

Catalogue of High Fidelity Equipment & Accessories

30-4-9

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A. C. FARNELL (SHEFFIELD) LTD

KENYON STREET, SHEFFIELD 1

Telephone Sheffield 78901 (7 lines)

and

A. C. FARNELL LTD

(HEAD OFFICE)

81 KIRKSTALL ROAD, LEEDS 3

Telephone Leeds 35111 (7 lines)

In line with our usual policy ALL ITEMS
IN THIS CATALOGUE ARE CARRIED IN
STOCK. Subject only to normal
availability of supplies.



LINEAR AMPLIFIERS

'CONCHORD' HIGH FIDELITY ULTRA LINEAR 30 WATT AMPLIFIER



Pre-amplifier and tone controls are incorporated. Two separately controlled high impedance inputs permit individual or simultaneous use of pick-up, microphone, radio or tape. By adjustment of the separate Bass and Treble controls tone compensation (equalization) can be obtained for standard or long playing records with any make of pick-up. Suitable for schools, clubs, theatres and large halls.

Sensitivity—Vol. (1) 20 m.v. for full output; Vol. (2) 200 m.v. for full output. **Input Impedance**—Both inputs 500K plus 10 p.f.d. **Frequency Response** + 1 dB. 20—20,000 c/s.

Rumble Filter 12 dB. per octave below 50 c/s. **Power Consumption** 110 watts. **Maximum Power Output** in excess of 33 watts. **B.V.A. Valves**—EF86 (2), ECC83 (1), EL34 (2), GZ34 (1). **Effective Output Impedance** 0.9 ohms. across 15 ohms. terminals. **Negative Feedback**—Total 28 dB. **Stability**—Entirely stable with capacity of .08 m.f.d. in parallel with Loudspeaker Load. **Harmonic Distortion** (including Pre-amplifier) 0.05% measured at 10 watts, 0.1% measured at 20 watts. **Damping Factor** 18. **Output Matchings** for 3 ohm. and 15 ohm. Speakers from High Grade Sectionalised Output Trans. **Bass Control** + 12 dB. to -12 dB. at 50 c/s. **Treble Control** + 12 dB. to -6 dB. at 12,000 c/s. **Hum Level** referred to full output and including Pre-amp. -73 dB. **Microphony** virtually eliminated due to use of Mullard EF86 valves.

Reserve Power Supply (for Radio Tuner) 300 v. 30 m.a. and 6.3 v. 1.5 a. at 4-pin socket.

For A.C. mains supply of 200-250 v. 50 c/s.

Size of Unit 12½" × 9" × 7½".

Stove Grey hammered finish. Matched protective Cover with carrying handles available at 27/6 (C)

Retail Price 17 Gns. (C)

L50 HIGH FIDELITY ULTRA LINEAR 50 WATT AMPLIFIER



Pre-amplifier and tone controls are incorporated. Two separately controlled high impedance inputs permit individual or simultaneous use of Pick-up, Microphone, Radio, or Tape. By adjustment of the separate Bass and Treble controls compensation (equalisation) can be obtained for standard or long playing records with any make of pick-up.

Suitable for schools, clubs, theatres and large halls, etc.

Sensitivity—Vol. (1) 25 m.v. for full output; Vol. (2) 200 m.v. for full output. **Input Impedance**—Both inputs 500K plus 10 p.f.d. **Frequency Response** ± 1 dB. 20—20,000 c/s. **Power Consumption** 130 watts. **Maximum Power Output**

in excess of 50 watts. **B.V.A. Valves**—EF86 (2), ECC83 (1), EL34 (2), GZ34 (1). **Effective Output Impedance** 0.9 ohms. across 15 ohms. terminals. **Negative Feedback**—Total 28 dB. **Stability** entirely stable with capacity of .08 m.f.d. in parallel with Loudspeaker Load. **Harmonic Distortion** (including Pre-amplifier) 0.05% measured at 10 watts, 0.2% measured at 30 watts. **Damping Factor** 18. **Output Matchings** for 3 ohm. and 15 ohm. Speakers from High Grade Sectionalised Output Trans. **Bass Control** + 12 dB. to -12 dB. at 50 c/s. **Treble Control** + 12 dB. to -6 dB. at 12,000 c/s. **Hum Level** referred to full output and including Pre-amp. -60 dB. **Microphony** virtually eliminated due to use of Low Noise EF86 or 6BR7 valves. **Reserve Power Supply** (for Radio Tuner) 300 v. 30 m.a. and 6.3 v. 1.5 a. at 4-pin socket.

Size of Unit 14" × 10" × 8".

For A.C. mains supply of 200-250 v. 50 c/s.

Stoved Grey hammered finish.

Twin-handled matching protective Cover available at 32/6d. (C)

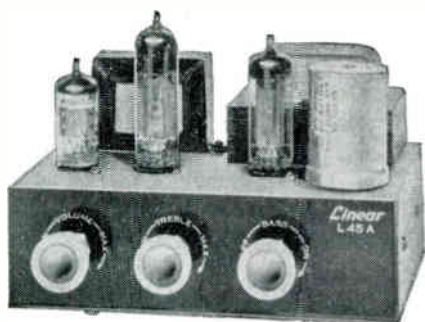
Retail Price 22 Gns. (C)

STOCKED & DISTRIBUTED BY **A. C. Farnell Ltd.**

81 KIRKSTALL ROAD, LEEDS 3

A. C. FARNELL (SHEFFIELD) LTD. KENYON STREET, SHEFFIELD 1.

L45A 4-5 WATT QUALITY AMPLIFIER



A highly sensitive amplifier for high quality reproduction of Gramophone Records, or for use with most microphones. Separate Bass and Treble controls allowing full tone compensation for Long Playing Records. Output is suitable for the home, small clubs, schools, hotels, etc. Suitable for use with any kind of record playing unit. Especially recommended for those fitted with the latest High Fidelity pick-up heads.

For convenience when the unit is fitted in a gram cabinet the mains switch is incorporated in one of the tone controls.

Sufficient smoothed H.T. current, and L.T. A.C. current is

available for supplying a Radio Tuner Unit (which does not have its own power supply) providing requirements do not exceed 250 v. 25 m.a. and 6.3 v. 1.5 a.

The L45 is suitable for use in the home or in small Clubs, etc., with microphone or gram. It can also be used for intercommunication or as a Baby Alarm.

Frequency response ± 3 dB. 50—15,000 c/s. **Hum Level** referred to maximum output and including pre-amp—68 dB. **Power Consumption** 60 watts. **Maximum Power Output** in excess of 5 watts. **Rated Power Output** 4 watts. **Treble Control** continuous variable $+ 8$ dB. to -8 dB. at 12,000 c/s. **Bass Control** continuously variable $+ 8$ dB. to -8 dB. at 50 c/s. **B.V.A. Valves** ECC83, EL84, EZ80. **Sensitivity** 28 millivolts for rated output. **Negative Feedback** total 16 dB. **Output Matchings** for 3 ohm. Speaker. **Reserve Power Supply** (for Radio Tuner) 250 v. 25 m.a. and 6.3 v. 1.5 a. at 4-pin socket.

For A.C. mains supply of 200-250 v. 50 c/s.

Size of Unit 7" \times 7" \times 5" high. Stoved Grey hammered finish. Matched protective cover available at 15/-d. (C)

Retail Price 6 Gns. (C)

L5/5 5+5 WATT STEREOPHONIC AMPLIFIER



The L5/5 is designed to provide ample high quality out-put in the home when used with stereo., pick-up and matched Loudspeakers to the same standard. It can also be used as a straight 10 watt Amplifier for large Hall, etc. Practically every make of microphone can be used when required.

The two channel input is high impedance. The sensitivity is high enough to fully load the output when the Amplifier is connected to every make of Stereo. Head at present available. Separate Bass and Treble controls allow full tone compensation for L.P. and Standard records.

Remarkably realistic reproduction can be obtained (at levels normally required in the home). Customers will find it well worth while to use good quality speakers, and cabinets (or baffles) as large as possible, having regard to space available.

Full instructions for use are given on the Guarantee card

The amplifiers use is not limited to stereophony; it can be used with normal pick-ups for standard and long-playing records of the usual monaural type; also, of course, with the turnover pick-up heads for both stereo, and monaural.

Controls—Volume, Treble Bass and Balance. **Sensitivity** 10 m.v. **Rated Output** 5 watts on each channel, or 10 watts if both channels are used simultaneously for monaural reproduction. **Negative Feedback** total 28 dB. **Hum Level** —68 dB. referred to maximum output.

Frequency Response ± 3 dB. 50—15,000 c/s. **Balance Control** ± 10 dB. on each channel. **Treble Control** $+ 8$ dB. to -8 dB. at 12,000 c/s continuously variable. **Bass Control** $+ 8$ dB. -8 dB. at 50 c/s. continuously variable. **Power Consumption** 60 watts. **Output Matching** for 3 ohm. Speakers on each channel. **Valves** Mullard EZ81, ECC83, ECC83, EL84, EL84.

Size of Unit 10 $\frac{1}{2}$ " \times 8" \times 6".

For A.C. mains supply of 200-250 v.50 c/s.

Stoved Grey hammered finish.

A matched protective Cover with carrying handles is available, price 27/6. (C)

Retail Price 12 $\frac{1}{2}$ Gns. (C)

A. C. FARNELL LIMITED

*Specialist Wholesale Distributors
of High Fidelity Equipment*

81 KIRKSTALL ROAD, LEEDS 3

Telephone Leeds 35111

and KENYON STREET, SHEFFIELD 1

Telephone Sheffield 78901



ALL items listed in this trade catalogue are carried in stock at all times - subject only to availability from the manufacturers.

We would also point out that our range of Audio Equipment is perhaps the largest in Great Britain.

A vast range of general purpose cartridges, Styli, Microphones, Amplifiers, etc. not listed in this catalogue, are also carried in stock.

Discount Coding: A = $33\frac{1}{3}$ %

B = 30 %

C = 25 %

**FOR FINEST DELIVERY SERVICE OF
HIGH FIDELITY EQUIPMENT
RING LEEDS 35111**

GRAMOPHONE UNITS

GARRARD



Garrard 401

GARRARD MODEL 401 TRANSCRIPTION TURNTABLE

Precise speed control by means of a special eddy-current brake. Six pound die-cast 12" turntable. Stroboscopic illumination by means of high intensity neon lamp. Three standard speeds. Double pole power supply switch with switch-click suppressor. Dual voltage range 100-130 and 200-250V. 50 or 60 cycles according to motor pulley supplied. Finish in metallescent charcoal, chrome relief. Minimum cabinet space:—side to side: 13 $\frac{3}{4}$ ", front to rear: 14 $\frac{1}{2}$ ", above top of motor board: 2 $\frac{1}{4}$ ", below top of motor board: 4 $\frac{1}{4}$ ". Antistatic rubber mat.

Price £27 19 0 plus £4 11 0 P. Tax. Total £32 10 0 (A)



Garrard LAB80

GARRARD MODEL 80 LABORATORY SERIES TRANSCRIPTION TURNTABLE WITH AUTOCHANGE

Dynamically balanced rotor and special motor suspension give smooth performance. Automatically plays eight 7", 10" or 12" records (of the same speed). Plays 7" 45 r.p.m. records using LRS 9 large record spindle, available as an optional extra. New type spindle eliminating need for overarm. 12" diameter turntable. 33 $\frac{1}{3}$ and 45 r.p.m. speeds. Pick-up wiring for stereo and mono. Two-pole power supply switch with switch-click suppressor. Illuminated indicator to show size of record selected. Dual voltage range 100-130 and 200-250V. 50 or 60 cycles according to motor pulley supplied. Finish dark green polychromatic with satin chrome. Minimum cabinet space:—side to side: 16 $\frac{3}{4}$ ", front to rear: 14 $\frac{1}{8}$ ", above top of motor board: 5 $\frac{1}{2}$ ", below top of motor board: 3 $\frac{1}{2}$ ".

LAB.80 Transcription Auto Turntable (less Pick-up Cartridge)

Price £23 13 0 plus £3 17 0 P. Tax. Total 27 10 0 (A)

WB2 BASE Suitable for Model 80.

Price £4 6 3 plus 14/- P. Tax. Total £5 0 3 (A)



Garrard A70

GARRARD MODEL A70 TURNTABLE WITH AUTOCHANGE

Sloping, stepped record spindle with gentle record drop. Plays 7", 10" or 12" records manually or six 7", 10" or 12" records (of the same speed) automatically. Plays 7" 45 r.p.m. records using LRS3 large record spindle, available as an optional extra. Integral bias compensator. Stylus pressure adjustment with integral calibration 0-5gms. Extra light and sensitive auto trip. Extremely low wow and flutter. Specially designed motor suspension. Lapped turntable spindle thrust washers help reduce rumble to a minimum. Separate controls for speed, manual and auto. Plug-in pick-up head accepts any cartridge. Four standard speeds. Pick-up wiring for stereo and mono. Switch-click suppressor fitted. Dual channel pick-up muting switch, mutes pick-up during changing cycle. Dual voltage range 100-130 and 200-250V. 50 or 60 cycles according to motor pulley supplied. Dark green polychromatic, charcoal and satin finished aluminium. Available with or without base. Minimum cabinet space:—side to side: 16 $\frac{3}{4}$ ", front to rear: 14 $\frac{1}{8}$ "; above top of motor board: 6", below top of motor board: 2 $\frac{3}{4}$ ".

Model A70 on base

Price £23 12 6 plus £3 15 10 P. Tax. Total £27 8 4 (A)

Model A70 including Pick-up Shell (less Pick-up Cartridge).

Price £19 8 0 plus £3 3 1 P. Tax. Total £22 11 1 (A)

GRAMOPHONE UNITS

GARRARD

GARRARD MODEL AT60 AUTOMATIC TURNTABLE



Garrard AT60

Weight counterbalanced pick-up arm with calibrated stylus pressure adjustment, plug-in pick-up head and bias compensator. Large non-magnetic die-cast turntable. 'Laboratory' series motor with balanced rotor. Switchclick suppressor. Automatically plays up to eight 7", 10" or 12" records (of the same speed) intermixed in any order. 45 r.p.m. records with large centre holes may be played automatically using large record spindle LRS.10. available as an optional extra. Four standard speeds. Pick-up wiring suitable for stereo and mono. Sensitive automatic trip. Dual channel muting switch. Dual voltage range, 100-130 and 200-250 volts, 50 or 60 cycles according to motor pulley fitted. Available with or without base. Finish in polychromatic dark green and chrome. Minimum cabinet space:—side to side: 15 $\frac{1}{4}$ ", front to rear: 13 $\frac{1}{4}$ ", above top of motor board: 4 $\frac{3}{4}$ ", below top of motor board: 2 $\frac{1}{4}$ ".

AT.60 Auto Turntable with Cast Turntable (less Pick-up Cartridge)

Price £11 5 0 plus £1 16 7 P. Tax. Total £13 1 7 (A)

GARRARD MODEL 50 AUTOMATIC TURNTABLE



Garrard 50

Automatically plays eight 7", 10" or 12" records (of the same speed) intermixed in any order. Plays 7" 45 r.p.m. records using LRS10 large record spindle, available as an optional extra. Four standard speeds. Long and short record spindles. Pick-up wiring for stereo and mono. Sensitive automatic trip. 100-130 or 200-250V. 50 or 60 cycles operation according to motor pulley supplied. Finish in dark green polychromatic and glossy silver. Available with or without base. Minimum cabinet space:—side to side: 13 $\frac{1}{4}$ ", front to rear: 12 $\frac{1}{4}$ " above top of motor board: 4 $\frac{3}{4}$ ", below top of motor board: 2 $\frac{1}{4}$ ".

Model 50 (less Pick-up Cartridge)

Price £8 7 0 plus £1 7 2 P. Tax. Total £9 14 2 (A)

GARRARD MODEL 3000 AUTOMATIC TURNTABLE WITH NEW LOW-MASS PICK-UP ARM.



Garrard 3000

Automatically plays up to eight 7", 10" or 12" records (of the same speed) intermixed in any order. Plays 7" 45 r.p.m. records using LRS10 large record spindle available as an optional extra. Four standard speeds. Fitted brush removes accumulated dust from stylus. Fine stylus pressure adjustment. 100-130 or 200-250V. or 50 or 60 cycles operation according to motor pulley supplied. Pick-up wiring stereo and mono. Sensitive automatic trip. Switchclick suppressor. Available with or without base. Finish in dark metallic grey, black and chrome. Minimum cabinet space:—side to side: 13 $\frac{1}{4}$ ", front to rear: 12 $\frac{1}{4}$ ", above top of motor board: 4 $\frac{3}{4}$ ", below top of motor board: 2 $\frac{1}{4}$ ".

Model 3000 Auto Turntable (with Sonotone 9TA.HC Cartridge)

Price £10 19 6 plus £1 15 8 P. Tax. Total £12 15 2 (A)

GARRARD MODEL 2000 AUTOMATIC TURNTABLE



Garrard 2000

Automatically plays up to eight 7", 10" or 12" records (of the same speed) intermixed in any order. Plays 7" 45 r.p.m. records using LRS10 large record spindle, available as an optional extra. Large diameter turntable. Long and short spindles. Incorporated stylus pressure adjustment. Four standard speeds. Pick-up wiring for stereo and mono. Sensitive automatic trip. Switch-click suppressor. 100-130 or 200-250V. 50 or 60 cycles operation according to motor pulley supplied. Finish in dark metallic grey and aluminium. Available with or without base. Minimum cabinet space:—side to side: 13 $\frac{1}{4}$ ", front to rear: 12 $\frac{1}{4}$ ", above top of motor board: 4 $\frac{3}{4}$ ". below top of motor board: 2 $\frac{1}{4}$ ".

Model 2000 Auto Turntable (with G.C.8 Cartridge)

Price £8 2 3 plus £1 6 5 P. Tax. Total £9 8 8 (A)

GRAMOPHONE UNITS

GARRARD

GARRARD MODEL 1000 AUTOMATIC LOW COST COMPACT RECORD CHANGER



Garrard 1000

Automatically plays up to nine 7", 10" or 12" records (of the same speed) intermixed in any order. Plays 7" 45 r.p.m. records using LRS10 large record spindle, available as an optional extra. Four standard speeds. Induction motor. Pick-up wiring stereo and mono. Sensitive automatic trip. Switch-click suppressor. 100-130 or 200-250V. 50 or 60 cycles operation according to motor pulley supplied. Available with or without base. Finish in dark metallic grey and polished aluminium. Minimum cabinet space:—side to side: 14½", front to rear: 12½", above top of motor board: 4 3/8" below top of motor board: 2 3/4".

Model 1000 Auto Turntable (with G.C.8 Cartridge)

Price £7 11 9 plus £1 4 8 P. Tax. Total £8 16 5 (A)

Extra Cost for Battery Operated Model 1000

Price 18/9 plus 3/1 P. Tax. Total £1 1 10 (A)

WBI BASE suitable for Model 1000-2000, 3000, A50, SP25, AT60.

Price £3 2 6 plus 10/2 P. Tax. Total £3 12 8 (A)

GARRARD MODEL SP25 A SINGLE RECORD PLAYER OF HIGH QUALITY



Garrard SP25

Cueing device which slowly lowers or raises the pick-up arm at any desired point of the record. Switch-click suppressor. Weight counterbalanced pick-up arm with built-in calibrated stylus pressure adjustment, plug-in head and bias compensator. Large diameter non-magnetic die-cast turntable. 'Laboratory' series 4-pole motor magnetically screened dynamically balanced rotor. Four standard speeds. Pick-up wiring suitable for stereo and mono. Dual channel muting switch. Dual voltage range. 100-130 and 200-250 volts. 50 or 60 cycles according to motor pulley fitted. Available with or without base. Finish in polychromatic dark green and chrome. Large centre hole adaptor for 45 r.p.m. records available as an optional extra.

Minimum cabinet space:—side to side: 15 3/4", front to rear: 13 1/2", above top of motor board: 3 1/2", below top of motor board: 2 3/4".

Model SP25 with Cast Turntable (less Pick-up Cartridge)

Price £10 16 0 plus £1 15 2 P. Tax. Total £12 11 2 (A)

GOLDRING

GL68 TRANSCRIPTION UNIT



GL68

New turntable unit incorporating the G.65 pick-up arm. Infinitely variable speed adjustment, pick-up lowering device and idler wheel disengagement. Full 12" diameter pressed steel turntable.

Minimum fitting dimension 15" x 13".

Price £16 16 0 plus £2 14 7 P. Tax. Total £19 10 7 (A)

GRAMOPHONE UNITS

GOLDRING

GOLDRING Lenco HIGH FIDELITY TRANSCRIPTION UNITS GL70



GL70

A.C. mains 200-250 v., 50 c.p.s. 4-pole constant velocity motor (15 watts). Continuously variable speed adjustment. Positive click-in positions for 16, 33½, 45 and 78 r.p.m. Centre spindle of ground and lapped steel in cindered bronze main bearing. Wow and flutter—maximum 0.2%. Rumble and hum—negligible. Less than 1% speed change for 13% mains voltage change. Positive drive and completely accurate speed control through the vertical drive system. Pick-up arm—L.70. Dimensions: 15½" long x 13¼" wide x 5½" high.

GL70 Unit complete with pick-up arm, but less cartridge.

Price £25 15 0 plus £4 3 8 P. Tax. Total £29 18 8 (A)

GL70P As above but mounted on wooden plinth.

Price £28 15 0 plus £4 13 5 P. Tax. Total £33 8 5 (A)



C70 cabinet

GOLDRING CABINETS C.58 AND C.70 for GOLDRING/LENCO TRANSCRIPTION UNITS MODELS GL58, GL68 and GL70

These elegant cabinets in sapele mahogany will not only enhance the appearance of a Hi-Fi system, but will enable a turntable to be installed in a limited space, such as a bookshelf.

The removable clear perspex dust cover will at all times keep the turntable clean and protect records from the ever-present menace of dust.

The cabinets are already cut out for their respective turntable units (C.58 for GL.58 and C.70 for GL.70), and these can very easily be mounted either on springs or solidly. Dimensions: 7" x 14" x 17".

Price £8 19 6 plus £1 12 10 P. Tax. Total £10 12 4 (C)

G.66 INEXPENSIVE TURNTABLE UNIT AND ARM

Removeable plug-in shell, pick-up lowering device and —10% fine speed adjustment on each speed. Available with various cartridges as follows:— Dimensions 12½" x 10". 2½" clearance required above and below deck.

MX.2 Mono

Price £9 18 8 plus £1 12 4 P. Tax. Total £11 11 0 (A)

CS.80 Stereo

Price £10 10 0 plus £1 14 2 P. Tax. Total £12 4 2 (A)

CM.60 Mono

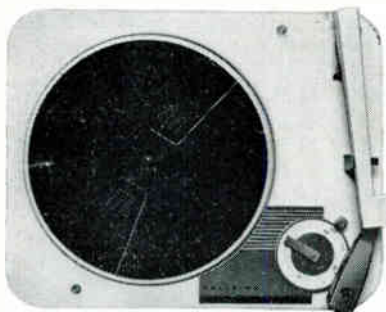
Price £10 2 6 plus £1 12 11 P. Tax. Total £11 15 5 (A)

CS.90 Stereo

Price £12 12 10 plus £2 1 2 P. Tax. Total £14 14 0 (A)

PH4 Spare headshells

Price 10/6 plus 1/9 P. Tax. Total 12/3 (A)



G66

G.99 TRANSCRIPTION TURNTABLE UNIT

For use with any pick-up arm Heavy non-ferrous turntable, reducing wow and flutter to an absolute minimum. Infinitely variable speed adjustment, neon-lit stroboscope. Push button On/Off switch coupled with idler wheel disengagement.

Minimum cabinet dimensions to allow for fitting of 9" pick-up arm 15½" x 14½".

Price £18 18 0 plus £3 1 5 P. Tax. Total £21 19 5 (A)



G99

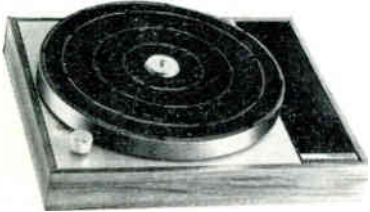
GRAMOPHONE UNITS



Model TD124



Model TD135



Model TD150



Model TD150AB



Model TD224

THORENS

MODEL TD124 SERIES II

Considered to be the worlds finest transcription unit. Now with modified motor suspension and switching operation. Unique clutch action. Cast aluminium turntable. 4 speed. Variable control $\pm 3\%$ acting on the four speeds. Precision in built stroboscope. Wooden board for tone arm mounting made integral with cast aluminium frame. **Only available less pick-up** though illustration shows pick-up mounted. Size Length $15\frac{1}{2}$ ", Width $12\frac{3}{4}$ ". Depth below motor board 3", Height above $2\frac{1}{2}$ ".

Price Unit only £34 2 6 plus £6 3 2 P. Tax. Total £40 5 8 (C)

MODEL TD135

A brand new unit with heavy aluminium cast turntable and incorporating the same drive components as in the TD124. An integral part of the unit is the BTD125 professional pick-up arm. Priced at £30 0 0 plus tax this extremely high quality unit represents top value as the pick-up itself accounts for £13 10 0 plus tax of the price. 4 speed, variable control $\pm 3\%$ on four speeds. Non magnetic turntable 12" weighing 8 lbs. Special inbuilt leveling device. Size Length 15", Width $13\frac{1}{8}$ ", Depth $3\frac{3}{8}$ ", Height $3\frac{3}{8}$ ".

Price ... £31 10 0 plus £5 18 3 P. Tax. Total £37 8 3 (C)

MODEL TD150 (and TD150B with Plinth)

A new 2-speed Transcription Motor $33\frac{1}{3}$ and 45 r.p.m. precise to within plus or minus 0.2%. Unique Belt Drive System on 2 part heavy Cast Non-Ferrous Turntable, weight 8 lbs. Double low speed Synchronous Motor ensuring rumble free performance. Accommodation for pick-up on separate resiliently suspended Mounting Board.

TD150

Price £17 10 0 plus £3 3 2 P. Tax. Total £20 13 2 (C)

TD150B (with Plinth)

Price £20 15 0 plus £3 14 10 P. Tax. Total £24 9 10 (C)

MODEL TD150A (and 150AB with Plinth)

Basic Unit is TD150 plus the new professional Arm TPI3. Counterbalance weight adjustment 1-8 grammes plus fine adjustment control. Lightweight Shell with patented lateral and horizontal adjustment for optimum tracking position. Lowering device incorporated.

TD150A

Price £22 15 0 plus £4 1 11 P. Tax. Total £26 16 11 (C)

TD150AB (with Plinth)

Price £26 0 0 plus £4 13 10 P. Tax. Total £30 13 10 (C)

MODEL TD224

Basic Performance

Speed regularity (wow and flutter content) and rumble level (horizontal and vertical) exceed NAB standards for studio equipment. 4-speed operation, through long rubber belt, low speed stepped pulley and idler wheel drive system. Patented variable speed control ($\pm 3\%$) with high precision illuminated stroboscope. Precisely machined, non-magnetic 12" turntable. Weight 7 lbs. 100-120, 125-150, 200-250 volts; 50 and 60 cycle operation. Professional type BTD-125 Tone Arm with stylus positioning slide, balancing counterweight and precision-calibrated stylus force adjustment. Low inertia and very low bearing friction. Low frequency resonance below 10 c/s. for high compliance cartridges. Plug-in shielded cable connector for a complete 5-wire system throughout. Inbuilt spirit level.

Automatic performance: Plays automatically up to eight records ($\frac{3}{4}$ " stack). Intermixes records of any diameter between 7" and 12" provided speed, groove shape and centre hole diameters are alike. Automatically shuts off when all records have been played. Records can be rejected during play. New records may be added and others removed from the reverse stack during an audition. Manual operation for playing single records without automatic cycle. Records cleaned during play by means of built-in continuous record cleaning device mounted on record feed-in arm.

Dimensions with full load of 12 records: Length 26" (660 mm.), Width $16\frac{1}{4}$ " (410 mm.). Depth: $3\frac{1}{2}$ " (90 mm.) below top of mounting board. Height: $5\frac{1}{2}$ " (140 mm.) above mounting board. Dimensions of unit plate: $15\frac{3}{4}$ " x $13\frac{1}{4}$ " (400 x 335 mm.) Weight unpacked: 24½ lbs. (11 kg.), shipping 37½ lbs. (17 kg.).

Price £70 17 6 plus £12 15 8 P. Tax. Total £83 13 2 (C)

GRAMOPHONE UNITS

DECCA



Model TSA33



Model AT6/1



Model DDI



Model 301

DECCA TSA33 TRANSISTORISED STEREO AMPLIFIER

Mains supply: 220/240 volts A.C. 50 c/s. Power consumption: 30 watts. Transistors: Each channel: SFT353, OC81, OC81, OC82D, AD140. Frequency variation: Bass control range: +8dB. —8dB. Treble control range: +10dB. —10dB. Hum and noise level: —50dB. Controls: Volume, bass, treble, balance, mono/stereo on/off selector switch for gramophone, tape and radio. Power output: 3 watts per channel (British rating). Gramophone output: Effective impedance suitable for Deram and other similar cartridges. Sensitivity approximately 60 mV. Radio input: Effective impedance approximately 1 megohm. Sensitivity approximately 150 mV. Tape input: Effective impedance approximately 100Kohm. Sensitivity approximately 250 mV. Output impedance: 15 ohms.. (transformer). Fuses: Mains fuse 1 Amp. LT fuse 2 Amp. Dimensions: 14½" x 7" x 3½". Pilot light: Neon indicator.

