subject of a patent application.

Each preamplifier incorporates continuously variable tone controls, rumble filter, and switched low pass filter. The following inputs are available:

- Dynamic Microphone.
- Fully equalised tape head.
- Radio.
- Ceramic pick-up.
- Crystal pick-up.
- Fully equalised magnetic pick-up.

The FM tuner has been re-designed to receive B.B.C. stereo broadcasts. Plastic encapsulated transistors are used throughout the circuit.

In addition to the working demonstrations, information is available of interest to the professional and amateur high fidelity enthusiast in a comprehensive book of audio circuits.

FERROGRAPH

The Ferrograph Co. Ltd.,
84 Blackfriars Road,
London, S.E.1
WATERloo 1981

Booth 53
Demonstration
Room 134

Magnetic Sound Recorders

In the year 1949 the first Ferrograph was devised, tooled and produced. The standard it set was extremely high and formed a basis on which most Recorders were evaluated for many years will into the late 1950's.

By reason of its early attained excellent specification and robust honest engineering, it was found unnecessary to change the model continually as has been the practice over the years with makers of more popular types of apparatus.

After 17 years of production, the Ferrograph Company has now announced its Second Generation instruments to be designated **Series 7**, and here, in this International Audio Festival and Fair, is the first presentation of the Series.

Following on a careful market survey and information obtained from rather more than 2,000 users, the facilities of the instrument have been so framed as to include practically every need of the informed and serious recordist. Allied to this general engineering approach, has been the styling of the machine by two of the United Kingdom's acknowledged industrial design experts whose work has finalised a Recorder that is good to look at, although still restrained in the well-known Ferrograph tradition.

Since the sound of Ferrograph is well known to everybody, we are not this year concentrating on an Audio Demonstration but are utilising the space available to bring the instrument and its construction to the notice of the greatest number of persons, both on our booth in the hall and in the demonstration room upstairs.

FISHER

Fisher Radio International Inc.

11-40, Forty-Fifth Road,
Long Island City, N.Y.11101
Telephone No.: 937-2100

Audio Arcade

Display 4

Demonstration

Room 637

High Fidelity Sound Reproduction Equipment

Once again America's most prominent manufacturer of high-fidelity equipment, **Fisher Radio**, will exhibit its world renowned products at this exhibition. On display will be Fisher's latest models of receivers, tuners and amplifiers, in both valve and transistor types, as well as the most advanced state of-the-art loudspeaker systems.

Fisher Radio was founded in 1937 by Avery Fisher, musician, engineer and a perfectionist in terms of high quality electronic amplifying equipment. His equipment to-day brings enjoyment to millions of people in every walk of life, and if large quantities can be equated in terms of success, Fisher Radio is by far the most successful in the industry. Its products are now legion, and its name has become a standard in the high-fidelity business.

The assurance of complete customer satisfaction with every item manufactured is one of the main reasons for Fisher's position of leadership. To this very day, Avery Fisher makes himself available to his customers, no matter how minute the problem may be. The result, a product which excels in the market place and which stands head and shoulders over its competitors in terms of workmanship and quality.

One very interesting aspect of Fisher's popularity in the U.K., aside from its reputation for devotion to the highest of standards in quality control, is the fact that the company sells its products at sharply competitive prices to its European counterparts. This is accomplished, despite duty and freight costs, by marketing its products from Fisher's several factories in America, directly to the leading high-fidelity dealers in the U.K. This tactic has resulted in tangible savings to the ultimate consumer. Another commendable feature is the three year parts warranty on valves and transistors.

In 1965 and 1966 the most popular amplifier offered by Fisher in the U.K. was the **X101C**, described by the *Gramophone* magazine as "the BEST integrated amplifier available in England". At the Audio Fair, Fisher will show the new **X101D** with 10% greater RMS power and more flexibility. Now that the stereo FM Broadcasts are a daily occurrence in the U.K., Fisher's **Model 400**, an FM stereo receiver, available for only **99 gns.**, will be of great interest to English music lovers and should not be missed by anyone who is interested in seeing and hearing the finest that America has to offer.

U.K. Distributors: Getz Bros. & Co. Inc., 2, Harewood Place, W.1. GRO 6901.

GARRARD

Garrard Engineering Limited,
Newcastle Street,
Swindon, Wiltshire
Swindon 5381

Booth 71
Demonstration
Room 234

Record Playing Equipment

Several new models of particular interest to Hi-Fi enthusiasts are included in this year's representation display from the comprehensive Garrard range of record playing units.

Model 401

Transcription turntable designed to meet the most exacting requirements. Heavy non-magnetic turntable, gear-cut stroboscope illuminated by high-intensity neon lamp. Variable speed adjustment, magnetically screened motor.

***Model SL95**

Automatic transcription quality turntable fitted with the new Garrard Synchro-LAB constant speed motor. Incorporates a number of important design features including cue and pause facility, wood and aluminium pick-up arm, gimbal type pick-up arm pivots, slide-in cartridge carrier, calibrated pick-up arm bias compensation and stylus force adjustment, retractable record platform.

***Model SL75**

Similar design features to the SL95. Has die-cast aluminium pick-up arm. Both units feature a combined record-speed and size selector for 12 in. (78 r.p.m.), 7 in. (45 r.p.m.) and 12 in., 10 in. and 7 in. (33½ r.p.m.).

***Model 80 Mk. II**

Automatic transcription turntable. Features include automatic play of single records, calibrated pick-up arm bias compensation and stylus force adjustment, record-repeat and cue and pause facilities. Two turntable speeds—33½ and 45 r.p.m.

***Model AP75**

A new, high-quality, three-speed single record-playing unit. Features include non-magnetic turntable, die-cast aluminium pick-up arm with calibrated bias compensation, stylus force adjustment and slide-in cartridge carrier. Facilities for cue and pause and automatic play of single records.

***Model SP25 Mk. II**

A high-quality four-speed single record-playing unit with tubular pick-up arm, cue and pause facility, bias compensation and integral calibrated stylus force adjustment.

***Model SL65**

Four-speed automatic record-changing unit with cue and pause facility, weight-counterbalanced pick-up arm, calibrated stylus force adjustment, pick-up arm bias compensation, and plug-in pick-up head. Fitted with the new Garrard Synchro-LAB constant speed motor.

***Model SL55**

Four-speed automatic record changer incorporating cue and pause facility, stylus force adjustment and plug-in pick-up head. Fitted with the new Garrard Synchro-LAB constant speed motor.

***Model 3500**

Three-speed automatic record changer having cue and pause facility, low-mass tubular pick-up arm, and calibrated stylus force adjustment.

***Model 3000**

Four-speed auto-changer with low-mass pick-up arm for use with high compliance cartridges—gives exceptionally low record wear.

* Wood bases and rigid transparent plastic dust covers available as optional extras.

GOLDRING

Goldring Manufacturing Company

(Great Britain) Limited,

486-488 High Road,

Leytonstone,

London, E.11

Leytonstone 8343

Booth 93

Demonstration

Room 402

Transcription Turntable Units, Pick-up Arms and Cartridges, and Replacement Styli

Highlights of the Goldring Exhibit will be the recently introduced Model GL.75 Transcription Unit and the 800 range of Free Field Stereo Magnetic Cartridges.

The GL.75, following in the tradition of previous Goldring/Lenco Transcription Turntable Units, maintains the invaluable feature of infinitely variable speed adjustment. It is fitted with an entirely new pick-up arm with calibrated stylus pressure adjustment by sliding counter weights, and removable plug-in head with $\frac{1}{2}$ in. adjustment for accurate position of stylus. The arm includes bias compensation, and is raised and lowered hydraulically by a conveniently placed lever. The turntable is non-magnetic, dynamically balanced and weighs 9 lbs.

The 800 Cartridges employ the free-field principle which enables the effective tip mass to be substantially reduced and the high frequency response to be placed well above the audible frequency range. The tracking capabilities of these cartridges are excellent, and coupled with very high cross talk separation and high compliance, these cartridges are capable of really superlative musical reproduction.

Other items in the Goldring range include the Model GL.68 Transcription Unit, which now incorporates hydraulic lift/lower mechanism, and the G.99 Transcription Unit which now has adjustable click-in positions for the four standard playing speeds.

Also shown will be the range of high quality Stereo Ceramic Cartridges Type CS.90 and CS.91/E, as well as the G.65 and P.77 Transcription Arms.

In addition, the Goldring Audio Lead Set, which permits any one of 38 different equipment-to-equipment connections to be made, will be shown for the first time.

GOODMANS

Goodmans Loudspeakers Ltd.,
Axiom Works, Wembley,
England
WEMbley 1200

Booth 45
Demonstration
Room 434

*Acoustic Engineers and Manufacturers of High Quality
Loudspeakers*

The **Goodmans Stand—No. 45**—shows a selection from the enormous range of High Fidelity Loudspeakers, the **Maxamp 30**—stereophonic transistorised High Fidelity Amplifier, the **Stereomax**—transistorised A.M., F.M., **Stereo F.M.** High Fidelity Tuner, and the **MT 1000**—High Fidelity Record Player complete with arm and pick-up.

Formal demonstrations will be given in **Room 434** at approximately 15 minutes intervals from **Friday** to **Sunday** inclusive and every endeavour is made to make our audience as comfortable as possible so as to give the maximum opportunity for critical listening. We apologise if a short wait is necessary.

Goodmans Audio Suite will be shown and demonstrated. The Audio Suite is made up of: the **Maxamp 30** stereo amplifier, the **Stereomax** Stereo Tuner, the **MT 1000** Record Player complete, and the M-range of Loudspeaker enclosures—**Maxim**, **Mezzo II** and **Magnum-K**. All units are **True High Fidelity** quality and all are housed in handsome polished wood cabinets, Teak or Walnut as preferred. The very small size of the Amplifier, Tuner and the **Maxim** loudspeaker enables them all to be simply and unobtrusively “lost” on an existing bookshelf thus obviating the necessity for an equipment cabinet—unless this is preferred.

The audience will then leave through a **Showroom** where a simple version of the **Audio Suite** will be shown in a normal living room and where **Goodmans** technicians will be in attendance to answer questions and give advice on individual audio problems.

Friends from the Industry will be welcomed in **Room 405**.

THE GRAMOPHONE

General Gramophone Publications Ltd.,
379 Kenton Road, Kenton,
Harrow, Middlesex
01-907 2010

**Press
Lounge
444**

Publishers

The Gramophone is Britain's oldest and most widely read gramophone record journal. It was founded in 1923 by Sir Compton Mackenzie and Christopher Stone and today has a circulation in excess of 70,000 copies per month, circulating to very nearly every country in the world.

Record reviews, in conjunction with a comprehensive technical section, form the basis of the journal. In the technical field a compact team of experienced writers is led by John Borwick, B.Sc. (Technical Editor) and John Gilbert, F.R.S.A., Assoc.I.E.E., M. Brit. I.R.E. (Technical Consultant) with regular contributions from authorities such as Stanley Kelly. The team of record reviewers is necessarily larger and includes such well-known critics as Alec Robertson, Lionel Salter, Andrew Porter, Philip Hope-Wallace, Deryck Cooke, Felix Aprahamian, William Mann, Roger Fiske, Julian Budden, Edward Greenfield, Trevor Harvey, Malcolm Macdonald, Denis Arnold, Stephen Plaistow, Stanley Sadie, Roger Wimbush and W. A. Chislett. On the lighter side, and in the field of Jazz, further reviews are contributed by Frederick Woods, Charles Fox, Alun Morgan, Brian Rust, Nigel Hunter, William Gilman and Michael Cox. Quarterly retrospective articles are contributed by Desmond Shawe-Taylor and Robert Layton.

The Gramophone is published on the 1st of the month, price 2s. 6d. Annual subscriptions (home and overseas) 38s. per annum.

In addition *The Gramophone* also publishes the following catalogues and booklets.

Technical Reports—reprints selected from 1958-65; 5s.

Technical Reports II—reprints from 1965-66; 5s.

Technical Reports III—reprints from 1966-67; 5s.

Know Your Gramophone—a reprint of John Borwick's series of articles discussing in lay terms the various items of equipment which constitute the audio chain, together with notes on the assembly of the various components and suggestions for fault finding; 5s.

Recommended Recordings—Classical, light orchestral, operetta, military and brass bands, etc. 3s. 6d.

Classical Record Catalogue—quarterly; 5s.

Popular Record Catalogue—quarterly; 2 sections, Artist and Title; 5s. each.

(Please add 6d. each on above for postal orders.)

GRAMPIAN

Booth 38

Grampian Reproducers Ltd.,
The Hanworth Trading Estate,
Feltham, Middlesex
Tel.: 01-894 9141/3

Speakers, Microphones, Microphone Accessories

Grampian Reproducers are exhibiting a new range of products of particular interest to Audio enthusiasts.

The world renowned **DP4** microphones are being shown in various forms together with other types of dynamic microphones in addition to Ribbon and Cardioid patterns. Among these will be a new cardioid dynamic type, modern in style with on/off switch and the unique feature of an easily replaceable diaphragm/coil assembly. There is a range of accessories, stands, etc., with a windshield and parabolic reflector which may have many useful applications.

Microphone mixers of various types ranging from simple passive models to semi-professional units with pre-amplifiers will be displayed. The pre-amplifier types, battery and mains operated patterns have exceptionally low noise levels.

The **Grampian Reverberation** unit as used by leading recording companies, television and broadcasting studios and the **Ambiophonic** unit for use with live performers as well as with pre-recorded tapes and discs, for both mono and stereo equipment are also featured on Stand 38. The **Ambiophonic** unit enables the user to add varying levels of reverberation and impart a more spacial distribution of sound and a quasi-stereo effect.

The well known **T.C.12** dual cone, 12 in. diameter loudspeaker unit which has proved so popular will complete the range of quality equipment.

GRUNDIG

Grundig (Great Britain) Ltd.,

London, S.E.26

SYDenham 2211

Booth 69

Demonstration

Room 634

Tape Recorders, Audio and Hi-Fi Equipment

The full range of Grundig tape recorders from single-speed two-track mono to three-speed four-track stereo will be on show and available for demonstration. Of the ten models, nine were introduced in January this year, many incorporating a number of revolutionary new features.

Of particular interest to the enthusiast is the **TK 247** de luxe. This two-speed ($3\frac{3}{4}$ and $7\frac{1}{2}$ i.p.s.) four-track, solid state, fully stereophonic tape recorder is fitted with two 4W output stages, one for each stereo channel, and a total of four loudspeakers. It has a superbly designed deck with simple well set out controls and a number of additional features. For example, facilities for multi-synchronous recordings (multiplay) are provided. It is fitted with a mixer input control and illuminated double edgewise reading VU/input level meters for positive recording levels on each stereo channel. Recordings may be monitored either through the built-in loudspeakers or through headphones and the instrument switches off automatically when the end of the tape is reached. Using 21 transistors, 2 diodes and 2 rectifiers, the **TK 247** de luxe opens up a new world of high fidelity sound entertainment. In keeping with its advanced electronic and mechanical design, the **TK 247** de luxe, styled for the future is finished in graphite and silver trim. Further information and technical details are available from Booth 69 and Demonstration Room 634.

Visitors to the Demonstration Room will have the opportunity of hearing a stereo Hi-Fi tuner incorporating VHF and 3 AM wave-bands, two stereo amplifiers of different power ratings and two integrated tuner/amplifiers, one of which, the **RTV 600** is new to the range. The **RTV 600** is a most sophisticated and elaborate unit containing no less than 53 transistors and 31 diodes and gives every facility that the most demanding Hi-Fi enthusiast could possibly ask. Of particular interest is the extremely wide linear power band width which indicates that the amplifiers are capable of delivering the full rated power from the lowest bass to the highest treble notes. To handle the massive power available at both ends of the audio frequency spectrum Grundig has developed special loudspeakers as any ordinary loudspeaker, however good its specification, is totally inadequate. There are nine different types of loudspeaker complete with infinite baffle enclosures. Many of these are new to the range and some heard at the Audio Fair last year have had their power handling capacity increased for use with different Grundig amplifiers.

A full range of accessories will also be on display and available for demonstration.

All details and specifications may be obtained from Room 634 where Grundig sales and technical experts will also be available throughout the period of the Fair to advise and answer questions.