Price £26 5 0 (No Tax) (C)

DECCA DDI AND AT6/1 RECORD PLAYER UNITS

Type DDI Incorporates non-auto Deccadec De-Luxe

Type AT6/1 Incorporates Garrard Auto 60 unit.

Remainder of this specification applies to both units. Pick-up head: Decca Deram transcription head with .0005/6" diamond stylus. Body coding—white. Suitable mono and stereo micro groove recordings.

Stylus pressure: 5 grams. Cabinet finish: Medium polished teak finish, Green leather-cloth interior. Dimensions: 16" wide, 15" deep, 9" high. Termination: 3 pin continental.

Price each model

£23 10 7 plus £3 15 5 P. Tax. Total £27 6 0 (A)

DECCA 301 LOUDSPEAKER SYSTEM

Bass unit: 13" x 8" elliptical with specially designed cone. 13,000 line ceramic magnet. HF unit 3" round-unique to Decca. 10,000 line ceramic magnet. Crossover network: Inductive/Capacitive. Crossover frequency 5,000 c/s. Finish: Medium polished teak finish. Dimensions: 21½" x 12½" x 9"

Price £15 15 0 (No Tax) (B)

STAND FOR RECORD PLAYER UNITS

A metal and plastic stand (as illustrated) to accommodate either the DDI or AT6/1 record player unit and the TSA33 amplifier is available as an extra.

Price £3 19 4 plus 4/8 P. Tax. Total £4 4 0 (B)

GRAMOPHONE UNITS

DECCA

DECCADEC DE-LUXE



Deccadec De-luxe model

Mains supply: 100-130v. 200-250v. A.C. 50 or 60 c/s. depending on motor pulley. Dimensions: minimum motorboard size, allowing for all necessary clearances— $14\frac{3}{4}$ " wide \times $12\frac{1}{2}$ " deep a clearance of $3\frac{1}{2}$ " above and $2\frac{7}{8}$ " below the motorboard is required.

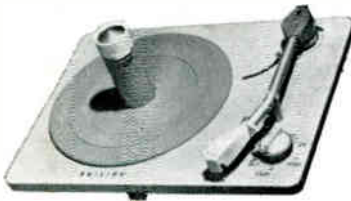
Deram Cartridge

Transcription stereo/mono pick-up cartridge with diamond stylus. Tip mass: 0.6 milligram. Compliance: 9×10^{-6} cm./dyne lateral. 5×10^{-6} cm. dyne vertical. Tracking weight: $2\frac{1}{2}$ grams. Frequency response: ± 3 dB. 18c/s.—18Kc/s. Channel separation: 20dB. at 1Kc/s. Output: 50mV./cm./sec. Load Impedance: 2 megohms. (long screened leads do not affect frequency response, but will affect output). Transducer: ceramic. Tip radius: $0.0005/6$ ". Stylus coding: Pale blue.

Price £15 7 7 plus £2 9 5 P. Tax. Total £17 17 0

PHILIPS

PHILIPS SEMI-AUTOMATIC No. AG1016 FOUR-SPEED UNIT



Philips AG1016

For all sizes of record; arranged so that pick-up arm automatically positions stylus in record run-in groove. Special adaptor provides fully automatic changing for ten 7" records. Suitable for stereo or mono. Heavy metal turntable on special bearing. Size 12".

Wow and flutter: 0.2% r.m.s. Output voltage: 120mV/cm./sec. Vertical stylus force 4-6 grammes. Overall size: $14\frac{3}{4}$ " \times $12\frac{1}{2}$ " \times $3\frac{1}{4}$ " above board or $5\frac{1}{2}$ " with adaptor.

Complete with pick-up having two sapphire styli.

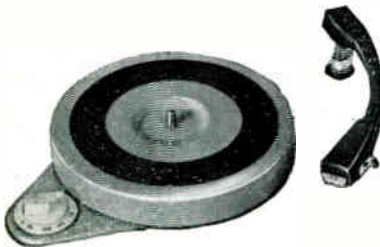
Price £11 15 3 plus £1 17 9 P. Tax. Total £13 13 0 (A)

45 r.p.m. Auto adaptor spindle.

Price 7/6 plus 1/2 P. Tax. Total 8/8 (A)

B.S.R.

B.S.R. TUI2 UNIT



B.S.R. TUI2

The TUI2 is a robust, 4-speed turntable unit designed to suit the most compact case. The PU30 pick-up arm, available separately, is strong yet light in weight and is particularly suitable for use with the TUI2. It is fitted with the latest B.S.R. range of cartridges.

Complete with Pick-up and TC8H Cartridge.

Price £3 16 0 plus 12 2 P. Tax. Total £4 8 2 (A)

Pick-up only and TC8H Cartridge

Price £1 10 0 plus 4 10 P. Tax. Total £1 14 10 (A)

B.S.R. GU7 UNIT



B.S.R. GU7

A 4-speed Gramophone unit of compact design. Plays 10", 12" or 7" records. Four speeds: 78, 45, 33 and 16 r.p.m. Available for all mains voltages—50 or 60 c/s. Available for battery operation. Built-in monaural or stereo cartridge. 45 r.p.m. adaptor and clip supplied with each unit.

With TC8M or TC8H cartridge.

Price £4 5 0 plus 13 8 P. Tax. Total £4 18 8 (A)

With TC8S Cartridge.

Price £4 16 6 plus 15 6 P. Tax. Total £5 12 0 (A)

GRAMOPHONE UNITS

UA15 SUPERSLIM

Dimensions: Height of Unit from top of motor board: $3\frac{1}{8}$ ". Below motor board $2\frac{1}{4}$ ". Unit plate $13\frac{1}{8}$ " x $11\frac{1}{4}$ ". Automatically plays 12", 10" or 7" records of same speed, intermixed in any order. Four-speed—78, 45, 33 and 16 r.p.m. Simple to operate, with manual play facility. Designed to take monaural or stereophonic cartridges. Available for all mains voltages—50 or 60 cycles or 9 volt battery operation. BSR Gardisk retractable cradle can be fitted together with CI Ceramic cartridge. R.M.S. wow and flutter are below 0.3% and 0.06% respectively on the Gaumont-Kalee meter.

Fitted with B.S.R. Crystal Stereo Cartridge
Price ... £8 6 8 plus £1 6 9 P. Tax.
Total £9 13 5 (A)

Fitted with CI Ceramic Stereo Cartridge
Price ... £8 12 8 plus £1 7 8 P. Tax.
Total £10 0 4 (A)

Fitted with Mono Crystal Cartridge
Price ... £7 15 2 plus £1 4 10 P. Tax.
Total £9 0 0 (A)



UA15 Changer

UA15 3B SUPERSLIM

Dimensions: Height of Unit from top of motor board $3\frac{1}{8}$ ". Below motor board $2\frac{1}{4}$ ". Unit plate $13\frac{1}{8}$ " x $11\frac{1}{4}$ ". Automatically plays 12", 10" or 7" records of same speed, intermixed in any order. Four-speed—78, 45 33 and 16 r.p.m. Automatic or manual play facilities. Designed to take the very highest quality cartridges having low tip mass and high stylus compliance. Available for all mains voltages—50 or 60 cycles. R.M.S. wow and flutter are below 0.3% and 0.06% respectively on the Gaumont-Kalee meter.

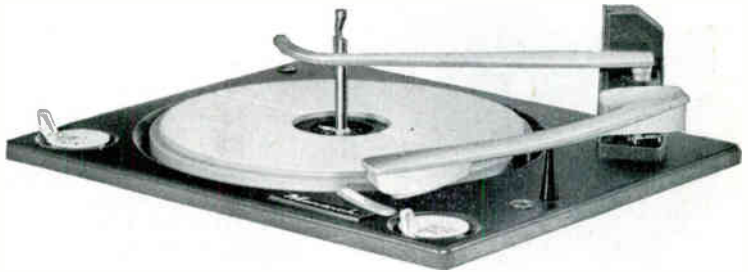
'Monarch' Record Changer fitted with CI Ceramic Stereo Cartridge.

Price £9 8 8 plus £1 10 3 P. Tax. Total £10 18 11 (A)



UA15 3B Superslim

B.S.R.



UA15 Superslim

MODEL UA15 CHANGER

Automatically plays ten 12", 10" or 7" records of same speed, intermixed in any order. Four-speed—78, 45, 33 and 16 r.p.m. Simple to operate, with manual play facility. Designed to take monaural or stereophonic cartridges. Available for all mains voltages—50 or 60 cycles or 9 volt battery operation. B.S.R. GARDISK retractable cradle can be fitted. R.M.S. wow and flutter are below 0.2% and 0.06% respectively on Gaumont-Kalee meter. Unit plate dimensions $13\frac{1}{8}$ " x $11\frac{1}{4}$ ". Height above motor board $4\frac{3}{8}$ ". Depth below motor board $2\frac{1}{4}$ ".

Fitted with B.S.R. Mono Cartridge.
Price ... £7 15 2 plus £1 4 10 P. Tax. Total £9 0 0 (A)

Fitted with B.S.R. Stereo Crystal Cartridge
Price ... £8 6 8 plus £1 6 9 P. Tax. Total £9 13 5 (A)



UA15 3B Superslim

UA25 SUPERSLIM

Dimensions: Height of Unit from top of motor Board: $3\frac{1}{8}$ ". Below motor board $2\frac{1}{4}$ ". Unit plate $13\frac{1}{8}$ " x $11\frac{1}{4}$ ". Automatically plays 12", 10" or 7" records of same speed, intermixed in any order. Four-speed±78, 45, 33 and 16 r.p.m. Designed to take monaural or stereophonic cartridges Available for all mains voltages—50 or 60 cycles or 9 volt battery operation. R.M.S. wow and flutter are below 0.3% and 0.06% respectively on the Gaumont-Kalee meter.

Fitted with B.S.R. Crystal Stereo Cartridge.
Price £7 6 6 plus £1 3 6 P. Tax. Total £8 10 0 (A)

Fitted with B.S.R. Mono Crystal Cartridge
Price £6 15 0 plus £1 1 8 P. Tax. Total £7 16 8 (A)

AUDIO AMPLIFIERS AND TUNER UNITS

QUAD

ACOUSTICAL "QUAD II" AMPLIFIER



Quad II Amplifier

Remains completely stable under all signal and load conditions and full performance may be obtained with random valve replacements.

The output circuit utilises a cathode coupled arrangement, with resultant low distortion combined with a high efficiency which is reflected in the overall size of the equipment.

Power output 15 watts throughout the range 20-20,000 c/s. Input: Sensitivity 1.4 v. r.m.s. for 15 watt output. Load imposed on input of 1.5 Megohm in parallel with 10 pF. Frequency response: within 0.2 db 20-20,000 c/s. Within 0.5 db 10-50,000 c/s. Valves 2 x EF86, 2 x KT66, 1 x GZ32. Consumption 90 watts. Mains voltages 200/250 v. A.C. single phase (or 95/125 v. A.C.) 40/80 c/s.

Size: 13" x 4 1/2" x 6 1/2". Weight 18 1/2 lbs.

Price £25 0 0 (Free of P. Tax) (C)

ACOUSTICAL "QUAD II" CONTROL UNIT MONO



Quad II Control Unit

The monaural counterpart of the Quad 22 and is similar in all the main features except those associated exclusively with stereo.

Frequency response, cancel position: Radio and tape inputs 20-20,000 c/s. to within 0.3 db., microphone input 20-18,000 c/s. within 1 db; Bass and treble controls within 1 db of curves. Filter frequencies 5 Kc/s., 7 Kc/s 10 Kc/s. ±250 c/s. Input sensitivities for 1.4 v. output: Radio and tape 100 mv. at 100 K.ohms., microphone 1.5 mV. at 100 K. ohms.

Price £23 0 0 (Free of P. Tax) (C)

ACOUSTICAL "QUAD 22" STEREO CONTROL UNIT



Quad 22 Stereo Control Unit

Designed to operate with the Quad II power amplifiers but it may be used with one only for monaural operation if required. Selection of stereo or monaural is by push-buttons, as also are the choice of programme and record equalisation characteristics. The gramophone input may be accurately matched to any pick-up by choice of the correct plug-in adaptor unit, indicated on a chart supplied with the amplifier, while another chart shows the push-button combinations required to provide correct equalisation for different makes of record.

Frequency response cancel position: Radio and tape inputs 20-20,000 c/s. ±0.5 db., microphone 20-20,000 c/s. ±2 db. Filter frequencies 5 Kc/s., 7 Kc/s. and 10 Kc/s. Input sensitivity (at 1 Kc/s. for 1.4 v. r.m.s. output): Radio and tape 70 mv. r.m.s. Load impedance 100,000 ohms. Microphone: 1.5 mv. r.m.s. Load impedance 100,000 ohms. Distortion: All controls level; Any input: 0.02%.

Output, control unit to amplifier: 1.4v. r.m.s.

The unit takes its power from the main amplifier as follows:

330 v. 4 mA.

6.3 v. 1.1 amp.

} Plus current taken by tuner units.

Maximum power available from tuner sockets 330 v., 35 mA. each tuner.

Rad. 1 and Rad. 2: 6.3 v., 3 amp. total.

Rad. 1 (2nd channel): 6.3 v., 3 amp.

The heater supply is C.T. to chassis.

Valves: 2 x EF86, 2 x ECC83.

Price £25 0 0 (Free of P. Tax) (C)

AUDIO AMPLIFIERS AND TUNER UNITS

QUAD

ACOUSTICAL "QUAD" F.M. TUNER



"Quad" F.M. Tuner

To be used with the Quad II amplifier. Tuning range: 87.5-108 mc/s. Output 100 mv. at 100 K ohms. impedance (to be terminated by 100 K ohms. across amplifier input).

Consumption: 6.3 v. 1.85 A., 330 v. 27 mA.

Valves: 6BJ6, 12AT7/ECC81, 6BH6, 6AU6, 6AL5/EB91, 12AX7/ECC83, neons Hivac CC11L, Lamp 6.5 v. 0.3 A. Front panel: Die-cast, stove finished silvered fawn, aluminium knob. Dial $\frac{3}{8}$ " perspex.

Size: $10\frac{1}{2}$ " \times $3\frac{1}{2}$ " \times 6". Weight 6 lb.

Price ... £24 0 0 plus £4 10 0 P. Tax. Total £28 10 0 (C)

ACOUSTICAL "QUAD" A.M.II TUNER

Designed for the Quad II or Quad 22 control units.

Output 100 mv. at 5,000 ohms. impedance via screened cable. Selectivity 2 position switched to give audio bandwidths of 5 and 12 kc/s. Consumption 6.3 v. 1.2 amp.

Valves: EF89, ECH81, EBF89, EM84.

Size: $10\frac{1}{2}$ " \times $3\frac{1}{2}$ " \times 6". Weight 6 lb.

Price ... £24 0 0 plus £4 10 0 P. Tax. Total £28 10 0 (C)



"Quad" AM II Tuner

TWO MODELS AVAILABLE

AM II European

Long wave: 2070-800 metres, Medium wave: 588-185 metres, Short wave: 5.8-18.5 mc/s.

AM II/Overseas

Medium wave: 510-1620 kc/s, Short wave 1: 2.2-6.6 mc/s, Short wave 2: 5.8-18.5 mc/s.

THE QUAD MULTIPLEX DECODER

The QUAD multiplex decoder is designed specifically for use with the QUAD FM Tuner and QUAD 22 control unit.

It is a small unit with its internal mono-stereo electronic switching operated remotely from the QUAD 22 controls. It may, therefore, be concealed within the equipment cabinet without any need for access after installation. When it is correctly connected according to the instructions provided with each unit (existing QUAD FM tuners require a small modification) pressing the RADIO and MON or 2 MON push buttons allow the tuner to work in the normal way as a mono receiver. If the STEREO button is pressed, only stereophonic transmissions will be heard, since mono transmissions are automatically muted. This facility allows stereo programmes to be selected immediately without the need for special indicators. Dimensions: 7" \times 3.4" \times 2.1" (170 \times 85 \times 53 mm.). Weight: 11b. 3oz. (538gm.)

Price £16 0 0 (C)

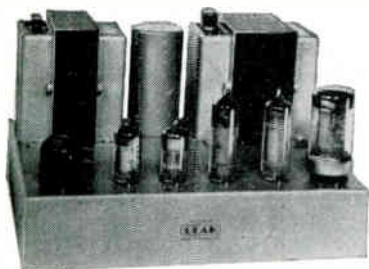


Multiplex Decoder

AUDIO AMPLIFIERS AND TUNER UNITS

LEAK

"TL/12 PLUS" POWER AMPLIFIER



"TL/12 Plus"

Circuitry: 3-stage triple loop feedback circuit, the main loop applying 26 db. of negative voltage feedback over the complete amplifier from input to output terminals. Low-noise, high-gain pentode feeds into a second-stage double-triode phase-splitter which, in turn, feeds two-push-pull output valves.

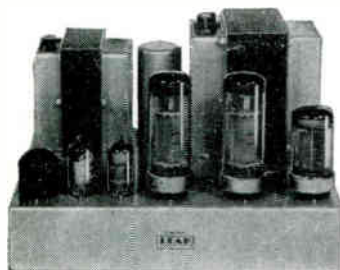
Valves: 1 x EF86, 1 x ECC81, 2 x EL84, 1 x GZ34. Power output 14 watts r.m.s. maximum. Harmonic distortion 0.1% at 12 watts output (± 1 db.) at 1,000 c/s. Hum and noise 85 db. ± 3 db., below 12 watts with source impedance of 25,000 ohms. Sensitivity: Input of 125 mv. at 1,000 c/s. gives 12 watts output. Frequency response ± 0.5 db., 20 c/s. to 20 kc/s. Input impedance 1 megohm, plus approximately 5 mmfd. Consumption 75 watts. Speakers of any impedance between 3 and 20 ohms. may be used. Adjustable plug on output transformer selects three tapings, nominally 16, 8 and 4 ohms. Mains voltage 200/250 v. 50/100 c/s., or 100/125 v. 50/100 c/s.

Size: 10" x 7 $\frac{1}{8}$ " x 5 $\frac{1}{8}$ " high. Weight 14 $\frac{1}{2}$ lb.

Finished in beige gold paint with visible accessories black.

Price £20 0 0 (Free of P. Tax) (C)

"TL/25 PLUS" POWER AMPLIFIER



"TL/25 Plus"

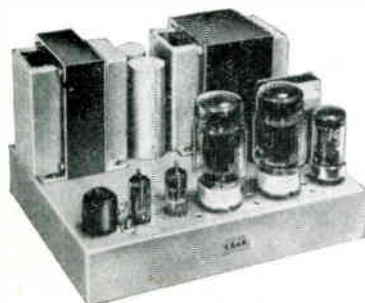
The circuitry on this amplifier is similar to the "TL/12 Plus". Valves: 1 x EF86, 1 x ECC81, 2 x EL34, 1 x GZ34. Power output 32 watts r.m.s. maximum. Harmonic distortion 0.1% for 25 watts output (± 1 db.) at 1,000 c/s. Hum and noise 86 db., ± 3 db., below 25 watts with a source impedance of 25,000 ohms. Sensitivity: An output of 125 mv. at 1,000 c/s. gives 25 watts output. Frequency response ± 0.5 db., 20 c/s. to 20 kc/s. Input impedance 1 megohm, plus approximately 5 mmfd. Consumption 130 watts. Speakers of any impedance between 3 and 20 ohms. may be used. Adjustable plug on top of the output transformer selects three tapings, nominally 16 ohms. 8 ohms. and 4 ohms. Mains voltages 200/250 v. 50/100 c/s. or 100/125 v. 50/100 c/s.

Size: 10" x 7 $\frac{1}{8}$ " x 6 $\frac{1}{8}$ " high. Weight 17 lb. 6 oz.

Finished in beige gold paint with visible accessories black.

Price £26 10 0 (Free of P. Tax) (C)

"TL/50 PLUS" POWER AMPLIFIER



"TL/50 Plus"

The circuitry is identical with the "TL/12 Plus" and TL/25 Plus" amplifiers. The massive output transformer has a core of high grade orientated steel. Valves: 1 x EF86, 1 x ECC81, 2 x KT88, 1 x GZ34. Power output 50 watts r.m.s. maximum (British rating) or 100 watts peak (American rating). Harmonic distortion 0.1% for 50 watts output (± 1 db.) at 1,000 c/s. Hum and noise 83 db., ± 3 db., below 50 watts with a source impedance of 25,000 ohms. Sensitivity: An input of 125 mv. at 1,000 c/s. gives 50 watts output. Frequency response ± 0.5 db., 20 c/s. to 20 kc/s. Input impedance 250 k ohms., plus approximately 5 mmfd., feedback magnitude minus 23 db. at 1 kc/s. Consumption 145 watts. Loudspeakers of any impedance between 3 ohms and 20 ohms. may be used. Adjustable plug on top of the output transformer selects three tapings, nominally 16 ohms., 8 ohms and 4 ohms.

Mains voltages 200/250 v. 50/100 c/s., or 100/125 v. 50/100 c/s.

Size: 11 $\frac{1}{4}$ " x 9" x 6 $\frac{3}{8}$ ". Weight 28 lb. 10 oz.

Finished in beige gold paint with visible accessories black.

Price £35 10 0 (Free of P. Tax) (C)

AUDIO AMPLIFIERS AND TUNER UNITS

LEAK

"STEREO 20" POWER AMPLIFIER

The "Stereo 20" has a total power output of 22 watts, which is adequate not only for the largest room in a dwelling but for small halls seating up to 400 people.

It has two identical circuits, each comprising a 3-stage triple loop feedback amplifier, the main loop applying 26 db. of negative feedback over the complete amplifier from input to output terminals. A low-noise, high gain triode feeds into a second-stage double-triode phase-splitter, which in turn feeds two push-pull output valves arranged in the distributed-load condition. Grain-orientated steel is used for the cores of the two output transformers and the mains transformer. Valves: 3 x ECC83, 4 x EL84 1 x GZ34. Power output 22 watts r.m.s. maximum (11 watts per channel) or 44 watts peak (22 watts per channel). Harmonic distortion 0.1% for 10 watts r.m.s. output per channel (± 1 db) at 1,000 c/s. Hum and noise 80 db. (± 3 db.), below maximum output with a source impedance of 25,000 ohms. Sensitivity: An output of 120 mv. gives maximum output. Frequency response ± 0.5 db., 20 c/s. to 20 Kc/s. Input impedance 1 megohm, plus approximately 5 mmfd. Stability margins: Gain 10 db. ± 3 db., phase $20^\circ \pm 10^\circ$. Loudspeakers of any impedance between 3 ohms. and 20 ohms. may be used. Adjustable plugs on top of each output transformer select three tapings, nominally 16 ohms., 8 ohms. and 4 ohms.

Mains voltages 200/250 v. 50/100 c/s. or 100/125 v. 50/100 c/s. A voltage selector plug is fitted on top of the mains transformer. Consumption 105 watts.

Size: $10\frac{1}{2}'' \times 12\frac{1}{4}'' \times 6\frac{7}{8}''$ high. Weight 22 lb. 6 oz.

Price £32 10 0 (Free of P. Tax) (C)



"Stereo 20"

"STEREO 60" POWER AMPLIFIER

Larger and more powerful version of the "Stereo 20". Valves: 3 x ECC83, 4 x EL34, 1 x GZ34. Power output 60 watts r.m.s. maximum (30 watts per channel) or 120 watts peak (60 watts per channel). Harmonic distortion 0.1% for 25 watts r.m.s. output per channel (± 1 db.) at 1,000 c/s. Hum and noise 80 db. (± 3 db.), below maximum output with a source impedance of 25,000 ohms. Sensitivity: Input of 120 mv. gives maximum output. Frequency response ± 0.5 db., 20 c/s. to 20 Kc/s. Input impedance 1 megohm, plus approximately 5 mmfd. Stability margins: Gain 10 db. ± 3 db., phase $20^\circ \pm 10^\circ$. Loudspeakers of any impedance between 3 ohms and 20 ohms may be used. Adjustable plugs on top of each output transformer select three tapings, nominally 16 ohms., 8 ohms. and 4 ohms. Consumption 180 watts. Mains voltages 200/250 v. 50/100 c/s. or 100/125v, 50/100 c/s. A voltage selector plug is fitted on top of the mains transformer. Size: $10\frac{3}{8}'' \times 13\frac{1}{8}'' \times 6\frac{7}{8}''$ high. Weight 27 lb. 6 oz.

Price £45 0 0 (Free of P. Tax) (C)



"Stereo 50" Power Amplifier

LEAK "VARISLOPE III" PRE-AMPLIFIER MONO

A low-noise, low-distortion 2-stage feedback control pre-amplifier. The first stage is used to give record compensation by the use of frequency selective negative feedback. The second stage embodies feedback tone control circuits which give continuously variable control of both bass and treble frequencies.

Valves: 2 x EF86. Five-position input selector switch. Bass control continuously variable, ± 14 db. at 50 c/s. Treble control continuously variable ± 14 db. at 20 Kc/s. Harmonic distortion less than 0.01% for 125 mv. output. Hum and noise approximately 60 db. below full power output on radio and tape positions, and 52 db. below on the other inputs.

Size, chassis: $10\frac{1}{2}'' \times 3\frac{3}{4}'' \times 5''$ deep. Weight 5 lb. Front panel $11\frac{1}{2}'' \times 4\frac{1}{4}''$.

Price £15 15 0 (Free of P. Tax) (C)

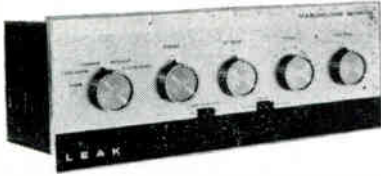


"Varislope III"

AUDIO AMPLIFIERS AND TUNER UNITS

LEAK

LEAK VARISLOPE 2 STEREO



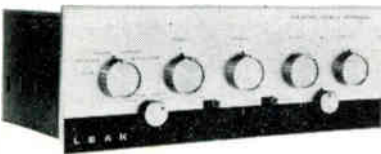
"Varislope Stereo"

Five position input selector switch allows choice of inputs from Pick-up, Tape head, Tuner, Microphone, and Tape amplifier. Bass controls, Treble control, Filter and slope controls, Volume Control with on/off switch Balance control. Tape Monitor switch. This permits instantaneous comparison between the original signal and the recorded signal (with tape recorders having a separate replay head and separate record and replay amplifiers). Total harmonic distortion less than 0.01% for 125 mV. output which will load any Leak Power Amplifiers.

Can be used in conjunction with any combination of two Leak Monaural amplifiers or Stereo 20 and Stereo 60 Power amplifiers.

Price £25 0 0 (C)

LEAK "STEREO 30" POWER AMPLIFIER AND PRE-AMPLIFIER



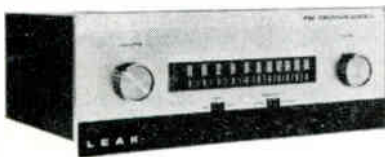
"Stereo 30" Power Amplifier and Pre-Amplifier

A fully transistorized amplifier designed for operation on A.C. Mains 110—250v. Power output 10 watts per channel into a 15 Ω load 15 watts per channel into 4 Ω load. Total harmonic distortion 0.1% for 8 watts r.m.s. output per channel at 1000 c/s. into 15 Ω load (± 1 dB.) Frequency response ± 30 -20,000 c/s. A five position input selector allows the choice of Pick-up, Tape Head, Tuner, Tape Amp., Microphone. Controls, Function control, Bass control, Treble control, Filter and slope controls, Volume controls with on/off switch. Balance control, Tape Monitor switch permits instantaneous comparison between the original signal and the recorded signal (with tape recorders having a separate replay head and separate record and replay amplifiers), Panel indicator light fitted as visual reminder that power supply is switched on when alight. A.C. supply for gram motors, etc.. (Output impedance from 4 to 15 Ω).

The unit may be used free-standing (as on a table or bookcase), or it may be cabinet mounted on a panel of any thickness through a cut-out of $12\frac{7}{8}$ " \times $3\frac{3}{8}$ ".

Price £49 10 0 (C)

LEAK TROUGH-LINE F.M. TUNER Mk. II (Self Powered)



Leak Trough-Line F.M. Tuner

The oscillator of this tuner employs a trough-line as a tuning inductor. Foster-Seeley discriminator employing germanium diodes is used, and the preceding stage has a limiter which eliminates amplitude-modulated signals, rendering the receiver insensitive to ignition and other forms of impulse interference. Frequency range: 88-108 mc/s.

Sensitivity: 2 mv. at aerial terminals for full limiting.

Valves: 2 \times ECF80, ECC84, ECC85, EF80, EM34, EZ80, 2 \times OA79.