HI-FI NEWS AND TAPE RECORDER

Link House Publications Ltd.,
Link House, Dingwall Avenue,
Croydon, CR9 2TA
01-686 2599

Booth 81
Press
Lounge 244

Publishers of Magazines

Hi-Fi News is a monthly magazine devoted exclusively to high quality sound reproduction. With a circulation of over 34,000, it has something useful and lively to say on every aspect of hi-fi, carrying many authoritative articles, both constructional and theoretical. Regular features include: reliable reviews of stereo records and books, and reports on equipment famed for their outspoken impartiality. The magazine's policy is to encourage all developments leading to better quality music reproduction in the home, and visitors to the Audio Festival and Fair, whether plain non-technical music lovers or do-it-yourself hi-fi hobbyists, will find something stimulating and interesting in its pages.

Tape Recorder first appeared a little over nine years ago to serve the enthusiast specialising in sound recording. The magazine quickly became the leading publication in its field. Like *Hi-Fi News*, *Tape Recorder* is renowned for completely reliable unbiased reviews of tape equipment, accessories, tape records and books. The technically minded, the drama enthusiast, the constructor and beginner, all will find features and regular articles to interest them. A comprehensive Readers' Enquiry Service provides information on the use and care of equipment, while regular articles describe in straightforward language the servicing of recorders old and new.

The 1968 edition of *Audio Annual* is concerned with high fidelity sound reproduction and tape recording, and is produced by the same editorial team responsible for *Hi-Fi News* and *Tape Recorder*. Many special features are included covering a wide range of subjects within the field, plus all the more important equipment reviews that appeared in *Hi-Fi News* and *Tape Recorder* during 1967.

The Audio Fair numbers of *Hi-Fi News* and *Tape Recorder* are obtainable at our booth, and a selection of back numbers are also available for reference or purchase. *Hi-Fi News* is 2s. 6d. monthly, annual subscription 41s., and *Tape Recorder* is 2s. 6d. monthly, annual subscription 36s. To avoid disappointment it is advisable to place a regular order for copies with your newsagent. *Audio Annual 1968* is also on sale at our booth or from newsagents, price 7s. 6d., or 8s. 6d. (p.p.) from Link House, Dingwall Avenue, Croydon, CR9 2TA.

HI-FI SOUND

Haymarket Publishing Group,

Gillow House,
Winsley Street,
London, W.1
01-636 7766

Booth 56
Press
Lounge 344

Publishers

Covering all aspects of high quality sound reproduction—from discs, tape and radio—*Hi-Fi Sound* is a new magazine which aims to serve the increasing audience for hi-fi in the home. The success it has achieved in the short time since its inception is largely attributable to the care with which technical information is interpreted. *Hi-Fi Sound* is designed to attract and inform the music-loving public which cares more for results than for ways and means. But the interests of more experienced enthusiasts are also catered for in test reports and special articles. Here are examples of how the magazine serves its readers.

Test Reports

Every month *Hi-Fi Sound* contains a number of detailed test reports on audio equipment at various price levels. Record playing, tape and radio equipments are covered, and it is the magazine's policy to include units suitable for low-cost "budget" systems as well as products of semi-professional calibre.

New Products

Illustrated surveys of new products, including both major items of equipment and accessories, form a prominent and useful feature of the magazine's coverage.

Advisory Service

Readers' enquiries, technical or otherwise, are given expert attention. Typical problems and their solutions, likely to be of wide interest, are selected each month for publication.

Special Articles

Hi-Fi Sound articles cover all aspects of hi-fi and are of particular value to amateur enthusiasts with limited interest in technical matters. Topics of discussion in recent issues have included low-cost speakers, tape recording and hi-fi, the manufacture of discs, pick-up design and VHF/FM radio reception.

Record Reviews

Highly selective record reviews aid the amateur in the choice of discs for high quality reproduction. Technical quality is taken into account and bargain releases are noted.

News and Views

Hi-Fi Sound reports new developments in the world of hi-fi. Full coverage is given to the International Audio Festival and Fair.

HIGH FIDELITY

Booth 36

The Billboard Publishing Co.,

The Publishing House,

Great Barrington,

Mass., U.S.A.

Publishers

High Fidelity and *High Fidelity/Musical America Edition* are America's first choice monthlies in their fields.

High Fidelity brings you authoritative information on sound reproduction in the home . . . new recordings . . . behind scenes visits to people and places concerned with music. CBS Laboratories test data on new equipment is supplemented by listening tests. A dozen specialists discuss new disc and tape recordings in depth: from symphonies and operas to jazz and pops. Top journalists and musicians shed light on Caballe, Nilsson, Streisand, etc. \$8 a year (£3.6.6. sterling).

High Fidelity/Musical America Edition. The complete music magazine. All of *High Fidelity* plus about 32 more pages per issue of news and reviews of important "live" musical happenings throughout the world—concert, opera, etc. Internationally acclaimed by professional musicians and by readers passionately absorbed in serious music. \$13 a year (£5.8.6. sterling).

European Representation: Andre de Vekey, High Fidelity Magazine, 7 Welbeck Street, London, W.1. Tel.: 01-486 5971.

JORDAN-WATTS

Boosey & Hawkes (Sales) Ltd.,
Sonorous Works,
Deansbrook Road,
Edgware, Middlesex
EDGware 5581

Booth 30
Demonstration
Room 448

High Fidelity Loudspeakers and Loudspeaker Systems

Making a debut in England at this Audio Fair are two new bookshelf mounting loudspeaker systems, the Janet and Juliet which attracted such favourable interest when first exhibited at the Fiarto in Amsterdam last Autumn. Ask for the full details at Booth 30.

The very small size of the unique Jordan-Watts module which covers the entire audible frequency range of sound with a single driving unit, makes possible a new standard of low distortion compact loudspeaker systems, so desirable in these modern days where there is less and less room available and often the loudspeakers must of necessity take their place inconspicuously on open shelving. Although small in appearance there is no reduction in the power handling or perfection of sound quality in these systems, either of which can stand comparison with loudspeaker cabinet systems many times their size.

The Jordan-Watts "Module" Mk. II. This new improved loudspeaker is scientifically designed and of outstanding merit, capable of reproducing sounds with an accuracy, clarity and freedom from distortion superior to anything hitherto achieved in this field. 6 in. square frame. Aluminium diaphragm with plastic surround. Voice coil 1½ in. Ceramic magnet. Impedance 3.5 ohms and 7½-16 ohms. HC 12W. FR 25 c/s-20 Kc/s. Price **£11 0s. 0d.**

The Jordan-Watts "Jumbo" Model. The smallest 12 watts High Fidelity loudspeaker system obtainable. Cleanly reproduces from a satisfying 70 c.p.s. to beyond audibility with tireless ease. Size 16½ in. x 8 in. x 3½ in. infinite baffle. Teak/Vynair finish, classical styling. 3/5 or 7½/16 ohms. Weight 15 lbs. Price **£18 10s. 0d.**

The Jordan-Watts "Juno" Model. A slender 0.6 cu. ft. reflex system of elegant style and impeccable balanced performance. Powerful smooth base and measured response almost flat from 40 Hz through 20,000 Hz. Remarkable low distortion and a quality of sound difficult to surpass by any loudspeaker regardless of size or complexity. 12 watts (24 watts peak). 3/5 or 7½/16 ohms. Size 24½ in. x 12 in. x 6½ in. Weight 30 lbs. Teak/Vynair. Price **£25 10s. 0d.**

The Jordan-Watts "Gemini" Model. Beautiful smooth powerful sound, handling up to 25 watts input over 30 to 20,000 Hz through twin balanced drive units in a reflex enclosure. Aptly named after the heavenly twins, the Gemini offers a standard of listening pleasure approaching perfection. Size 30 in. x 13½ in. x 7½ in. Walnut/Vynair finish. 7 or 15 ohms. Weight 45 lbs. Price **£39 15s. 0d.**

The Jordan-Watts "Jupiter" Model. A luxurious loudspeaker system suitable only for a connoisseur's equipment capable of a clean signal at good power down to 20 Hz. No expense is spared in the design and construction to ensure that the user enjoys a perfect combination of enclosure and driving units, styled in a manner appropriate to such excellent performance. The frequency range is from 20 Hz to 20,000 Hz power handling 25 watts (50 watts peak). Impedance matching 7 or 15 ohms. Teak/Vynair finish. Size 34½ in. x 15 in. x 10½ in. Weight 60 lbs. Price **£54 10s. 0d.**

Mr. Leslie Watts looks forward to meeting old and new friends at Booth 30 or in Room 448.

K.E.F.

KEF Electronics Ltd.,

Tovil,

Maidstone, Kent

Booth 92

Demonstration

Room 542

Loudspeakers

The **Cresta**, which was introduced at the Audio Festival in 1967, has had a spectacular success all over the world in the ensuing 12 months. Perhaps its most remarkable quality is the wonderful smoothness of its mid-range and treble reproduction—features which have distinguished all KEF speakers. Most listeners have also discovered that the **Cresta** sounds much bigger than its physical dimensions suggest—a characteristic resulting from the very wide dispersion achieved at all frequencies by the **special** units and techniques which we have employed in this model. **These** include a very small hemispherical diaphragm in Melnex for the upper frequencies with a special bass-cum-medium unit fitted with an Acoustilene diaphragm. This was the first of a new series of low frequency loudspeakers which will ultimately be used in the new B.B.C. Monitoring Speaker recently written about enthusiastically in the technical press.

The **Cresta** offers such fantastic possibilities that it was a logical step to marry it with the world's most sought-after bass unit, the B139, and produce a new super speaker—the three-way Concerto. This elegant design combines all the best qualities of the **Cresta** with the firm clean bass of the **Concord** to give some of the best sound ever heard from a domestic speaker of reasonable size and price.

This loudspeaker has already been heard at the Festival du Son in Paris, where it was judged another winner from KEF. Be sure to see it in Room 542.

This year we have taken the unusual step of limiting our display to only two systems the **Cresta** and Concerto. By so doing, we hope to give a good demonstration in spite of the problems of space and acoustics. If you find difficulty in getting into our room, we ask you to be patient. We can only take fifteen people at a time, if we take more, the room will be uncomfortably overcrowded and acoustically over-damped. Notwithstanding the reduced scope of our demonstration, we should make it clear that the KEF range continues in production and is unaltered. Examples of every model will be found on our stand in the Main Hall, where our staff will as usual be in attendance to answer your queries.

KIRKSAETER

Per Kirksaeter G.m.b.H.,
Kurfurstenstrasse 30,
4000 Dusseldorf 1,
West Germany
SA.-Nr. 3501 31

Booth 42A

**Demonstration
Room 561**

Loudspeaker Systems, Tuners, Amplifiers and Receivers

Making its first appearance at the Audio Fair is Kirksaeter, a name highly respected in Europe and America. In 1958 the Company began in Europe as pioneers in high fidelity and stereo, at a time when these terms were quite new to music lovers. The years of research and development are apparent in the latest range of tuners, amplifiers and speakers.

The following models will be demonstrated :—

Compact 70

This is an integrated stereo tuner/amplifier. It is fully transistorised with silicon transistors. Outstanding, electromechanical components, precision potentiometer and switches.

RTX 700

A tuner/amplifier for large rooms and for speaker systems of low efficiency. It is an extremely sensitive FM stereo tuner with advanced circuitry. It features four fully tuned RF circuits and separate oscillator. Inter-channel muting eliminates annoying hiss between stations. Astonishingly low, almost unmeasurable distortion figures, and a host of operating features not found on any other equipment.

Also demonstrated will be the **TX 500** amplifier and the **RT 100** tuner. The above units will be demonstrated using the Tandberg 64X high quality tape deck and the mini-conic pick-up.

The Kirksaeter speakers will be used to complete the system.

The **Scala** and the **Professional** each have 12 in. base unit, 6 in. mid-range, and two, 2½ in. tweeters. All speaker systems offer frequency control adjustment to give the correct tonal balance to specific room acoustics. The power handling capacity is 50 watts.

Kirksaeter

The complete range of Kirksaeter equipment is designed for the man who puts sound perfection before price.

U.K. Distributors : Elstone Electronics Ltd., Hereford House, Vicar Lane, Leeds 2. 0532 39834.

LEAK

H. J. Leak & Co. Ltd.,
Brunel Road,
London, W.3
01-743 1173/0626

Booth 54
Demonstration
Room 104

Amplifiers, Loudspeakers, FM Tuners, Pick-ups

Please turn to pages 49 to 56 of this Catalogue for description of our products. For those new to "High Fidelity" the following brief details are about the Company behind the products.

For over 33 years we have been engaged exclusively on research, development and manufacture of High Fidelity equipment of the highest quality: reference to the technical Press will verify that we have set new standards of performance for amplifiers, tuners and moving-coil loudspeakers.

We started by designing and manufacturing equipment for professional audio engineers. Later, by making in larger quantities, we brought professional quality within reach of the music-lover.

Leak equipment has continued to be made to the most exacting standards and is used in broadcasting and recording studios and by music-lovers throughout the world.

While meeting the requirements of professional engineers, our equipment has been styled to look attractive in the home; the controls are so simple to operate that you can sit back in your armchair enjoying the music and you need never know what goes on inside the equipment.

The following will be in attendance at the Fair:—

Harold J. Leak, M.I.E.R.E., *Chairman and Founder of the Company, 1934.*

J. Frank Hawkins, *Managing Director (28 years service).*

Philip H. Biggs, *Works Manager (28 years service).*

Fred Blackman, *General Manager (28 years service).*

Edward H. Ashley, A.M.I.E.R.E., *Chief Engineer (24 years service).*

John Leak, *Marketing Manager (5 years service).*

Donald A. Barlow, M.Sc., A.I.E.R.E., *Senior Research and Development Engineer (9 years service).*

Norman G. Rowe, *Technical Service (23 years service).*

Angus G. Gilchrist, *Technical Service (19 years service).*

You are welcome to our Demonstration Room 104 which is on the first floor. All enquiries should be made at Booth 54.

LOWTHER

Lowther Manufacturing Co.,
Lowther House, St. Mark's Road,
Bromley, Kent

**Audio Arcade
Display I
Demonstration
Room 204**

Electronic and Electro-Acoustic Reproducing Equipment

Lowthers as designers and manufacturers of sound reproducing systems since 1932 are proud to introduce further developments in their specialised range :—

Drive Unit Type PM6 Mk. I, a direct replacement of our PM6 having pioneered high quality sound reproduction for 12 years the Mk. I incorporates Lowther exclusive silver wire speed coil design, new neoprene roll surround and back centring ring to provide all round improvement.

Lowther Ideal Infinite Baffle Enclosure. This is a major development in small enclosure technique, enabling the natural frequency range of a drive unit to be achieved.

Lowther F.E.T. and silicon Transistorised Mono and Stereo Master Control Units provide low noise, high gain, infinite stability, high impedance input, all valve features of versatility.

Lowther Organino Electronic Keyboard Instrument (made under licence Neonvox, Holland)—a 5-octave, 54-stop combination, plus long tone piano sound with controlled vibrato unit. This musical instrument is for direct connection to a high quality sound system either separate bass or treble amplification or combined.

Lowther Sales and Technical Staff always at your service, to give further information on the above and on our current range of equipment which will also be on show.

LUGTONS

Lugton & Co. Ltd.,
P.O. Box 2BN,
209-212 Tottenham Court Road,
London, W.1
01-636 3261

**Trade
Lounge
250**

Wholesale Distributors, High Fidelity, Radio, Records

All trade visitors are welcomed to Room 250 where "Lugtons" will be participating actively in this Audio Fair.

Lugton representatives including Mr. Cunningham from Newcastle, Mr. Graham from Liverpool, Mr. Young and Mr. Fry from the West Country, will be in attendance and able to furnish full information on all the new products for which Lugtons are authorised distributors.

Since its inception Lugtons have specialised in the distribution of high quality disc and tape recording equipment and are factors for the leading manufacturers.

Their reputation for reliable and speedy service is well known. Dealers will undoubtedly take this opportunity to call in and meet the people who have made Lugtons' service unrivalled.

As a result of their wide experience built up over more than 65 years in the sound reproduction business, the lines they distribute are those of the very highest quality and reliability.

Amplifiers :

Acoustical - Chapman - Decca - Goodmans - Grampian - Leak - Lowther - Rogers - Vortexion.

Gramophone Units :

Decca - Garrard - Goldring - Thorens.

Transcription Pick-up Arms and Cartridges :

Decca - Goldring - Ortophon - Shure - S.M.E. - Thorens.

Loudspeaker and Loudspeaker Systems :

Acoustical - Decca - Goodmans - Grampian - K.E.F. - Kelly - Leak - Lowther - Rola - W.B. - Wharfedale.

Professional and High Quality Tape Recorders :

Telefunken - Uher - Vortexion.

Tape Recorders and Accessories.

LUSTRAPHONE

Lustraphone Ltd.,
St. George's Works,
Regent's Park Road,
London, N.W.1
PRImrose 8844/6

Booth 79

**Demonstration
Room 145**

Microphones, Mixers, Amplifiers, Microphone Stands

Microphones : Introducing the "Series Four" range of high quality Multi-Impedance Microphones, which cover virtually every requirement :—

- Model 4-20 Omni-directional Dynamic.
- Model 4-30 Hyper Cardioid Dynamic.
- Model 4-40 Studio Ribbon.
- Model 4-50 Professional Miniature Ribbon.
- Stereolus VR65 Stereophonic Dual Ribbon.
- Velodyne VC52 Noise Cancelling Dynamic.
- LV/59 Lavalier Dynamic.
- LFV/H59 Hand-held Tubular Dynamic.
- LDM/81 Surgeon's Mask Microphone.

Mixers : Exclusive LO-NOISE Multi-Impedance Mixer for Stereo and Mono operation.

Amplifiers : LO-NOISE 50 watt and 15 watt Silicon Transistor Amplifiers, with line level input, or combined with Multi-Impedance Mixer.

Portable Public Address Systems : "Pelsa" Self-Contained, Lightweight, Voice Reinforcement system for churches, schools, etc. PPA/570 Portable 10 watt Public Address System.

"Radiomic" Systems : Radio Microphone System provides cable free link between microphone and amplifier. G.P.O. Approved.

Transphone : Designed for industrial use, Transphone is also a rally-proven Driver-Navigator link, providing effective communication in very noisy conditions.

Stands : A wide range of stands for every need.

MB MIKROFONBAU

Booth 41

**MB—Electronic,
Mikrofonbau Vertrieb G.M.B.H.**
683, Schwetzingen,
Postfach 59,
Germany

Microphones, Headphones

The MB range of Microphones and Headphones comprises miniature dynamic microphones, moving coil, twin dynamic stereo microphone, dynamic headsets of studio quality and specification approved by Language Laboratories and aeronautical boards.

Prices from **3 gns.**

U.K. Distributors : Denham & Morley (Overseas) Ltd., 173/5, Cleveland Street, London, W.1. EUS 3656.

MEDLEY MUSICAL

Booth 39

Medley Musical Ltd.,

4, Felltram Way,

London, S.E.7

01-858 3426/7

Amplifiers, Tuners and Speaker Systems

Medley Musical have an impressive number of new items on show. Of special interest will be the compact Hi-Fi unit which incorporates the Garrard S.P. 25 or A.T. 60 Mk. II, an all silicon solid state amplifier, and high compliance magnetic cartridge, attractively housed in teak cabinet with perspex lid.

The 1600 solid state amplifier is also available as a separate unit in a teak case.

The M.M.25 Amplifier and matching FM Tuner are being shown for the first time at this exhibition, the design of both items is quite unique.

Featured also will be the Maestro 3 unit Speaker System, the Musette 2 Speaker System, and the Mini Musette, a dual cone unit, all of which are very good value for money.

A comprehensive range of cabinets will be on show suitable for all makes of Tape Recorder, Turntable, Amplifier, etc., included will be the new table equipment cabinet, with hidden air flow for heat dissipation. Finish: Teak, Rosewood, Walnut.

MINICONIC
Euphonics Corporation,
Puerto Rico, U.S.A.

Booth 26
Demonstration
Room 540

Cartridges

The **Miniconic Pick-up Cartridge** is the first break-through in pick-up design for many years and it is attracting considerable attention. No visitor to the Audio Festival and Fair should overlook our demonstration.

The **Euphonics Miniconic Phonograph Transducer**, an outgrowth of the aero-space industry, has indisputable points of superiority over any other cartridge on the market. The striking features of smooth, wide-range music reproduction with unparalleled transient response result from the use of silicon semi-conductor elements. This permits a radical reduction in the mass of the moving system, so that stylus-groove contact is maintained under severe conditions. This is particularly true when the matched **Miniconic Low-Mass Tone Arm** also is employed. For the first time, you hear clean, clear highs, and—because Miniconic is purely resistive—you get bass response you literally feel, all the way down to 1 cycle per second !

In addition, the Miniconic cartridge uses an external power source to provide the energy for the music signals transmitted to the stylus, thus saving the delicate record grooves from undue wear, as in conventional cartridges.

There are two classes of Miniconic cartridges, the **Laboratory Standard (LS) Series** and the **Professional (P) Series**. Major difference is that the LS series uses the **Miniconic N-15-BR Biradial Elliptical Stylus**, to give best performance; it also is made to closer tolerances than is the Professional series. The latter series uses the **Miniconic N-15-LM Low Mass, 0.5 mil Spherical/Conical Stylus**, permitting more stylus force. This makes the cartridge more rugged for conditions of severe use; also, cost of stylus replacement is lower. Both series are available in two models, mounting-wise. A plug-in version is provided with the Miniconic Tone Arms. For conversion of exiting arms to Miniconic cartridges, a bracket version is supplied. This is a universal nylon bracket that is part of the cartridge assembly, and it fits all standard heads.

The **LS Series** is now fitted with a .0007 x .0002 elliptical diamond stylus.

Sole Distributor for U.K.: Elstone Electronics Limited, Hereford House, Vicar Lane, Leeds, 2. Tel.: Leeds 39834.

MULLARD
Mullard Limited,
Mullard House,
Torrington Place,
London, W.C.1
01-580 6633

Booth 36
Demonstration
Room 350

Semiconductors, Components and Valves for Audio Applications

On display at Booth 36 will be selections from the wide range of Mullard semi-conductors and components for audio equipment, including a range of plastic encapsulated "Lock-fit" transistors, and matched pairs of germanium transistors, like the AC128/AC176 and the AD161/162 with outputs up to 10 w. Also on display will be a range of Mullard capacitors in their new skin-wrapped, tear-off card packing. Details of all these devices and audio component information, plus literature describing the design and performance of high-power audio amplifiers will be available from the stand.

The new, comprehensive Mullard Pocket Data Book 1968 will be on sale here throughout the Exhibition, price 3s. 6d.

Rooms 350-351 Industry Lounge

The latest additions to the "Lock-fit" range of transistors, and new, easy-to-mount complementary pairs in an epoxy resin encapsulation with V_{ceo} ratings ranging from 45V to 60V and 80V, plus high-power silicon transistor BDY20 to TO-3 encapsulation, and field effect transistors BFW10 and BFW11. Other items shown from the Mullard range will include integrated circuits, modules and components, and the Mullard staff will be pleased to answer your questions and discuss the latest developments in all these fields.

MULTICORE

Booth 62

Bib Division, Multicore Solders Ltd.,

Hemel Hempstead,

Herts.

Hemel Hempstead 3636

Audio Aids and Multicore Solders

Among the products shown are :

Bib Tape Splicers

Enable quick and accurate joints to be made of all thicknesses of magnetic tape. New Model 21 Video $\frac{1}{2}$ in. Tape Splicer Kit. The chrome plated splicer mounted on a non-slip base has diagonal and vertical cutting slots, two easily adjusted tape clamps and a recess for a razor cutter. The splicer may be removed from the base and mounted direct on the tape deck. Packed in a plastic box with 5 spare cutters, spool of Scotch 41 splicing tape and a Bib Tape Head Maintenance Kit Size E.

Standard Bib $\frac{1}{4}$ in. Model 20 Tape Splicer (19s. 6d.) is shown in its new presentation including a plastic coated non-slip base. Splicer has all the features of the Model 21 and has become virtually the standard in Broadcasting and Recording Studios.

Bib Tape Head Maintenance Kits

Size E (12s. 6d.) contains in a plastic wallet 2 each Applicator and Polisher Tools, 10 Applicator and Polisher Sticks, double-ended brush, packet of cleaning tissues, bottle of Bib Cleaner.

Size K (£2 16s.). For Service organisations, Recording and Broadcasting Studios, comprises 24 each Applicator and Polisher Tools, 100 single-ended Applicator and Polisher Sticks, 2 Brushes, 6 packs of tissues and 2 bottles of Bib Cleaner. Replacements include Size F 2 Applicator Tools, Size G 2 Polisher Tools, Size H 10 Applicator and Polisher Sticks.

Bib Hi-Fusters

Size L (2s. 6d.). Pack of 2 Bib Hi-Fusters. Made of special soft, fluff free, highly absorbent washable material, Hi-Fusters are particularly suitable for removing dust from Audio and Electronic equipment, plated, plastic, metal and glass surfaces, and for cleaning with a suitable liquid.

Bib Audio Cable and Flex Shorteners

Pack of 4 (2s. 6d.) enables excess to be shortened without cutting.

Bib Instrument Cleaner

Size A 4 oz. bottle (4s. 6d.) cleans tape recorders, record players, metal, plastic and glass. Anti-static and non-inflammable.

Bib Wire Strippers and Cutters

Strip flex and cable without nicking the wire and cuts wire cleanly. Model 8 (9s. 6d.) is instantly adjusted for 8 gauges. Model 3 (4s. 6d.) is pre-set for any one gauge.

Ersin Multicore Match Melting Solder

New pack (2s. 6d.) contains 50 pieces of tin/lead tape solder which melts with a match and requires no extra flux.

Ersin Multicore Solder Dispensers

Size 15 (3s.) contains 21 ft. of 60/40 22 swg. Size 5 (2s. 6d.) contains 10 ft. of Savbit alloy 18 swg.

Bib Home Electrician's Kit

Size C (14s. 6d.) contains in a plastic wallet Model 8, Tape Solder, screwdriver, 3 Flex Shorteners, fuse wire and insulating tape.

Holder of the Queen's Award to Industry for Export Achievement.

OKI

Oki Electric,

Kyokuto Boeki Kaisha Ltd.,

7th Floor, New Otemachi Bldg.,

4, 2-Chome, Otemachi, Chiyoda-Ku,

Tokyo, Japan

Booth 33

Demonstration

Room 255

Tape Recorders

The Oki range of all-transistorised solid state tape recorders comprises complete monaural and stereo tape recorders and stereo tape decks with pre-amplifiers of professional quality and specification. All in magnificently finished cabinets. Prices from **42-199 gns.**

U.K. Distributors : Denham & Morley (Overseas) Ltd., 173/5, Cleveland Street, London, W.1. EUS 3656.

ORTOFON
Ortofon A/S,
5 Trommesalen,
Copenhagen V,
Denmark

Booth 51
Demonstration
Room 647

*Pick-up Cartridges, Arms, Speakers
and Pick-up Arm Controls*

New standards in sound reproduction were set when Ortofon introduced their now internationally renowned Elliptical Stylus versions of their Stereophonic and Monaural Cartridges. Independent Consumers' Association reports in both the United States and Germany together with reviews by the leading technical writers all over the world have confirmed Ortofon's leading position in the field of High Fidelity Cartridges and Pick-ups.

At last year's Audio Fair, ORTOFON introduced the SL15 Series combining the modern trend to lightweight cartridges without compromising their reputation for manufacturing the world's finest and most musical Pick-ups. By reason of the unique Transformer Module in the lead between Arm and Amplifier it has been possible for the many advantages of the Moving Coil Cartridge over any other design, to be as widely utilised as the previous ORTOFON Stereo Pick-up Heads with built-in Transformers.

As ever, the Technical Press regarded the introduction of a new model by ORTOFON as an event worthy of note and the reviews confirmed the impression of the visitors to last year's Audio Fair, that this was a Stereo Cartridge "on the very top branch of the Audio Tree". The Editor of *Hi-Fi News*, Mr. John Crabbe, was moved to say "the SL15E is now the one that will remain at the end of my arm".

The many High Fidelity enthusiasts still preferring to play their Monophonic records with such a cartridge can still obtain the ORTOFON Type "C", unsurpassed as the finest of all single channel heads with a flat frequency characteristic from 20-20,000 cps—even when reproducing a very high level amplitude the distortion factor of the dynamic system is less than 0.2 per cent.

The wide range of ORTOFON Pick-up Arms caters for all possible requirements and the RS.212 introduced last year together with the SL.15 Series, has also been the subject of the most enthusiastic reviews.

The Ortofon Hi-Jack is of all-metal chromium-plated construction with a special spring-loaded friction system giving "air cushion" lowering at an adjustable speed. It is available in two models, the Mk. II specifically designed for use with Ortofon Arms and the Mk. IV which can be used with any Arm, is free standing and requires only one $\frac{3}{16}$ in. hole in the Mounting Board or Plate. The Ortofon Hi-Jack is the ideal pick-up arm control for safeguarding records and Stylus against accidental damage.

**U.K. Sole Distributors: Metrosound (Sales) Limited, Bridge Works,
Wallace Road, Canonbury, London, N.1. 01-226 8641/2/3.**

PARMEKO

Parmeko Limited,
Percy Road,
Aylestone Park, Leicester
Leicester 32287

Booth 82
Demonstration
Room 358

Stereophonic Sound Reproducing Systems

Parmeko will be displaying and demonstrating a range of three player units featuring solid state circuitry. The **System 12** gives 10 watts per channel (speech and music) and offers the choice of auto-change turntable and high quality single player. The **System 22** gives 30 watts per channel (speech and music) and utilises a semi-conductor pick-up. The **System 32** is a double size console which can be fitted with either **System 12** or **System 22** electronics and provides space for a tape deck, if required. All these player cabinets are craftsman-made teak veneered with protective satin finish and matching tables can be provided.

The range of loudspeaker units comprises the **S10** bookshelf type with 10 watts capacity and includes bass and treble units with a frequency response of 45-18,000 Hz. The **S11** is similar to the **S10** but with a frequency range of 60-18,000 Hz. The **S14** mid-range loudspeaker handles 15 watts with bass and treble units with a frequency response of 35-20,000 Hz. The **S15** free-standing loudspeaker comprises bass, mid-range and treble units with a comprehensive cross-over network with a power handling capacity of 15 watts. The frequency range is 35-18,000 Hz. The cabinets are craftsman-made, teak veneered with protective satin finish, with maple green Vynair grilles.

PHILIPS

Philips Hi-Fi Division,
Philips Electrical Ltd.,
Century House, Shaftesbury Avenue,
London, W.C.2
GERrard 7777

Booth 23

**Demonstration
Room 336**

Hi-Fi Equipment

In the Philips Audio Plan range two new amplifiers and an AM/FM radio tuner will be shown. Styled in natural teak, the new amplifiers (**GH943** and **GH949**) and AM/FM radio tuner (**GH944**) match the other units in this range, from which a wide variety of systems may be built up.

The discriminating buyer may select that combination which best suits his particular requirements in terms of performance, size, cost and versatility. The system can expand as the user's needs alter. Units are supplied with interconnecting leads and plugs ready wired. Impedances and sensitivities are compatible throughout the range. The units are completely complementary to both reel-to-reel and cassette recorders.

The simplest system, costing about 60 gns., consists of the GA228 record player, a single player featuring automatic pick-up lowering; the GH925 stereo amplifier, providing up to six watts music power to each channel; and two GL559 loudspeaker enclosures, eminently suitable for shelf mounting as they stand less than a foot high. To this basic system the GH926 tuner may be added to give excellent mono FM reception.

This system and other sample systems, ranging in price up to 266 gns., are displayed and set systems are demonstrated.

Features of the top price combination include a transcription quality turntable unit with integral pick-up arm equipped with adjustable side thrust compensation and friction damped lowering device and AM/stereo FM tuner, a 20 + 20 watt integrated amplifier having a stabilised power supply, and wide range multi-speaker loudspeaker enclosures.

All transistor circuitry is used throughout the range.

PHILIPS

Philips Tape Recorder Division,
Philips Electrical Ltd.,
Century House, Shaftesbury Avenue,
London, W.C.2

Booth 25

Demonstration

Room 337

Tape Recorders and Tapes

A new tape recorder of outstanding quality, the **PRO12**, is to be introduced. Designed to very high standards for industrial and professional studio applications, the **PRO12** is also intended for Hi-Fi enthusiasts whose discriminating requirements are not fully met by a perfected domestic recorder, and who are prepared to pay more for equipment of professional quality.

The **PRO12** is a two-speed machine ($3\frac{3}{4}$ and $7\frac{1}{2}$ ips) which can be operated in the vertical and horizontal positions and is suitable for twin-track mono dual track mono or twin-track stereo recording and play-back. Its dimensions are $13\frac{3}{4}$ in. by $9\frac{3}{8}$ in. by $20\frac{3}{8}$ in., and its price will be approximately **180 guineas**.