Front panel: $11\frac{1}{2}$ " \times $4\frac{7}{8}$ "

Price £27 0 0 plus £4 14 6 P. Tax. Total £31 14 6 (B)

SEE PAGE 57 FOR TRUVOX TSA100 INTEGRATED TRANSISTOR AMPLIFIER

AUDIO AMPLIFIERS AND TUNER UNITS

H. H. SCOTT

SCOTT MODEL 200B



The Scott 200B has a frequency response level within ± 1 dB. from 30 to 20,000 c/s., with harmonic distortion 0.8% and a hum and noise level figure of 70 dB. down, at full output (i.e. 12 watts R.M.S. per channel).

Important design features: To keep hum and noise inaudible, Scott heats the pre-amplifier valves with D.C. and also uses a non-magnetic electrolytic aluminium chassis. Most manufacturers use A.C. current for all valve heaters and ordinary steel for Chassis, which is far less satisfactory. A special subsonic (below 20 c/s.) sharp cut-off filter prevents power waste due to subaudible rumble, eccentric records, or acoustic feedback.

The following controls are provided: Input for Pick-up, Tuner A.M. or F.M. and tape. Power on/off. Loudness. Stereo selector, incorporating unique H.H. Scott balancing circuit. Individual Bass and Treble controls for each channel. Compensator to boost extreme high and low notes at low volume. Derived centre channel output enabling 3rd speaker to be fed. Pilot light.

The following outputs are provided. Speakers, terminals for 4, 8 or 15 ohms stereo headphones. Tape recorder. Accessory outlet providing additional A.C. mains outlet to gram or other unit.

Valves: Three 12AX7/ECC83, One 5AR4/GZ34, Four 6GW8/ECL86.

Dimensions: Satin brass front panel 15" x 4 1/2". Depth behind panel 13".

Price 82 Gns. (C)

SCOTT MODEL 299



The most widely used, highly respected stereo amplifier made in U.S.A.—the latest version of the amplifier recommended by both leading American Consumer Testing Organisations. Endorses the old adage "A good big one will always beat the good little ones"—in fact 299 is outstanding even among much larger amplifiers. The rugged 80-watt output stage assures low distortion reproduction of even the lowest frequencies, and anyone who experiences the magnificent dynamic range with breathlessly

quiet background is unlikely to be ever again satisfied with conventional small amplifiers of the type to which we have all been previously accustomed.

The Scott 299 has a frequency response level within ± 1 dB.* from 20 to 20,000 c/s.* with harmonic distortion 0.8%* and a hum and noise level figure of 80db.* down, at full output (i.e. 32* watts R.M.S. per channel).

*A complete amplifier specification should quote ALL these references.

The Scott 299 has similar controls to the model 200B plus the following additional ones. Two pick inputs Special input selector and balancing control. Slide switches for rumble and speaker on/off. Derived centre channel needing no extra amplifier.

Valves: Four 12AX7/ECC83, Two 6GH8, One 5AR4/GZ34, Four 7591.

Dimensions: Satin brass front 15" x 4 1/2". Depth behind panel: 13".

Price 131 Gns. (C)

SCOTT MODEL 260



SUPERB PERFORMANCE

Technical specifications (at 8 ohms. using vacuum tube measuring techniques. Steady state power each channel: 30 watts. Music power each channel: 40 watts. Power bandwidth (IHF): 20-20,000 c/s. Harmonic distortion: 0.8%. Hum and noise: 80 dB. Damping factor: Greater than 20. Load impedance: (switchable) 4, 8, 16

UNIQUE FEATURES.

1. Rugged silicon direct-coupled transistor output stage.
2. Pre-amps. on separate modular-type printed circuit boards.
3. Complete tape recorder input and output facilities.
4. Massive power supply provides high power surges when music demands it.

FRONT PANEL FEATURES. Input selector switch with these positions: Phono, Tape head, Tuner, Extra. Stereo selector switch with these positions: Bal L, Bal R, Mono, Stereo, Reverse stereo, Left input, Right input.

OTHER FRONT PANEL FEATURES. Loudness compensation switch, Tape monitor switch, Speakers switch, Rumble, filter, Scratch filter, Separate on-off switch, separate control for bass and treble, Stereo headphone output.

REAR PANEL FEATURES. Inputs: Mag. Phono (switchable 3, 6, 9 MV. sensitivity); Tape head; Tuner; Tape-in; Extra. Outputs: Tape recorder; Derived centre channel; Left channel speaker; Right channel speaker; Speaker impedance selector each channel; Two accessory A.C. outlets.

DIMENSIONS. Front panel: 15" W x 4 1/2" H. Depth behind front panel- 12 1/2". Weight: 21 lbs.

Price 149 Gns. (C)

AUDIO AMPLIFIERS AND TUNER UNITS

ROGERS

HG88 Mk. III INTEGRATED STEREO AMPLIFIER

The new HG88 Mk. III Integrated Stereo Amplifier has been designed to form the basis of the more ambitious Home Stereo System. Employing the latest techniques in valve amplifier design the new unit achieves standards of performance not yet possible with transistors at comparable cost.

Compared with the previous Mk. II HG88 the new amplifier provides increased power output, improved control facilities, including a high performance Filter Circuit, and entirely new styling. Detail improvements include pick-up matching by Plug-in Adaptors, a Tape Panel Socket, Tape Monitor facility and Silicon Rectifiers in the power supply.

Materials and workmanship conform to the usually high standard which has come to be expected of all ROGERS units and each amplifier is covered by our unique TWO-YEAR GUARANTEE.

Power output: 15+15 watts+0dB. 1000c/s. -1dB. Power response: 12 watts, 30-10,000 c/s. Frequency response: ±1dB, 20-25,000 c/s. Harmonic distortion: Less than 0.25%, 14 watts, 1000 c/s. Intermodulation Distortion: Less than 1%, 14 watts, 50 c/s. & 6,000, 4:1. Hum and noise: -80dB. below 14 watts. Output impedance: 4ohms., 8ohms., 16 ohms.



HG88 Mk. III Stereo Amplifier

Input Sensitivity	Input Radio	Sensitivity	Impedance	
	Disc:	100mV.	470K	Flat
	Magnetic	4mV.	68K	RIAA
	Crystal/Ceramic	65mV.	2 megohms.	Flat
	Tape Heads	2.5mV.	68K	CCIR
	Auxiliary	60mV.	100K	Adj.
	Tape Replay:			
	Panel Socket	600mV.	Approx. 250K	Flat
	Tape recorder output	600mV.	External load not less than 100K.	

talk: 42dB. 1,000c/s. 30dB. 10,000c/s. Valve Line-up: 4 x ECC807, 4 x ECL86, 2 x BY114 Silicon rectifiers. Operating voltage: 110-125-220-240V., 50/60 c/s. Mains consumption: 72 watts. Overall dimensions: Chassis 14½" long x 10½" deep x 4½" high (36.2cm. x 26.7cm. x 10.8cm.). Case: 16" long x 10½" deep x 5½" high. (40.6cm. x 26.7cm. x 14.0cm.). Weight: Chassis 21lb (9.5 kilos). Case: 25lb. (11.3 kilos).

Price HG88 III Integrated Stereo Amplifier. Chassis Model £42 0 0 (C)
 Price HG88 III Integrated Stereo Amplifier. Case Model £46 10 0 (C)



CADET MK. III MAIN AMPLIFIER AND CONTROL UNIT

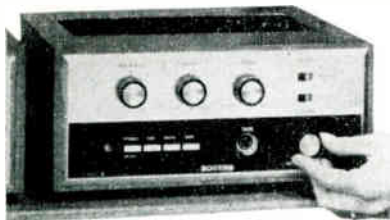
MAIN AMPLIFIER

Power output: 10+10 watts (Sine Wave). ±1dB. 12.5+12.5 watts. (IHF Music Power). Power response: 9 watts. 40 c/s.—10 Kc/s. Frequency response: +.5dB 20-20,000 c/s. Harmonic distortion: 5 watts. .25% at 1,000 c/s. 10 watts. .8% at 1,000 c/s. Intermodulation distortion: 3% at 10 watts. 50 c/s. & 6 Kc/s. 4:1. Hum and noise: -80dB. below 10 watts. Output impedance: 3.5 ohms. and 12-16 ohms. Operating voltage: 110-122-220-244V. 50/60 c/s. Valve line-up: 4 x ECL86, 2 x BY114 Silicon rectifiers. Overall dimensions: 10" x 6½" x 4". (25.4 cm. x 16.5 cm. x 10.2 cm.). Weight: 10 lbs. (4.5 kilos).

CONTROL UNIT

Inputs:	Sensitivity:	Impedance:
Radio	100 mV.	470K.
Disc (Magnetic)	3.8 mV.	68K Standard
Disc (Ceramic/Crystal)	65 mV.	2 megohms. Adaptors.
Tape Replay	600mV. (Input overload capacity 25dB.)	

Tape record output: 600mV. (external load not less than 100K). Frequency response: -2dB. 20-20,000c/s. (Controls level). Bass control: ±13.5dB. 40 c/s. Treble control: +13.5dB.—16dB. 10 Kc/s. High pass filter: 60c/s. 10dB. per octave. Low pass filter 6.5 Kc/s. 10dB. per octave. Cross-talk: 42 dB. 1,000 c/s. 26dB. 10,000 c/s. Signal to noise ratio: Radio 60dB. Disc (Magnetic) 54dB. (Ceramic) 52dB. Balance control: 9dB. Range. Valve line-up: 3 x ECC807. Overall dimensions: (Chassis): 10½" x 4½" x 4½". (27.3 cm. x 12 cm. x 10.5cm.). (Front panel): 11½" x 4½". (28.5 cm. x 11.4 cm.). (Integrated Model in Case): 11½" x 11" x 5½". (29.8 cm. x 27.9 cm. x 13.3 cm.). Weight: 4 lbs. (1.8 kilos) Integrated Model: 19 lbs. (8.6 kilos). (Each unit supplied complete with comprehensive Installation and Operation Instructions and all necessary connectors).



Cadet Mk. II Main Amplifier and Control Unit

Price CADET III Stereo Amplifier/Control Unit. Chassis Model £31 0 0 (C)
 Price CADET III Stereo Amplifier/Control Unit. Case Model £34 10 0 (C)
 Price Plug-in Pick-up Adaptors. For HG88 III and CADET III each 9/- (C)

AUDIO AMPLIFIERS AND TUNER UNITS

ROGERS

MASTER II STEREO CONTROL UNIT



Master Stereo Control Unit

Input Facilities: MIC 1 m/v. to 10 m/v. 100K Impedance, DISC 1 2 m/v. to 20 m/v. 68K impedance, DISC 2 60 m/v. to 600 m/v. 2.2M impedance, TAPE 1 m/v. to 10 m/v. 68K impedance, RADIO 15 m/v. to 100 m/v. 300K. impedance. Impedance of MIC and DISC 1 inputs may be altered. Provision for plug-in Microphone Transformers on MIC inputs. Sensitivity of all inputs adjustable by N.F.B. Input overload characteristics over 40 dB. Tape Panel Socket: RECORD 200 m/v., external load 100K min. REPLAY 200 m/v., impedance approximately 100K. Auxiliary Socket on Front Panel provides limited mixing facility with selected input, impedance 220K, sensitivity dependent on input selected. Frequency response ± 1 dB. 20 c/s. Cross Talk better than 45 dB. 1,000 c/s better than 35 dB. 10,000 c/s. Front Panel Sockets: MIC, AUX, TAPE, REMOTE CONTROL & HEADPHONES.

Control Facilities: 6-way Push-Button Input Selector. MIC. DISC 1. DISC 2 AUX. TAPE. TUNER. Volume Control. Ganged Close Tolerance stepped type. Matched $\pm 1/2$ dB. Balance Control. Ganged. Range 9 dB. ON/OFF Toggle Switch, fitted click-suppressors. Equalisation Switch. LP RIAA/CCIR - Flat - SP RIAA/NARTB. Low Pass Filter Slope. Ganged. Matched ± 1 dB. 0-15 dB. Per Octave. Bass Control. Matched. ± 1 dB. + 15 dB. - 40 c/s. - 15 dB. - 40 c/s. Treble Control. Ganged. Matched ± 1 dB. + 15 dB. 15 - 15 Kc/s. - 20 dB. - 15 Kc/s. Function Switch. Mono A. Stereo Mono B. Disc Slide Switch - MONO/STEREO. Low-Pass Filter Slide Switch - 7 Kc/s., 10 Kc/s. Hi-Pass Filter Slide Switch - 20 c/s., 60 c/s. Phones Slide Switch. IN/OUT. Speaker Output muted in IN Position.

Cathode Follower Output: Adjustable 250-750 m/v., Impedance 25-50 ohms. Plug-in Power Pack: (optional extra) 100 v.-250v. operation. Dimensions: 14" x 6 1/2" x 5 1/8" weight 10 lbs. Styling: Front Panel: Brushed Brass/Matt Black. Control Knobs: Ivory with ground brass inserts.

Price £35 0 0 (Free of P. Tax) (C)

MASTER STEREO AMPLIFIER (Still in development stage) £50 0 0 (C)

MASTER STEREO AMPLIFIER Power pack £5 0 0 (C)



Mk. II FM Receiver Chassis Model

MK. III SWITCHED FM RECEIVER

The Switched FM receiver provides reception of the three BBC Band II VHF/FM transmissions in its simplest and most economic form. An efficient Automatic Frequency Control circuit guards against 'drift', a Foster-Seeley Discriminator ensures optimum audio quality and a low-impedance cathode follower output facilitates matching. The current model of the receiver features a built-in power supply and provision for the addition of a multiplex decoder should regular stereo transmissions be introduced. The Mk. III receiver is electrically identical to the Mk. II model but has been re-styled to match the new CADET III Stereo Control Unit and is also available in a case to match the integrated version of the CADET III Amplifier.

Frequency coverage: 87-96.9 mc/s. Sensitivity: 10 microvolts for 20dB. quietening (25 Kc/s. deviation). Audio output: 25v. R.M.S. (average). Aerial impedance: 70-90 ohms. Controls: Rotary ON/OFF Switch. 3-position Station Selector. Valves: ECC84, 3 x ECF80, 2 x OA79. Overall dimensions: Chassis Model: 11" x 6 1/2" x 4 1/2" (27.9 cm. x 16.5 cm. x 11.4 cm.). Case Model: 11" x 7 1/2" x 5 3/8" (27.9 cm. x 18.4 cm. x 13.8 cm.). Weight: Chassis Model: 4 1/2 lbs. (2.2 kilos). Case Model: 7 lbs. (3.2 kilos).

Mk. III Switched FM Receiver. Chassis Model

Price £16 16 0 plus £2 17 4 P. Tax. Total ~~£19 13 4~~ 19-18-10 (B)

Mk. III Switched FM Receiver. Case Model

Price £19 10 0 plus £3 6 6 P. Tax. Total £22 16 6 (B)



Mk. II FM Receiver Case Model

MK. III VARIABLE TUNER. PRICE AND RELEASE TO BE ANNOUNCED LATER.

AUDIO AMPLIFIERS AND TUNER UNITS

CHAPMAN

306 INTEGRATED STEREO AMPLIFIER



306 Integrated Stereo Amplifier

Power output: 8 watt per Channel ± 0.5 dB. 36 c/s.—20 Kc/s. including roll-off filters. Output matching: 3 and 15 ohms. Inputs and Input Matching: Gram: 4 mV. at 100K. ohms compensated for magnetic pick-ups. Aux.: 100 mV. at 500 K ohms. suitable for crystal pick-ups, flat response. Radio: 100 mV. at 250 K ohms. flat response. Tape: 40 mV. at 250 K. ohms flat response. Tape record outlets: 75 mV. average. Controls: Input selector by push buttons, Bass, Treble, Balance, Function, Volume and Filter. Tone Controls: Boost and Cut fully variable. Filter: Low pass, 5 Kc/s., 10 Kc/s., 20 Kc/s. and out, approx. 12 dB. per octave. Frequency Range: ± 0.5 dB. 36 c/s.—20 Kc/s. including filters at 1W. 25 c/s.—25 Kc/s. without filters. Distortion: Below $\cdot 1\%$ at full outpyt. Intermodulation below 1% at 1W. with mixed frequencies. Hum and Noise: Below -60 dB., gram -50 dB. Spare Power: 250v. 30 mA., 6.3v. 2.5A. Valves: 2 \times EF 86, 2 \times ECC 83, 4 \times ECL 86, EZ81. Finish: Gold and black with ivory/gold control knobs. Matching all tuners. Dimensions: $14\frac{1}{2}'' \times 5\frac{1}{2}'' \times 9\frac{1}{2}''$ deep. (368 \times 140 \times 242 mm.). Weight: 21 lbs. (9.53 kg.).

Price £47 0 0 (C)

FM1000 V.H.F. F.M. TUNER



FM1000 V.H.F. F.M. Tuner

Sensitivity: Better than 5 micro volts for 20 dB. quieting. Output Level: Almost constant at 100 mV. for 74 Kc/s. deviation. Output matching: Suitable for connection to inputs of 30K ohms. or greater. Mains Voltage: 100—125 and 200—250 volts A.C. 50/60 c/s. Consumption: 3 Watts approx. Controls: Tuning and on/off function. Connections: Two-core mains cable output socket and aerial socket. Range: 87.5—108 Mc/s. Semi-conductors: AF 102 AF 115, 2 \times AF 116, 4 \times OA 79, 2 \times OA 81, Z10K. Finish: Satin black with gold escutcheon and ivory/gold control knobs. Tropicalised throughout. Dimensions: $14\frac{1}{2}'' \times 3\frac{1}{2}'' \times 7\frac{1}{2}''$ deep. (368 \times 89 \times 190 mm.). Weight: 7 lbs. (3.175 kg.).

Note. Provision has been made for a Stereo Multiplex adaptor to be internally fitted when available.

Price £24 13 0 plus £4 12 5 P. Tax. Total £29 5 5 (B)

FM1005 AM/FM TUNER



FM1005 AM/FM Tuner

Sensitivity: FM Band: Better than 5 micro volts for 20 dB. quieting. AM Bands: Better than 10 micro volts for 20 dB. signal/noise ratio. Output Level: FM and AM 100 mV. approx. (for 75 Kc/s. deviation of 30% Modulation). Output Matching: for connection to inputs of 30K. ohms. or greater. Mains Voltage: 100—125 and 200—250 Volts A.C. 50/60 c/s. Consumption: 3 Watts approx. Controls: Tuning, Volume, On/off Function, Wave range Connections: Two-core mains cable, output sockets and aerial socket. Ranges: FM 87.5—108 Mc/s., SW 18—50m., TB 50—150m., MW 185—550m., LW 800—2000m. Semi-conductors: AF 102, AF 115, 3 \times AF 116, 6 \times OA 79, 2 \times OA 81, Z10K, AF 114, 2 \times AF 115, 2 \times AF 117. Finish: Semi black with gold escutcheon and ivory/gold control knobs. Tropicalised throughout. Dimensions: $14\frac{1}{2}'' \times 5\frac{1}{2}'' \times 7\frac{1}{2}''$ deep (368 \times 140 \times 190 mm.). Weight: 8 lbs. (3.63 kg.).

Note. Provision has been made for an FM Stereo Multiplex adaptor to be internally fitted when available.

Price £36 4 6 plus £6 15 10 P. Tax. Total £43 0 4 (B)

AUDIO AMPLIFIERS AND TUNER UNITS

CHAPMAN

S6BS/FM Mk. II TUNER SIX STAGE A.M. BANDSPREAD AND HIGH GAIN F.M.

(The finest tuner in our range)



S6BS/FM Mk. II Tuner

Output: 500 m/v. approximately into 100,000/500,000 ohms
Sensitivity: AM 2 microvolts for 20 dB signal/noise ratio. FM 2 microvolts for 20 dB. quieting. Wave Range: AM 11 m. 13 m. 16 m., 19 m., 25 m. and 31 m. in six bandspread ranges. 13-43 m., 43-140 m., 175-570 m., FM 88-108 mc/s. Controls: Variable sensitivity/FM, Tuning, Volume/Off, wave change and AM sensitivity. AM Rejection: FM only—3 microvolts input 32 dB. 300 microvolts 40 dB. Connections: 2 pin socket for AM aerial, 3 pin socket for FM aerial, 2 co-axial sockets for normal output and multiplex output on VHF only Consumption 65 watts at 110 v. and 200-250 v. 40-60 c/s. A.C. Dimensions: 13 $\frac{3}{4}$ " x 8 $\frac{1}{4}$ " x 13 $\frac{1}{2}$ " deep. Weight: 18 lbs net (8.165 kilos). Finish: Chassis and brackets cadmium plated, escutcheons plated and lacquered in gold with knob operation silk screened. Valves: 3 x EF89, ECH81, EBF80, EM84, EZ80, EF85, ECF80, 2 x EF80, EB91.

Price ██████████ plus ██████████ P. Tax. Total ██████████ (B)
£60-0-0 £10-10-0 £70-10-0

S6 BS Mk. II TUNER SIX STAGE A.M. BANDSPREAD



S6 BS Mk. II Tuner

Output: 500m/v. approximately in 100,000/500,000 ohms. Sensitivity: 2 microvolts for 20 dB. signal/noise ratio. Wave Range: 11 m., 13 m., 16 m., 19 m., 25 m. and 31 m. bands in six bandspread ranges 13 m.-43m., 43 m.-140 m., 175 m.-570 m., displayed on a large scale. Consumption: 1 $\frac{1}{2}$ amps. at 6.3 v. 30/40 m/a. at 250 v. D.C. or 50 watts at 110 v. and 200/250 v. when self powered. Connections: 2 pin sockets for aerial/earth and gramophone inputs, miniature co-axial socket for tuner output, and either 2 core red/black mains cable, or 4 core coloured cable for heaters, HT and earth. Controls: Tuning, wave range/Gram. Volume /Off, variable selectivity and A.M. sensitivity. Dimensions: 13 $\frac{3}{4}$ " x 8 $\frac{1}{4}$ " x 11" deep. Weight: Unpowered 13 $\frac{1}{4}$ lbs. (6.57 kilos) powered 18 lbs. (8.16 kilos). Finish Chassis cadmium plated, escutcheons plated and lacquered in gold with knob operation silk screened. Valves: 3 x EF89, ECH81, EBF80, EM84, EZ80.

Price £45 0 0 plus £7 17 4 P. Tax. Total £52 17 4 (B)

LL HI-FI SYSTEM AND AMPLIFIER

LL2400 COMPLETE MATCHED STEREO HI-FI SYSTEM

LL2400 gives you stereo and mono sound reproduction of Hi-Fi standard—a complete, matched system in one single unit with two separate quality speakers for rich, vivid sound.

Good Looks—Matched to Performance

Equipment contained in a smart compact cabinet with brushed silver and black control panel, and a transparent drop front. The neat attractive speakers, too, will add to the looks of your room.

Specification

Main supply 200—250 volt A.C. 50 c/s. Consumption: 45 watt. Controls: On/off, Stereo-mono, Disc-tape-radio selector, Volume, Balance, Bass range +12dB.—5dB. Treble range +8dB.—13dB. Radio input socket: Effective impedance approximately 200K. Tape input socket: Effective impedance approximately 100K. Tape output socket: Effective impedance approximately 20K. Sensitivity (all output sockets) 90 mVs. per channel. Power output: 5 watts per channel. Output impedance: 15 ohms. Hum and Noise level: 50dB. Record Player: Garrard SP25. Cartridge: Sonotone 9TA-HC. Stylus: Diamond for LP, Sapphire for 78 r.p.m. Size: 23" x 17½" x 8". Speakers: 17½" x 11½" x 7".



LL2400 System complete with speakers.

Price £65 3 0 plus £10 9 0 P. Tax. Total 72 Gns. (A)

Speakers only

Price each £10 17 2 plus £1 14 10 P. Tax. Total 12 Gns. (A)

LL351 TRANSISTORISED AMPLIFIER

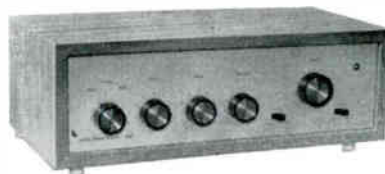
The LL351 is a complete, integrated control unit and power amplifier.

Facilities

Transistorised, naturally, for long life, instant play without warm-up time, lower power consumption. Tape and radio inputs, so that you can amplify radio programmes and tape recordings as well as records. Wide range cut and boost tone controls. Balance control, tape monitoring control. Transformerless output stages which means greater efficiency.

Specification

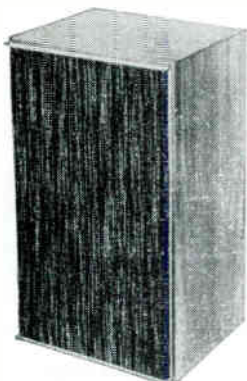
Mains Supply 110-200-250 volts A.C. mains. Power output: 3 watts per channel R.M.S. rating at 1K/c. 5 watts speech and music IHFM rating. Stability: No detectable spurious response with capacity loading. Frequency response: 15 c/s.—50 Kc/s. at 1 watt/sine wave input. 20 c/s.—35Kc/s. at 3 watt/sine wave input. Hum and noise: Input 1 (Gram) 52dB. below full power. Input 2 (Tape) 60dB. below full power. Input 3 (Radio) 60dB. below full power. Input sensitivity: Input 1 Gram: 12 millivolts for full power output. Inputs 2 and 3: 80 millivolts for full power output. Tone controls: Bass: Plus/minus 15dBs. Treble: Plus/minus 15dBs. Total 50dBs. Selector Switch: Tape-Gram-Radio. Tape Monitoring Switch: Instantaneous comparison between original and recorded signal (with Tape Recorders having separate Replay Head and Record/Replay Head). Tape outlet: 250 millivolts for stated input. Dynamic range all inputs: 10 times. Input impedance: 47K. Ohms. Cross Talk: —64dB. Size: 13½" x 7½" x 4". Finish Control panel: Heavy brushed silver case: Teak.



Price £27 6 0 (A)

LOUDSPEAKER SYSTEMS & ENCLOSURES

LEAK



Leak "Sandwich"

LEAK "SANDWICH" FULL RANGE LOUDSPEAKER

The cabinet, which measures only 26" x 15" x 12", is of unique construction which damps panel resonances and permits the loud speaker motor to reproduce full clean bass without the "boxy" colouration of conventional cabinets. A 3" and a 13" loudspeaker motor of novel design and a half-section cross-over network complete the system which gives the highest quality of reproduction over the whole frequency range of the input signal from records, radio, tape or microphone. The 13" unit employs a new cone whose stiffness to weight ratio is two hundred times better than the best cones which are currently available. This invention is the greatest advance in moving-coil loudspeaker design since Rice-Kellogg invented the moving coil loudspeaker in 1925. The low stiffness of conventional cones results in the flexing of the cone at large amplitudes and break-up resonances. The new LEAK cone which has immense stiffness for no greater weight than a conventional cone has given us, for the first time, a loudspeaker which behaves as the theoretical idea of a rigid piston, thus there is no flexing of the cone at large amplitudes and there is no break-up distortion within the frequency range handled by the loudspeaker. It is this freedom from colouration, produced in conventional systems by break-up distortion of the cone and cabinet resonances, which distinguishes the superior quality of reproduction of the LEAK "SANDWICH" LOUDSPEAKER SYSTEM from that of the best currently available moving-coil loudspeaker systems.

Price £39 18 0 (B)



Quad Electrostatic

QUAD ELECTROSTATIC LOUDSPEAKER

Supplied complete with built-in networks for operation direct from a low impedance amplifier source. Intended to be used with a Standard Quad II amplifier. Should be capable of delivering at least 15 watts at low distortion when a resistive load is varied between 30 ohms. and 7 ohms. The source impedance should be not more than 2 ohms. in the frequency range 100-5,000 c/s. and not more than 6 ohms. in the range 40-20,000 c/s. Dimensions: 31" high x 34½" long x 10½" deep.

Price £57 0 0 (C)

RICHARD ALLAN

RICHARD ALLAN MINETTE HIGH FIDELITY ENCLOSURE

The bass unit is five inches in diameter, the heavy moulded cone being suspended on an extremely flexible Neoprene surround resulting in the low free air resonance of 40 c/s. The movement of the cone at low frequencies is thus controlled by the stiffness of the air in the enclosure, and is linear. An extra long voice coil is used to accommodate the necessary increase in cone excursion and the flux density of 14,000 gauss on a 1" pole is provided by a large ceramic magnet. The treble unit is a specially developed version of the 460T unit fitted with an extremely light suspension system. The crossover network has been developed to provide a smooth distribution of frequencies between the two units.

Frequency response: 45-20,000 c/s. Handling capacity: 10 watts. Impedance: 15 Ohms. Finish: Satin walnut. Nett weight: 9 lbs. (4.1 kg.) Gross weight: 11 lbs. (5 kg.) Dimensions: 11½" L. x 7" H. x 6½" D.

Price £15 0 0 plus £2 10 6 P. Tax. Total £17 17 6 (B)



LOUDSPEAKER DRIVE UNITS

WHARFEDALE



Super 3

SUPER 3

Still one of the most efficient treble units on the world market the Super 3 is now fitted with a bakelised cone and cloth surround, and covers the range 1 to 20 Kc/s. with remarkable smoothness. Impedance 2/3 ohms. or 10/15 ohms. Flux density 14,500 oersteds. 1" dia. centre pole. Aluminium voice coil. Max. input 6 watts R.M.S. or 12 watts peak. Frequency range 1,000-20,000 c/s.

Price £5 5 0 plus 17/6 P. Tax. Total £6 2 6 (B)

PST/4

Cloth surround and polystyrene diaphragm. Impedance 10/15 ohms. only. Flux density 11,500 oersteds. 3/4" dia. centre pole. Aluminium voice coil. Max. input 5 watts R.M.S. or 10 watts peak. Frequency range 300-15,000 c/s.

Price £3 2 6 plus 10/5 P. Tax. Total £3 12 11 (B)



PST/4

8" BRONZE/RS/DD

When mounted in a 1 cu. ft. enclosure with slotted back (or tuned with 9" x 1" vent), this unit performs well in the bass and gives good "top" and justifies connection to a good FM set or average tape recorder. The HF output can easily be augmented by adding a PST/4. Impedance 10/15 ohms. only. Frequency range 50-20,000 c/s. Roll surround and double diaphragm.

Price £3 10 0 plus 11/8 P. Tax. Total £4 1 8 (B)



8" Bronze/RS/DD

SUPER 8/RS/DD

There is a saying that handsome is as handsome does, but there is no gain-saying that this speaker scores on both counts. The output is well maintained up to 20 Kc/s., and we have shown on page 3 that it will give some undistorted output in a small enclosure even as low as 30 c/s., although we only claim reasonable coverage down to 40 c/s. Impedance 10/15 ohms. only. 1" dia. centre pole. Ceramic magnet. Flux density 14,500 oersteds. Max input 6 watts R.M.S. or 12 watts peak. Frequency range 40-20,000 c/s. Aluminium voice coil. Roll surround and double diaphragm.

Price £6 10 0 plus £1 0 0 P. Tax. Total £7 0 0 (B)



Super 8/RS/DD

10" BRONZE /RS/DD

Impedance 10/15 ohms. only. 1" dia. centre pole. Flux density 10,500 oersteds. Max. input 6 watts R.M.S. or 12 watts peak. Frequency range 35-10,000 c/s. Roll surround and double diaphragm.

Price £4 10 0 plus 15/0 P. Tax. Total £5 5 0 (B)



10" Bronze/RS/DD

GOLDEN 10/RS/DD

Introduced about 25 years ago, the Wharfedale Golden has always enjoyed a high reputation. The RS/DD treatment brings the speaker up to date and improves the response at both ends of the scale. Impedance 10/15 ohms. only. 1" dia. centre pole. Flux density 14,500 oersteds. Max. input 8 watts R.M.S. or 16 watts peak. Frequency range 30-20,000 c/s. Aluminium voice coil. Roll surround and double diaphragm.

Price £7 10 0 plus £1 5 0 P. Tax. Total £8 15 0 (B)



Golden 10/RS/DD

LOUDSPEAKER DRIVE UNITS

WHARFEDALE



Super 10/RS/DD

SUPER 10/RS/DD

This model was demonstrated at the 1962 Audio Fair fitted in a 2 cu. ft. enclosure tuned with $12'' \times \frac{3}{4}''$ slot, and created a most favourable impression. Although the frequency range is similar to the Golden, the higher flux density of the Super 10 (formerly W10) magnet gives higher sensitivity and rather better HF and transient performance. Impedance 10/15 ohms. only. $1''$ dia. centre pole. Flux density 16,000 oersteds. Max. input 10 watts R.M.S. or 20 watts peak. Frequency range 30-20,000 c/s. Aluminium voice coil. Roll surround and double diaphragm.

Price £10 0 0 plus £1 13 4 P. Tax. Total £11 13 4 (B)

W12/RS/PST

For clean bass down to 25 c/s. in large enclosures, or 30 c/s. in quite small ones, the W12/RS/PST is hard to beat. The polystyrene diaphragm although shown white here, is actually sprayed black so it does not show through the mesh. Impedance 12/15 ohms. only. $1\frac{1}{4}''$ dia. centre pole. Ceramic magnet. Flux density 14,000 oersteds. Max. input 15 watts R.M.S. or 30 watts peak. Frequency range 25-4,000 c/s. Roll surround and polystyrene diaphragm.

Price £11 5 0 (No P. Tax) (B)



W12/RS/PST



RS12/DD

RS12/DD

Fitted with roll surround and double diaphragm assembly, this unit will give really wide response in enclosures as small as 2 cu. ft. and yet may be used with advantage in corner cabinets of 9 cu. ft. The centre diaphragm is a one-piece moulding, including dome, similar to the type used so successfully in the Super 3. Impedance 12/15 ohms. only. Flux density 14,000 oersteds. $1\frac{1}{4}''$ dia. centre pole. Aluminium voice coil. Max. input 15 watts R.M.S. or 30 watts peak. Frequency range 25-17,000 c/s.

Price £12 0 0 (No P. Tax) (B)

SUPER 12/RS/DD

This fine loudspeaker employs the same double diaphragm assembly as the RS12/DD but with a more powerful Alcomax III magnet giving improved sensitivity, damping and power handling capacity. Impedance 12/15 ohms. only. Flux density 17,000 oersteds. $1\frac{1}{4}''$ dia. centre pole. Aluminium voice coil. Max. input 20 watts R.M.S. or 40 watts peak. Frequency range 25-20,000 c/s.

N.B.—The LF performance of these 12" RS/DD units is on a par with the waveforms shown for the RS/PST type. The response above 12 Kc/s. has been improved since these models were introduced.

Price £17 10 0 (No P. Tax) (B)

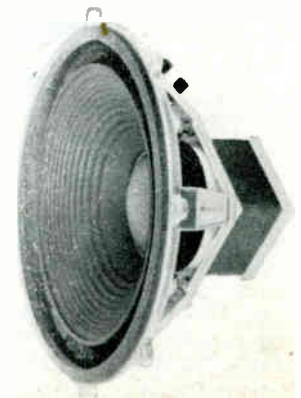


Super 12/RS/DD

W15/RS

Converted to the RS type in June 1961, this magnificent bass unit has a smooth response up to 2,000 c/s. and goes down to 25 c/s. in suitable enclosures as small as 4 cu. ft. in volume. It is used in the Airedale cabinet model, which has achieved world fame for its magnificent bass. Impedance 12/15 ohms. only. Flux density 13,500 oersteds. $2''$ dia. centre pole. Max. input 20 watts R.M.S. or 40 watts peak. Frequency range 25-1,500 c/s. Roll surround.

Price £18 15 0 (No P. Tax) (B)



W15/RS

LOUDSPEAKER SYSTEMS & ENCLOSURES

STANDARD FINISHES

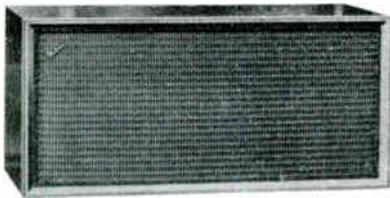
All Wharfedale cabinet models are now available in the following finishes:—

Polished walnut or mahogany veneer. Oiled teak veneer.

Polished oak veneer (light, medium or dark) available to special order.

Also unpolished at lower cost.

Tropical versions can be supplied at extra cost.



PST/8 (Cabinet Only)

This small enclosure is constructed with expanded polystyrene panels giving reduction of cabinet resonance. (Patent No. 890986).

Fitted with a good 8" unit, the PST/8 provides high quality performance at an economical price. It is suitable for mono or stereo use, and may be stood on a table or on the floor.

Many hundreds have been sold for use with tape recorders and the model is strongly recommended for this purpose.

For optimum results, the new Super 8/RS/DD is recommended, but any type of CS, FS or RS 8" speaker can be used in this cabinet.

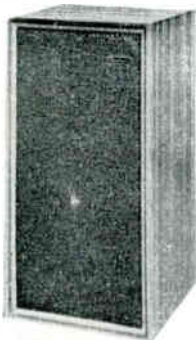
Size: 24" x 12" x 12". Weight: 17 lbs. cabinet only.

Also available unpolished or whitewood at a lower cost.

Price (Polished) £10 10 0 (B)

Price (Unpolished) £9 10 0 (B)

Price (Whitewood) £7 10 0 (B)



LINTON

The performance of the Linton is outstanding for its small size and moderate price. This is mainly due to the specially designed 8" unit, which is fitted with a Neoprene suspension, and has an exceptionally low resonant frequency.

Units: Specially designed 8" and 4" speakers. Size: 19" x 10" x 9 1/2". Weight: 18 lb. Impedance: 8—10 ohms. Max. Input: 10 watts r.m.s. Frequency range: 50 c/s.-15Kc/s. Fitted with treble control.

Polished or oiled.

Price £15 15 0 plus £2 12 4 P. Tax. Total £18 7 4

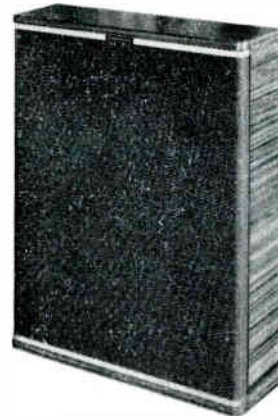
Unpolished

Price £14 15 0 plus £2 9 0 P. Tax. Total £17 4 0

Tropical (Extra)

Price ... £1 10 0 plus 5/- P. Tax. Total £1 15 0

WHARFEDALE SPEAKER SYSTEMS



DALESMAN

The Dalesman is completely new design of compact enclosure. It requires a minimum of room space and is suitable for floor or table mounting. Its performance owes much to the use of a specially designed 12" bass unit with Neoprene surround, giving full clean bass. Units: Crossover frequency: Size: 25" x 20" x 6 1/4" Weight: 31 1/2 lbs. Impedance: 10-12ohms. Frequency range: 30c/s.-15 Kc/s.

Price (Polished or Oiled) £25 10 0 (B)

Price (Unpolished) £25 0 0 (B)

Tropical 30/- extra.



W2-DOVEDALE

This is the latest version of the famous W2 enclosure. It is a compact two-speaker system giving a remarkably wide-range performance for its size, with pure, full-bodied bass reproduction. It is extremely versatile, being equally suitable as a floor standing model and for shelf or table mounting. The cabinet is fully finished on all four sides, and can therefore be used either horizontally or vertically. Units: Special Neoprene surround 12" bass speaker and Super S. Crossover frequency: 1,000 c/s. Size: 24" x 14" x 12". Weight: 37lb. complete. Impedance: 12-15 ohms. only. Power handling capacity: 15 watts max. Frequency range: 25 c/s.-17 Kc/s. Fitted with treble control in black panel.

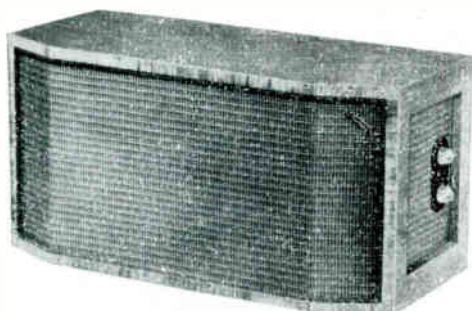
Price (Polished or oiled) £31 10 0 (B)

Price (Unpolished) £30 10 0 (B)

Tropical 35/- extra.

LOUDSPEAKER SYSTEMS & ENCLOSURES

WHARFEDALE SPEAKER SYSTEMS



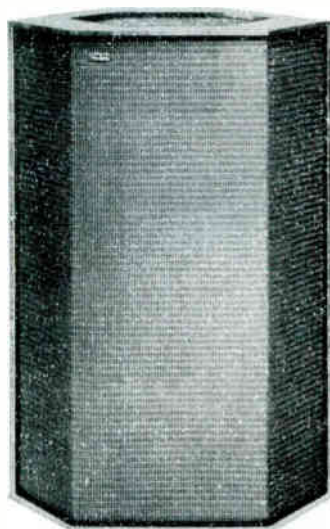
W3

W3

Slightly larger and heavier than the W2, this three-speaker system is equally versatile and has a better extreme top response. A *special feature* is the open mounting of the treble units which are isolated from the main enclosure. This arrangement gives a free, open quality to the reproduction, with good diffusion of middle and top registers. The rear panel is fitted with two ceramic tiles to subdue resonance.

Units: WLS/12, 5" W3 and Super 3. Crossover frequencies: 1,000 c/s. and 5,000 c/s. Size: 28" x 14" x 12". Weight: 48 lbs. complete. Impedance: 12/15 ohms. only. Power handling capacity: 15 watts max. Frequency range: 30-20,000 c/s. Two controls for middle and treble are provided at one end of the cabinet.

Price (Polished or Oiled) £39 10 0 (B)
 Price (Unpolished) £38 10 0 (B)
 Tropical £2 0 0 extra.



W4

W4

The W4 is a four-speaker system designed for use on mono or stereo. The middle and treble units are arranged for omni directional radiation, giving the effect of a broad sound source for which Wharfedale speakers have long been noted. This model is suitable for use along with our large corner speaker system on stereo. The bass enclosure is loaded by a slotted acoustic filter in the rear panel. This gives smooth resonance-free bass down to 25 c/s.

Although primarily a corner design, the W4 can be used along a wall if required; it is in fact virtually a stand-anywhere model.

Units: WLS/12, two Special 5" units and Super 3. Details of the special 12" and 5" units are given on page 00. Fitted with quarter-section three-way network, with cross-over frequencies at 400 c/s. and 5,000 c/s. Size: 35" x 24" x 12". Weight: 65 lbs. complete. Impedance: 12/15 ohms. Power handling capacity 15 watts maximum. Frequency range: 25-20,000 c/s. Separate controls for middle and treble are located in the rear panel.

Price (Polished or Oiled) £49 10 0 (B)
 Price (Unpolished) £48 10 0 (B)
 Tropical £2 10 0 extra.

AIREDALE

For many years the Wharfedale omni-directional three-speaker Corner system has been recognised as a superbly natural reproducer.

The AIREDALE is the latest version of this famous speaker presented for the first time in a one-piece free-standing assembly suitable for corner or along the wall location, and ideally suited to work with the original corner model on stereo, especially where the second corner is not available, or is too far away.

The smooth, clean bass is characteristic of the high flux 15" unit which is now fitted with roll surround.

The 8" mid-range and 3" treble units face upwards for omni-directional treble, and are arranged in a manner which imparts a natural airiness to the reproduction.

Cabinet resonance is avoided by sand-filling the front panel and fitting ceramic tiles to rear side panels.

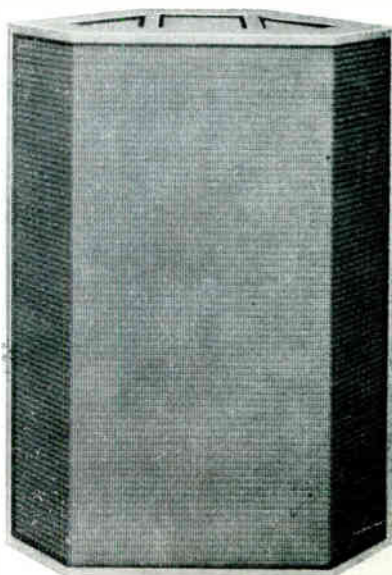
Units: W15RS fitted with heavy cone and impregnated cloth roll surround for minimum distortion.

SUPER 8/CS

SUPER 3

Half-section three-way separator unit with cross-over frequencies at 400 c/s. and 5,000 c/s. Size: 39" x 28½" x 14". Weight: 91 lbs. complete. Impedance: 12/15 ohms. only. Frequency range: 20/20,000 c/s. Max. input: 20 watts. Individual controls for middle and treble response are located in the rear panel.

Price (Polished or Oiled) £69 10 0 (B)
 Price (Unpolished) £68 10 0 (B)
 Tropical £2 15 0 extra.



Airedale

LOUDSPEAKER SYSTEMS & ENCLOSURES

WHAREDALE SPEAKERS FOR ELECTRIC GUITARS

After months of tests with various guitar groups, we have produced a 12" and 15" speaker robustly constructed to stand up to long periods of guitar input and specially designed to give good tonal quality in cabinets of portable size and weight.

The W12/EG is a wide-response unit fitted with double diaphragm and intended for use with LEAD GUITARS. The W15/EG is the 15" unit, fitted with heavy cone, giving full output down to the E-string of BASS GUITARS at 41 c/s.

Guarantee. With guitar input it is always necessary to make judicious use of the amplifier volume control to avoid excessive and distorted output which can overload practically any loudspeaker. Although these models have been specially designed for guitar use, the maker's guarantee does NOT cover physical damage due to overloading.

Cabinets. The models EG12 and EG15 can be supplied separately, or fitted with the appropriate unit, plus its list price. Constructional details are given on a separate leaflet, with a larger 15" enclosure which can be made and used where extra bass is preferred to mobility.



W12/EG

W12/EG

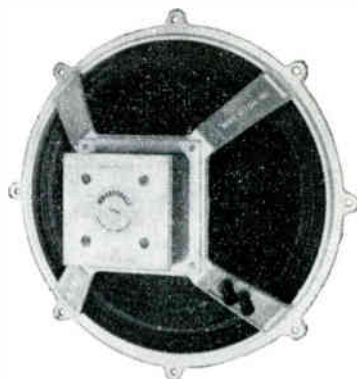
12/15 ohms. Weight 12 lbs.

Price £11 0 0 (B)

W15/EG

12/15 ohms. Weight 13½ lbs.

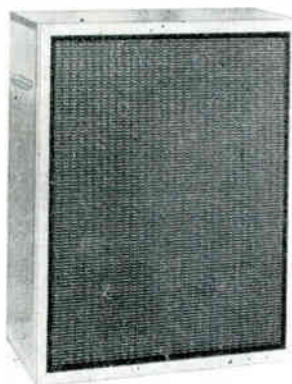
Price £18 15 0 (B)



W15/EG

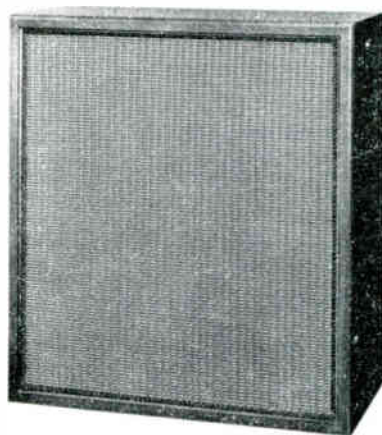
SPECIFICATION

	W12/EG	W15/EG
Flux density, oersteds	14,000	13,500
Total flux, maxwells	156,000	180,000
Maximum input R.M.S.	15 watts	20 watts
Maximum input peak	30 watts	40 watts
Frequency range	40-17,000 c/s.	35-5,000 c/s.



Available in the following finishes:

- Whitewood
- Sprayed Grey
- Oiled teak veneer



EG12 Cabinet 20¼" x 16" x 8½". Weight with 12" unit: 29 lbs.

Price (Oiled Teak) £11 0 0 (B)
 Price (Sprayed Grey) £10 0 0 (B)
 Price (Whitewood) £8 15 0 (B)
 Extra for Tropical ply £1 10 0 (B)

EG15 Cabinet 24" x 21" x 11¼". Weight with 15" unit: 52½ lbs.

Price (Oiled Teak) £15 10 0 (B)
 Price (Sprayed Grey) £14 0 0 (B)
 Price (Whitewood) £12 10 0 (B)
 Extra for tropical ply £2 10 0 (B)

LOUDSPEAKER DRIVE UNITS

WHARFEDALE

CROSSOVER UNITS

The use of reversible electrolytic capacitors and ferrite-cored coils, with a consequent reduction in size has enabled us to re-design the Wharfedale crossover units to make them much more compact and lighter in weight. The range has been streamlined to cater for the two basic types necessary for either a two or three-way speaker system.



HS/400/3

Half-section three-way separator with crossover frequencies at 400 and 3,000 c/s. Available for 7-16 ohms. only. This separator unit gives an attenuation of about 12 dB. per octave from the main crossover frequency. Volume controls are fitted in the middle and treble speaker circuits to assist in balancing the three units and to compensate for room acoustics. Size: 6" x 5" x 2 1/4". Weight: 32 ozs. Maximum input: 30 watts. The HS/400/3 can be used as a two-way half-section network by ignoring the treble terminals and putting the shorting switch to the two-way position.
Price £6 10 0 (B)



QS/800

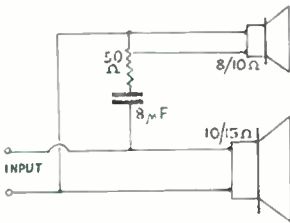
Quarter-section two-way network with a crossover frequency of 800 c/s. Available for 7-16 ohms. only. This separator gives a maximum attenuation of about 6 dB. per octave. Size: 5" x 3" x 2 1/4". Weight: 15 ozs. Maximum input: 30 watts. A tweeter can be added to the QS/800 using the circuit shown below. All separator boxes are filled with wax to keep out damp or moisture, and the units are therefore suitable for tropical use.

Price £3 5 0 (B)

QS/3000 As above but crossover frequency of 3000 c/s.

Price £3 5 0 (B)

N.B.—Full details of crossover circuits and how they work are given in the books *Loudspeakers* and *More About Loudspeakers* listed on page 27.



ADDING A TWEETER

When it is desired merely to improve the HF response, without rolling off the main speaker, this simple circuit can be used, and in fact often reduces audible mid-range coloration.

Tweeter with volume control. If the impedance of the main loudspeaker is 2/3 ohms. the filter capacitor and VC should then be 12 Mfd. and 20 ohms. respectively.

WMT1 MATCHING TRANSFORMER



Auto Transformer for matching 10-16 ohm. or 7-9 ohm. speakers to sets with 2-5 ohms. output or vice versa.

Frequency response within 1 dB. from 20 c/s. to 15 c/s. Power handling capacity 15 watts. Can be used to match loudspeakers of different impedances to crossover unit in high quality two or three-speaker system.

N.B.—This is not an isolating transformer.

Price 13/6 (Free of P. Tax) (B)

WMT 2 ISOLATING AND MATCHING TRANSFORMER



A matching transformer similar to the WMT 1 but having separate windings with heavy insulation. This enables it to be used safely as a matching/isolating transformer for connecting an external loudspeaker to a T.V. set. In this connection it is essential to mount the WMT 2 inside the set and ensure that the leads are well soldered to the tags provided.

Price 13/6 (Free of P. Tax) (B)

LOUDSPEAKER DRIVE UNITS

WHARFEDALE



"TRUQUAL" VOLUME CONTROL

The "Truqual" volume control is designed to give constant load impedance and therefore does not cause distortion at low levels. There are six switched positions giving the following approximate steps:

Position	1	2	3	4	5	6
	Full on	-4dB.	-10dB.	-16dB.	-24dB.	Off

N.B.—In the "Off" position the supply line is open circuited to prevent break through.

The "Truqual" is available in two types:

Type 32 for speakers $1\frac{1}{2}$ —5 ohms. impedance. Complete with knob and plastic recessed escutcheon. **Type 98** for speakers 6-15 ohms. impedance.

Size: 3" dia. x $2\frac{1}{4}$ " deep. Mounting hole: $2\frac{3}{8}$ " dia. Weight: 4 ozs

Price £1 0 0 (Free of P. Tax) (B)



SPEAKER SWITCH

A very useful fitting for any Set operating a LOW IMPEDANCE Extension Speaker. The switch may be mounted on the side of back of the receiver, and gives the following connections by turning the knob:

1. Set Speaker only.
2. Extension Speaker only.
3. Both Speakers.

Complete with knob and engraved metal escutcheon. Size: 2" x 2" x $2\frac{1}{8}$ ". Weight: $3\frac{1}{2}$ ozs.

N.B.—This switch is not suitable for use in the primary circuit of an output transformer.

Price £1 2 6 (Free of P. Tax) (B)

CONICAL DIFFUSERS

Provide omni-directional radiation with upward facing units. Spun from 18 swg aluminium with $\frac{1}{8}$ " dia. apical hole for easy attachment to supporting strut which may be of wood, metal or plastic.

Two sizes available for 8" and 10" speakers.

8" model. Size: 4" dia. x $2\frac{3}{8}$ " high. Weight: $1\frac{1}{2}$ ozs.

Price (8" Speaker) 7/6 (Free of P. Tax) (B)

10" model. Size: 7" dia. x $4\frac{1}{8}$ " high. Weight: 6 ozs.

Price (10" Speaker) 10/6 (Free of P. Tax) (B)

PIPE KITS Kit of fixtures for 8" pipe

£5 0 0 (B)

Kit of fixtures for 10" pipe

£6 5 0 (B)

BOOKS by G. A. BRIGGS

Audio and Acoustics 168 pages, 140 illustrations	12/6 (13/6 post free) (B)
More About Loudspeakers 136 pages, 112 illustrations	8/6 (9/6 post free) (B)
Cabinet Handbook 112 pages, 90 illustrations	7/6 (8/6 post free) (B)
Loudspeakers 336 pages, 230 illustrations	25/- (26/3 post free) (B)
A to Z in Audio 224 pages, 160 illustrations	15/6 (16/6 post free) (B)
Stereo Handbook 146 pages, 88 illustrations	10/6 (11/6 post free) (B)
Audio Biographies 344 pages, 112 illustrations	19/6 (20/9 post free) (B)
Pianos, Pianists and Sonics 190 pages, 102 illustrations	15/- (16/- post free) (B)

LOUDSPEAKER DATA

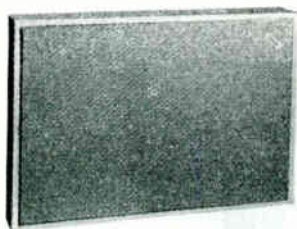
Model	Bass Resonance c/s.	Flux Density Oersteds	Total Flux Maxwells	Max. Input		Weight Lds.	Baffle opening In.	Chassis Dia. In.	Overall Depth In.	Fixing Holes P.D.C. In.
				R.M.S. Watts	Peak Watts					
Super 3	Treble only	14,500	60,000	6	12	3 $\frac{1}{2}$	3	3 $\frac{3}{8}$	2 $\frac{1}{2}$	3 $\frac{1}{8}$
PST/4	Treble only	11,500	28,800	5	10	1 $\frac{1}{2}$	3 $\frac{3}{8}$	4 $\frac{1}{8}$	2 $\frac{3}{8}$	4 $\frac{1}{8}$
8" Bronze	70/80	10,500	41,500	5	10	2 $\frac{1}{2}$	7	8	3 $\frac{1}{2}$	7 $\frac{1}{8}$
8" Bronze/RS/DD	50/60	10,500	41,500	5	10	2 $\frac{1}{2}$	7	8	3 $\frac{1}{2}$	7 $\frac{1}{8}$
Super 8/RS/DD	50/60	14,500	60,000	6	12	4 $\frac{1}{2}$	7	8	3 $\frac{1}{2}$	7 $\frac{1}{8}$
10" Bronze/RS/DD	38/43	10,500	41,500	6	12	4 $\frac{1}{2}$	8 $\frac{1}{2}$	9 $\frac{1}{2}$	4 $\frac{1}{2}$	9 $\frac{1}{8}$
Golden 10/RS/DD	38/43	14,500	60,000	8	16	5 $\frac{1}{2}$	8 $\frac{1}{2}$	9 $\frac{1}{2}$	5 $\frac{1}{2}$	9 $\frac{1}{8}$
Super 10/RS/DD	38/43	16,000	85,000	10	20	10 $\frac{1}{2}$	8 $\frac{1}{2}$	9 $\frac{1}{2}$	5 $\frac{1}{2}$	9 $\frac{1}{8}$
W12/RS/PST	26/32	14,000	156,000	15	30	12	10 $\frac{1}{2}$	12 $\frac{1}{2}$	5 $\frac{1}{2}$	12 $\frac{1}{8}$
RS/12/DD	26/32	14,000	156,000	15	30	12	10 $\frac{1}{2}$	12 $\frac{1}{2}$	5 $\frac{1}{2}$	12 $\frac{1}{8}$
Super 12/RS/DD	26/32	17,000	190,000	20	40	18 $\frac{1}{2}$	10 $\frac{1}{2}$	12 $\frac{1}{2}$	5 $\frac{1}{2}$	12 $\frac{1}{8}$
W12/EG	46/52	14,000	156,000	15	30	12	10 $\frac{1}{2}$	12 $\frac{1}{2}$	7	12 $\frac{1}{8}$
W15/RS	26/32	13,500	180,000	20	40	13 $\frac{1}{2}$	12 $\frac{1}{2}$	14 $\frac{1}{2}$	5 $\frac{1}{2}$	12 $\frac{1}{8}$
W15/EG	36/42	13,500	180,000	20	40	13 $\frac{1}{2}$	12 $\frac{1}{2}$	14 $\frac{1}{2}$	7 $\frac{3}{8}$	14 $\frac{1}{8}$

RS=Roll surround DD=Double diaphragm PST=Polystyrene diaphragm

LOUDSPEAKER SYSTEMS & ENCLOSURES

ROGERS

THE ROGERS "WAFER" SPEAKER SYSTEM



"Wafer" Speaker System

Measuring only $2\frac{1}{2}$ " front to back this ingenious design sets an entirely new standard of performance for ultra compact speaker systems.