The tape deck has three separate motors for individual drive of capstan and tape reels, and accurate adjustment of tape speed is provided by means of an inbuilt stroboscope device.

Three heads are employed for recording, erasure and playback, and the erasing head is switchable for the separate erasure of either track, or both simultaneously.

Monitoring facilities are provided whereby the input signal or recorded signal can be compared (before and after tape) stereophonically through headphones, or monophonically by the inbuilt speaker.

The tape deck is rigidly constructed on a strong die-cast metal chassis specially designed for easy access to moving parts. The amplifier circuits employing semi-conductors are on hinged wiring panels, and all pre-set potentiometers are positioned for easy adjustment.

In addition to its outstanding sound quality and performance specification the **PRO12** incorporates a number of features of special interest which renders the recorder eminently suitable for a variety of applications.

Five other reel-to-reel tape recorders, already released, will be shown and demonstrated. These include the model **4408**, a four-track three-speed, high fidelity recorder for mono or stereo, with detachable loudspeakers and an output of 6 watts per channel.

The range of cassette tape recorders will also be on view. In this section will be the **N2600**, a car cassette model which functions through the car radio receiver.

A new stereo cassette player, **N2500**, will be introduced, the pre-amplifier output of which is fed through high fidelity equipment to provide stereo reproduction of cassettes.

In addition there will also be the full range of Philips new High Fidelity low noise tape. These are new formulation tapes with outstanding sensitivity and signal-to-noise ratio. All tapes are now coated in Polyester backing and available in attractive library box presentation. A full range of blank cassettes will also be exhibited, these comprise **C.60**, **C.90**, and the new **C.120** which gives a total playing time of 2 hours' duration.

PIONEER

Pioneer Electronic Corporation,
Tokyo,
Japan

Booth 9
Demonstration
Room 316

Multiplex Stereo Receivers, Players and Loudspeakers Systems

A series of high quality tuner amplifiers, matching loudspeaker systems and transcription playing decks is being shown this year. All the integrated units incorporate F.M. Multiplex Circuits for the automatic reception of B.B.C. stereophonic broadcasts. Reception of these broadcasts is indicated by the glow of a small lamp in the tuning scale.

SX-34B covers F.M. frequency range of 88-108 Mc/s and A.M. in the M.F. band of 535-1605 Kc/s. 13 valves and 12 diodes are employed to give a R.M.S. power output of 11 watts per channel with an overall frequency response of 30 c/s to 20 Kc/s. Auxiliary inputs provide facilities for playing back stereo discs or tapes.

Solid State

SX-300T uses printed circuit techniques and with 41 transistors and 12 diodes produces 12.5 watts R.M.S. from each single-ended push-pull channel. The overall frequency response is 20 c/s to 20 Kc/s. An electronic switch protects the output circuits.

SX-600T employs four novistors in the cascode front end of the F.M. section which incorporates inter-station muting. 17.5 watts R.M.S. is produced from each channel through mesa type silicon power transistors which have protection circuits incorporated.

SX-700T is an all transistor precision-made instrument producing 30 watts R.M.S. per channel. It is highly sensitive on both A.M. and F.M. and has an overall amplifier frequency response of ± 1 db from 25 c/s to 50 Kc/s. Sophisticated circuitry enables inputs and outputs to be switched to various modes and sources without reconnection.

SX-1000TA provides 40 watts R.M.S. clean sound from each single-ended push-pull channel. This is a superb high fidelity tuner amplifier for professional use having an overall frequency response of ± 1 db from 20 c/s to 30 Kc/s. Double protection circuitry ensures 100% safety in operation. By combining the monitor switch with the mode switch four tracks recording and reproduction of mono can be achieved.

C6000 is a complete stereo sound system consisting of two separate loudspeakers and a control console, all housed in oiled teak cabinets. Under the glass top of the control console is a solid state, integrated AM/FM stereo tuner amplifier, similar to the SX300T and a belt-driven precision turntable with a balanced tone arm and magnetic cartridge.

Loudspeaker Systems

The range of loudspeaker systems shown includes the CS88 which houses in its attractive enclosure, a 12 in. woofer, a 5 in. squawker, two cone tweeters and a horn tweeter. Frequency response is 25 c/s to 20 Kc/s with a rated power input of 40 watts.

Transcription Playing Decks

These include the PL41, a quality belt-driven precision instrument with a 5 lb. die-cast turntable and an oil damped tone arm system.

Integrated amplifiers reverberation amplifiers and high fidelity stereo headphones complete the Pioneer equipment available in this country.

Sole Distributors : Swisstone Limited, 48a Station Road, Cobham, Surrey. Telephone : Cobham 4214 and 2853.

QUAD

Acoustical Mfg. Co. Ltd.,
St. Peters Road,
Huntingdon
Huntingdon (0480) 2561/2

Booth 90
Demonstration
Room 604

Amplifiers, Tuners and Loudspeakers

Recent trends in loudspeaker and pickup design have led to changes in amplifier requirements previously unchanged for many years. These are mainly greater power output for driving low efficiency speakers and greater sensitivity for low output pickups. In addition, developments in transistors have now made it possible to produce amplifiers of rather better performance than the best valve models, with not too great an increase in price, and these factors together led to the introduction of the new **Quad 33/303** models.

The unique output circuit arrangement of the **Quad 303** is the subject of a technical article in *Wireless World* (April, 1968) and is causing considerable discussion in technical circles everywhere. Very favourable reviews of both units have appeared in the hi-fi magazines both here and abroad.

This equipment maintains the flexibility of installation associated with separate units not possible with more cumbersome "integrated" units, while the physical size of the power amplifier (two 45 watt power amplifiers in the same volume as the old single 15 watt amplifier) and cool running greatly simplify cabinet design. Conversion of existing Quad installations is also quite simple as the control unit and tuner require virtually the same panel cut-out as their predecessors.

Apart from the front panel the FM tuner is substantially unchanged, but is now self powered and with multiplex facilities incorporated. The latter provide automatic stereo switching which can be over-riden if required, by pressing the mono radio push buttons on the **Quad 33** control unit.

The Quad electrostatic loudspeaker is completely unchanged but speakers more than about two years old do require a small modification to avoid risk of damage when used with the **Quad 303** power amplifier.

Our demonstrations in Room 604 will, as usual, consist of playing recorded music as naturally as possible and all enquiries will be dealt with by our staff on Stand 90.

RADIONETTE

Radionette Aksjeselskapet,
Trondheimsveien 100,
Oslo, 5,
Norway

Booth 31
Demonstration
Room 256

Stereo Radios, FM Radios, Tape Recorders

Superb performance matches advanced design of **Radionette** equipment for the truly discriminating listener. The range includes battery/mains portable four-waveband radios with model specifications covering long, medium, short, marine, aircraft bands and FM. Five-waveband table models include the popular Menuett and the multiplex prepared Quintett with optional decoder. The Quintett Stereogram is a handsome floor standing model complete with decoder and Garrard 3000 Auto Unit mounted on a teak plinth. Unique is the single-spool Multicorder tape recorder which gives twelve hours playing time with facility for changing from one track to any other of four at the flick of a switch.

All models have cabinets built in highest quality wood and styled by exquisite craftsmanship.

New to the range is the Kurer Automatic portable with all the attributes of a large table model, and the Quintett Compact with stereo amplifier and separate matching speakers.

U.K. Distributors : Denham & Morley (Overseas) Ltd., 173/5, Cleveland Street, London, W.1. EUS 3656.

RECORDAWAY

Booth 20

The Recordaway Co. Ltd.,
443 Becontree Avenue,
Dagenham, Essex
01-599 3977

Record Storage

Unique new storage system

Every year many millions of pounds are wasted because expensive and treasured long-playing records deteriorate through bad storage. In the past few years recording has improved; amplifiers have improved; pick-ups have improved; but until now, even the most careful record enthusiast may have been forced to make compromises in record storage.

For the first time at an Audio Fair, Recordaway announce the results of their development team's research into this long-standing problem: a unique, patented suspension filing system, basically simple and inexpensive, yet versatile enough to care for even the largest collection.

Lowest outlay

Having only two basic parts, the Recordaway system can be built up from the lowest possible outlay. One track unit and a single pocket will safeguard your first record, and a pocket bought with each new disc will carry on the valuable protection.

Convert your present storage

If it is a better home for an existing collection you need, you can use track units to convert your present shelves or cabinets to all the advantages of Recordaway unit storage. Alternatively, use one of the infinite combinations possible with fully-finished Recordaway units using the same basic system.

An investment for life

Whether for entertainment or serious musical study, today's records are wonderful value; but they are not cheap. Recordaway is in no sense an expense, but an investment in long life and pleasure from your carefully-chosen and sometimes irreplaceable records.

RECORD HOUSING

N. & S. B. Field & Co. Ltd.,
Brook Road,
London, N.22
Bowes Park 7487

Booth 29
Demonstration
Room 442

Hi-Fi Furniture, Record Storage

Record Housing were the first company in this country to specialise in the housing of audio equipment. We offer the largest choice of cabinets, over twenty different models, large ones and small ones, upright models and long low models. There are cabinets to house turntables, amplifiers, tuners, complete tape recorders, records, tapes and speakers—or any combination of these. Our cabinets are intelligently and stylishly designed, solidly built, cleanly finished, and sensibly priced. Prices run from **£7 to 52 gns.**

On show for the first time this year is our **Scan Plan System**, specially designed for the housing of “Audio Separates”. Scan Plan is extremely flexible, neat, inexpensive, and enables you to accommodate the most comprehensive set-up in the smallest possible space. Also on show will be a number of new Record Storage and Hi-Fi Housing Cabinets.

The range is so large it is doubtful whether we can get them all into our demonstration room, but as many as possible will be on show. We claim that whatever your particular set-up, there is a **Record Housing** cabinet to meet your need. In short “You name it—we’ll house it”.

We offer a free **Hi-Fi Advisory Service**, and if you tell us your equipment, we can advise you of the best way to accommodate it. Our trained staff at the Audio Fair will be happy to assist you.

RECORDS AND RECORDING

Booth 66

Hansom Books,

16, Buckingham Palace Road,

London, S.W.1

Tel.: 01-834 3571

Magazine Publishers

Records and Recording & Record Times, now in its eleventh year of publication, provides the collector with stimulating and authoritative guidance for his record choosing. Stimulating, for the freshness and outspokenness of its outlook; authoritative, for the balanced judgment and insight of its specialised panel of reviewers. In addition to more than 100 extended record reviews each month, there are lavishly illustrated articles on the artists, music and background to recordings. A comprehensive Audio section each month reports on new technical advances. John Earl examines the latest equipment and gives frank advice on its suitability for home listening. Regular features are the monthly "What's New in Audio" pages, "Problem Page", Tim Tweeter's "World of Sound" column and "Record Man's Diary".

"Britten's Dream" by Gerald Larner, "Super Trackability" and "Song Precision Turntable" by Clement Brown, "Karajan Begins his Rhine Journey" by Thomas Heinitz, "Indian Classical Music" by N. A. Jairazbhoy, "Bellini's Beatrice" by Jeremy Commons, "Monteverdi's Great Venetian Vespers" by Kenneth Long, "Garrard's Lab 80 Mk. II" by Frank Ellis, "Nilsson Becomes Elektra" by Thomas Heinitz, "Baby Leak Sandwich" and "Solidstate Stereo by Grundig" by John Earl, "New Light on Mozart's Titus" by Erik Smith, "A Tchaikovsky Revelation" by John McCabe, "Too Much Top" by Ivan March, and "Quad's 33/303" by R. S. Roberts. Inside each issue of *Records and Recording & Record Times* is a 50-page Record Guide reviewing all new classical, jazz, folk and c.-and-w. releases at length.

If you miss buying *Records and Recording & Record Times* at the Audio Fair we will send you a free sample back number (not the April Audio Fair issue) as a sample for you to see. Future copies can be obtained from any newsagent or bookstall in the country 3s. monthly by giving a firm order for regular delivery (you can always cancel if not satisfied). Copies are also on sale at most good record dealers each month or copies by post from the publishers are 42s. for twelve months to any address in the world by writing to Hansom Books, 16 Buckingham Palace Road, London, S.W.1.

RESLO

Reslosound Ltd.,
Reslo Works,
Spring Gardens,
London Road,
Romford, Essex
Romford 61926

Booth 15

**Demonstration
Room 348**

Amplifiers and Loudspeakers

Reslosound Ltd., a member of the Derritron Group, are showing a full display of their standard range of microphones and accessories and a selection from their range of public address amplifiers and loudspeakers, together with microphone stands, the "Boom Arm" and the Stereo Twin Mount.

One of the new microphone models is the omni-directional miniature MPD.2, high quality yet very competitively priced.

The UD.1 uni-directional hand or stand microphone is shown for the first time and is supplied complete with a detachable perspex ring for changing the cardioid response, and incorporating an internal anti-pop filter and an optional bass reduction connection. Also on show is the omni-directional type OD.1 for hand or stand use. This model is slimmer and shorter than its predecessor and is pop proof.

The SL.1 omni-directional stick microphone for hand or stand use is now available and is shown complete with remote universal matching unit with bass reduction and impedance selector, phasing switch and input/output sockets.

In addition to these, a high quality radio microphone in an attractive artiste's carrying case is shown, together with a special microphone and banqueting stand with base clips to accommodate the transmitter. A demonstration will be given in Room 348 on stereo tape recordings made with a pair of VRT/L Ribbon Microphones using the A.910 Stereo Mount.

A selection from the range of Chapman Radio Tuners, now manufactured by Reslo, are exhibited in their improved presentation. Model FM.1000 for use on VHF only, and Model 2005 for long, medium and short wave bands are available in free standing wooden cabinets and in black metal cases for installation into the buyer's own cabinet. A development model of a new Chapman Stereo Amplifier is being demonstrated reproducing a selection of the latest long-playing records.

REVOX-STUDER

Willi-Studer,
Althardstrasse,
Regensdorf,
Zurich,
Switzerland

Booth 19
Demonstration
Room 649

Tape Recorders

Reviews now appearing in the various technical publications (copies sent on request) all prove without question that the new **Revox 77 Series** of stereophonic tape recorders will set new high standards of performance, together with quality of workmanship and design techniques which are ten years ahead of their time.

The **Revox 77** is based on several decades of experience in the production of studio recorders, famous in radio and television broadcasting, studios, laboratories, etc., all over the world.

Here are some of the outstanding features :

- Electronically governed capstan motor which will run accurately regardless of voltage fluctuations or 50-60 cycle operation.
- Two extra motors for spooling to ensure constant back-tension and take-up tension as well as very fast winding speed.
- Two tape speeds ($7\frac{1}{2}$ and $3\frac{3}{4}$ i.p.s.)—are also electronically governed.
- All transistor circuitry built on plug-in printed circuit panels.
- Operating functions (push-button relays) can all be remotely controlled.

Other important features include :

Calibrated VU Meters, Photo-electric end of tape switch, 4 digit tape position indicator, headphone monitoring, high and low microphone inputs, Editing feature (reel motor switch), NAB and IEC playback, multiplay (sound on sound) recording, echo effect, etc.

The **77** is produced in several versions :

Chassis only, **134 Gns.**; chassis in Teak case, **139 Gns.** (either version fitted with 10 + 10 watt, plug-in amplifier panels, **20 Gns.** extra).

Suitcase version with power amplifiers and four speakers, **165 Gns.**

Be sure that you see the **Revox 77**—and hear its incredible performance.

A new 40 + 40 watt transistor amplifier, forerunner of an entire Revox Hi-Fi System, will be demonstrated for the first time.

Also shown are the **Studer** professional recorders. The **Studer C37** has proved itself to be the finest tape recorder available today (the B.B.C. alone use over 80) and is in constant demand by recording and broadcasting organisations throughout the world. It is available in mono or stereo versions, both of which run at either 15 or $7\frac{1}{2}$ i.p.s. Switched equalisation is provided for CCIR or NAB characteristics. Extremely low wow and flutters figures are achieved by the use of an uncomplicated drive system and servo tape tension control. Special features include built-in "auto scissors" for editing, and a four digit tape timer giving minutes and seconds. The **C37** is constructed on a heavy chassis weighing 172 lbs. Standard console type cabinets are available to order.

U.K. Agents for Revox Tape Recorders : C. E. Hammond & Co. Ltd.,
90 High Street, Eton, Windsor, Berks.

U.K. Agents for Studer Professional Tape Recorders : F. W. O. Bauch
Ltd., Holbrook House, Cockfosters, Barnet, Herts.