The enclosure lends itself particularly to wall mounting, where it takes up no more space than a small picture, and is equally suitable for placing on a window sill, fireplace shelf, room divider or bookshelf.

Only sensitivity has been sacrificed in achieving this performance. Transient response is most exceptional and bass response down to 40 c/s. is obtained.

Two speaker Units are employed:—

(1) A specialised 5" unit with massive 15,000 gauss magnet and roll surround.

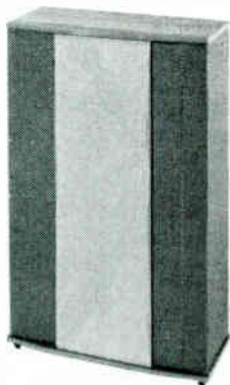
(2) A $3\frac{1}{2}$ " treble unit with 13,000 gauss magnet and foam plastic suspension. A precise half-section cross-over unit operates at 2.2 Kc/s.

Brief Specification: Power Rating: 12 watts, music power. Impedance matching: 15ohms Frequency response: 40 c/s—16,000 c/s. Weight: $10\frac{1}{2}$ lbs Overall dimensions: Height: $13\frac{1}{8}$ ", Width: $16\frac{1}{8}$ ", Depth: $2\frac{1}{2}$ ".

Retail Price ~~£42.00~~ plus ~~£2.00~~ 6 P. Tax. Total ~~£44.00~~ (B)

16.00. 2.14.7. 16.14.7.

CADET II HORN LOADED SPEAKER SYSTEM



Cadet II Horn Loaded Speaker System

Introduced at the 1963 London Audio Fair the CADET II Horn Loaded Speaker System was very well received especially by reviewers who were universal in their praise of the excellent performance achieved at such a modest price.

Where space permits a floor-standing enclosure this design offers the advantages of horn loading, in particular excellent bass performance and very high efficiency.

Pressure horn loaded system: horn length 5', exponential flare. Bass unit: $8\frac{3}{4}$ " x $5\frac{3}{4}$ " Elliptical. High-flux ring magnet. 13,000 gauss. Plasticized cone surround. Treble unit: 3", high-flux ring magnet. 13,000 gauss. Plastic cone surround. Cross-over frequency: 4 Kc/s. Power handling capacity: 6-8 watts. Impedance: 15 ohms. Frequency response: 45-18,000 c/s. Overall dimensions: Height- $33\frac{3}{4}$ " x Width- $20\frac{1}{4}$ " x Depth- $8\frac{1}{4}$ ". (85.7 cm. x 51.4 cm. x 20.9 cm.). Finish: 'VYNAIR' with contrasting centre panel; top panel Teak finish FORMICA laminate.

CADET II Horn Loaded Speaker System. Teak or Walnut

Price ... £20 5 0 plus £3 9 0 P. Tax. Total £23 14 0 (B)

COMPACT SPEAKER SYSTEM



Compact Speaker System

The cabinet is substantially constructed and finished in either Teak or Dark Australian Walnut FORMICA laminate. The front is covered in matching VYNAIR. Many installations are possible and the cabinet may be placed on a table or shelf or fixed to the wall, suitable brackets being supplied for this purpose. The enclosure may be used either horizontally or vertically. As can be seen from the illustration styling is simple and unobtrusive and the enclosure will blend well with any furnishing scheme.

Overall frequency range: 30-18,000 c/s. Impedance matching: 15 ohms. Power handling capacity: 10-12 watts (Music power). Overall dimensions: 20 " x $13\frac{3}{8}$ " x 9 ". (50.8cm. x 34.9cm. x 22.9cm.).

CADET III Compact Speaker System. Teak or Walnut

Price £25 0 0 (B)

LOUDSPEAKER DRIVE UNITS

KEF

COMPONENTS FOR THE HOME CONSTRUCTOR AND ARCHITECT

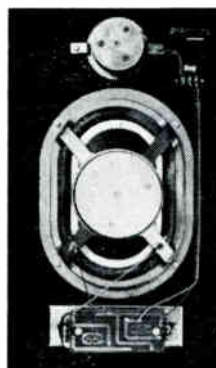
There are some applications for which the standard range of KEF cabinet models are unsuitable and in these cases our complete baffle assemblies are a good solution. The baffles are fitted with units and crossover network, wired and tested ready for installation in a cabinet, cupboard or architectural recess. A booklet of enclosure designs giving all the necessary constructional information is available free on request.

K2 BAFFLE

This is the two speaker assembly used in the Duette. It is an ideal low-cost system giving superb results in enclosures of modest size. Fitted with B.139, T.15 and DN.5 crossover network.

Size: 22½" × 13½" × 4". (57cm. × 34cm. × 10cm. Weight: 20lb. 9Kg. Impedance: 15ohms. Max. input: 15 watts r.m.s. 30 watts peak. Frequency range: 30-20,000 c/s.

Price £24 0 0 (B)



T15 TWEETER



A wide range, low distortion high frequency radiator; fitted with exclusive hemispherical diaphragm made from aluminised Melinex, giving wonderfully smooth response to beyond 20,000 c/s. with very wide dispersion of the higher frequencies. Totally enclosed at the rear, it avoids interaction with the low frequencies in an enclosure. The diaphragm assembly is easily replaced without special tools or jigs.

Size: 3½" dia. × 1¾" deep. Weight: 2lb. 1Kg. Impedance: 15ohms. Max. input: 6 watts continuous r.m.s. above 1Kc/s. 15 watts music rating. Flux density: 12,000 oersted. Total flux: 43,000 maxwells. Frequency range: 800-20,000 c/s. Fundamental resonance: 650 c/s.

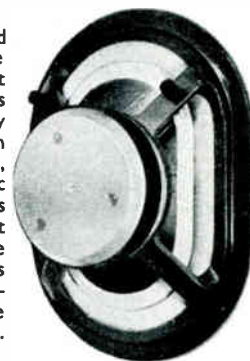
Price £6 0 0 (B)

B139 WOOFER

One of the most highly developed bass drivers in the world, the B.139 is an ideal unit for compact systems. Unlike paper cones which have irregular frequency response and serious colouration due to poor transient response, the aluminium stressed plastic diaphragm of the B.139 gives complete freedom from transient distortion and break-up. The special shape of the diaphragm is designed to give very wide dispersion up to 1,000 c/s. where the off-axis response is only 1dB. down at 45°.

Size: 13" × 9½" × 3". Weight: 14 lb. 6.4 Kg. Impedance: 15 ohms. Max. input: 15 watts r.m.s. Flux density: 10,500 oersted. Total flux: 137,000 maxwells. Frequency range: 30-1,000 c/s. Fundamental resonance: 25c/s.

Price £11 10 0 (B)



B1814 WOOFER

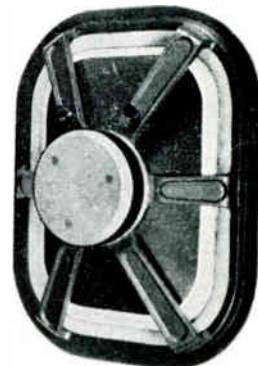
The B.1814 is one of the largest diaphragms in the world and it has over twice the area of a 12" round unit. When properly baffled, it is capable of superb low-frequency reproduction, and is therefore of special interest to organ enthusiasts.

Size: 18" × 14" × 4½". Weight: 16lb. 7.3Kg. Impedance: 15 ohms. Max. input: 25 watts. Flux density: 12,700 oersted. Total flux: 156,000 maxwells. Frequency range: 20-1,000c/s. Fundamental resonance: 20c/s.

Price £19 0 0 (B)

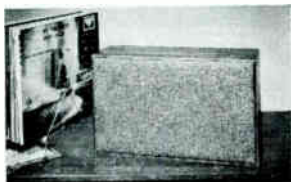
FEATURES

- Super rigid plastic & aluminium diaphragm for smooth response.
- Roll surround gives linear edge suspension and accurate transient reproduction.
- Nylon back suspension maintains precise centering.
- Fibreglass voice coil former withstands all stresses.
- Massive machined aluminium chassis for long life alignment.
- Powerful flat Feroba II magnet assembly.



LOUDSPEAKER SYSTEMS & ENCLOSURES

KEF



Celeste

CELESTE

Size: 18" x 10³/₄" x 6³/₄" (46cm. x 27cm. x 17cm.). Weight: 24lb. (11Kg.). Impedance: 15 ohms. Max. input: 15 watts r.m.s. 30 watts peak. System resonance: 85 c/s. Frequency range: 60-20,000 c/s. Input connections: Terminals.

Fitted with separate B.139 woofer, T.15 tweeter and four element printed circuit crossover network. Finished in super grade hardwood veneer with a choice of oiled American walnut or teak. The attractive coffee fleck Vynair grille is made exclusively for K.E.F. by I.C.I. The styling is commendably modern without seeming austere. It blends unobtrusively with furnishings both classical and contemporary.

Price £26 10 0 (B)

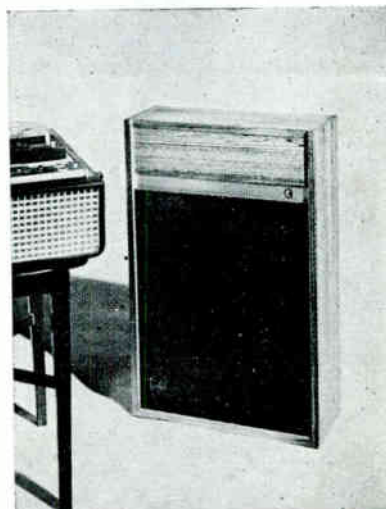
GROUP 4 CANTATA

This is a new model originally designed for the GROUP 4 integrated High Fidelity Assembly, and now available separately. It represents the ultimate in slimline speakers both sonically and visually.

Size: 24" x 16" x 6". (61cm. x 41cm. x 15cm.). Weight: 27³/₄ lb. (12.5 Kg.). Impedance: 15 ohms. Max. Input: 15 watts r.m.s. 30 watts peak. System resonance: 60 c/s. Frequency range: 40-20,000 c/s. Input connections: Terminals.

Fitted with B.139 bass unit. T.15 HF radiator and four element printed circuit crossover network. Finished in selected Teak veneer with brushed antique silver trim and lustre black grille fabric.

Price £28 0 0 (B)



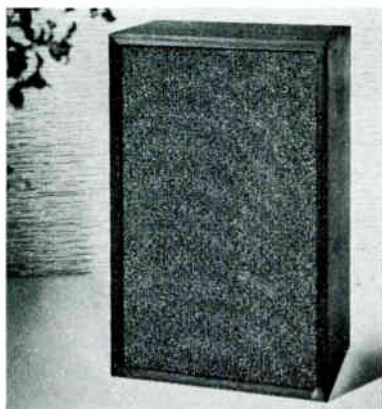
DUETTE

The Duette is an entirely new approach to loudspeaker design. No other compact system contains so many outstanding technical advances.

Size: 24" x 15" x 9¹/₂". (61cm. x 38cm. x 24cm.). Weight: 48 lb. (22Kg.). Impedance: 15ohms. Max. Input: 15 watts r.m.s. 30 watts peak. System resonance: 45 c/s. Frequency range: 30-20,000 c/s. Input connections: Terminals.

Fitted with B.139 bass unit, T.15 radiator and seven element printed circuit crossover network. Finished in selected hardwood veneers and available with a choice of oiled American walnut or teak with coffee fleck grille.

Price £35 0 0 (B)



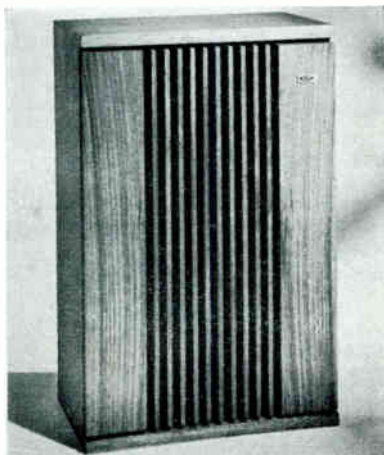
Duette

DUETTE DE-LUXE

Size: 24" x 15" x 9¹/₂". (61cm. x 38cm. x 24cm.). Weight: 48 lb. (22Kg.). Impedance: 15 ohms. Max. Input: 15 watts r.m.s. 30 watts peak. System resonance: 45 c/s. Frequency range: 30-20,000 c/s. Input connections: Terminals.

Fitted with B.319 bass unit, T.15 radiator and seven element printed crossover network. Finished in selected hardwood veneers and available with a choice of oiled American walnut or teak with matching grille.

Price £39 19 0 (B)



Duette de-Luxe

LOUDSPEAKER DRIVE UNITS



Trebax 5K/20XL



Midax 650



Axiette 8



Axiom 10



Axiom 80 9 1/2"



Trebax 100



TREBAX PRESSURE UNIT 100

A pressure driven horn unit covering from 2,500 to 16,000 c/s. Intended to be used only as a treble unit. Very low distortion at high frequencies. 15 ohms.

Price £6 16 11 (Free of P. Tax) (A)

TREBAX 5K/20XL

Frequency Range 2,500—20,000 c/s.

Crossover Frequency 5,000 c/s.

Power Handling Capacity 20 watts in Systems

Fitted L-pad attenuator and L.C. Crossover network.

Price £7 13 9 (Free of P. Tax) (A)

MIDAX PRESSURE UNIT 650

Frequency range 650 c/s. to 8,000 c/s. 15 ohms. impedance. Power handling capacity 25 watts. Baffle cutout 5 1/8" x 2 7/8" with 3/8" radii corners. Overall length 9 1/8".

Price £10 6 3 (Free of P. Tax). (A)

AXIETTE 8

SPECIFICATION

Frequency range 40-15,000 c/s. For amplifiers up to 6 watts (12 watts U.S.A.). Fundamental resonance 65 c/s. Flux Density 13,500 Gauss. Total Flux 53,000 Maxwells. Voice Coil 1" diameter aluminium. Impedance 15/16 ohms. Chassis Diecast. Fixing holes 4 holes 3/8" dia. equally spaced on 7 3/8" dia. (PCD). Overall Diameter 8 3/8" (21 c.m.)

Price ... £4 15 7 plus 15/4 P. Tax. Total £5 10 11 (A)

TWIN AXIETTE 8"

Frequency range 40-15,000 c/s. Impedance 15 ohms. Power handling capacity 6 watts.

Price £5 9 2 plus 17/6 P. Tax. Total £6 6 8 (A)

AXIOM 10

SPECIFICATION

Frequency range 40-15,000 c/s. For amplifiers up to 10 watts (20 watts U.S.A.). Fundamental Resonance 45 c/s. Flux Density 13,500 Gauss. Total Flux 53,000 Maxwells. Voice Coil 1" diameter aluminium. Impedance 15/16 ohms. Chassis Diecast. Fixing holes 4 holes 1/2" dia. equally spaced on 9 3/8" dia. (PCD). Overall Diameter 10 1/8" (26.6 c.m.).

Price ... £5 13 11 plus 18/4 P. Tax. Total £6 12 3 (A)

AXIOM 80 9 1/2" (6 watts)

The extended frequency coverage from 20/20,000 c/s. in free air has been achieved by the duplex cantilever (free suspension) cone assembly. Frequency coverage 20/20,000 c/s. Fundamental resonance 20 c/s. Flux density 17,000 gauss. Net weight 9 lb. 6 oz. Impedance 15 ohms.

Price ... £18 8 11 plus £2 19 2 P. Tax. Total £21 8 1 (A)

LOUDSPEAKER DRIVE UNITS



Axiom 201

AXIOM 201

SPECIFICATION

Frequency range 30—16,000 c.p.s. For Amplifiers up to 15 watts (30 watts U.S.A.). Fundamental resonance 35 c/s. Flux density 13,000 Gauss. Total Flux 87,500 Maxwells. Voice Coil $1\frac{1}{2}$ " diameter aluminium. Impedance 15/16 ohms. Chassis Diecast. Baffle hole diameter 11" (28 c.m.) Fixing holes 4 holes 0.312" diameter equally spaced on $11\frac{1}{4}$ " (29.8 c.m.) diameter (PCD). Overall diameter $12\frac{3}{8}$ " (32.1 c.m.) Overall depth $5\frac{3}{16}$ " (13.2 c.m.) A.R.U. 172 enclosure 7,800 cubic inches. volume (internal).

Price £11 8 9 (Free of P. Tax) (A)

AXIOM 301

SPECIFICATION

Frequency range 30—16,000 c.p.s. For Amplifiers up to 20 watts (40 watts U.S.A.). Fundamental resonance 35 c/s. Flux density 16,500 Gauss. Total Flux 185,000 Maxwells. Voice Coil $1\frac{1}{2}$ " diameter (4.4 c.m.) aluminium. Impedance 15/16 ohms. Chassis Diecast. Baffle hole diameter 11" (28 c.m.) Fixing holes 4 holes 0.312" diameter equally spaced on $11\frac{1}{4}$ " (29.8 c.m.) diameter (PCD). Overall diameter $12\frac{3}{8}$ " (32.1 c.m.). Overall depth $6\frac{3}{32}$ " (15.6 c.m.) ARU 172 enclosure 7.800 cubic inches volume (internal).

Price £15 18 9 (Free of P. Tax) (A)



Axiom 301

TRIAxiOM 1220C 12" TRIPLE-ELEMENT HIGH FIDELITY LOUDSPEAKER

The following special features are incorporated to give a span of more than nine octaves. Plastic terminated vacuum formed 12" diaphragm. Automatic cross-over at 2,000 c/s. to high stability mid-range radiator. Pre-wired double section L-C type electrical cross-over at 5,000 c/s. to pressure driven horn loaded high frequency unit complete with its own separate magnet system. Aluminium diaphragm and extra long $1\frac{1}{2}$ " voice coil in self-aligning assembly with air chamber and phase equaliser. Adjustable constant impedance L-pad attenuator on flying lead for high frequency level balancing. Massive diecast unitary chassis. High efficiency Feroba II magnet systems. Phased terminals for easy stereophonic connections.

SPECIFICATION

Frequency Range: 30-20,000 c/s. Power Handling Capacity: 20 watts (40 watts U.S.A.). Fundamental resonance: 35 c/s. Flux density (main gap): 16,500 gauss. Total Flux (main gap): 185,000 maxwells. Pole diameter (main gap): $1\frac{1}{4}$ " (4.4 cms.) dia. (Bass and Mid-Range). Pole diameter (H.F. gap): 1" dia.—aluminium (High Frequency). Impedance: 15/16 ohms. Crossover: 5 Kc/s. L.C. network. Chassis H.F. control: 15 ohms. L-pad. Chassis: Diecast. Overall diameter: $12\frac{3}{8}$ " (32.1 c.m.). Overall depth: $6\frac{3}{32}$ " (15.6 cm.). A.R.U. 172 enclosure volume (internal): 7,800 cu. ins. Baffle hole diameter: 11" (28 cm.). Fixing holes 4 holes 0.312" (0.8 cm.) dia. equally spaced on, $11\frac{1}{4}$ " (29.8 c.m.) P.C.D. Nett weight: 19 lbs. (8.621 kg.).

The TRIAXIOM 1220c. brings professional standard High Fidelity to domestic listening.

Price £19 9 1 (A)



Triaxiom 1220C



Audiom 51

AUDIOM 51

SPECIFICATION

Maximum Power handling Capacity 15 watts (30 watts U.S.A.). Fundamental resonance 35 c/s. OR 75 c/s. Flux density 13,000 Gauss. Total Flux 87,500 Maxwells. Voice Coil $1\frac{1}{2}$ " diameter (4.4 c.m.) Impedance 15/16 ohms. Chassis Diecast. Baffle hole diameter 11" (28 c.m.) Fixing holes 4 holes 0.312" diameter equally spaced on $11\frac{1}{4}$ " (29.8 c.m.) diameter (PCD). Overall diameter $12\frac{3}{8}$ " (32.1 c.m.) Overall depth $5\frac{3}{16}$ " (13.2 c.m.) A.R.U. 172 enclosed volume (internal) 7,800 cubic inches.

Price £9 12 5 (Free of P. Tax) (A)

LOUDSPEAKER DRIVE UNITS



AUDIOM 61

SPECIFICATION

Maximum Power handling capacity 20 watts (40 watts U.S.A.). Fundamental resonance 35 c/s. OR 75 c/s. Flux density 16,500 Gauss. Total Flux 185,000 Maxwells. Voice Coil 1½" diameter (4.4 cm.) Impedance 15/16 ohms. Chassis Diecast. Baffle hole diameter 11" (28 cm). Fixing holes 4 holes 0.312" diameter equally spaced on 11½" (29.8 cm.) diameter (PCD). Overall diameter 12½" (32.1 cm.) Overall depth 6¾" (15.6 cm.) A.R.U. 172 enclosure volume (internal) 7,800 cubic inches.

Price £15 0 0 (Free of P. Tax) (A)

For quality and Hi-Fi applications Audiom 51 and 61 with 35 c/s. fundamental resonance is recommended. For Public Address work 75 c/s. fundamental resonance should be used. This resonance is also a wise choice for many electric guitars and similar instruments, especially when these are being used at full power and with loudspeaker enclosures which, because of the requirements of portability are smaller than the optimum size and therefore do not provide full acoustic loading for the diaphragm. Under these conditions the Audiom 61 (75 c/s.) is the preferable choice.



Audiom 61



Audiom 81

AUDIOM 81 BASS (15 inch—25 watt—15 ohm.)

The AUDIOM 81 BASS is a rugged 15" single diaphragm Bass unit of new heavy duty construction and handling up to 25 watts. It is fitted with a massive FERROBA II magnet system and 3" voice coil this combining a shallower assembly and up-to-the-minute styling with exceptional ruggedness in use and the ability to handle high power. The rigid diecast chassis is of exceptional strength. The cone edge is plastic treated to give correct termination. Binding posts are fitted for rapid and secure connection.

Maximum power handling capacity 25 watts (50 watts U.S.A.) Fundamental resonance 25 c/s. Flux density 14,000 gauss. Total flux 269,000 maxwells. Voice coil 3" (7.6 cm.) diameter. Impedance 15/16 ohms. Chassis Diecast. Overall diameter 15½" (38.2 cm.) Overall depth 6¾" (16.0 cm.) ARU 280 enclosure volume (Internal) 9,600 cu. ins. Baffle hole diameter 13½" (33.8 cm.) Fixing holes 8 slots ¾" x ⅝" (0.95 cm x 0.8 cm) on 14½" (36.9 cm) P.C.D. Nett weight 20 lbs. (9.075 Kg.)

Price £25 6 3 (A)

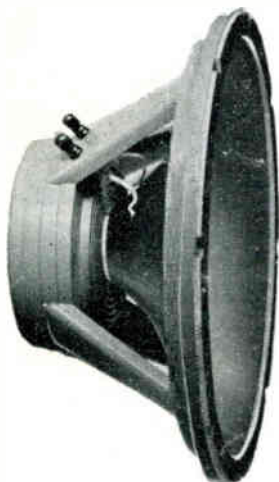
AUDIOM 91 BASS.

18" 50 WATT SINGLE CONE LOUDSPEAKER

This heavy-duty Loudspeaker is eminently suitable for very high power public address systems. Massively built so as to be able to withstand continuous handling of heavy inputs.

Bass Resonance 35 c/s. V. Coil imp. 15 Ω or 6 Ω.
Flux Density 14,500 gauss. Weight 29½ lbs. Baffle Hole dia. 16½".
Rating 50 Watts. Depth 10¾" Guitar and Public Address version also available—bass resonance 50 c/s.

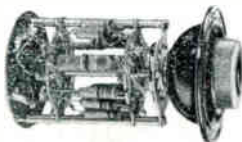
Price £28 11 10 (Free of P. Tax) (A)



Audiom 91



XO/5,000



Attenuator

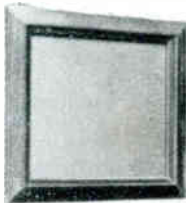
ATTENUATOR AND CROSSOVERS

	Price
Attenuator (12 db.) 8-step variable	£2 16 3
Chokes 1005 (4.5 mH), per pair	£1 17 0
Crossover Type XO/5,000 c/s.	£2 2 2
Type XO/950	£5 17 2
Type XO/950/5000	£7 14 8

(All prices free of P. Tax) (A)

LOUDSPEAKER SYSTEMS & ENCLOSURES

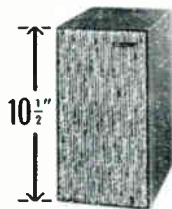
GOODMANS



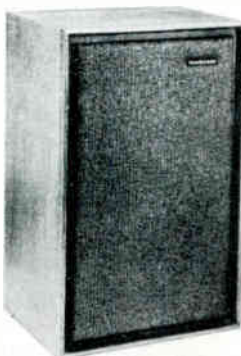
172ARU



Eleganza



Maxim



Magnum-K

GOODMANS' ACOUSTICAL RESISTANCE UNITS

The acoustical resistance unit is a rectangular panel having specific acoustic properties, and it is fitted into an aperture cut in one wall of the enclosure. This system reduces the cone resonance both in amplitude and frequency and eliminates all serious resonances above this frequency. As a consequence, transient characteristics are improved and harmonic and inter-modulation distortion levels are reduced.

Cat No.	Loudspeaker Type:	Price
180ARU	One Axiom 80	3 11 3 (A)
280ARU	Two Axiom 80's or Audiom 80B	3 11 3 (A)
480ARU	Four Axiom 80's or Audiom 90B	4 4 0 (A)
172ARU	For use with 12" range	3 11 3 (A)

(All prices free of P. Tax)

GOODMANS ELEGANZIA

Range 35-15,000 c/s. Power handling 15 watts. Impedance 15/16 ohms. Bass Loudspeaker 12" with Suprhoam diaphragm. Mid-range and high frequencies. Back loaded sealed direct radiator. Crossover L/C Network at 900 c/s. Enclosure Acoustically sealed so that bass diaphragm operates on 'air cushion'. Dimensions: 27" high x 20" wide x 6 1/4" deep. Finish Satin walnut, scratch and heat resistant or Teak.

Price £27 10 0 (Free of P. Tax) (B)

GOODMANS MAXIM

True High Fidelity from the most compact loudspeaker system ever! To make all this come true has involved the most exhaustive investigations into diaphragm behaviour and electro-magnetic control characteristics. The end result is two tiny precision direct radiator drive units with the most unusual capabilities. Quite apart from their ability to handle power, they cover the frequency range with less deviation from level response than almost any other High Fidelity Loudspeaker.

These 'mighty midget' drivers were developed exclusively for use in an enclosure no larger than a stout book—so that in this sized housing they are giving optimum results. In fact, if they were to be housed in anything larger, performance would suffer.

It has taken a long time for even Goodmans expert and experienced Engineers to achieve results like this, so now we ask only one thing. Give it a good signal. In return it will give you a good sound—very good. No problems in finding room for it—just move a couple of books.

Externally too, the sturdy little MAXIM'S enclosure is meticulously finished, and is polished on all sides so it can be used upright or horizontally.

Vital Statistics: Dimensions: 10 1/2" x 5 1/4" x 7 1/4". Frequency range: A clear clean 45-20,000 c/s. Power handling: No weakling this at 8 watts.

Available in either Walnut or Teak finish to order.

Price £15 0 0 plus £2 10 6 P. Tax. Total £17 10 6 (B)

GOODMANS MAGNUM-K HIGH FIDELITY LOUDSPEAKER SYSTEM

The MAGNUM-K is the latest and most exciting result of Goodmans' many year experience in low distortion wide-range loudspeaker systems. Originally designed to a very high standard for monitoring studios, the MAGNUM-K is now released to bring these same standards to the audio enthusiast at home.

It is a 3-way system, and although reasonably compact (11 1/4" x 15" x 24") no performance compromises have been accepted. Every detail that could contribute to really accurate sound reproduction has been included.

Dimensions: 15" x 24" x 11 1/4" deep (38cm. x 61cm. x 23.5cm.). Frequency range: 30-20,000 c/s. Power handling: 25 watts.

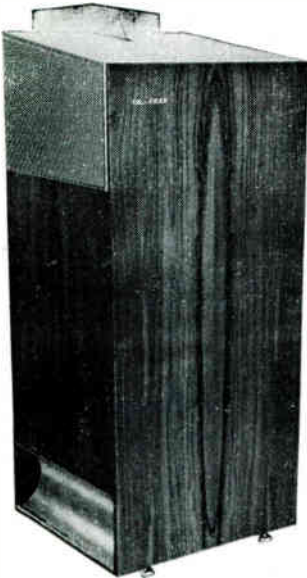
Price 35 gns. (B)

**SEE PAGE 38 FOR LATEST GOODMANS
INTRODUCTION "MEZZO LOUDSPEAKER"**

LOUDSPEAKER SYSTEMS & ENCLOSURES

LOWTHER

LOWTHER ACOUSTA TWIN ENCLOSURE



Acousta Twin Enclosure

The Lowther Acousta Twin is the only design of its kind in the world. It is designed to reverse the accepted Blumlein principle for stereophonic recordings, namely when two microphones are placed at a central point and angled to collect sound from a given area. The sound pattern from the Lowther Acousta twin will be of the same order, with the concentration of sound in the central area, giving the feeling of the original. The listener has complete freedom of listening whether in the centre, left or right of the speaker. Reproduced orchestration gives a wonderful feeling of envelopment with crescendo, whilst a solo voice remains its normal size and retains position.