RICHARD ALLAN

Richard Allan Radio Limited,
Bradford Road,
Gomersal,
Nr. Leeds,
Yorkshire
Cleckheaton 2442

Booth 27
Demonstration
Room 642

High Fidelity Loudspeakers and Enclosures

Richard Allan celebrate their 21st birthday this April by announcing their entry into the High Fidelity Amplifier market. The occasion is doubly significant by virtue of the fact that the amplifiers offered are the first available transistorised devices designed on the principals of **Class A** operation.

With the usual Class B designs the problems of crossover distortion with its attendant production of the more objectionable high order harmonics, especially at lower power levels, are now well known. Only recent developments in output power transistors have permitted true **Class A** operation to be achieved. **Class A** operation offers a distortion content which is negligible at low power and rises in linear manner with increasing output. In simple domestic terms this means that the distortion content at normal listening levels (between $\frac{1}{4}$ and 1 watt) is many times lower with **Class A** operation than with its Class B counterpart. These differences are not only measurable but readily audible.

Two models are being offered. A fully integrated 10 watts per channel version complete in teak case (**Model A21**), and a highly sophisticated 20 watts per channel power amplifier of advanced specification (**Model A41**) and a separate control unit (**Model C41**) featuring facilities designed for the discriminating enthusiast and professional user.

Complementary to these amplifiers is the **Pavane**, a new, compact free standing triple speaker system measuring 25½ in. x 15½ in. x 12 in. deep. Housing a high flux (14,000 lines) 12 in. bass unit, 8 in. mid-range and 4 in. tweeter units this new speaker is finished in teak with matching vynair fabric.

In addition to the Pavane another speaker new to the Audio Fair will be shown—the **Chaconne**. This is a twin speaker reproducer of bookshelf proportions utilising 8 in. and 4 in. units. Completing the quartet of loudspeakers to be demonstrated are the well established **Minette**, and the **Sarabande** which made its debut at last year's event.

Following last year's successful policy, Richard Allan have again opted for a series of closed well planned musical demonstrations, firmly believing that this is the only satisfactory method of demonstrating high quality equipment.

Richard Allan personnel will of course be in attendance to present the programme, and will also be pleased to answer your questions, technical or otherwise.

RICHARDSON

J. Richardson Electronics Ltd.,
43b Hereford Road,
London, W.2
01-727 5096

Booth 74
Demonstration
Room 359

Audio Amplification Manufacturers and Engineers

Richardson manufacture a range of products built to the highest standards to meet the requirements of the Hi-Fi enthusiast and the professional user.

At this Audio Festival may be seen and heard for the first time their amplifiers, pre-amplifiers and mixers.

MA 135. A high quality mono valve amplifier giving up to 30 watts output for negligible distortion.

MA 200. An amplifier similar to the **MA 135** but giving up to 70 watts output. This unit is suitable for use in standard G.P.O. 19 in. racks and therefore makes it of particular use to the professional user. Special facilities are available to order.

SA 170. A high quality stereo valve amplifier having the same characteristics as the **MA 135**.

SCP1. A stereo pre-amplifier of new design which incorporates both field effect and silicon planar devices, 16 of them in all! This unit gives lower noise and distortion than the conventional valve or transistor pre-amplifiers. The range of controls include stereo blend and phase reverse which are seldom found on British pre-amplifiers.

Mixers. On display is our standard 4-channel Discotheque Mixer pre-amplifier. This unit incorporates a crossfade control on the 2 disc channels. Microphone and tape inputs, also a 2 watt monitor amplifier enabling the second disc channel to be monitored whilst the first channel is playing. A range of custom built mixer-pre-amplifiers are available to special order.

ROGERS

Rogers Developments (Electronics) Limited,

4-14 Barmeston Road,

Catford,

London, S.E.6

01-698 7424/4340

Booth 48

Demonstration

Room 602

*Stereo Amplifiers, FM Tuners, Decoders
and Speaker Systems*

Static Display

Ravensbourne Stereo Amplifier. An Integrated Stereo Amplifier/Control Unit rated at 25 watts per channel employing silicon transistors throughout. First introduced at last year's Fair. Available in chassis form or in a free-standing teak case.

Ravensbourne "2" FET FM Tuner. A high performance FM Tuner featuring an FET Front end and designed primarily for use with the Ravensbourne Amplifier which it matches in appearance. Introduced at this year's Fair. Available with or without built-in Stereo Decoder.

Cadet III Stereo Amplifier/Control Unit. Now entering its fourth year of production the Cadet has proved to be the most popular medium-priced stereo amplifier on the British high fidelity market. It combines versatile performance with attractive styling and forms the ideal basis on which to build up a complete home stereo system at a realistic price. Available in chassis form or in a free-standing case finished in teak Formica.

Mk. III Switched FM Tuner. A local station tuner for use under good reception conditions providing FM reception in its simplest and most economic form. The current Series III model includes a built-in stereo beacon and is suitable for direct connection of the un-powered Decoder. Styled to match the Cadet III and available with or without free-standing case in teak Formica.

Mk. II Stereo Decoder. A high performance multiplex stereo decoder available with or without built-in power supply. Features fully automatic electronic switching.

Wafer Speaker System. Measuring only 2½ in. deep this ingenious design is ideal where space is at an absolute premium and is equally suitable for wall or shelf mounting. Current production models feature improved styling including a frame in solid afrormosia and black fret material and detail design improvements.

Demonstration Equipment

Demonstration equipment will be based on the Ravensbourne Stereo Amplifier feeding two of the new Ravensbourne "Compact" Speaker Systems which have joined the "Standard" models demonstrated last year. The Compact employs the same basic design principles but uses a high flux 8 in. main drive unit. Programme material will be from disc, tape and FM radio. Regular demonstrations of 15/20 minutes duration will be given throughout the Fair and entry will be controlled.

The units used for demonstration and static display are standard production models in every respect and have not in any way been modified or specially prepared for exhibition purposes. This applies particularly to the standard of wiring to be seen on the equipment used for Static Display.

All items in the current range of Rogers High Fidelity equipment have been selected by The Council of Industrial Design for inclusion in Design Index.

SANSUI

Sansui Electric Company Limited,
14-1 2Chome Izumi Suginami - Ku,
Tokyo,
Japan

Booth 28
Demonstration
Room 159

High Fidelity Audio Equipment

The Sansui range at this Audio Fair is now augmented by four new models. These will be featured in our Demonstration Room. These new models together with those already introduced will be displayed and demonstrated by Technical Ceramics Limited.

Model 400 Solid-State AM/FM Multiplex Stereo Tuner Amplifier

Power output 20W per channel.

Compactly designed and features A & B switching for double speaker systems.

Model 2000 Solid-State AM/FM Multiplex Stereo Tuner Amplifier

Power output 32W per channel.

This model incorporates a field effect transistor circuit for improved sensitivity and is attractively designed with a black front face which is

This model incorporates all the latest developments in circuitry including illuminated when the model is switched to FM or AM function.

Model 3000A Solid-State AM/FM Multiplex Stereo Tuner Amplifier

Power output 48W per channel.

no less than 99 specially selected transistors and diodes.

Model AU-777 Solid-State Control Amplifier

Power output 30W per channel.

This is a Hi-Fi professional control amplifier providing all the facilities needed for the reproduction of quality sound coupled with high power performance.

Sole U.K. Importers : Technical Ceramics Limited, Cheney Manor, Swindon, Wiltshire, England. Telephone : Swindon 6251.

SANYO

Marubeni-Iida Co. Ltd.,

Central P.O. Box No. 1000,

Osaka,

Japan

Booth 73

Demonstration

Room 342

*Stereo Tape Recorders, Transcription Units and
High Fidelity Tuner Amplifiers*

Since their introduction into the U.K. eight years ago, Sanyo Radio products have grown from strength to strength, so much so, that they are now one of the best known brands of Japanese Radios in the U.K. During 1967 Sanyo extended their activities into high quality audio and tape fields, and utilising their considerable technical and financial resources are manufacturing a range of products which are of the same high standard of reliability and design as their radio range. The current range of audio products available is as follows :

Model D.C.434. Solid state F.M./A.M. Tuner Amplifier with fitted multiplex incorporating high quality transcription unit. Pickup arm and magnetic cartridge. 16 x 16 watts per channel. Speakers extra.

Model D.C.534. Solid state F.M./A.M. Tuner Amplifier with fitted multiplex incorporating high quality transcription unit. Pickup arm and magnetic cartridge. 12 x 12 watts per channel. Speakers extra.

Model D.C.60. Solid state F.M./A.M. Tuner Amplifier with fitted multiplex. 30 x 30 watts per channel.

Model D.C.904. Solid state F.M./A.M. Stereo Radiogram with fitted multiplex. Fold back lid which houses two high quality speakers. 5 x 5 watts per channel.

Model M.R.151. Mains/Battery Stereo Tape Recorder, 4 tracks Record/Playback. Three speeds Sound on Sound, Sound with Sound. Automatic Shut-Off, Push Button Operation including two Microphones, Spool of Tape, Empty Spool.

Model M.R.929. Mains Stereo/Mono Tape Recorder, 4 tracks, two speeds, Sound with Sound facilities. Automatic Shut-Off. **Accessories:** Two Microphones, full Spool of Tape, Empty Spool, Separate Speakers.

Model M.R.800. Mains Stereo/Mono Tape-Deck, 4 tracks, three speeds, Sound with Sound facilities. Automatic Shut-Off facility record direct from magnetic cartridge. Separate volume controls for each channel on Record/Playback.

Model M.R.939. Mains Stereo/Mono Tape Recorder, 4 tracks, Record/Playback. Three speeds, Sound on Sound and Sound with Sound facilities. Automatic Shut-Off. Seven watts output per channel. **Accessories:** Two Microphones, Empty Spool. 7 in. Spool of Tape. Separate Speakers.

Model M.R.801. Mains Stereo/Mono Tape-Deck. Four tracks. Three speeds. Sound with Sound. Automatic Shut-Off.

In addition we shall be displaying one or two new items in our demonstration room at the Audio Fair, and we cordially invite you to come and see these products and discuss the range with us.

U.K. Agents : Electronic Equipment Dept., Mr. J. W. Cowley, Marubeni-Iida Co. Ltd., 164 Clapham Park Road, London, S.W.4.

SCOTCH

Minnesota Mining & Manufacturing Co. Ltd.,

3M House, Wigmore Street,

London, W.1

HUNter 5522

Booth 60

Demonstration

Room 347

Magnetic Tape and Accessories

The qualities of the complete range of Scotch audio magnetic tapes will be demonstrated on professional recording equipment in Room 347 by the 3M Company at the International Audio Fair at the Hotel Russell, London, from April 18 to 21.

The range, which is manufactured at the most modern tape plant in Europe at Gorseinon, near Swansea, comprises low-noise **Dynarange** tapes, **Superlife** tapes, and the new **Scotch** cassette.

Also on show will be a wide variety of Scotch magnetic tape accessories including splicing tape, sensing tape, leader tape, self-threading reels, empty spools, tape clips, the One-Five special letter-on-tape, and accessory kits.

Dynarange 202 (standard) and **Dynarange 203** (long play) is accepted as the professionals' tape, and is recommended by Ferrograph, Akai and Tandberg for use on their equipment. It can record at half usual speed without sacrificing quality, has a signal-to-noise ratio of up to five decibels better, a wider range of frequency response, and it is coated with Superlife, which affords greater life for both tape and recording heads.

Superlife is the name given to the advanced method of adhering the coating of magnetic oxide particles to a polyester base film. This major development in the construction of magnetic tape—recognisable by its black colour—is a feature of nearly all the Scotch magnetic tape range.

Superlife's qualities lead to improved frequency response, reduced recording head wear, reduced magnetic oxide "rub-off" and increased tape life.

The Superlife range comprises: Scotch 175 (standard play); Scotch 215 (long play); Scotch 220 (double play) and Scotch 290 (triple play).

The Scotch 271 (C-60) Cassette also uses Superlife tape which because it virtually eliminates background noise, is capable of recording a large range of sounds even at ultra slow speeds.

Visitors to the 3M stand will be given free a copy of the first edition of *Playback*, the new all-colour 3M quarterly magazine for tape users. In the cover story "Writing with Tape", Peter Cook and Dudley Moore describe how they use tape in the preparation of their comedy scripts. This first issue also features a competition in which entrants are asked to place in order of preference the different qualities of tape. The winner of the competition, together with friend, will spend a day at Pinewood Studios with a tape recorder interviewing the stars, and touring the sound department.

SENNHEISER

Sennheiser Electronic,
3002 Bissendorf,
Hanover,
Western Germany

Booth 63

**Demonstration
Room 355**

Microphones

Following the success at the 1967 Audio Fair, Sennheiser have decided to continue this year's demonstration on similar lines. In Room 355 visitors will hear **original stereo recordings** made **under domestic recording conditions**. These stereo recordings were made using various pairs of Sennheiser microphones with a B. and O. 2000 tape recorder and by changing the microphones at regular intervals during the recordings sensible comparisons can be made regarding the quality and characteristics of the microphones used. In this demonstration comparisons will be made between the most expensive **R.F. condenser microphones** and the cheaper domestic **dynamic microphones**. This method of demonstration allows the visitor to the Audio Fair to form his own opinions without having to suffer any harassing sales technique. All **questions** regarding these recordings, or any comments the visitor may wish to make, will be answered in the above room by Sennheiser's Sound Engineers.

These original stereo recordings will be heard on the "**Philharmonic**". This expensive **studio replay system** (just under £500) incorporates two loudspeaker enclosures, each having their own 30 watt (R.M.S.) power amplifiers built into the back, a three-channel stereo mixer, and a unique remote control unit. Also on display will be the complete range of Sennheiser R.F. condenser microphones and dynamic microphones. **New** in the dynamic range are three microphones specially designed for the music recording industry. Each microphone has a specially tailored frequency response for a particular application. **The MD 415** has been designed as a vocalist's microphone with excellent anti-feed-back properties, and is not sensitive to handling noise. **The MD 409** is an instrumentalist's microphone, again with excellent anti-feed-back properties and a built-in on/off switch. **The MD 421 HL de luxe** is a development of the MD 421 studio cardioid microphone, but this new version has a smoother frequency response and is used in particular by jazz groups, dance bands, and night club entertainers. All these three models are easily recognisable by the black and gold finish.

At Booth 63 similar original recordings to those already mentioned will be heard, but in this instance the quality will be checked on pairs of **stereo headphones**. As usual the Sennheiser range of **sub-miniature microphones** will be on display.

U.K. Distributors : Audio Engineering Limited, 33 Endell Street, London, W.C.2. Temple Bar 0033.

SHURE

Shure Brothers Inc.,
222 Hartrey Avenue,
Evanston, Illinois, U.S.A.

Booth 91
Demonstration
Room 404

*Pick-up Cartridges, Pre-amplifiers, Headphone-amplifiers,
Microphones and Accessories*

The **V15** Type II "Super-Track" Stereo Dynetic Cartridge is the highlight of the Shure high fidelity display and demonstration. Introduced only last year, the V15-II established a new standard of cartridge performance and specification.

The **M75** Series "Hi-Track" Cartridges provide high trackability at a modest price. Model **M75E** has an elliptical stylus for tracking at $\frac{3}{4}$ -1 $\frac{1}{2}$ grammes. Models **M75G** and **M75-6** have a conical stylus for tracking at $\frac{3}{4}$ -1 $\frac{1}{2}$ and 1 $\frac{1}{2}$ -3 grammes respectively. The **N75-3** stylus is available as an accessory for playing 78 records.

To be introduced at the Festival, the **M75E-95G** "Gard-A-Matic" Hi-Track Cartridge is designed specifically for the new Garrard Model SL95 Transcription Turntable. The **M75E-95G** is supplied ready-mounted and wired in a slide-in carrier for ease of installation. A similar cartridge, Model **M75E-D19**, is supplied for use with Dual Models 1019, 1009SK, 10105 and 1016. The performance of this series is equivalent to that of the M75E with the advantages of a retractile safety suspension system providing scratch-proof, bounce-proof operation in installations where floor vibration is a problem.

The **M31E** and **M32E** both have a Bi-Radial elliptical stylus for tracking at 1-2 grammes and 2 $\frac{1}{2}$ -5 grammes respectively and are particularly suitable for use with automatic turntables and changers. The **M32-3** Stylus is available as an accessory for playing 78 records.

Model **M32-3** is for playing 78 records only and is provided for those collectors who prefer to own a separate cartridge for this purpose.

The **M3D-M**, the famous original Shure Stereo Dynetic Cartridge, is an ideal choice for budget systems.

The Solo-Phone amplifier facilitates high-quality personal stereo listening at a moderate cost. Other applications are music appreciation courses in education, quality control in record factories and listening systems in record shops, libraries and hospitals. Inputs are provided for radio and tape as well as for magnetic pick-up.

The Unidyne range of dynamic cardioid microphones is augmented by the introduction of the Unidyne IV Series, Models **548** and **548S**. These microphones are engineered for professional applications and are of robust construction with the cartridge resiliently mounted and protected by a rigid screen. Cannon type connectors are provided.

Of particular interest to the professional sound engineer and tape-recording enthusiast are the new Shure Model **M68-2E** Transistorised Microphone Mixer and **M62** "Level-Loc" Audio Level Controller.

The **M68-2E** has four microphone inputs, each for high or low impedance microphones, and a fifth input for a tape recorder, pick-up or tuner. A Master volume control is also provided. The **M68-2E** has two outputs, one at high or low impedance for connection to the microphone input of a P.A. system, amplifier or tape recorder, and the other a high impedance, high level, output for direct connection to a power amplifier.

Model **M62** automatically and instantly locks the volume level of a sound system to eliminate the annoying volume changes normally applying when an unskilled speaker moves his position relative to the microphone when speaking. The "Level-Loc" is basically a low-noise, unity-gain, pre-amplifier which reduces its gain as the input signal increases, thereby holding the output signal constant.

SINCLAIR RADIONICS LIMITED

Sinclair Radionics Limited,
22 Newmarket Road,
Cambridge
Cambridge 52996 (OCA3)

Booth 46
Demonstration
Room 248

Amplifiers, Loudspeakers

Exhibiting for the first time in an Audio Fair Sinclair are displaying and demonstrating the **Neoteric 60** integrated stereo amplifier and the **Q.14** loudspeaker, both of which are now well established. New high fidelity products include a loudspeaker and an F.M. tuner in the **Neoteric** range, and the first items in a new range known as **System 2,000**.

The **System 2,000** range, which includes an integrated amplifier and a stereo or mono F.M. tuner, is lower in price than the **Neoteric** range but the quality remains at the same high standard. Styling is quite new and the remarkable value for money which the new range represents results from the use of advanced circuitry and production techniques employed. This approach also yields products with extremely high reliability levels.

SLOT STEREO

University Recording Ltd.,

36 Hertford Street,

London, W.1

01-499 8157

Booth 52

Demonstration

Room 661

Stereo Tape Players

New to this year's Audio Fair, SLOT Stereo are now launching two mains-powered 8-track hi-fi units using the 8-track tape cartridge, undoubtedly the easiest, most convenient form of musical packaging yet devised.

The new SLOT Stereo home units are being shown in two versions :

A low-cost satellite unit, for plugging into an existing hi-fi set; the satellite unit consists of a tape deck, pre-amplifier and a track-selector switch; and,

A self-contained system with its own amplifier, full set of controls and two loudspeaker cabinets. Controls include an on-off indicator light, volume, tone and speaker balance knobs, plus track-selector switch.

Both tape players are surrounded by an elegant bag-pressed wood laminate casing, handsomely designed to fit into any room setting.

Both are based on the world's most proven 8-track tape deck, the Motorola 12-volt DC deck, with transformer-fed DC supply. The amplifier which uses all-silicon, solid-state, direct-coupled circuitry, has an output per channel of 4 watts (13 watts American peak-to-peak rating).

Motor and output power are automatically stabilised between 190-260 volts. Heat generated by the units is dissipated through castellated heat sinks at the rear of the players.

Eight-track cartridges work on the continuous-loop principle whereby the tape runs from the centre of a reel and is returned to the outer lap of the same reel in one continuous operation.

This principle eliminates the need to rewind, turn the cartridge over (as with cassettes), or touch the tape at all. It also means the cartridge will play endlessly if required.

Once inserted into a SLOT Stereo player, the tape inside the cartridge is drawn across a twin magnetic head which picks up two sound channels simultaneously.

This twin magnetic head jumps automatically from one "programme" to another and will pick up four "programmes" in succession before automatically repeating the first one.

In a nutshell, 8-track cartridges are less bother than cassettes.

Supply of a wide Beethoven-to-Beatles range of 8-track cartridges is assured by SLOT Stereo's own 8-track tape duplicating facilities in Islington, unique in Europe.

SONOTONE

Technical Ceramics Ltd.,
Cheney Manor Trading Estate,
Swindon,
Wiltshire

Booth 49

**Demonstration
Room 154**

Pick-up Cartridges

Since its inception in 1929, the name Sonotone has been linked with high quality sound reproduction, and is now widely known on an international scale.

Early in 1946 Sonotone produced the first **Ceramic Pick-up Cartridge**, and these Units are now used by leading manufacturers throughout the world.

Sonotone Ceramic Pick-up Cartridges are virtually unaffected by the prevailing conditions of temperature and humidity encountered throughout the world. More than 100 manufacturers of Record Playing Equipment now instal Sonotone Cartridges into over 1,000 different models.

The **Sonotone 9TA** and **9TAHC** are Cartridges of superior quality offering extremely high compliance for a Cartridge with Dual Styli. The extremely light tracking weight thus made possible together with low tip mass ensures the minimum of Record Wear.

Although economically priced, the **9TAHC Cartridge** has a specification and performance superior to that of other Ceramic and even Magnetic Heads costing far more.

Sole Distributors for the U.K.: Metrosound Manufacturing Co. Ltd.,
Bridge Works, Wallace Road, Canonbury, London, N.1. 01-226 8641/2/3.

S.M.E.

Booth 61

S.M.E. Limited,

Steyping, Sussex

Steyping 2228

Precision Pick-up Arms

We extend a cordial invitation to our Booth on the ground floor in the Main Hall where we are pleased to deal with technical and commercial enquiries concerning our precision pick-up arms.

The **Series II** models are exhibited without change other than detail refinements and are to be seen in use with leading cartridges and turntables.

Model 3012 Series II Precision Pick-up Arm—(nominal stylus to pivot distance 12 in.).

Model 3009 Series II Precision Pick-up Arm—(nominal stylus to pivot distance 9 in.).

S.2 Ultra-light shell.

D.3 Adaptor for mounting Decca ffs heads.

P.1 Spacer-plinth to increase height of pick-up when used with deep turntable units.

TD 124/3012 Mounting Board to fit **Model 3012** on Thorens TD.124.

TD 124/3009 Mounting Board to fit **Model 3009** on Thorens TD.124.

S.T.C.

Standard Telephones and Cables Limited,

STC Acoustis Sub-Division,

West Road,

Harlow, Essex

Harlow 26811

Audio Arcade

Display 6

Microphones and Headsets

Regrettably STC is not demonstrating at this year's show but on Display 6 in the Audio Arcade the following Acoustic products can be seen.

- Type 4113.** Ribbon Cardioid, Microphone, offering remarkable performance—for only **11 gns.**
- Type 4119.** A double ribbon Microphone with Cardioid response, particularly suitable as a hand-held microphone for small vocal or musical groups. Priced at **£30**, inclusive of case and cable.
- Type 4136.** Capacitor Microphone. The professional's choice. Very wide flat frequency response gives the ultimate quality in sound. Price **£110.**
- Type 65/1B.** Headset for comfortable and effortless private listening. Suitable for stereo on Mono operation. Price **7 gns.**
- Type 4001E.** A Tweeter, with excellent transient response. Frequency response 6 Kc/s to 20 Kc/s \pm 3 db. Price **£5 12s. 6d.**

Fuller information on the wide range of Acoustic products available from STC is obtainable from: STC Acoustic Sub-Division, West Road, Harlow, Essex. Tel.: Harlow 26811.

STEREOSOUND

Stereosound Productions Ltd.,
Capital Works,
Wakefield Road,
Brighouse, Yorkshire
Brighouse 1755

Booth 32
Demonstration
Room 155

Stereophonic Sound Equipment

Stereosound introduce their new 88 Audio System. The 88 comprises a stereo amplifier with Garrard SP.25 Mk. II and ceramic cartridge in a plinth style cabinet and is supplied with a pair of matching enclosures. The speakers fitted in the enclosures have been specially designed and supplied exclusively to **Stereosound** by Rola Celestion. A 6½ in. high compliance bass and 4 in. high frequency unit is used in each enclosure. An AM-FM radio tuner with AFC and Multiplex decoder is also available housed in a matching cabinet. This connects to the 88 amplifier by a single plug. It has a ferrite aerial for AM, a dipole is required for FM.

There is also a matching 4-track 3-speed Stereo-tape system which again connects by one plug. Stereo or Mono recordings can be made direct from radio or disc. Microphone facilities are provided. Large scale meters are used for recording level.

The entire 88 system uses transistor circuitry (mains powered). Sound output (speech and music) is eight watts per channel. Prices are very reasonable. At the time this catalogue was prepared prices were thus : Amplifier in cabinet with Garrard SP.25 and a pair of matching enclosures, **63 gns.** AM-FM tuner with Multiplex, **30 gns.** Tape System, **43 gns.**

Other **Stereosound** Audio Systems are on show and being demonstrated. There is a new presentation with built-in AM-FM radio and Multiplex in a Teak and Rosewood cabinet which houses all the equipment and has space to store records. Separate speaker enclosures are available.

Stereosound Export is handled by Wilmex Ltd., who are located in Room 363.

TANDBERG

Tandbergs Radiofabrikk A/S,
Oslo,
Norway

Booth 24

Demonstration

Room 504

Tape Recorders

The Tandberg range of high quality products has been extended since the 1967 Audio Festival and Fair. The main points are as follows :—

The well established **Tandberg 6X** with its superior performance will again be one of the highlights of the show. This year it will be demonstrated through the newly-introduced **Tandberg Solvsuper** tuner/amplifier. This is one of a new range of tuner/amplifiers in the medium price range. The complete range will be exhibited.

The **Series 12 Stereo** tape recorder will be shown in its teak case and in the aero carrying case.

The **Huldra** tuner/amplifiers will be exhibited with Solvsuper range. These offer superior FM reception and wide range AM and short wave bands. These are integrated with high quality amplifiers offering many facilities.

Series 15. This is a newly-introduced Mono tape recorder and has all the facilities to satisfy the high-fidelity enthusiast and the cine and photographic specialists. The Series 15 is available in teak or built into a carrying case.

Model 11. For the professional user the new Model 11 portable tape recorder will fulfil all his requirements. Available in full track or half track. A pilot tone version is also available.

Loudspeakers

Six new and improved loudspeakers will complete the sound system from Tandberg.

Sole U.K. Distributor : Elstone Electronics Limited, Hereford House, North Court, Vicar Lane, Leeds, 2. Phone Leeds 39834.

TANNOY

Tannoy Products Limited,

West Norwood,

London, S.E.27

01-670 1131

Booth 67

Demonstration

Room 547

High Fidelity Systems

The introduction of the Monitor Gold Dual Concentric marks a further step forward in the Tannoy Policy of introducing new models only when change is justified by real improvement in performance. In conception the Dual Concentric has remained unchanged for 23 years and in detailed design for 8 years, and the new model incorporates the development experience, production techniques, and design philosophy which have for the past 45 years maintained the Tannoy Organisation as leaders of the Electro Acoustical Industry.

The **Tannoy 12 in.** and **15 in.** and **III LZ Monitor Gold Loudspeakers** have been modified to have an impedance of 8Ω and incorporate treble energy and roll off controls. Modifications to the low frequency cones and high frequency assemblies have resulted in substantial improvement in the frequency and transient response and will ensure that these Loudspeakers continue to be chosen as listening standards by broadcasting, television and recording companies throughout the world—a continuing indication of their supremacy.

Tannoy Loudspeaker Enclosures. The Guy R. Fountain Autograph Enclosures provides both front and rear horn loading for the 15 in. Dual Concentric unit. It makes use of the exclusive Tannoy expanding source principle and gives reproduction of the highest quality where space is not an important consideration.

The **G.R.F. Enclosure** has many of the advantages of the Autograph but is of smaller size and available in both corner mounting and freestanding versions, thus increasing its appeal. This Enclosure provides horn loading and is fitted with a 15 in. Dual Concentric, being used by many British record manufacturers and television companies as a quality standard.

The **Lancaster** range of corner and freestanding enclosures available as infinite baffles for the 15 in. unit and bass reflex enclosures for the 12 in. units have achieved considerable popularity since their introduction to the Tannoy range with their smaller size and modern styling.

The **York** remains in current production for those who can accommodate a larger enclosure, and is available in freestanding and corner versions.

The **III LZ Mark II** is designed specifically for the **III LZ Monitor** unit. It is sufficiently small to be placed on a shelf or small table, but nevertheless, provides outstanding reproduction over the entire audio frequency range, extending to well below 40 cycles in the bass.

The **Tannoy Audio Metric** Loudspeaker is especially designed for close budget domestic installations, is a twin loudspeaker system comprising a 12 in. bass and mid-range unit and a single suspension small diaphragm presence unit. The enclosure is an infinite baffle with very shallow front to rear dimensions, which is intended for floor mounting.

The **Tannoy Variluctance Mono Cartridge, Mark II** is well established as a standard with many companies manufacturing television and broadcasting studio equipment, and is selected for use in quantity by the B.B.C. and many Commonwealth Broadcasting Organisations.

TAPE RECORDER SPARES

Tape Recorder Spares Ltd.,

323 Kennington Road,

London, S.E.11

RELIance 5252

Booth 84

Demonstration

Room 160

Tape Recorder Accessories

“Unique in its versatility and completeness” is what they say of the T.R.S. range and we know you will agree.

Plugs, connecting leads, adaptors, drive belts, attenuators and so on. Pre-packed for ease of handling, ready to use, a valuable time-saver and above all—right for the job.

New items this year include a range of adaptors which are designed to meet all inter-standard connecting problems. D.I.N. to B.S.I., to mention but a few. Plugs include $\frac{1}{4}$ in. stereo jack plugs and sockets (British made and very well priced). Skirting board mounting speaker sockets to tidy up your speaker installation and make it more flexible (please the wife, this one). These are on display here for your inspection—they will be on sale at your Dealers within a couple of weeks.

We take this opportunity to thank all the manufacturers and importers who are using our manufacturing facilities, and are always willing to quote for connectors and leads made to your own standards and configuration.

We welcome all overseas visitors—our products are on sale throughout Western Europe, in Australia and America. Let us show you how we are able to present our products, packaged for your country in your language and currency.

Please contact us at our Booth No. 84 or in Room No. 160 on the 1st Floor.

TAPE RECORDING MAGAZINE

Print and Press Services Ltd.,

Prestige House,

14-18 Holborn,

London, E.C.1

01-242 4742

Press

Lounge

343

Publishers

The most distinguished writers in the world of tape recording contribute regularly to *Tape Recording Magazine*. Its news coverage is complete and unrivalled and its guidance is practical and authoritative.

The magazine is edited by Denys Killick, a recording enthusiast since the earliest days of tape, who writes regularly from experience gained in close and continuous contact with all the leading firms and in constant recording activity in the field. He is responsible for several of the demonstration tapes used by exhibitors at this Audio Festival.

A feature of the magazine is a commentary on tape matters which has been contributed each month since the magazine was founded over 11 years ago by Douglas Brown, the publisher, who is also President of the Federation of British Tape Recordists and Clubs.

Two important series of articles running currently in the magazine are by Fred Judd former editor of *Amateur Tape Recording* (on multi-tracking techniques) and John Borwick, Technical Editor of *The Gramophone* (on how to establish a home recording studio).

Each month a recorder or item of associated equipment is reviewed in our "Test Bench" feature, with precise performance measurements set against manufacturers' specifications, and detailed information given on tests made in day-to-day use.

The fullest reviews of all tape records (spools and cassettes) are printed in each issue, and there is detailed coverage of all new equipment coming on the market.

Tape Recording Magazine is primarily intended for enthusiasts for creative tape recording, but it casts its net wide and every type of amateur, from the beginner to the near-professional, will find it compulsive reading.

From time to time articles appear on sound recording allied to home movies—and the contributing expert in this field is John Aldred, one of the recording engineers responsible for the magnificent sound track of the epic film "Far from the Madding Crowd". Video tape recording is also covered to the extent that it is significant to the amateur at the present stage of development.

Tape Recording Magazine is on the bookstalls on the third Wednesday in each month and costs less than any other journal in the field—2s. An annual postal subscription costs 25s. (U.S.A., \$3.75). You can take out a subscription at the Audio Festival if you visit *Tape Recording Magazine* in Room 343.