The Lowther Acousta Twin will not give the listener 'divided' music or reproduction with a hole-in-the-middle in any circumstances. The blending of sound and distribution through the four special apertures is a most important feature, providing presence, balance of sound, naturalness, and complete lack of gimmick or listening fatigue.

The Lowther Acousta Twin reproducing monaural sound (single or double amplifying channels) behaves in the same way as the stereoscope, whereby two nearly identical pictures or prints placed at a critical lateral distance apart, when viewed, will give the illusion of three dimensions. The placement of the Lowther P.M. Drive Units, together with the acoustic distribution of the Acousta Twin enclosure, gives a panoramic effect which is very comparable with the visual, and most satisfying.

Absences of point source gives complete freedom of listening position and no listening fatigue. Complete audio balance is maintained at all listening levels, a most important feature; and like the Acousta has the ability to faithfully reproduce attack and timbre. Due to the high efficiency of the double bass exponential horn drive feature, it is usually necessary to retard the bass control on monaural listening. Side deflector wings may be fitted if the Twin is mainly used for monaural reproduction and set at an angle of 45° to the body.

Price, Enclosure only £43 0 0 (C)

LOWTHER ACOUSTA ENCLOSURE



Acousta Enclosure

The Acousta P.M.6 Drive Unit combination has now established itself beyond all doubt, for an enclosure of its size, now reduced to 14½" deep, 18" wide and 33" high, has no equals for its high degree of definition and balance of sound throughout the entire audio frequency range.

It is indeed very pleasant to be able to readily distinguish between the close sounding wood wind instruments as well as the stopped and unstopped strings of bass and double bass sections of the orchestra. The volume level at which this combination is played is completely immaterial, and so enables volume level required for monitoring purposes to be readily set without fear of altering balance. The efficiency is of the order of 25%.

The enclosures are free standing, offering optimum performance at all times on single channel working or complete freedom of placement when used double channel mono or as reproducers of stereophonic programme material. Wide dispersion of sound is attained due to the stabilizer fitted to the P.M.6 Drive Unit, which also prevents high directional effect which causes listening fatigue.

We can add nothing to the reports as published by the various magazines on this outstanding combination of which we are naturally proud.

Price, Enclosure only £21 0 0 (C)

LOWTHER CORNER ACOUSTA ENCLOSURE



Corner Acousta Enclosure

The Corner Acousta Enclosure is a further development of our P.M.6 Acousta folded horn technique, and of no mean overall performance and achievement. Designed to stand facing into a corner of the room or a right angled structure, the distribution of middle and high frequencies being indirect gives a spacious sound, but not lacking in definition due to the remarkable performance of the Lowther P.M.6 Drive Unit.

The folded exponential bass horn, 7' 6" in length, is close coupled to the drive unit and terminates in two vertical orifices, which couple to the side walls of the room, and so form the final horn flare in conjunction with the sides of the enclosure. This final flare feature enables a low frequency performance to be attained as would otherwise be impossible with such a small enclosure 9½" wide.

The enclosure as illustrated is 32" high, 18" deep and 9½" wide, and is available in our usual range of veneers and finishes. The enclosure can be fitted with 6" shelves mounted one on either side to assist in decor, being used as bookshelves, etc., without impeding performance. The performance single channel is very well balanced, easy to listen to due to its indirect distribution, whilst two units for stereophonic reproduction gives a very broad sound, high degree of separation without the hole in the middle effect.

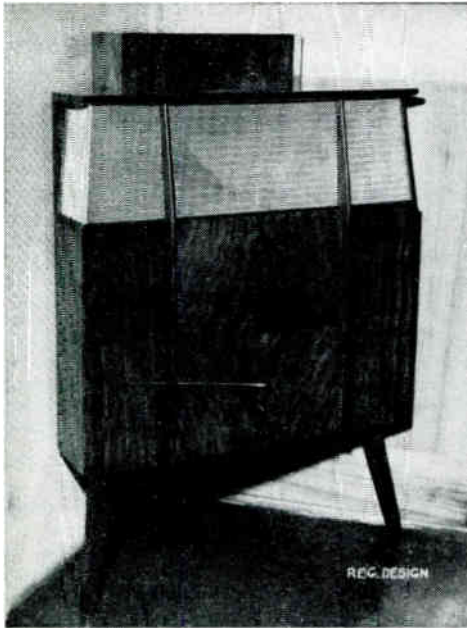
Price, Enclosure only £21 0 0 (C)

See Page 36 for Lowther Drive Units.

LOUDSPEAKER SYSTEMS & ENCLOSURES

LOWTHER

LOWTHER CORNER REPRODUCER T.P.I.



Corner Reproducer T.P.I.

The Lowther Corner Reproducer, type T.P.I., has established itself over the years as being second to none, and is still one of the most outstanding electro-acoustic developments.

The Lowther high flux drive unit-horn combination as a principle for sound reproduction is no longer challenged but accepted, and the T.P.I. Reproducer is our finest example. The unique design of the P.M.3 Drive Units rear chamber orifice couples to the 8' 6" folded exponential bass horn, reproducing bass register frequencies free of resonance, restoring the true meaning of the word "timbre".

The middle and high frequencies being actuated by the same speech coil as low frequencies are segregated by compliances throughout the twin diaphragm structure, ensuring that fundamental to harmonic relationship over the audio range is preserved. The higher order of harmonic content is further assisted by the function of the Lowther full stabilizer, which not only prevents interference and cross talk within the inner cone, but its contour together with that of the inner cone is also designed as to form a short horn. This feature extends the useful band pass by raising the efficiency of frequencies emitted by the speech coil direct, and furthermore prevents inner cone breakup under transient conditions.

All these and many other features combine to make the T.P.I. so outstanding. It should be treated, therefore as a musical instrument rather than just a "loudspeaker". Very much care and detail has gone into the design and manufacture in order to achieve such definition and overall quality of reproduction. Workmanship throughout is executed by skilled craftsmen, thus ensuring that both performance and appearance are of the highest order.

Dimensions: Height in corner 47", Height front edge 42", Corner to front edge 23", Corner along side of wall 23", Width of front 32", Leg height 12". Side wall to front edge 7", Nett weight 90 lbs.

Price T.P.I. Reproducer Model A-D	...	...	...	£108	0	0	(C)
" B	...	...	...	£128	0	0	(C)

LOWTHER AUDIOVECTOR ENCLOSURE

Lowthers audiovector enclosure is yet another compound horn enclosure for reproduction of speech and music. The enclosure is a free standing or wall type cabinet contemporary in appearance and designed to be used in conjunction with either of the famous Lowther Drive Units. Details of performance of this combination will increase with increase of gap flux but the general presentation of spacious sound will be common with all Units.

Once again Lowther engineers have mastered full range dynamic attack with their wonderful drive unit-horn combination. In studio application, stereo reproduction with two 'Audiovectors' fitted with drive unit type P.M.4 is utterly astounding. The upwards facing horn of special hard plaster cast construction for medium and high frequencies prevents unwanted resonance arising, and adds a clarity which is customary to "Lowther Sound". Efficiency is of course, very high, and will finally depend upon which drive unit is fitted. Only a few milliwatts are necessary for small studio monitoring with full details at all levels. Whilst for full dynamic range the units may be connected to any power amplifier of tens of watts output, 20 watts of peak power integrated programme material would be considered a maximum requirement.

Performance: High frequency cut-off depending upon unit fitted; low frequency horn cut-off 35 c/s. Overall efficiency 25% P.M.6s. 45% P.M.4. Recommended drive unit, P.M.4, with full stabilizer. Size 26½" wide, 19" deep, 34" high. Finishes Rosewood/sapele. Contrasting walnut. Contrasting oak. Castors fitted with plinth base.

Price, Enclosure only	£58	0	0	(C)
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Audiovector Enclosure

STENTORIAN

STENTORIAN 'CLUMBER' LOUDSPEAKER SYSTEM TYPE 912C



Clumber 912C

Specification

Unit: Cone diameter 9", Pole diameter 1", Flux density 12,000 gauss, Total flux 47,400 maxwells, Impedance 15 ohms., Die cast chassis. Cabinet dimensions: Width 25", Height 11", Depth 11½", Weight, complete 20 lbs.

Price	...	£13	16	5	plus	£2	6	7	P. Tax.	Total	£16	3	0	(B)
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See Page 36 for Lowther Drive Units.

LOUDSPEAKER SYSTEMS & ENCLOSURES

GOODMANS

GOODMANS MEZZO

Now completing the famous 'M' range from Goodmans—the MEZZO. In both price and size the Mezzo comes between the first pocket-sized High Fidelity reproducer ever—the Maxim, and the champagne class Magnum-K. MEZZO is the Goodmans bookshelf reproducer— $10\frac{3}{4}'' \times 18\frac{1}{4}'' \times 8''$ deep, handling a generous 15 watts of power and giving a clear clean 40-20,000 c/s. frequency range. It contains two new specially developed and patented loudspeakers, a long-throw 8" bass mid range—the smoothest of its size ever produced—and a sealed back 3" treble unit matching in quality. The L.C. crossover network operates at 2,200 c/s.

Specification—Dimensions: $10\frac{3}{4}'' \times 18\frac{1}{4}'' \times 8''$ deep. Frequency range: 40-20,000 c/s. Power: 15 watts (30 watts U.S.A.). Impedance: Suitable for 8-15 ohms. amplifiers. Distortion: Less than 1% total harmonic at 55 c/s. and above for sound pressure level of 80 dB. at 6 ft. Finish: Hand rubbed Teak or Walnut to order.

Price £22 9 3 plus £3 5 9 P. Tax. Total £25 15 0 (B)



CELESTION

CELESTION DE LUXE MODEL 20W CX2012

Overall frequency response: 30-18,000 c/s. Power handling capacity: 20 watts British 40 watts American. Fundamental resonance frequency: 35 c/s. Crossover frequency: 4 Kc/s. Impedance: 15/16 ohms. Ceramic magnet: Flux density: 17,000 gauss. Total flux: 180,000 maxwells. Voice coils: Bass $1\frac{3}{8}''$ (44 mm.) dia. Treble (Aluminium wire) $1''$ (25 mm.) dia. Chassis (die-cast Alloy): Overall diameter: $12\frac{1}{2}''$ (317mm.) Overall depth: $5\frac{1}{2}''$ (139 mm.) Fixing holes: $4 \times \frac{5}{16}''$ (8mm.) equally spaced on $11\frac{11}{16}''$ (296 mm.) P.C.D. Baffle hole: $11''$ (279 mm.) Nett weight: 16lb. 10ozs. (7.5kg.). Gross weight (including packing): 19lb 8-6 kg.).

20 watt, 12" Co-Axial.

Price £16 10 0 (A)

CELESTION STANDARD MODEL 15 W. CX1512

Overall frequency response: 30-15,000 c/s. Power handling capacity: 15 watts British 30 watts American. Fundamental resonance frequency: 35 c/s. Crossover frequency: 4 Kc/s. Impedance: 15/16 ohms. Ceramic magnet: Flux density: 13,000 gauss. Total flux: 88,000 maxwells. Voice coils: Bass: $1\frac{3}{8}''$ (44 mm.) dia. Treble: $\frac{3}{4}''$ (19 mm.) dia. Chassis (Die-cast Alloy): Overall diameter: $12\frac{1}{2}''$ (317 mm.) Overall depth: $5\frac{1}{2}''$ (139 mm.) Fixing holes: $4 \times \frac{5}{16}''$ (8mm.) equally spaced on $11\frac{11}{16}''$ (296mm.) P.C.D. Baffle hole: $11''$ (279 mm.). Nett weight: 12 lb. 2 oz. (5.5kg.) Gross weight (including packing): 14lb. 8 oz. (6.5kg.)

15 watt, 12" Co-Axial

Price £11 10 0 (A)

DITTON 10

Enclosure

Type: Infinite baffle (totally enclosed box). Size: $12\frac{3}{4}'' \times 6\frac{3}{4}'' \times 8\frac{1}{2}''$ ($323 \times 171 \times 203$ mm.) Weight (complete): 13lbs. (5.89 kg.) net. Overall frequency response: 35-15,000 c/s. (see below). Fundamental resonance: 70 c/s. Damping: $Q=0.7$. Power handling capacity: 10 watts r.m.s. Impedance: 15 ohms. Crossover: half-section, four-element LC network. Crossover frequency: 3,500 c/s.

Bass Drive Unit

Size: $5''$ (127 mm.) diameter. Excursion: $\frac{1}{2}''$ (12 mm.) maximum. Fundamental resonance in free air: 30 c/s. Frequency response: 35-3,500 c/s. (in enclosure). The Frequency Response is level ± 2 dB. 90-3,500 c/s. and falls at 12dB./octave below 80 c/s.

H.F. Drive Unit

Type: Moving coil pressure. Size: $1\frac{1}{2}''$ (38 mm.) diameter. Frequency response: 3,500-15,000 ± 2 dB. (in enclosure).

10 watt Compact System.

Price ... ~~16-13-2~~ plus ~~2-14-10~~ P. Tax. Total ~~18-15-0~~ (A)

LOUDSPEAKER SYSTEMS & ENCLOSURES



Fane H.F. Unit

FANE

FANE HIGH FREQUENCY UNIT

Pressure type high note unit. Power handling 15 watts peak.
Flux density 17,000 gauss. Frequency range 1,500-18,000 c/s.
Matching impedance 15 ohm.

Cat. No. 301.

Price £3 15 0 (Free of P. Tax) (A)

2X1 Crossover Unit

Price £3 0 0 (Free of P. Tax) (A)

FANE 12" HEAVY DUTY LOUDSPEAKERS MODELS 122/10, 122/10A, 122/14A, 122/17, 122/17A

	Model 122/10	Model 122/10A	Model 122/14A	Model 122/17	Model 122/17A
Dia. of Magnet Pole	2"	2"	2"	2"	2"
Flux density of Magnet, gauss	10,000	10,000	14,000	17,000	17,000
Total lines	100,000	100,000	186,000	226,000	226,000
Power Handling	20	20	22	25	25
Frequency Response	c/s. 30—5,000	30—15,000	30—15,000	25—6,000	30—17,000
Input Impedance ...	Ohms. 15	15	15	15	15
Main Resonance ...	c/s. 40	40	30	30	30
Voice Coil Winding Material	Copper	Aluminium	Aluminium	Copper	Aluminium
Cone	Single	Dual	Twin	Single	Twin
Max. overall diameter	12 $\frac{3}{8}$ "	12 $\frac{3}{8}$ "	12" diameter—12 $\frac{3}{8}$ " over mounting lugs		12 $\frac{3}{8}$ "
Height	4 $\frac{1}{8}$ "	4 $\frac{1}{8}$ "	4 $\frac{11}{16}$ "	4 $\frac{7}{8}$ "	4 $\frac{7}{8}$ "
Mounting	4 holes $\frac{1}{4}$ " dia. on pitch circle 11 $\frac{3}{8}$ " dia.				
Baffle hole dia. ...	11"	11"	11"	11"	11"
Nett Weight Lbs.	5	5	7	10 $\frac{1}{2}$	10 $\frac{1}{2}$
Price (carriage paid in U.K.)	£5 5 0 (A)	£6 6 0 (A)	£10 10 0	£11 17 6	£12 17 6

The Model 122/10 is normally supplied with a main resonance of 40 c/s. for use as a bass reproducer. It can be supplied, on request with a cone giving a resonance of 70 c/s. which is very suitable for the rhythm electric guitar.

The Model 122/10A is normally supplied with a main resonance of 40 c/s. for use as a full range speaker. It can also be supplied with a cone giving a resonance of 70 c/s. when it is very suitable for the lead electric guitar.

Both models are built with robust cast aluminium chassis, and can be supplied to special request with bi-filar wound voice coils giving a 4 ohm. input impedance without the usual loss in efficiency.

FANE 15" and 18" EXTRA HEAVY-DUTY LOUDSPEAKERS MODELS 153 and 183 3" VOICE COILS—CERAMIC MAGNETS

	Model 153	Model 183
Diameter of Magnet Pole	3"	3"
Flux density	14,500 gauss	14,500
Total Flux	375,000 maxwells	375,000
Power Handling—Watts	40 R.M.S.	60
Voice Coil Winding	Copper	Copper
Cone	Single	Single
Frequency Response	30—3,500 c/s.	20—3,000
Input Impedance	15 ohms.	15
Main Resonance	40 c/s.	30
Chassis diameter	15"	18"
Diameter over fixing lugs	15 $\frac{1}{4}$ "	18 $\frac{1}{4}$ "
No. of mounting holes	4	8
Diameter of mounting holes...	$\frac{1}{8}$ "	$\frac{1}{8}$ "
Pitch circle diameter of mounting holes	14.67"	17 $\frac{1}{4}$ "
Baffle hole diameter	13 $\frac{1}{2}$ "	16 $\frac{1}{2}$ "
Overall height	6 $\frac{1}{4}$ "	7 $\frac{1}{8}$ "
Nett Weight	20 lbs.	22 lbs.
Price (Carriage paid in U.K.)	£18 18 0 (A)	£25 4 0 (A)

These two models have very large ceramic-type magnet systems with 3" diameter pole pieces. They are built with massive cast aluminium chassis and are ideal for high power applications such as the Electric Organ, Bass Guitar, or the bass unit in a large Hi-Fi system.

The voice coils are built with a special epoxy-type resin cement which gives great strength and permits the handling of extreme load conditions.

LOUDSPEAKER SYSTEMS & ENCLOSURES

TANDBERG

4 ohm. Loudspeakers ideally suitable for Transistor Amplifiers

HI-FI SYSTEM MODEL TAN 8

Hi-Fi System 114/116/8 designed for perfect reproduction of the entire audible range from 45 c/s. to 16,000 c/s. with high efficiency and capable of dealing with input power up to 20 watts.

The HT116 Tweeter is co-axially mounted in front of the large Woofer. An efficient filter network is used, cross-over at 3,000 c/s.

Dimensions: Length 27½". Height 13½". Depth 11¼". Internal volume: 50 litres. Loudspeaker chassis: HT 114 with Tweeter HT116. Woofer 10". Tweeter 2.5". Impedance: (at 400 c/s.) 4 ohms. Maximum continuous input: 15 watts. Efficiency (Radiating from one side only): 4%. Bass resonance frequency 65 c/s. Frequency response: 45-16,000 c/s.

Price Available in Teak finish only

£26 15 0 plus £4 9 7 P. Tax. Total £31 4 7 (B)

HI-FI SYSTEM MODEL TAN 7

This model is specially designed to accommodate the full output of a 10 watt amplifier and provide maximum power and outstanding frequency response throughout the entire range.

The loudspeaker incorporates a co-axial system with a unit for the lower and medium frequencies, with a Tweeter mounted in the centre of it and taking care of frequencies above 3,000 c/s. The low bass resonance and long magnetic field ensures excellent bass reproduction.

Dimensions: Length 20½". Height 10¾". Depth 9¾". Internal volume: 25 litres. Loudspeaker chassis: HT:112 with Tweeter. Woofer 10" x 6". Tweeter 2". Impedance (at 400 c/s.) 3.2 ohms. Maximum continuous input: 8 watts. Efficiency (radiating from one side): 2.5%. Bass resonance frequency: 85 c/s. Frequency response: 60-16,000 c/s.

Available in Teak finish only

Price £19 16 8 plus £3 5 4 P. Tax. Total £23 2 0 (B)

EXTERNAL LOUDSPEAKER MODEL TAN 9

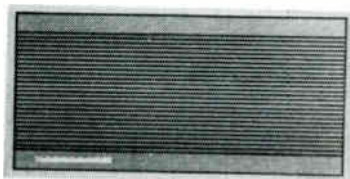
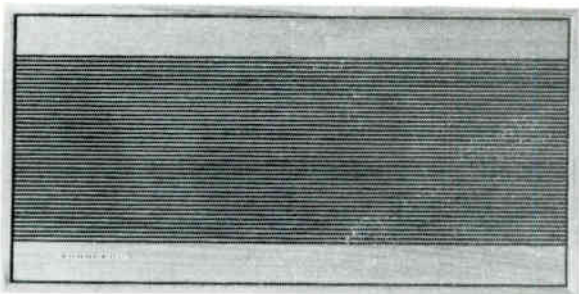
A first class extension loudspeaker for the kitchen, the living room, or other parts of the house. Incorporates loudspeaker chassis HT110 which has a dual cone for wide range reproduction.

The cone has an extremely low resonance, is of moderate size, and has a long concentrated field ensuring minimum distortion at low frequencies.

Dimensions: Length 14¼". Height 10¾". Depth 9¾". Internal volume: 8.5 litres. Loudspeaker chassis: HT 110 with dual cone. Diameter: 6.5". Impedance: (at 400 c/s.) 5 ohms. Maximum continuous input: 5 watts. Efficiency (radiating from one side only) 1.5%. Bass resonance frequency: 115 c/s. Frequency response: 80-14,000 c/s.

Available in Teak finish only

Price £11 13 8 plus £1 19 4 P. Tax. Total £13 13 0 (B)



LOUDSPEAKER DRIVE UNITS

W.B.



T359

S510 TWEETER UNIT

Recommended for use with Stentoreo loudspeaker system.

Price £1 16 7 plus 6/2 P. Tax. Total £2 2 9 (B)

MODEL T359 CONE TWEETER UNIT

High standard of reproduction when used with Stentorion 10" or 12" units. 9,000 gauss magnet. Frequency response 3,000-15,000 c/s. Voice coil impedance 15 ohms. or 5 ohms. Power handling capacity 15 watts when used with a 3,000 c/s. crossover.

Price £1 10 5 plus 5/1 P. Tax. Total £1 15 6 (B)

MODEL T.10 TWEETER UNIT

Moving coil pressure type. Gives a very high standard of reproduction when used with the HF1012, 1016 or 1214 speakers. Speech coil impedance 15 ohms. Flux density 14,000 gauss. Power handling capacity 5 watts. Dispersion angle 90°. Response 2000/15,000 c/s.

Price £5 2 0 (Free of P. Tax) (B)



T10

HF610 6" DIE CAST UNIT

10,000 gauss magnet. Handling capacity 3 watts. Frequency response 60-10,000 c/s. Bass resonance 70 c/s.

Price £2 6 5 plus 7/10 P. Tax. Total £2 14 3 (B)

HF810 8" STEEL UNIT

Handling capacity 5 watts. Frequency response 50-12,000 c/s. Bass resonance 65 c/s. 10,000 gauss magnet.

Price £2 13 8 plus 9/1 P. Tax. Total £3 2 9 (B)

HF812 8" DIE CAST UNIT

12,000 gauss magnet. Handling capacity 5 watts. Frequency response 50-12,000 c/s. Bass resonance 65 c/s.

Price £3 12 1 plus 12/2 P. Tax. Total £4 4 3 (B)



HF816

HF816 8" PERMANENT MAGNET UNIT

16,000 gauss magnet. Fitted with cambric cone, die-cast chassis and universal speech coil providing instantaneous matching at 3, 7.5 and 15 ohms. Handling capacity 6 watts. Frequency response 50-15,000 c/s. Bass resonance 63 c/s.

Price £5 18 6 plus £1 0 0 P. Tax. Total £6 18 6 (B)

HF1012 10" DIE CAST UNIT

12,000 gauss magnet. Handling capacity 10 watts. Frequency response 30-14,000 c/s. Bass resonance 35 c/s. Universal impedance coil for 3, 7.5, 15 ohms.

Price £4 6 8 plus 14/7 P. Tax. Total £5 1 3 (B)

HF1016 10" PERMANENT MAGNET UNIT

16,000 gauss magnet. Fitted with cambric cone, die-cast chassis and universal speech coil providing instantaneous matching at 3, 7.5 and 15 ohms. Handling capacity 10 watts. Frequency response 30-15,000 c/s. Bass resonance 35 c/s.

Price £6 18 5 plus £1 3 4 P. Tax. Total £8 1 9 (B)

Price HF1016 New Type £8 17 7 plus £1 9 11 P. Tax. Total £10 7 6 (B)

HF1216 12" PERMANENT MAGNET UNIT

16,000 gauss magnet. Fitted with cambric cone, die-cast chassis and aluminium voice coil. Handling capacity 15 watts. Frequency response 20-16,000 c/s. Bass resonance 37 c/s.

Price £18 3 9 (Free of P. Tax) (B)

HF1214 12" UNIT

Incorporating 14,000 gauss magnet. Handling capacity, 15 watts. Frequency response 25 c/s.—14,000 c/s. Bass resonance, 39 c/s. Die cast chassis.

Price £11 17 3 (Free of P. Tax) (B)

CROSSOVER NETWORKS

Type CX3000 For use with Models T10 and T12, 3,000 c/s. £1 16 6 (Free of P. Tax) (B)

Type CX1500 For use with No. T816, 1,500 c/s. £2 6 3 (Free of P. Tax) (B)

Type CX500 For use with 3-speaker systems, 500 c/s. £1 11 9 (Free of P. Tax) (B)

CONSTANT IMPEDANCE VOLUME CONTROL

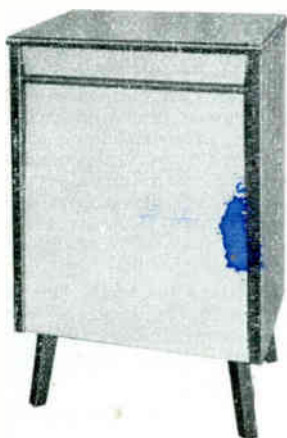
For installations where the impedance presented by the load must be constant whilst the volume level fed into it is varied. T-pad type attenuator having 10 steps of attenuation. 3, 8 or 15 ohms.

Price £1 5 6 (Free of P. Tax) (B)



HF1012

LOUDSPEAKER ENCLOSURES & EQUIPMENT CABINETS



Console Cabinet C15

THORESBY BASS REFLEX CONSOLE CABINET (C15)

This cabinet is designed for Stentorian 8" or 10" Loudspeakers and there is also provision for fitting tweeter unit if desired.

Size: Height 31" x Width 19 $\frac{1}{2}$ " x Depth 18".

Price in Mahogany £14 3 3 (Free of P. Tax) (C)

Price in Walnut (C15A) £14 11 6 (C)

THORESBY BASS REFLEX CORNER CONSOLE (C14)

Specially designed to utilise the natural acoustic properties of walls, it is ideally suitable for use where space-saving is a consideration. It is sturdily constructed to take every advantage of Stentorian 8" or 10" units, with provision for Tweeter Unit.

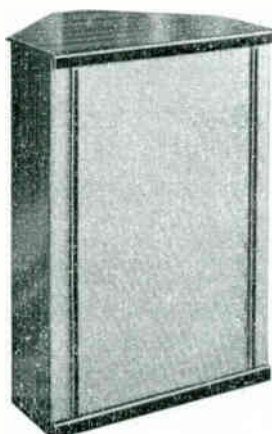
Size: Height 31" x Width 19 $\frac{1}{2}$ " x Depth 17".

Price in Mahogany £13 1 3 (Free of P. Tax) (C)

Walnut (C14A) £13 6 9 (C)



Corner Console C14



Corner Console C3

SENIOR BASS REFLEX CORNER CONSOLE (C2)

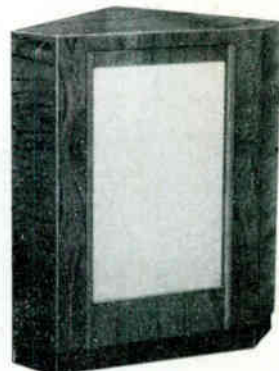
Carefully designed to ensure superb quality of reproduction when used in conjunction with Stentorian 10" or 12" units. Provision is also made for Tweeter Unit, if required. Measures (approx.) 35" x 30" x 19".

Price £15 13 6 (Free of P. Tax) (C)

JUNIOR BASS REFLEX CORNER CONSOLE (C3)

A contemporary-style cabinet, specially designed to give a maximum reproduction quality from Stentorian 8" or 10" units, with provision for Tweeter Unit, if required. Measures 33" x 22 $\frac{1}{2}$ " x 18 $\frac{1}{2}$ ".

Price £12 13 0 (Free of P. Tax) (C)



Corner Console C2

THORESBY SLIM LINE CABINETS (C17)

This enclosure has been designed to accommodate any of the Stentorian range of 8" or 10" units. Provision is made for the addition of either pressure or cone type tweeter and a crossover may be used.

The cabinet is substantially constructed and acoustically proportioned to give a balanced reproduction with the chosen units. Available in Mahogany or Walnut (C17A). Height 31" x Width 20" x Depth 9 $\frac{1}{4}$ ".

Price in Mahogany £11 5 6 (C)

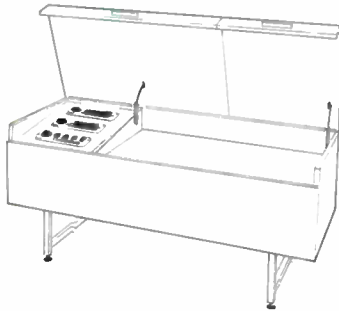
Price in Walnut C17A £11 11 0 (C)



HI-FI EQUIPMENT ENCLOSURES



The Anglian Mk. II



Open view of Anglian



Huntingdon Mk. II



The Southdown

THE ANGLIAN MK. II

This superbly styled cabinet just re-designed now offers even greater versatility than ever before. It provides for turntable or tape deck; tape deck of complete tape recorder in its case. All controls are concealed from view, yet are easily accessible when needed. Handles are finished in Satin anodized aluminium and the legs are finished in matt black with height adjusters. Additional features; Fitted lock. Easily removable fascia panel has been undercut to receive the more popular hi-fi tuners and pre-amps. etc., simplifying the installation considerably; Caged base in control section giving additional space for housing the more larger equipment. Available in choice of Dark Australian Walnut and Teak finishes. (Optional extra: Heat shield for Quad installations). Suitable for most leading equipment including Quad, Leak, Rogers, Armstrong, T. V. Cox, Chapman, etc.

Overall dimensions: 55 $\frac{1}{2}$ " wide, 21 $\frac{1}{4}$ " deep, 25 $\frac{1}{2}$ " high (on legs). Internal dimensions: Amplifier and Control Section: 15 $\frac{3}{4}$ " wide, 19 $\frac{3}{4}$ " deep, 12 $\frac{1}{2}$ " high. (Cage giving additional space if required). Combined Motor and Tape Section: 37" wide, 19 $\frac{3}{4}$ " deep, 4" above, 8 $\frac{3}{4}$ " below. (Motor board height variable).

Price 39 gns. (C)

ACCESSORY CABINET

A useful and attractive storage cabinet styled to match the "Huntingdon" and "Anglian" cabinets with same choice of finishes. Will house most tape recorders, tape, records, accessories etc. Internal dimensions: 20 $\frac{3}{4}$ " wide, 21 $\frac{1}{4}$ " deep, 13 $\frac{3}{4}$ " high.

Price £14 13 0 plus £1 2 0 P. Tax. Total £15 15 0 (C)

HUNTINGDON MK. II

A smaller version of the "Anglian" without right hand section. Choice of finishes and exterior trim as for "Anglian". Overall dimensions: 35 $\frac{3}{4}$ " wide, 21 $\frac{1}{4}$ " deep, 25 $\frac{1}{2}$ " high (on legs). Amplifier and Control Section: As for "Anglian" Motorboard: 17 $\frac{3}{4}$ " wide, 19 $\frac{3}{4}$ " deep, 4" above, 8 $\frac{1}{4}$ " below.

Price 29 Gns. (C)

SOUTHDOWN

A smaller version of the 'Chiltern' without right hand section, but with same facility for Stereo 30. Choice of finishes and all exterior trim as for 'Chiltern'.

Overall dimensions: 34" wide, 21" deep, 25" high (on legs). Main Amplifier Section, Instrument Fascia and Motor-Board as for 'Chiltern'.

Price 29 Gns. (C)

HI-FI EQUIPMENT ENCLOSURES



The Chiltern



Open view of Chiltern

THE CHILTERN

The major model in the GKD range for Leak equipment. An extremely handsome cabinet designed to accommodate turntable or tape deck; tapedeck or complete tape recorder in its case. It has a sprung motorboard and all knobs are concealed from view yet are easily accessible when needed due to a unique spring-loaded drawer which hinges forward as required. It has been designed to harmonise with the Leak Sandwich speaker. Available in a choice of Dark Australian Walnut and Teak finishes. Handles and all exterior trims in satin anodised aluminium. The attractive legs are fitted with height adjusters. Designed exclusively for all current Leak equipment including the Stereo 30*.

Overall dimensions: 54" wide, 21" deep, 25" high (on legs). Internal dimensions: Main amplifier section: 13½" deep, 12½" wide, 13½" high. Instrument Fascia: 31" x 5½", ¾" clearance above ¾" fascia panel, 8¾" below. Motor board: 18½" wide, 19½" deep, 4" above, 8½" below. Tape Section: 20½" wide, 19½" deep, 4" above, 8½" below.

Price 39 gns. (C)

*Stereo 30 users are able to house this instrument in the right hand side of the fascia, leaving the main amplifier section free for storage purposes. Conversion kits are available consisting of spare lid stay, handle and blanking pieces. Price 2 gns.

ACCESSORY CABINET

A useful and attractive storage cabinet, is available which is styled to match the "Southdown" and "Chiltern" cabinets with same choice of finishes. Will house most tape recorders, tape, records, accessories etc. Internal dimensions: 20½" wide, 19½" deep, 13½" high.

Price £14 13 0 plus £1 2 0 P. Tax. Total £15 15 0 (C)

DUETTE

A revolution in Hi-Fi cabinets. Space saving—can be situated in almost any recess or even used as room divider. Eye level fingertip control, pick-up away from hum field—and it will accommodate almost any integrated amplifier, tuner, turntable or tape deck, tape deck or complete tape recorder. Quad valve amplifiers can be accommodated Available in choice of walnut or teak finishes.

Overall dimensions: 58" x 38" x 21". Lower unit (internal): 11" x 34" x 19". (Motorboard Height Variable). Upper Unit (internal): 7¼" x 33¾" x 13¼". Fascia Panel: 34" x 7¼".

Price 45 Gns. (C)



Equipment Console C16



Duette

THORESBY HI-FI EQUIPMENT CONSOLE (C16)

This takes most makes of tape-deck or record player, amplifier, pre-amplifier control unit and radio tuner. Size: Height 31" x Width 19½" x Depth 18"

Price in Mahogany £16 10 0 (Free of P. Tax) (C)

Price Walnut (C16A) £17 1 0 (C)

PICK-UPS & CARTRIDGES



Decca Mk. I Super

DECCA MK. I SUPER PICK-UP ARM

This arm supercedes original Mk. I arm and is specially designed for a playing weight of 2 grams. for Mk. III head. Like the Mk. I this is damped with viscous fluid.

Price £6 15 9 plus £1 1 9 P. Tax. Total £7 17 6 (A)

Mk. I arm suitable for Mk. I and Mk. II heads and 78 r.p.m. and L.P. mono heads. Tracking weight 3½ grams.

Price £4 10 6 plus 14/6 P. Tax. Total £5 5 0 (A)

Magnetic Bias Compensator

Price ... 18/1 plus 2/11 P. Tax. Total £1 1 0 (A)

DECCA RESTYLED PROFESSIONAL ARM

The Restyled Professional Arm, when used in conjunction with the ffs Mk. III head, creates a combination unrivalled throughout the world for quality of sound reproduction.

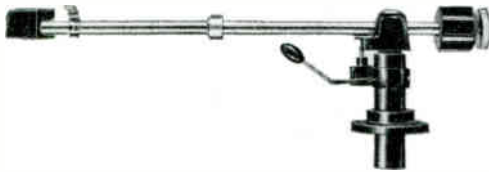
This unique arm possesses many outstanding features. They are both coarse and fine counterweight adjustments for achieving perfect dynamic balance. An additional sliding weight in conjunction with an accurately calibrated scale allows for adjustment of stylus pressure to suit all the heads in the ffs range. A lowering device is incorporated, and a degree of bias compensation is another feature of the design. The pick-up leads are brought out to a 4-pin socket at the base of the pillar. This allows for ease of installation and overcomes the danger of added torsional forces caused by twisted pick-up leads. This completely supercedes original Professional Arm at no difference in price.

Price less Mk. III Head

£15 16 8 plus £2 10 10 P. Tax. Total £18 7 6 (A)

Price complete with Mk. III Stereo Head (note saving of 3 gns.)

£28 19 1 plus £4 12 11 P. Tax. Total £33 12 0 (A)



Decca Professional

DECCA ffs STEREO HEAD Mk. I

Designed for use with Decca arm but can also be used with appropriate adaptor on S.M.E. precision arms. Separate heads of identical fitting are available for Standard and L.P. microgroove records and these are detailed below.

STEREO ffs HEAD. Output 1.4 mV./cm./sec. Impedance 3,000 Ω Frequency response 50-15,000 c/s. ± 1dB. Playing weight 3.5 grams. Cross talk 20 dB. at 1 K/s. Diamond stylus 0.0005" Coding D.

Price ... £11 15 3 Plus £1 17 9 P. Tax. Total £13 13 0 (A)

MICROGROOVE ffs HEAD Diamond tip radius .001" Coding X.

Price ... £8 11 11 Plus £1 7 7 P. Tax. Total £9 19 6 (A)

78 r.p.m. ffs Head Diamond tip radius .0028" Coding Y.

Price ... £8 11 11 plus £1 7 7 P. Tax. Total £9 19 6 (A)



Decca ffs Stereo Head Mk. I

DECCA ffs STEREO HEAD Mk. II

Identical as regards fitting and connections as MKI head.

Output 1.2 mV./cm./sec. Impedance 3,000 Ω. Frequency response 40-16,000 c/s. Cross talk better than -20 dB. at 1,000 c/s. Diamond stylus 0.0005". Coding M.

Recommended playing weight 3.5 grams.

Price ... £13 2 5 plus £2 2 1 P. Tax. Total £15 4 6 (A)



Decca ffs Stereo Head Mk. II

DECCA ffs Mk. III STEREO HEAD

A magnetic Stereo Head which can be used with Mk. I Super ffs Arm, Professional Arm, and Professional (Restyled) Arm. Or with D3 SME adaptor with SME Arms. Incorporates elliptical diamond stylus. Output 1.2 mV./cm./sec. Suitable for amplifiers with sensitivity of 5 mV. Load 50K Ω Tracking weight 2 grams. Frequency response 20-16,000 c/s.

Price ... £15 16 8 plus £2 10 10 P. Tax. Total £18 7 6 (A)



Decca ffs Stereo Head Mk. III

DECCA ffs ELLIPTICAL DIAMOND MONO L.P. HEAD

A magnetic mono L.P. Head fitted with elliptical diamond stylus. Suitable for use with pick-up arms as detailed for Mk. III Stereo Head. Output 1mV./cm./sec. suitable for amplifiers with a sensitivity of 5 mV. Load 50K Ω Tracking weight 2 grams. Frequency response 20-16,000 c/s.

Price ... £11 6 3 plus £1 16 3 P. Tax. Total £13 2 6 (A)

PICK-UPS & CARTRIDGES

DECCA DERAM TRANSCRIPTION ARM

With the knowledge gained in the development of the "fss" and "Professional" pick-ups, Decca have now produced a transcription arm specifically designed to use with the "Deram" cartridge (though the cartridge can, of course, be used with the majority of other arms). The "Deram" transcription arm is, needless to say, manufacture to precision limits and the whole assembly is designed to keep the arm resonance well below the audio spectrum and is specially damped with viscous fluid to prevent shocks exciting the pick-up.

Transcription Pick-up Complete with stereo cartridge.

Price £8 11 11 plus £1 7 7 P. Tax. Total £9 19 6 (A)

Transcription Arm only.

Price £4 10 6 plus 14/6 P. Tax. Total £5 5 0 (A)



Decca Deram Transcription Arm



Decca Anti-Rumble Pick-up

DECCA ANTI-RUMBLE INTEGRATED PICK-UP

In the Decca Deram ARI pick-up the mechanical combination of arm and head has been arranged to effect directionally selective filtering which almost eliminates the most troublesome rumble frequencies without reducing any required low frequency signal. The great advantages of this purely mechanical system operating at the point of excitation as opposed to more complex devices built into the amplifiers, are not only its extreme simplicity, but also the fact that wanted and unwanted modulations even of the same frequency are mechanically separated and the unwanted filtered

while the wanted remain unimpaired. The Deram ARI pick-up arm is fitted with the transcription stereo pick-up head suitable for all stereo records and the majority of mono L.P.'s., E.P.'s. and 45 r.p.m. singles. The arm will also accept the mono L.P. and 78 r.p.m. Deram heads. Playing weight is factory pre-set at 3.5 grams, but this may be adjusted if necessary by altering the setting of the counterweight. Dimensions: Overall length 10.3". Distance from centre of turntable pin to axis of rotation of pick-up base 8". Height adjustment range. Height can be varied over a range of 1.1".

Price Complete with Stereo Cartridge

£9 19 1 plus £1 11 11 P. Tax. Total £11 11 0 (A)

ARM ONLY

£5-17-9 .. 18/9 .. £6-16-6 (A)

DECCA DERAM CERAMIC CARTRIDGE

This ceramic cartridge is manufactured in a variety of types to cater for both Mono and Stereo requirements. Output 50mV./cm./sec. (per channel). Frequency response ± 3 dB. 40 c/s.-12 Kc/s. Tracking weight 3-5 grams. (Changer type) 2-4 grams. (Transcription type).

Stereo Transcription Cartridge White outer shell—red pocket.

Price £4 1 4 plus 13/2 P. Tax. Total £4 14 6 (A)

Stereo Changer Cartridge. Black outer shell—white pocket.

Price £3 3 4 plus 10/2 P. Tax. Total £3 13 6 (A)

Mono L.P. Transcription Cartridge. White outer shell—red pocket.

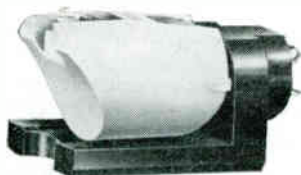
Price £4 1 4 plus 13/2 P. Tax. Total £4 14 6 (A)

Mono L.P. Changer Cartridge. Black outer shell—white pocket.

Price £3 3 4 plus 10/2 P. Tax. Total £3 13 6 (A)

Mono Std. Changer Cartridge. Black outer shell—white pocket.

Price £2 9 7 plus 7/11 P. Tax. Total £2 17 6 (A)



Decca Deram Ceramic Cartridge

ACOS HI-LIGHT STEREO PICK-UP

The 'Hi-Light' Pick-up has been designed to play records at downward pressure with the elastic limit of the disc material. No permanent deformation of the record takes place under these conditions and record wear is not measurable.

The requirements for a Cartridge to fulfil such conditions are most stringent. A very low effective tip mass is required, coupled with a high compliance.

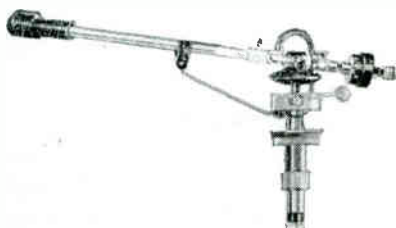
Price Arm only £12 16 0 plus £2 1 1 P. Tax. Total £14 17 1 (A)

Diamond Mono Head '001

Price £2 6 6 plus 7/6 P. Tax. Total £2 14 0 (A)

Diamond Stereo Head '005

Price £2 6 6 plus 7/6 P. Tax. Total £2 14 0 (A)



Acos Hi-Light

PICK-UPS & CARTRIDGES



Shure M3D Stereo Cartridge

SHURE M3D STEREO CARTRIDGE

A Magnetic Cartridge of excellent frequency response and channel separation for Stereo and microgroove and monaural records. Output 5mV./cm./sec. per channel. Load 47,000 Ω. Tracking weight 3-6 grams. Frequency response 20-15,000 c/s. D.C. resistance 280 Ω.

Price £7 10 0 plus £1 4 1 P. Tax. Total £8 14 1 (A)



Shure M80E Gard-a-Matic

MODEL M80E GARD-A-MATIC

The Model M80E Stereo Dynetic Cartridge is designed specifically for use with the Garrard LAB80 and Type A70 Series Automatic Turntables. The new elliptical stylus cartridge is spring mounted in a Garrard type pick-up head in such a manner that permits a maximum tracking pressure of 1½ grammes to be exerted on the record. Pressures in excess of this cause the plastic safety bumper at the rear of the cartridge to make contact with the record surface, thereby protecting the record and guarding the stylus itself against damage.

Price £18 2 6 plus £2 18 2 P. Tax. Total £21 0 8 (A)



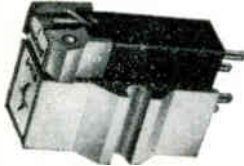
Shure M5D & M6S Mono Cartridge

SHURE M5D and M6S MONO CARTRIDGE

A Magnetic Cartridge for Mono records. M5D is for mono/L.P. records and is fitted with 0-001 diamond stylus. M6S is for Mono Std. records and is fitted with 0-003 sapphire stylus. Output 21mV. Frequency response 20-20,000 c/s. Load 27K Ω. Tracking weight 3-6 grams.

Price M5D £11 13 9 plus £1 17 6 P. Tax. Total £13 11 3 (A)

Price M6S £6 7 6 plus £1 0 6 P. Tax. Total £7 8 0 (A)

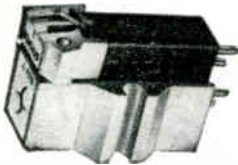


Shure M44-5 Stereo Cartridge

SHURE M44-5 STEREO CARTRIDGE

A high quality Magnetic Stereo Cartridge for use with high quality arms. Frequency response 20-20,000 c/s. Output 6mV./cm./sec. Load 47,000 Ω Tracking weight ¾-1½ grams. Fitted with 0-0005 diamond stylus.

Price £12 10 0 plus £2 0 1 P. Tax. Total £14 10 1 (A)



Shure M44-7 Stereo Cartridge

SHURE M44-7 STEREO CARTRIDGE

A high quality Magnetic Stereo Cartridge. Frequency response 20-20,000 c/s. Output 9mV./cm./sec. Load 47,000 Ω Tracking weight 1½-3 grams. Fitted with 0-0007 diamond stylus.

Price £11 17 6 plus £1 18 1 P. Tax. Total £13 15 7 (A)



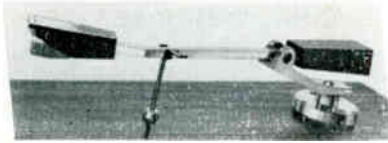
Shure M55-E Stereo Cartridge

SHURE M55-E STEREO CARTRIDGE

A Magnetic Stereo Cartridge of the highest quality incorporating an elliptical diamond stylus. Maximum tracking pressure of 1½ grams necessitates the use of transcription type arm. Frequency response 20-20,000 c/s. Output 6mV./cm./sec. Load 47,000 Ω. Tracking weight ¾-1½ grams. Diamond stylus 0-0009 frontal 0-0002 side.

Price £17 2 6 plus £2 15 0 P. Tax. Total £19 17 6 (A)

PICK-UPS & CARTRIDGES



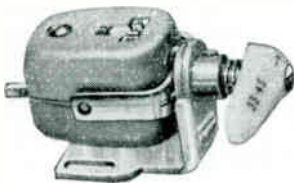
G65 Pick-up Arm



L70 Pick-up



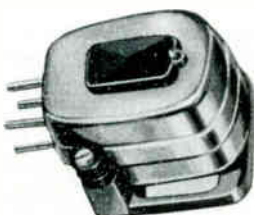
Lenco P77



Goldring S80



Goldring 600



Goldring 700 Mk. II

GOLDRING G.65

Inexpensive low mass transcription pick-up arm Counter balanced stylus pressure adjustment, low mass head shell with removable headslide accommodating all pick-up cartridges.

Price £6 6 0 plus £1 0 6 P Tax Total £7 6 6 (A)

Price HS2 Spare Headslide 10/6 plus 1/9 P. Tax. Total 12/3 (A)

GOLDRING-LENCO L70 PICK-UP

Transcription type pick-up arm of tubular metal with plug-in type head shell wired for both monaural and Stereophonic.

Suitable for use with all types of cartridges using the standard $\frac{1}{2}$ " fixing centres. Playing weight 0-15 grams, and height can be adjusted to fit all types of installations.

Price £7 7 0 plus £1 3 11 P. Tax. Total £8 10 11 (A)

PH3 Spare Head Shells.

Price £1 10 0 plus 4/11 P. Tax. Total £1 14 11 (A)

LENCO P.77

Precision engineered pick-up arm which can be balanced out in all directions. Built in lowering device and removable plug-in shell to accommodate any cartridge.

Price £25 6 0 plus £4 12 6 P Tax Total £29 18 6 (C)

PHS Spare Headshell

Price £3 5 0 plus 11/11 P. Tax. Total £3 16 11 (C)

GOLDRING 580 VARIABLE RELUCTANCE CARTRIDGE

A high quality variable reluctance Cartridge almost approaching 600 type in performance but fitted with two sapphire styli. Complete with mu-metal screen. Can be identified from 600 cartridge by finish of mu-metal screen which is dull bronze.

Output 3-2 mV./cm./sec. Load 68K Ω . Frequency response 20-18,000 c/s. Tracking weight 7 grams.

Price £4 4 0 plus 13/8 P. Tax. Total £4 17 8 (A)

GOLDRING VARIABLE RELUCTANCE CARTRIDGE 600

Similar to 580 Cartridge but designed specifically around a Diamond L.P. Stylus. A High Fidelity cartridge with flat frequency response from 20 to 20,000 c/s. Sapphire 78 r.p.m. and Diamond L.P. fitted as standard. Can be distinguished from 580 by its gold plated finish.

Output 3-2 mV./cm./sec. Load 68K Ω . Frequency response 20-21,000 c/s. Tracking weight 7 grams.

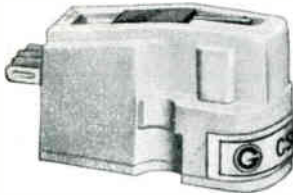
Price £8 8 0 plus £1 7 4 P. Tax. Total £9 15 4 (A)

GOLDRING 700 Mk. II STEREO CARTRIDGE

A magnetic variable reluctance type of high quality with diamond stylus for stereo records. Frequency response 40-12 Kc/s. separation 15 dB. Output 3 mV./cm./sec. Load 50K Ω . Stylus pressure 3-4 grams.

Price £7 7 0 plus £1 3 8 P. Tax. Total £8 10 8 (A)

PICK-UPS & CARTRIDGES



CS90 Ceramic Cartridge

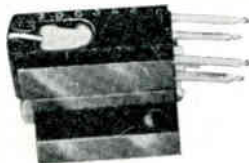
Appearance as CS90



Pickering 380A



Pickering V15



SPU-G Stereo Head

CS90 STEREO CERAMIC CARTRIDGE

A Cartridge designed to give the highest possible quality at a reasonable price. Fits all arms with standard fixing centres. Playing weight $1\frac{1}{2}$ to 3 grams. Frequency response 30-20,000 c/s. Output per channel 50 mV. at 1Kc/cm. sec. Characteristics of frequency response and separation equal to that of best magnetic cartridge.

Price £4 4 0 plus 13/8 P. Tax. Total £4 17 8 (A)

CS.91/E

Stereo Ceramic Cartridge fitted with elliptical diamond stylus. High compliance, enabling the cartridge to be tracked at 1 gram. Excellent frequency response and cross talk separation, output 20 mV.

Price £6 6 0 plus £1 0 6 P. Tax. Total £7 6 6 (A)

PICKERING-GOLDRING 380A STEREO CARTRIDGE

A high quality Magnetic Cartridge fitted with Diamond Stylus. Hermetically sealed and fully encased in mu-metal. Compatible for Stereo and Monaural records. Frequency response 20-15,000 c/s. ± 2 dB. Separation -35 dB. Output 15 mV. per channel. Stylus pressure 4-7 grams.

Price £12 12 0 plus £2 0 11 P. Tax. Total £14 12 11 (A)

PICKERING V.15.AMI

Micro Magnetic Cartridge of very low mass, giving flat frequency response with output of 1.5 mV. per cm./sec. Excellent separation. Suitable for manual as well as automatic turntables. Fully shielded against inductive hum. Push-in replaceable V-guard floating stylus assembly.

Price £9 9 0 plus £1 10 9 P. Tax. Total £10 19 9 (A)

PICKERING V.15 AMEI

Micro Magnetic Stereo Cartridge fitted with elliptical diamond. Extremely high compliance, permitting stylus pressures of as low as $\frac{3}{4}$ gram to be used. Flat frequency response and output of 1.5 mV. per cm./sec. Excellent cross talk separation and fully shielded against inductive hum pick up.

Price £13 15 0 plus £2 4 8 P. Tax. Total £15 19 8 (A)

ORTOFON SPU-G STEREO HEAD

Ortofon Stereo Moving Coil Cartridge is designed for professional use, having extremely high compliance and low inertia of the stylus armature. Cartridge fitted with Diamond Stylus. Channel separation 20-25 dB. Frequency response 20-20,000 c/s. Impedance 2 Ω . Output 0.05 mV./cm./sec. Stylus pressure 2 grams. Ortofon cartridge also available in THORENS shell for BTD125 Pick-up arm. TDI35 unit. Specify SPU/TT.

Price £18 0 0 plus £2 17 9 P. Tax. Total £20 17 9 (A)

TYPE SPU/GT

This Cartridge is identical to type SPU but incorporates the novel feature of an inbuilt matching transformer to suit input of all amplifiers.

Price £20 0 0 plus £3 4 2 P. Tax. Total £23 4 2 (A)

TYPE SPU/GTE

As above but incorporates special elliptical diamond stylus. Both types are available to special order fitted to S.M.E. ultra light shell.

Price £25 0 0 plus £4 0 3 P. Tax. Total £29 0 3 (A)

PICK-UPS & CARTRIDGES



SMG212 Pick-up Arm



SKG212 Pick-up Arm



RMG309 Pick-up Arm



S.M.E. Pick-up Arm

ORTOFON SMG212 PICK-UP ARM

Due to the special shape of the arm, turntable levelling is unnecessary. The turntable may be up to 30° out of level before tracking difficulties arise. Ball bearings are applied for both horizontal and vertical motions, assuring trouble-free performance even at the lowest possible stylus forces. Designed for the type G Shell. No other type of shell will fit into it. All ORTOFON Cartridges can be mounted into the G shell.

Price £11 0 0 plus £1 15 4 P. Tax. Total £12 15 4 (A)

ORTOFON TYPE SKG212 PICK-UP ARM

For exchangeable Heads Designed for the type G Shell. No other type of shell will fit into it. All ORTOFON Cartridges can be mounted into the G shell. The G shell is designed to take standard cartridges of other makes. Distance between disc centre and arm centre: 212 mm. Stylus pressure adjustable.

Price £7 0 0 plus 22/6 P. Tax. Total £8 2 6 (A)

ORTOFON TYPE RMG309 PICK-UP ARM

Distance between disc centre and arm centre: 309 mm. Statically balanced, stylus pressure adjustable by means of a spring.

Rubber damping between arm and counterweight. Height over mounting plate adjustable.

Price £21 0 0 plus £3 7 6 P. Tax. Total £24 7 6 (A)

TYPE RKG 309

As above but stylus pressure adjustment by means of counterweight.

Price £17 0 0 plus £2 14 8 P. Tax. Total £19 14 8 (A)

S.M.E. PRECISION PICK-UP ARM SERIES II

Compensation is provided for the force which tries to move a pick-up arm towards the centre of a record. The arm is given an opposing bias, adjustable for various tracking pressures, which balances the stylus centrally in the groove so that it does not favour one wall.

Precision ball races and knife-edge bearings reduce pivot friction to approximately .020 gramme measured at the stylus. Cartridges can be used at optimum stylus pressure without the excess weight otherwise required to overcome friction in the pivots.

A carefully chosen offset minimises distortion due to tracking error. The balance system permits accurate longitudinal and lateral balance of cartridges from 7-20 grams weight and tracking pressures from ¼ to 5 grams. applied precisely without the need for a stylus pressure gauge.

Full advantage can be taken of the best present and future cartridges, impracticable with arms of 'integrated' design. Lever operated raising and lowering control gives automatic slow descent. Fascinating to use—safeguards valuable records. Choice of tone arm length to suit space available. If the motor board is big enough the 3012 is better, tracking error is even smaller and for studio use 16" records can be played. Otherwise the 3009 can be used with every confidence and indeed is the one most frequently employed.

Model 3009 Series II Precision Pick-up Arm complete with L4 connecting lead but less shell.
Price £20 9 6 plus £3 8 3 P. Tax. Total £23 17 9 (A)

Model 3012 Series II Precision Pick-up Arm complete with L4 connecting lead but less shell.
Price £21 19 6 plus £3 13 3 P. Tax. Total £25 12 9 (A)

Price S3 Standard Shell 18/- plus 3/- P. Tax. Total £1 1 0 (A)

Price D3 Adaptor £2 0 0 (Free of P. Tax) (A)

Price PI Plinth to increase height of pick-up when used with deep turntable units 15/- (A)

Price TD124/3002 Mounting board to fit Model 3009 on Thorens TD124 £2 17 6 (A)

Price TD124/3012 Mounting board to fit Model 3012 on Thorens TD124 £3 10 0 (A)

PICK-UPS & CARTRIDGES



S.M.E. Ultra Light Head Shell

SME ULTRA LIGHT HEAD SHELL

Perforated Aluminium. This is the lightest inter-changeable shell available. Weighing only 6 grammes with mounting hardware it offers reduction of mass at the point of greatest effect.

Price £1 4 0 plus 4/- P. Tax. Total £1 8 0 (A)

HI Lifting handles for SME head shells

Price 3/- (A)



Shure M212 Tone Arm

SHURE M212 TONE ARM and STEREO CARTRIDGE

This pick-up tracks at the incredible light weight of $1\frac{1}{2}$ - $2\frac{1}{2}$ grams minimizing record wear and virtually eliminating the possibility of scratch. Jewel bearings throughout. Cartridge is pivoted on ruby sleeve and jewelled bearings. Arm pivot is a ruby thrust bearing. Cartridge is of moving magnet type within stationary coils. Frequency response 20/20,000 c/s. Separation better than 2 dB. at 1,000 c/s. Output 4.5 mV. per channel. D.C. resistance 600 Ω . Compliance (Vert-Lateral 9×10^{-6} cms./dyne.