From the same publishers (and available in Room 343) comes a series of *Tape Recording Handbooks*. Titles include "Advice on buying a tape recorder" and "Tape Recording and the Law". New titles are planned for early publication.

Tape Recording Yearbook, the standard reference book, listing all tape recorders on the market, will be published in the immediate future, price 10s. Orders will be accepted in Room 343.

The staff of *Tape Recording Magazine* look forward to meeting many friends made over the last eleven years and to making the acquaintance of many new ones now joining the ranks of its regular readers.

TEAC

Teac Corporation,

3-7-3 Naka Cho,

Musashino,

Tokyo, Japan

Booth 7

Demonstration

Room 349

Semi-Professional and Domestic Tape Recording Apparatus

For the first time in an Audio Fair a comparatively new arrival on the U.K. market, TEAC of Japan have specialised in the manufacture of industrial and professional tape recording equipment such as Data Recorders, Analog correlators, Digital Computers, etc., and now we are introducing an exciting range of domestic and semi-professional tape recorders for immediate delivery as follows :—

Model A1600. Complete portable stereo tape recorder. Twin sections of the lid house the loudspeakers. $7\frac{1}{2}$ and $3\frac{3}{4}$ i.p.s, 4 track, 3 motors, 4 heads, electrified automatic reverse, automatic shut off, multiplay, stereo echo, VU Meter, 4 digit index counter. Wow and flutter 0.12% ($7\frac{1}{2}$) 0.15 ($3\frac{3}{4}$). Frequency response 30-20,000 Hz ($7\frac{1}{2}$) and 50-15,000 Hz ($3\frac{3}{4}$). Full specification to professional standards. Price **185 gns.**

Model A1500. Specification as for the A1600 but this version is without speakers and amplifiers and has a one-piece lid. Price **154 gns.**

Model A4010S. This is a 4-track Deck in a Teak Cabinet for shelf mounting. The general specification is similar to the A1600 but there are several extra features, including Symmetrical Control System, Tape Tension Control, 2 Jumbo size VU Meters, selection of recording and playback equaliser, etc. Price **173 gns.**

Model A400. Deck only version of above. Price **117 gns.**

Model A1200. Stereo Tape Deck in Walnut Cabinet. This unit has 3 motors and 3 precision heads and the rest of the technical specification is identical to that quoted for the A1600. Price **130 gns.**

Model A6010. This is the newest—the ultimate, in stereo tape decks. The deck and a separate control panel are mounted in one vertical wooden shelf unit, and there are many exclusive features including completely automatic reverse and playback in both directions by phase sensing system, Symmetrical Control, New Outer-rotor motors, 4 heads in plug-in unit, reverse and repeat play with sensing Foil, plus a whole host of other features too numerous to include here. Wow and flutter 0.08% ($7\frac{1}{2}$) 0.12% ($3\frac{3}{4}$). Altogether a really supreme recorder. Price **264 gns.**

Series R310. For professional use, consisting of a series of decks and separate amplifiers in several versions and including console or table cabinets, this series is of a very high technical specification and yet very competitively priced compared with other makes of studio equipment. 15, $7\frac{1}{2}$ and $3\frac{3}{4}$ i.p.s, Full Track or 2-4 track versions, with or without amplifiers—quotation on request.

U.K. Agents: TEAC U.K. Sales, 35 Connaught Street, London, W.2.
Tel.: 01-723 1647.

TELEFUNKEN

AEG-Telefunken,

Export Dept.,

3 Hannover,

Gottinger Chaussee 76,

W. Germany

Booth 47

Demonstration

Room 247

High Fidelity equipment (tape recorders, tuner/amplifier units, transcription units, amplifiers and loudspeaker boxes)

The Telefunken range of equipment incorporates the following units: Tuner Amplifiers, Amplifiers, Tape Recorders and Speakers, and Transcription Units. Details of this equipment can be gained from our full-colour catalogues available on request. Below you will see some of the equipment which is being displayed at this Audio Fair plus a full range of accessories, years of experience and years of research (1935/1968).

M204: Full stereo, separate input output controls for each channel, $\frac{1}{4}$ track, $7\frac{1}{2}$ and $3\frac{1}{2}$ i.p.s. One selection switch controls six functions including mono one, mono two, transcription from one to two, transcription from two to one, parallel playback, and stereo recording and playback. Built-in public address system, two push-pull output stages of 2 x 6 watts.

M203 Studio: Two or four track, full stereo recording, can be used for stereo playback with separate amplifier for second channel. No doubt Hi-Fi enthusiasts already possess an amplifier so the M203 combined with existing equipment represents an inexpensive method of connecting to stereo recording and playback.

V 201 Amplifier (stereo) (satisfies requirement laid down in DIN 45.500 German Hi-Fi Standard): 11 push buttons, flat response, rumble filter, noise filter, mono-stereo, 2 seven-stage amplifiers, with OTL push-pull output stages 2 x 25 w. output, equipment for the discerning enthusiast.

T 201 Stereo Tuner: Again German DIN Hi-Fi Standard specification. Featuring cross modulation characteristics. Separate AM/FM tuning, fly-wheel powered, station selection, AFC, FM, SW, MW, LW. AM/FM tuning indicator, total band width FM 170 Kc/s. AM 4.5 Kc/s, Harmonic distortion: better than 1% at 40 Kc/s. Frequency response: 30 . . . 12.500 c/s-1 DB Automatic FM. Stereo indicator 11 FM circuits plus 4 stereo decoders. 7 AM circuits. The specifications of this Tuner place it amongst the leading tuners available on the market today.

Concertino 101 Hi-Fi Stereo Tuner: German DIN Hi-Fi Standard. Auto electronic tuning. 7 AM circuits. 11 FM circuits plus 4 decoder circuits. 4 wavebands FM, SW, LW, MW. 14 push buttons. Separate AM/FM tuning. 2 transformerless push/pull output stages. 2 x 15 w. output. Sockets for—dipole antenna, AM antenna, ground connection, pick-up/tape recorder, loudspeakers. You can tune and store seven different stations, five with FM push buttons, one with the FM waveband button and one with the AM waveband button. The automatic FM fine tuner AFC but in by pressure of a button, this ensures accurate fine tuning of FM stations.

U.K. Distributors: AEG (G.B.) Ltd., Lonsdale Chambers, 27, Chancery Lane, London, W.C.2. 01-242 9944.

TELETON

Mitsubishi Shoji Kaisha Ltd.,
20, Marunouchi 2 - Chome,
Chiyoda - Ku,
Tokyo, Japan

Booth 64
Demonstration
Room 158

Amplifiers, Tuners, Tape Recorders

Making a first appearance at an Audio Fair and showing for the first time to the public in this country are the Teleton products of Japan.

The name **Teleton**—covers a group of companies manufacturing home entertainment electronics in close co-operation and with Mitsubishi Shoji Kaisha, Tokyo. **Teleton** is already popular in Germany, Switzerland and Belgium and the products are being factored according to European designs in Japan.

The **Teleton** range includes a high quality range of tape recorders, Hi-Fi Stereo sets, etc. The name of Mitsubishi is well known, being the second largest company in Japan and this is an assurance of high quality and first-class service.

The **Teleton** group operating in Europe, has bulk purchasing facilities which enables these high quality units to be sold at very competitive prices. The Group holds stocks in the various parts of Western Europe, with an ability to offer supplies at short notice and to execute a readily available programme of sales items during the whole year.

The techniques of **Teleton** products are the most advanced. Hi-Fi Stereo units are equipped with silicon transistors and integrated circuits as well as F.E.T. transistors.

As an example of value for money we can offer a 2 x 5 watts RMS Stereo tuner/amplifier in a matt walnut cabinet for **£29 0s. 0d.** retail, excluding purchase tax.

The Group, although very new to the U.K., now has its own office in London. The whole of the United Kingdom is covered and with our own Service Department carrying a representative supply of spare parts. The fact that all larger customers and department stores in Germany are our customers is proof that the quality and price are attractive. **Teleton** is not just a jobber-importer and will build up the import of entertainment electronics on a serious basis.

A visit to the **Teleton** exhibit (Booth 64, Demonstration room 158) is of extreme interest to any buyer or enthusiast in the United Kingdom.

U.K. Distributors: Teleton Elektro (U.K.) Co. Ltd., 66-68 Margaret Street, London, W.1. Tel: 01-636 6491.

THORENS

Booth 50

Thorens-Franz AG,
Seminarstrasse 92,
5430 Wettingen,
Switzerland

*Transcription Motors, Turntables, Units and
Pick-up Arms*

More firmly entrenched than ever before as the most distinguished name in the world for the finest Transcription Motors, Units and Turntables, **Thorens** continue to manufacture a range of equipment worthy of its high reputation.

The most famous of all Transcription Motors, the **Thorens TD.124/II** is still the standard by which all others are judged and continues to occupy its foremost position by virtue of its unsurpassed performance and many unique features.

The introduction of the **Thorens TD.150** Series some two years ago proved to be the most important landmark since the **TD.124** was first produced. Not only the entire Technical Press enthused with such comment as that by Mr. Ralph West, B.Sc., in *Hi-Fi News*, "setting a new standard of performance", but in the meantime it has gained tens of thousands of owners, many of whom have taken the trouble to write expressing their complete satisfaction. These factors prove that although far lower in price than products of similar specification, the **TD.150** Series continues to maintain the **Thorens** reputation for quality and precision.

The **TD.150** Series is a Transcription 2-speed motor available with or without Plinth also combined with the **Thorens TP.13** Pick-up Arm (itself the subject of enthusiastic reviews) again with or without Plinth.

The **TP.14** Professional Pick-up Arm possesses the most positive yet gentle lowering and raising device designed to date. It is also fitted with a **TP.50** perforated Lightweight Shell which has adjustment for length and angle, thus ensuring optimum tracking position of the stylus on any known pick-up.

Finally, the famous **Thorens TD.224**, the only true High Fidelity Transcription Motor with Auto-change, has now been re-styled and incorporates the **TP.14** Arm and Shell, justifying even more the name of Masterpiece by which it has become so well known.

U.K. Sole Distributors: Metrosound (Sales) Limited, Bridge Works, Wallace Road, Canonbury, London, N.1. 01-226 8641/2/3.

TRANSCRIPTORS

Booth 17

Transcriptors Limited,

551 Holloway Road,

London, N.19

Tel.: 01-272 6419

*Turntables, Pick-up Arms, Styli Scales,
Audio Accessories*

Transcriptors Limited are displaying their complete range of British manufactured equipment, which are made to the highest obtainable standards, in workmanship, performance and design.

The main exhibit is the Transcriptor Reference Turntable, which, with its decided Transcriptor look, has a magnetic attraction for the Audio enthusiast. Using a synchronous motor driving a heavy non-ferrous platter by means of a rubber belt via a neon-lit perspex idler stroboscope, wow is kept to a minimum, and speed stability is further enhanced by the use of a P.T.F.E. Main bearing. Also incorporating a reed switch, acoustic feedback legs hinged perspex top and many other novel features, this unit is regarded by many as the ultimate unit obtainable in the field of turntables.

The Fluid Arm is obtainable in 9 in. 10 in. or 12 in. versions to suit cartridges with either universal or ffs fittings, the Fluid Arm incorporates every conceivable adjustment and feature found on quality arms. The Fluid Arm differs in that the mass is very low indeed, having been designed for use only with cartridges of compliance better than 15×10^6 cm/dyne. Unique to the Transcriptor Fluid Arm is the cueing feature, incorporated along with the hydraulic lowering mechanism. Lateral, horizontal, and height adjustments, ensure its suitability with any installation.

Transcriptor Record and stylus cleaning accessories include the Sweep Arm, which with its precision unipivot, parking device, and fine hair brush, is a new approach to the disc cleaning problem. Tracking at $\frac{1}{2}$ gramme, the Sweep Arm is intended for permanent installation. The stylus Brush is adjustable for height to a degree enabling its use in most installations.

The Transcriptor Stylus Scales have been acclaimed by both users and the Press alike, as being the standard by which all others should be judged. Of balanced beam construction, incorporating a precision unipivot running in a jewelled bearing, the Scales are read by means of a bubble indicator. The accuracy claimed is in the order of 1/20th of a gramme from 1-5 grammes.

TRD

Tape Recorder Developments Ltd.,
7 King George Avenue,
Bushey, Herts
Bushey Heath 2331

Booth 16
Demonstration
Room 447

Precision Tape Recorders, Tape Transport Systems

The **DPA1** record playback unit so well received when shown for the first time at last year's Audio Fair will again be continuously demonstrated in Room 447. This unit goes from strength to strength and DPA's are now operating with various broadcasting authorities, sound studios, universities, government departments and similar establishments. Hi-Fi addicts also appreciate the **DPA1**, one retailer sold 10 in his first two months as a dealer.

Two new items shown this year are a mono machine to professional standards, believed to be the first Tape Recorder to go into production fitted with Mullard Ferrite Heads as standard. The other new product is a 4-speed tape playback unit suitable for a variety of uses and available with or without power amplifier.

Various tape decks and transport systems for all widths of tape are also on display.

All TRD equipment is available for rack mounting.

TRIO

Trio Corporation,
6-5, 1-Chome Shibuya,
Shibuya - KU,
Tokyo,
Japan

Booth 42
Demonstration
Room 260

High Fidelity Amplifiers, Tuners and Tuner/Amplifiers

The TRIO Corporation have on display at Booth 42 and Demonstration Room 260, the following High Fidelity equipment:—

This range represents the latest 1968 designs and incorporates the latest solid state technique.

Model TK-40E

Solid state MW/FM multiplex stereo tuner amplifier.

Audio output 20 + 20 watts per channel.

Recommended Retail Price £89 5s. 0d.

Model TK-60BE

Solid state MW/FM multiplex stereo tuner amplifier.

Audio output 20 + 20 watts per channel.

Recommended Retail Price £72 9s. 0d.

Model TK-140E

Solid state MW/FM multiplex stereo tuner amplifier.

Audio output 50 + 50 watts per channel.

Recommended Retail Price £138 12s. 0d.

Model TK-250E

Solid state integrated stereo tuner amplifier.

Audio output 20 + 20 watts per channel.

Recommended Retail Price £49 10s. 0d.

Model TK-350E

Solid state automatic MW/FM multiplex stereo tuner.

Styled to match the TK-250E.

Recommended Retail Price £57 15s. 0d.

Also on show for the first time will be:—

Model TK-150E

Solid state stereo amplifier.

This has an output of 13.5 watts rms per channel.

Provisional Recommended Retail Price £33 12s. 0d.

And Supreme I

Solid state integrated stereo amplifier.

Each channel employs separate bass, mid and high range amplifiers.

Audio output 64 + 64 watts per channel.

Provisional Recommended Retail Price £280 0s. 0d.

This model represents a breakthrough in solid state audio amplification equipment.

All the above models will be on demonstration in Room 260.

Sole Agents and Distributors for the U.K.: B. H. Morris & Co. (Radio) Ltd., 84-88, Nelson Street, London, E.1. Tel.: 01-790 4824.

TRUVOX
Truvox Ltd.,
Hythe,
Southampton
04214 3165

Booth 94
Demonstration
Room 636

Tape Recorders, Units, Amplifiers and Tuners

This International Audio Fair marks the public debut of Truvox as a member of the Controls & Communications Group. Under the new and still wholly British management, the company is proud to announce its outstanding **Series 200** range of equipment.

The **Series 200** includes three-speed two- and four-track mono and stereo tape units and recorders, transistor stereo amplifier, FM tuner and stereo decoder, with specifications, standards of construction and styling appropriate to hi-fi equipment of the front rank. The **Series 200** replaces the well-known Truvox **Series 100**—still available from retailers and among the foremost equipment of its day.

Full details at last can be obtained on the new series here at the Audio Fair and specifications and all the information you may require concerning this new event is available from Room 636.

For those with smaller budgets, the Truvox **Series 50** recorders, first introduced last autumn, are no-compromise two- and four-track instruments offering much of the performance and many of the facilities of the **Series 200**.

Lower down the price scale, the well-established Truvox **Series 40** still offers good value.

Since its acquisition by the Controls & Communications Group, Truvox has moved from its old Neasden (London) premises to Hythe, Southampton, where it now forms part of the largest tape recorder manufacturing complex in Britain. The Truvox **Series 200** has been wholly developed in the new establishment, which also manufactures and markets professional tape recording equipment for communications, industrial, educational and scientific purposes. The Hythe complex also markets video tape recording equipment, and office recording equipment.

UHER

Uher Werke Munchen,

Barmsee Strasse 11,

Munchen 25,

West Germany

Telephone : (0811) 78647

Booth 44

Demonstration

Room 361

Tape Recorders

Bosch Limited introduce at the International Audio Festival and Fair the first ever Uher tape recorder for horizontal or vertical operation. The Royal de Luxe, which will retail at **189 gns.**

Among the various functions of which this instrument is capable are the following : Either two- or four-track heads can be fitted to the same machine, so that either $\frac{1}{2}$ or $\frac{1}{4}$ track recording and replay is possible.

The amplifier of the Uher Royal de Luxe operates with ironless push-pull output stages with a sine wave output power of 10 watts each. This is high fidelity reproduction and, with the motor switched off, can be used as a 2 x 10 watts hi-fi amplifier.

Other features include :—

Multiplay; Echo; Mixing; Synchro play; 4 speeds; A.B. monitoring (switchable); Built-in dia pilot for automatic slide projection; Physiological volume control (Bass compensated).

Also on show will be the following models :—

724L—2-speed, 4-track stereo.

4000—4-speed, 2-track battery portable.

4200—Report Stereo, 4-speed, 2-track battery portable.

4400—Report Stereo, 4-speed, 4-track battery portable.

Pilot 1000—Battery portable full-track with pilot tone.

A121—Mono/Stereo 5-channel transistor Mixer.

U.K. Distributors : Bosch Limited, 205, Great Portland Street, London, W.1. LANGHAM 2672.

VORTEXION

Vortexion Ltd.,

257-263 The Broadway,

Wimbledon,

London, S.W.19

01-542 6242/3/4

Booth 2

Demonstration

Room 334

Audio Equipment

Vortexion Tape Recorders, Series 7 feature solenoid start stop with provision for remote control and voice-operated control. An all silicon version has a 10/15 watt per channel output amplifier with less than 0.1% distortion at 10 watts and low noise F.E.T.'s at every input for low intermodulation distortion.

Electronic Mixers. Various types of Mixers available. Three-channel with accuracy within 1db Peak Programme Meter. 4- 6- 8- 10- and 12-way Mixers. Twin 2- 3- 4- and 5-channel stereo. Tropicalised controls. Built-in screened supplies. Balanced line mic. inputs. Outputs 0.5v at 20K or alternative 1 mW at 600 Ω , balanced unbalanced or floating.

20/30 Watt Mixer Amplifier. High fidelity all silicon model with F.E.T. input stages to reduce intermodulation distortion to a fraction of normal transistor input circuits. The response is level 20 to 20,000 cps within 2db and over 30 times damping factor. At 20 watts output there is less than 0.2% intermodulation even over the microphone stage at full gain with the treble and bass controls set level. Standard model 1-low mic. balanced input and Hi Z gram.

100 Watt All Silicon Amplifier. A high quality amplifier with 8 Ω -15 Ω and 100 volt line output for A.C. Mains. Protection is given for short and open circuit output over driving and over temperature. Input 0.4v on 100K Ω .

CP50 Amplifier. An all silicon transistor 50 watt amplifier for mains and 12 volt battery operation, charging its own battery and automatically going to battery if mains fail. Protected inputs, and overload and short circuit protected outputs for 8 Ω -15 Ω and 100 volt line. Bass and treble controls fitted.

200 Watt Amplifier. Can deliver its full audio power at any frequency in the range of 30 c/s-20 Kc/s \pm 1db. Less than 0.2% distortion at 1 Kc/s. Can be used to drive mechanical devices for which power is over 120 watts on continuous sine wave. Input 1 mW 600 Ω . Output 100-120v or 200-240v. Additional matching transformers for other impedances are available.

30/50 Watt Amplifier. With 4 mixed inputs, and bass and treble tone controls. Can deliver 50 watts of speech and music or over 30 watts on continuous sine wave. Main amplifier has a response of 30 c/s-20 Kc/s \pm 1db. 0.15% distortion. Outputs 4, 7.5, 15 Ω and 100 volt line. Models are available with two, three or four mixed inputs for low impedance balanced line microphones, pick-up or guitar.

W.B. STENTORIAN

Whiteley Electrical Radio Co. Ltd.,

Victoria Street,

Mansfield, Notts.

Mansfield 24762/5

Booth 85

Demonstration

Room 304

*Amplifier, Loudspeaker Units and Systems,
Equipment and Ready to Assemble Cabinets*

A wide range of Whiteley High Fidelity products is being displayed, comprising the transistorised integrated stereo amplifier, loudspeaker units and systems, enclosures and matching equipment cabinets. The whole range of sound reproducing equipment is manufactured within the Whiteley organisation and close control is exercised at every stage of manufacture.

Whiteley Amplifier

The new Stereo 30 amplifier is an attractive fully transistorised, integrated unit, having been designed for use with all types of pick-up cartridges and has facilities for Tape and Microphone inputs. Bass, Treble, Volume and Balance controls are included and the input selection and mode of operation is by push button switches. It is available complete with teak veneered cabinet for shelf or bookcase mounting or can be included in the new compact equipment cabinet.

Stentorian Loudspeakers

The loudspeakers available, range in size from 2 inches in diameter up to 18 inches and these units are available with a variety of cone construction, speech coil impedance and magnet strength to suit all requirements. The universal impedance speech coil is fitted to the 8 and 10 in. units and this feature is of great value in providing satisfactory matching to most systems.

Loudspeaker Systems

Three high quality loudspeaker systems are exhibited, viz., the LC93, LC94 and LC95.

The LC93 Loudspeaker of small overall dimensions has been developed as a bookshelf unit and houses an efficient 9 in. graded cone drive unit giving a flat extended frequency response.

The LC94 houses the new 9 in. graded cone unit used in the compact loudspeaker. This drive unit is housed in the attractive reduced depth, acoustic labyrinth enclosure and gives a balanced response through the audio spectrum.

The floor standing bass reflex enclosure LC95 houses a new efficient graded cone drive unit giving an extended frequency response. The enclosure is acoustically designed and this, the LC93 and LC94 are available in either teak or rosewood finish.

Ready to Assemble Cabinets

A range of acoustically designed enclosures suitable for use with various types of loudspeakers will be on display. These cabinets are of bass reflex design and can be assembled with the aid of a screwdriver. The finishes are in walnut or sapele mahogany veneers and the completed items form an attractive piece of furniture.

A selection of various items of our equipment will be on display at Booth No. 85 and continuous demonstrations, using the Whiteley high quality amplifier, will be given by our engineering staff in Demonstration Room 304. Members of our staff will be happy to discuss your various problems at any time during the exhibition.

WHARFEDALE

Rank Wharfedale Limited,
Idle, Bradford,
Yorkshire
Bradford 612552/3/4/5

Booth 87

Demonstration

Room 502

Loudspeakers and High Fidelity Systems

Wharfedale is this year featuring the latest additions to the Wharfedale range of speaker cabinets—the “**Denton**” and “**Super Linton**”. These two versatile bookshelf speakers, at Audio Fair for the first time since their launch last September, are fully displayed alongside the “**Dovedale**” and “**Teesdale**” speakers. The main demonstrations are to a strict schedule and admission is by ticket, obtainable from the Wharfedale Commissioner on the fifth floor.

For those people who do not wish to hear the full demonstration, the adjacent room contains “**Super Linton**” and “**Denton**” speakers on continuous demonstration. Here, as in the main room, the speakers are fed from Wharfedale amplifiers, turntables and tuners.

A modified range of units for the home constructor is also on view. An interesting addition is a new speaker kit called **Unit 3**. Apart from the wood, everything needed to build a cabinet is supplied in a neat pack. Technical guidance is available from the booth in the main hall.

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Exporters of Audio and Electronic Products

All overseas visitors are assured of a cordial welcome in ROOM 363 (third floor) where WILMEX LIMITED is based for THE 1968 INTERNATIONAL AUDIO FESTIVAL & FAIR. Wilmex Limited, the leading export house in the United Kingdom, specialising in audio equipment, will be pleased to provide full details and information on the very fine range of audio goods for which franchises are held.

Tous les visiteurs étrangers sont assurés de recevoir un accueil cordial à la salle 363 (troisième étage) où la Société: WILMEX LIMITED s'est installé pour la 1968 INTERNATIONAL AUDIO FESTIVAL & FAIR. Wilmex Limited, la principale maison d'exportation du Royaume-Uni, spécialisée dans l'équipement audio, se fera un plaisir de vous fournir des détails et des renseignements complets sur la magnifique gamme d'articles audio pour lesquels les exemptions de droits sont maintenues.

Alle Besucher von Übersee können einer freundlichen Aufnahme im Raum 363 (3.Stock) der INTERNATIONAL AUDIO FESTIVAL & FAIR 1968 gewiss sein. Wilmex Limited, das führende Exporthaus Englands für Audio-Ausrüstungen—ein Gebiet, auf dem Wilmex sich spezialisiert hat—ist gern bereit, nähere Angaben über die hervorragenden Audiogeräte zu machen, für welche die Firma die Alleinverkaufsrechte hat.

Aseguramos a todos los visitantes extranjeros una cordial bienvenida en el salón 363 (tercer piso) donde WILMEX LIMITED tiene su sede para la 1968 INTERNATIONAL AUDIO FESTIVAL & FAIR. Wilmex Limited, la principal casa de exportación especializada en equipos de audio en el Reino Unido, tendrá sumo placer en dar información detallada sobre la ancha gama de productos de audio para los cuales se ha extendido franquicias.

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Electrical & Electronic Trader is the leading trade journal of the radio, television and light electrical industries, widely read by dealers, service engineers, manufacturers and wholesalers. Obtainable only on subscription basis by bona fide members of the trade, it provides an invaluable weekly survey of trade trends, experienced observers reporting on every development, technical or commercial. "Audiotopics", a regular feature now in its eleventh year, presents the latest technical and commercial aspects of the audio field—an invaluable aid to dealers in keeping right up-to-date in this increasingly important subject. *Electrical & Electronic Trader* costs £3 10s. 0d. a year, including postage.

Technical Books. Authoritative and up-to-date books on many aspects of radio and television are also on show.

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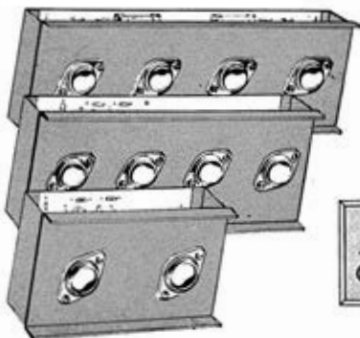
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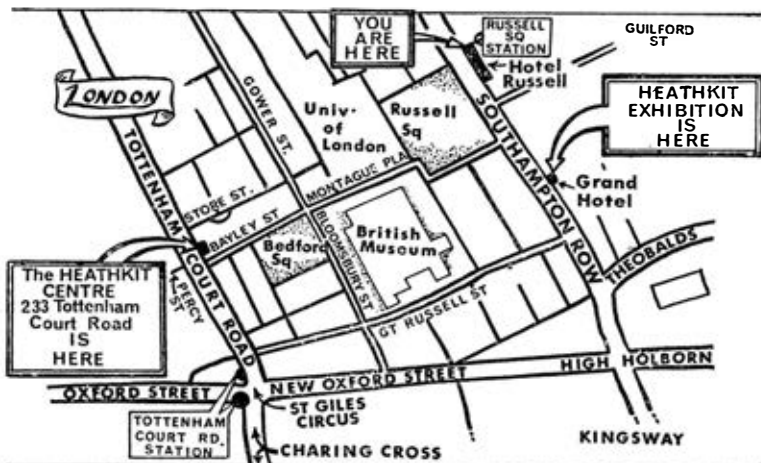
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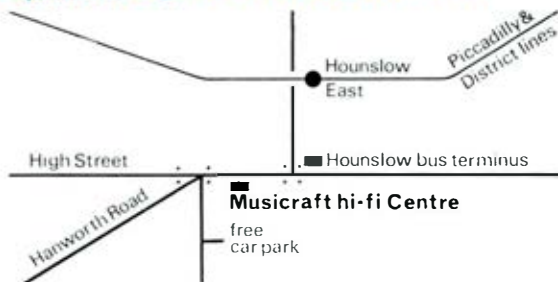


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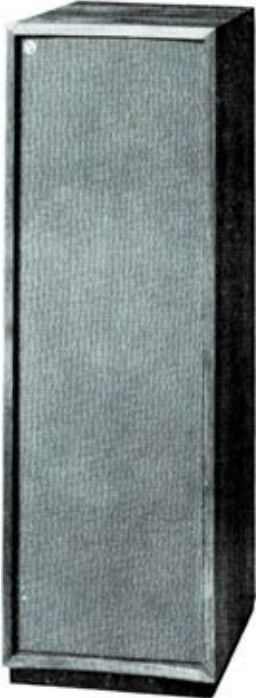
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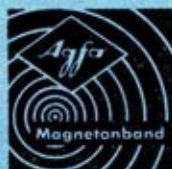
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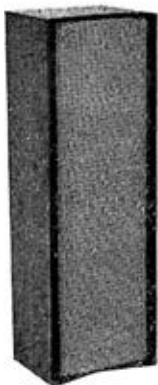
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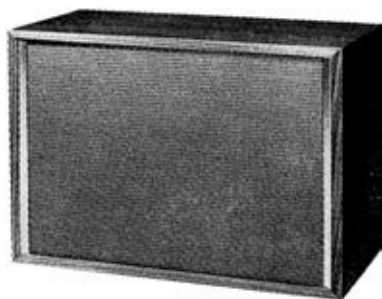
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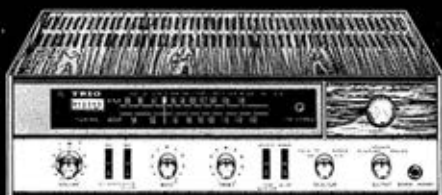
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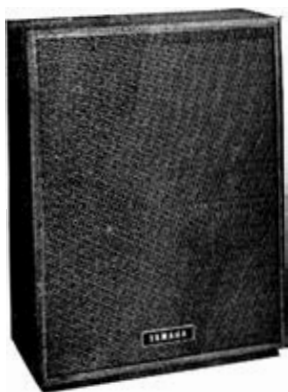
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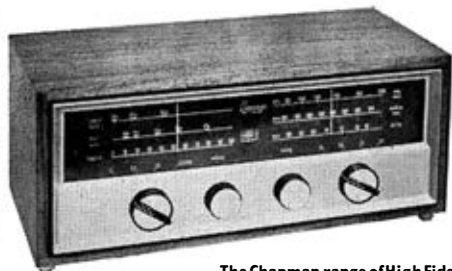


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TRANSISTORISED TUNER**
type FM 1000A/B FM. 80-108
Mc/s. only.

AM/FM VALVE TUNER type
S6BS/FM MK.II.

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man range.

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STAND No. 15

**Demonstration
room
348**



Chapman

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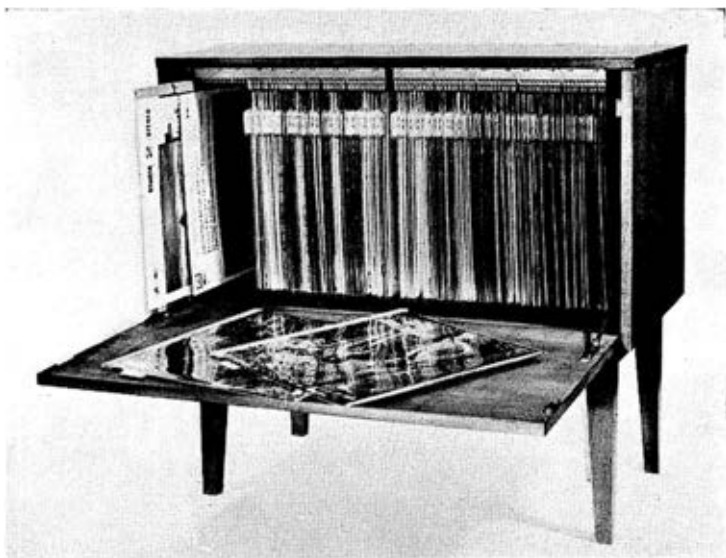
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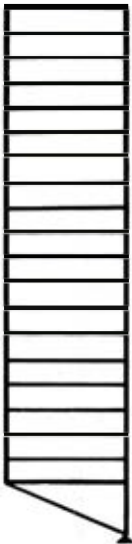
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APRIL 1968

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