With Stereo Head

Price £36 2 6 plus £5 15 11 P. Tax. Total £41 18 5 (A)

A Monaural L.P. Head is available for this type of arm. Type M1
Price £15 18 9 plus £2 11 2 P. Tax. Total £18 9 11 (A)



Thorens Transcription Arm BT-125

THORENS TRANSCRIPTION TONE ARM BT-125

The tone arm that perfectly matches the performance of Thorens turntables. Taking into account the exhaustive experiments made by professional users, the BT-125 arm has been designed to suit the need of the discriminating music lover for a precise, secure, easy to use and rugged instrument.

Specially adapted to receive pick-up cartridges of the highest lateral and vertical compliance, the realisation of the lowest possible inertia, both in the horizontal and vertical plane, has been considered as one of the first objectives.

Precision ball bearings throughout, simultaneous longitudinal and lateral balance, stylus force realised by means of a spring device exerting a torque lowering and raising the pick-up, are some of the main features of the BT-125 tone arm.

Evidence of utmost engineering precision and finely finished work appears here as on each Thorens turntable.

A few minutes and a screwdriver only are necessary to mount a factory pre-adjusted BT-125 arm on a THORENS TD 124 turntable.

Price £14 3 6 plus £2 11 2 P. Tax. Total £16 14 8 (C)



A.D.C. Point Four Stereo Cartridge

A.D.C. POINT-FOUR

Type: Induced magnet. Sensitivity: 5mV. at 5.5 cms./sec. Channel separation. 30 dB., 50 to 8,000 c/s. Frequency response: 10 to 20,000 c/s. ± 2 dB. Stylus tip radius: 0.4 mil. Vertical tracking angle: 15°. Tracking force range: $\frac{3}{4}$ to $1\frac{1}{2}$ grams. Compliance: 30×10^{-6} cms./dyne.

Price £20 10 0 plus £3 5 9 P. Tax. Total £23 15 9 (A)

PICK-UPS & CARTRIDGES

A.D.C. POINT-FOUR/E

Type: Induced magnet. Stylus/Tip size: Diamond/0.8 x 0.2 mil. Recommended playing weight: 0.75-1.5 grams. Low impedance: 47K. Output voltage (cm./sec.): 1.2mV. Compliance: 30×10^{-6} cm./dyne. Vertical tracking angle: 15° .

Price £25 0 0 plus £4 0 2 P. Tax. Total £29 0 2 (A)

A.D.C. 660

Type: Induced magnet. Stylus/Tip size: Diamond/0.5 mil. Recommended playing weight: 1.5-4 grams. Load impedance: 47K. Output voltage (cm./sec.): 1.5 mV. Compliance: 20×10^{-6} cm./dyne. Vertical tracking angle: 15° .

Price £12 0 0 plus £1 18 6 P. Tax. Total £13 18 6 (A)

ADC 660E

As 660 but with elliptical diamond stylus.

Price
£17 4 0 plus £2 15 2 P. Tax. Total £19 19 2 (A)

A.D.C. 770

Type: Induced magnet. Stylus/Tip size: Diamond/0.7 mil. Recommended playing weight: 2-6 grams. Load impedance: 47K. Output voltage (cm./sec.): 2.1 mV. Compliance: 15×10^{-6} cm./dyne. Vertical tracking angle 15° .

Price
£9 0 0 plus £1 8 10 P. Tax. Total £10 8 10 (A)



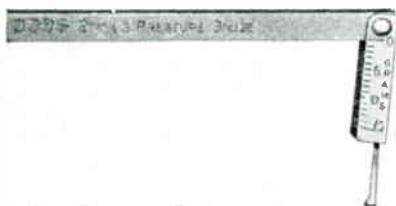
A.D.C. 40 Tone Arm

A.D.C. 40 TONE ARM

Specially recommended for use with A.D.C. Point-Four cartridge. Has very low moment of inertia, anti-drag lead out wires and side thrust compensator. Fitted with plug-in head shell and integrated arm rest. Arm length: $10\frac{1}{2}$ " overall. Pivot to stylus tip: 9". Rear overhang: $1\frac{1}{2}$ ". Stylus overhang: 0.007". Fundamental resonance 6 c/s./sec. System tracks at $\frac{1}{2}$ gram. (with Point-Four cartridge.)

Price £14 8 0 plus £2 6 3 P. Tax. Total £16 14 3 (A)

PICK-UPS & UNIT ACCESSORIES



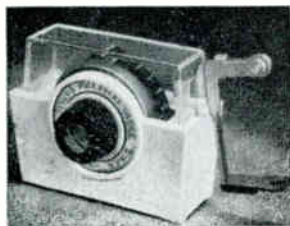
Acos Pressure Gauge

THE ACOS STYLUS PRESSURE GAUGE

The new ACOS stylus pressure gauge enables you to check the downward force on your stylus in an instant, and keeps your equipment in first-rate condition, thereby protecting your records.

The ACOS stylus pressure gauge is constructed of channel-section nickel-plated brass and is graduated from 0-15 grams. It is of robust construction and folds up to protect the spring when not in use.

Retail Price 9/6 plus 1/7 P. Tax. Total 11/1 (A)



SPG3 Pressure Gauge

GARRARD SPG3 STYLUS PRESSURE GAUGE

FEATURES. Elegantly styled—Modern design—Pleasing appearance. Easily readable scale, visible through a clear plastic window, reading 0-12 grams., with $\frac{1}{2}$ gramme indications. Utmost sensitivity and accuracy. Accurate through the entire scale, 0-12 grams. Easy to operate. Readily adjustable. Plastic Scale Pan—no damage to delicate stylus. Swivelling Balance Lever to ensure sensitivity with all pick-ups. Will accommodate all current Pick-up Arms and Heads. Measures the exact Stylus Pressure at the actual stylus and at record level. Supplied complete with a 5 gram. checking weight.

Retail Price 16/9 plus 2/9 P. Tax. Total 19/6 (A)



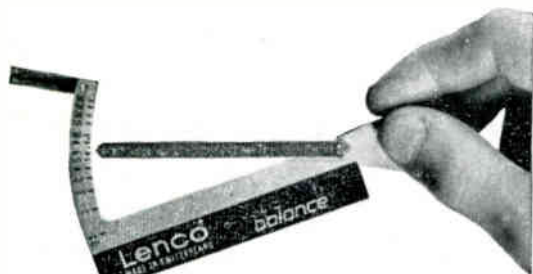
Goldring Pressure Balance

GOLDRING STYLUS PRESSURE BALANCE STBI

A small, simple and accurate balance which does not rely on springs. The stylus tip rests in an indentation at one end, and a sliding weight, moving along a scale graduated from 4 to 10 grams indicates stylus pressure. An inexpensive "must" for all gramophone users.

Retail Price 3/6 plus 7d. P. Tax. Total 4/1 (A)

PICK-UPS & UNIT ACCESSORIES



Lenco Stylus Pressure Balance STB2

LENCO STYLUS PRESSURE BALANCE STB2

As illustrated. A simple but accurate balance graduated 0-5 gram s
Retail Price 12/6 plus 2/1 P. Tax. Total 14/7 (A)



Decca Stylus Cleaner

DECCA STYLUS CLEANER

This new product is soundly constructed and incorporates a wheel covered in soft hair which engages with the stylus when the pick-up is in its rest position. A height adjustment screw means that the Cleaner can be accommodated to suit any pick-up on the market and the wheel is easily turned in one direction only by means of a single device. The Cleaner helps to preserve your records and keep your sapphire or diamond stylus in excellent condition—indeed, it is a 'must' for all discerning and conscientious record collectors.

Note:— For use with all non-automatic record players.

Retail Price 18/- plus 3/- P. Tax. Total £1 1 0 (A)

THE "DUST BUG"

Easily fitted to any turntable and will remove dust and static from the grooves of a record at the moment of playing. A device which has already sold in many thousands and is to be highly recommended.

Retail Price 17/6 plus 2/11 P. Tax. Total £1 0 5 (A)

SPARE PLUSH PADS	} Pairs	...	...	...	...	1/9 (A)
SPARE NYLON BRISTLES		...	...	...	...
SPARE BOTTLES OF CLEANING FLUID		...	...	...	...	1/6 (A)

AUTO CHANGER "DUST BUG"

As above but specially designed for fitting to Pick-up Arms on Auto-Change units.

Retail Price 17/6 plus 2/11 P. Tax. Total £1 0 5 (A)

PARASTAT

The "Parastat" has a dual function of cleaner for older records, when held upright to enable the nylon bristles to penetrate the record groove, the preener, when tilted, for the maintenance of new records. Removes dust, grit and residue deep within the record groove, bringing old records to life and maintaining new records as new.

The brush is made of nylon bristles with tips less than 0.00025" radius. "Restores fidelity to older records".

Retail Price in U.K. complete with Parastatik Dispenser.

£2 5 0 plus 7/6 P. Tax. Total 2 12 6 (A)

Components for replacements as follows:—

Brush	...	...	...	...	...	8/6 each
Plush Pad Covers	...	...	...	...	...	2/- each
New formula Parastatik Dispenser for Dust Bug, Disc	...	...	...	...	...
Preener and Manual Parastatik	...	...	...	...	...	4/6 each

HUMID MOP

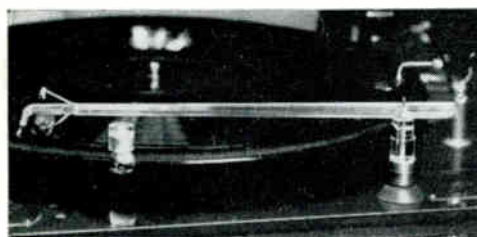
For use with the manual Parastatik Record Cleaning Machine.

Price 4/6 (A)

METRO-MAT

Carbon activated turntable mat. Discharges static from all LP records. For all turntables.

Price 10/6 plus 1/9 P. Tax. Total 12/3 (A)



The Dust Bug



Auto Changer Dust Bug



Parastatik

PICK-UPS & UNIT ACCESSORIES



Parastatic Disc Preener

PARASTATIC DISC PREENER

This device provides a most efficient form of maintenance for all NEW records. Capable of removing all micro particles from the groove. The use of this method will preserve the mirror-like polish of the groove, leaving no trace of film or residue to clog the stylus of ultra light pick-ups. A built-in non-ionic compound prevents static build up during use and will gradually render records less liable to static charges.

Retail Price 6/9 plus 1/2 P. Tax. Total 7/11 (A)

HIGH FIDELITY STYLUS CLEANING KIT (Reg. Design)

Safe to use with all pick-ups. Comprises bottle of special cleaning fluid and fine brush applicator and dirt remover.

Price 6/- plus 1/- P. Tax. Total 7/- (A)

PLAY FAIR STYLUS TIMER

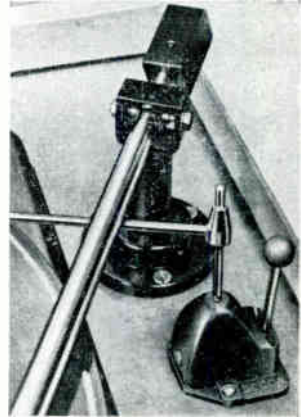
A device which counts the number of records you can play and indicates when your stylus needs replacing.

List Price 17/- plus 2/9 P. Tax. Total 19/9 (A)

THE DECCA MICROLIFT

This is a simple, precision-made device, indispensable to every record collector. For less than the cost of replacing one 12-inch L.P. disc, the MICROLIFT gives complete protection against the pitting and scratching of fragile microgroove records, which is bound to occur when the pick-up is raised and lowered by hand. It is easily adjustable to suit any back-pivoted pick-up and the arm of the MICROLIFT does not project over the turntable so as to hinder record handling.

Retail Price ... £1 5 10 plus 4/2 P. Tax. Total £1 10 0 (A)



Microlift

AURIOL PICK-UP CONTROL

AURIOL pneumatically lowers the stylus, eliminating the handshake which can ruin a record.

AURIOL is calibrated to immediately locate the very groove you want, anywhere on the record.

AURIOL makes it impossible to drop the pick-up accidentally on the record.

AURIOL positions the stylus with a featherlike touch.

AURIOL is unique. No other control has all these features.

Two models of the control are available. The *Standard model* has a non-pivoting arm and is intended for single record playing equipment only the *Mk. II model* has a pivoting arm which 'clicks' into the operating position and can be moved clear of the turntable when required. This is intended for auto changer/manual equipment but may be recommended for single record equipment when cabinet conditions impede record changing.

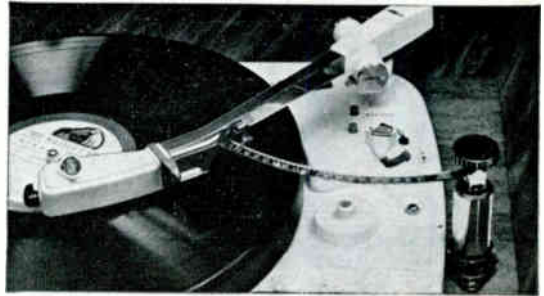
Standard Model

Retail Price £3 1 3 plus 10/3 P. Tax. Total £3 11 6 (A)

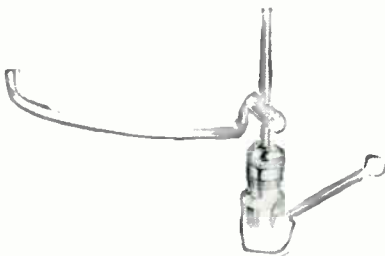
Mk. II Model

Retail Price £3 12 0 plus 12/- P. Tax. Total £4 4 0 (A)

Price Indexing Clips 2/1½ plus 4½d. P. Tax. Total 2/6 (A)



Auriol Pick-up Control



Ortofon Hi-Jack Pick-up Control

ORTOFON HI-JACK PICK-UP CONTROL

THE ORTOFON HI-JACK is an all metal chromium plated construction based on a special spring loaded friction system which provides "air cushioned" lowering and a positive vertical lifting and lowering of a manual pick-up arm at any point on the record. The lowering speed can be adjusted by turning the thumb screw located on the housing.

The device is designed to eliminate accidental damage either to record or pick-up and can be used with most types of record players.

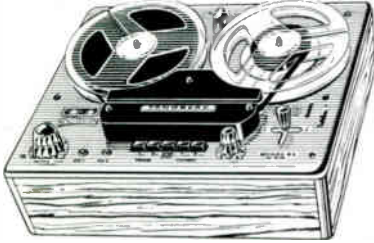
THE ORTOFON HI-JACK works independently of the weight of pick-up head or stylus pressure as the lever goes down automatically when released.

Retail Price ... £2 14 0 plus 8/8 P. Tax. Total £3 2 8 (A)

TAPE RECORDERS

Tandberg

World Famous examples of Norwegian Electronic and Mechanical Engineering products of TANDBERGS RADIOFABRIKK AJS, OSLO, pioneers in the development of high class Stereo, two and four track, tape techniques.



MODEL 6 (2 or 4 Track) STEREO TAPE DECK

This is a "No compromise" instrument capable of delivering consistently fine "Professional" quality. Entirely self-contained and without need of Add-on Unit. The Tandberg Model 6 is complementary to the finest Audio Systems and it is not possible to incorporate Amplifiers and Speakers, in one portable case, capable of doing justice to this exceptional Deck.

3 heads. 3 speeds. 7" reels. 4 amplifiers. 2 record level indicators. Sound on Sound. Frequency response: $7\frac{1}{2}$ i.p.s. ± 2 dB. 40 to 16,000 cycles, Wow and flutter $\cdot 15\%$ R.M.S. Noise level 55 dB.

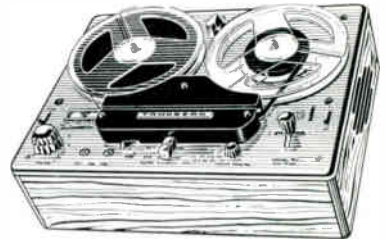
Price (2 or 4 Track) 110 Gns. (C)

MODEL 7 (2 or 4 Track) STEREO TAPE RECORDER

Combines Tandberg quality with complete mono/stereo portability. A worthy companion to the famous series 6.

2 heads. 2 speakers. 2 indicators. 3 speeds. 7" reels. Add-a-track. Frequency response: $7\frac{1}{2}$ i.p.s. ± 2 dB. 40 to 16,000 cycles. Wow and flutter $\cdot 15\%$ R.M.S. Noise level 53 dB.

Price (2 or 4 Track) 93 Gns. (C)

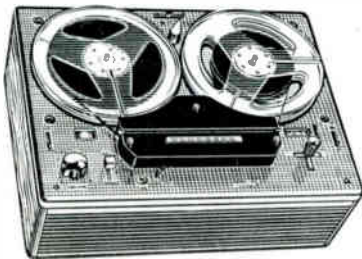


MODEL 9 (2 track) MONO TAPE RECORDER

Quality of reproduction compares favourably with the more expensive Tandberg four-track stereo instruments, and anyone with knowledge of the firm's reputation will confirm that Model 9 can be expected to be superior to other portable recorders, although Tandberg modestly refer to its heavy duty Goodmans unit as a "Monitor Speaker".

3 speeds. 4 digit counter. 7" reels. Bass switch. Pause control. Output 3 watts. Speaker 7" x 4". Frequency response: $7\frac{1}{2}$ i.p.s. ± 2 dB. 40 to 16,000 cycles. Wow and flutter $0\cdot 15\%$ R.M.S. Noise level 50 dB.

Price 69 Gns. (C)



For further details and Reprints of Technical Reviews, apply to the British Distributors, our associated company—

TANDBERG G.B.

ELSTONE ELECTRONICS LIMITED 81 KIRKSTALL ROAD LEEDS 3

Telephone: Leeds 35111 (7 lines)

NOTE: TANDBERG RECORDERS ARE ONLY SUPPLIED TO APPOINTED DEALERS BUT IN CERTAIN AREAS no arrangements have been concluded.

Enquiries and Orders for TANDBERG may be included when writing to A. C. FARNELL LTD.

Tandberg Series 8

Two speed two or four track monaural Record/Playback Units. **Better, clearer, more natural sound!**
Unrivalled utility for Education, The Professions, Music, Family Fun.



This handsome, extremely versatile series of precision engineered tape recorder/playback instruments combine world-renowned Tandberg quality, portability and ease of operation with many dramatic innovations. With the Series 8 you will find such exciting new features as: 2 or 4 track mono operation; mono playback of $3\frac{3}{4}$ and $1\frac{7}{8}$ i.p.s. stereo tapes; free position turntable action for easy independent, tape threading; precision laminated, combination record/playback heads and separate ferrite constructed erase head; semi-variable volume control; direct switching from playback to public address for programmes from microphone, radio and phono inputs.

Study the Series 8 quality-controlled specifications. Consider the fact that this record/playback instrument is, in fact, a complete 2 or 4 channel monaural tape system that offers up to 18 hours and 32 minutes of playing time from one 7" reel. Add to this the flexibility of Stereo playback. Then listen to a Tandberg 8.

Your own ear will tell you that there is remarkable little wow and flutter extremely low tape tension and exceptionally good frequency response for overall higher fidelity. You can also count on the rugged, lightweight construction and virtually trouble-free operation the Series 8 offers. Yes whatever your monaural tape recording needs, you will find the Series 8 an asset . . . for you, your family in so many ways!

Available in your choice of these models:

MODEL 823. In teak cabinet. 2 track, 2 speed with half-track heads. Price **54 Gns. (C)**

MODEL 824. In fabric covered portable cabinet, with lid and carrying handle. 2 track, 2 speed, with half-track heads. Price **57 Gns. (C)**

MODEL 823F. In teak cabinet, has remote control foot-pedal and built-in solenoids. As 823 but with extra dictation facilities, with foot control. Price **79 Gns. (C)**

MODEL 843. In teak cabinet. 4 track, 2 speed, with 4 track heads. In addition to normal monaural operation it will play back pre-recorded stereo tapes monaurally, or Free-head-outlet for second channel will freed an additional amplifier. Price **59 Gns. (C)**

MODEL 844. As 843 in fabric covered portable cabinet, with lid and carrying handle. Price **62 Gns. (C)**

SPECIFICATIONS—SERIES 8

(Model 823, 824, 823F, and 843, 844)

Microphone Input:	1 Megohm.
Gram or Radio Input:	·5 megohms—high impedance for radio, phono, TV and Aux.
Crystal Microphone:	Shock insulated for fugged use; 30 to 12,000 cycles \pm 2dB. response.
Recording Level Indicator:	Electronic Eye—EAM 86 with damped backward movement. Eye tube range 20dB. plus overload.
Playback Amplifier Output:	3 watts (3·5 volts across 4 ohms.)
Erase & Bias Frequency:	85-90 Kc/s.
Cross-talk Rejection:	Better than 60dB. on 4 track model.
Tape Speeds:	2 speeds $1\frac{7}{8}$ and $3\frac{3}{4}$ I.P.S.—speed may be changed while recorder is operating.
Wow and Flutter:	Better than 0·2% at $3\frac{3}{4}$ I.P.S. Better than 0·3% at $1\frac{7}{8}$ I.P.S.
Frequency Response:	$3\frac{3}{4}$ I.P.S.—20 to 13,000 c/s. (40 to 10,000 \pm 2dB.). $1\frac{7}{8}$ I.P.S.—20 to 8,000 c/s. (40 to 5,550 \pm 2dB.).
Signal to Noise Ratio:	50dB. below max. recording level.
Heads:	2 track models—823, 824, & 823F. 1 record/playback head ·00012" gap width. 1 high efficiency low-noise, ferrite erase head. 4 track models—843 & 842. 1 quadruple record/playback head ·00012" gap width designed for maximum sensitivity and response. 1 high efficiency quadruple erase head.
Speaker:	Built-in 7" \times 4", high fidelity.
Tape Program Indicator:	4 digit lighted counter with reset wheel.
Bass Switch:	Bass may be raised (12dB. at 70 c/s.) for playback.
Momentary Stop:	Push button arrangement for immediate start, stop or pause while unit is in operation.
Controls:	1.—Exclusive T-Switch controls for Fast Forward and Rewind, Record and Playback, Free Tape Loading Position, start and stop. 2.—Speed Change Switch. 3.—Record and playback Level Control. 4.—Speaker Selector Switch. 5.—Single Volume Control for Record and Playback. 6.—New Mode Slide Switch.
Remote Control Operation:	On model 823F two solenoids are built in recorder as well as accommodation for plug-in foot pedal control for start-stop and reverse wind.
Dimensions:	15" length \times 11 $\frac{1}{2}$ " width \times 6 $\frac{3}{4}$ " high.
Weight:	21lbs. . . with luggage case 23 lbs.
Power Requirements:	50 watts A.C. 200/240 volts, 50 cycles.

TEMPOTAPE

PROFESSIONAL PRE-RECORDED TAPES

RECORDED ON TOP QUALITY POLYESTER LONG PLAY TAPE
AT $3\frac{3}{4}$ I.P.S. MONO

* APPROXIMATELY 600 FT. OF TAPE ON SPOOL RECORDED ON TOP TRACK,
LEAVING BOTTOM TRACK FREE FOR RECORDING OWN PROGRAMME.

* SEE FULL LIST OF TITLES AVAILABLE.

It will be obvious to all recording enthusiasts that TEMPO offer pre-recorded tapes
at a price no more expensive than raw tape.

HOW IS THIS ACHIEVED?

By purchasing in bulk quantities raw tape from one of the leading British manufacturers.
By making all our recordings on the most advanced equipment in the world, produced
by Lyrec, a manufacturer of international repute.

THESE ARE NOT CHEAP TAPES

WHILST THE PRICE IS VERY ATTRACTIVE, QUALITY IN NO WAY HAS BEEN
ALLOWED TO SUFFER.

TAPES 21/- each List (C)

Available to dealers singly or in a very attractive display dispenser pack each containing
24 assorted titles. **£25 4 0** (C).

TEMPOTAPE PRE-RECORDED TAPE

Tempotape Serial No. and Title	Contents	Tempotape Serial No. and Title	Contents
1 EROTIC PERCUSSION	An Occasional Man Cuban Caper Topsy Mambo Italiano The Bad and the Beautiful Return to Paradise Mambo Inn Esso Es El Amore Caravan Lisbon Antigua Temptation	8 HAPPY HARMONICA	Samson & Delilah No Other Love Smoke Gets in Your Eyes Man on the Flying Trapeze Love Walked In. Yama Yama Man. Humoresque C'est Magnifique I Talk to the Trees La Cucaracha To a Wild Rose Isle of Capri
2 BIG BAND BLAST	Begin the Beguine Rhapsody in Blue Hawaiian War Chant Heathswille Take the 'A' Train I've got my love to keep me warm Lullaby of Birdland Jersey Bounce Blue Skies One O'clock Jump	9 SOUTH PACIFIC	Younger Than Springtime Bali Hai Dites Moi Some Enchanted Evening This Nearly Was Mine There's Nothing Like a Dame I'm Gonna Wash That Man Right Out of My Hair
4 TCHAIKOVSKY'S PIANO CONCERTO	Tchaikovsky's Piano Concerto	10 ANDRE PREVIN	Ain't Misbehavin Stealin Apples I've Got A Feeling I'm Falling Squeeze Me Honeysuckle Rose Oh You Sweet Thing Blue and Black Fatstuff That's Where The South Begins
5 THE KING AND I THE HOLLYWOOD STUDIO ORCHESTRA AND SINGERS	Shall We Dance I Have Dreamed Getting to Know You We Kiss in The Shadows March of The Siamese Children Hello Young Lovers My Lord and Master Something Wonderful	11 GREAT THEMES FROM GREAT MOVIES	Exodus Around The World in 80 Days Moulin Rouge Autumn in Rome Love Look Away As Time Goes By Que Sera ... A Summer Place Greensleeves River Kwai
6 CAMELOT THE HOLLYWOOD STUDIO ORCHESTRA	How to Handle A Woman Where Are The Joys Of Maidenhood Camelot I Wonder What The King Is Doing Tonight Follow Me Before I Gaze At You Again If Ever I Would Leave You If I Loved You Once in Silence	12 BIG BAND THE SWINGS CLASSICS	Anchors Away Evening Star Clair De Lune Peanut Vendor Waters from Minnesota Jeannie with the Light Brown Hair Battle Hymn of the Republic
7 FEATURING BILLY DANIELS	The Touch of your Lips Baby Won't you please Come Home All or Nothing at All Heartache I Miss You So I Foug a New Baby Perfidia Can't Get out of this Mood East of the Sun I've Got the Wolrd on a String	13 TRIBUTE TO DUKE ELLINGTON (FRANCIS BAY ORCHESTRA)	Take the 'A' Train Don't get Around Much Anymore Solitude Mainstem Things Ain't What They Used to Be Do Nothing 'Till You Hear From Me Sophisticated Lady. Jack The Bear Passion Flower
		14 FLAMENCO	Fandangos Brises Del G'enil Solera Caditana Fandanguillos Variados Danza Moro Granadinas Recuedo A Sevilla Seguidellas Gitanas Melodia De Un Corazon Dolorido

TEMPOTAPE PRE-RECORDED TAPE

- Tempotape
Serial No. and Title Contents
- 15 **UNDER PARIS SKIES** The Last Time I Saw Paris
Allez-Vous En
The Parisienne
Reverie
Paris in the Spring
Can Can (Offenbach)
I Love Paris
Musetta Waltz
C'est Magnifique
Claire De Lune
- 16 **ROMEO AND JULIET OVERTURE THE HAMBURG PHILHARMONIA ORCHESTRA** Romeo and Juliet Overture
The Hamburg Philharmonia Orchestra
- 17 **ORGAN POP CLASSICS JOHN KILEY** Largo
In A Monastery Garden
Because
Rosary
Toselli Serenade
Romance
Intermezzo
Andante Religioso
Melody in F
- 18 **TCHAIKOVSKY'S 1812 OVERTURE** Tchaikovsky's 1812 Overture
- 19 **L'AMORE D'ITALIA** Vieni Sol Mar
Sorrento
Arrividerci Roma
Parla Ma D'Amore
Santa Lucia
O Sole Mio
Three Coins in the Fountain
O Maria
Mamma
Guitani Romano
Mattinata
Vieno O Mare
- 20 **OKLAHOMA** Surrey With a Fringe on Top
I Can't Say No
Kansas City
Oklahoma
People will say we're In Love
Out of My Dreams
Oh What a Beautiful Morning
- 21 **FAMOUS OVERTURES** Overture to Oberon—Weber
Invitation to the Dance—Weber—Berlioz
Dance of the Hours—Ponchielli

- Tempotape
Serial No. and Title Contents
- 22 **MUSIC FROM IRVING BERLIN** There's No Business like Show Business
Got My Love to Keep Me Warm
They Say It's Wonderful
How Deep is the Ocean
Alexander's Ragtime Band
Cheek to Cheek
Putting on the Ritz
Blue Skies
Sun in the Morning
A Pretty Girl is like a Melody
Doing What comes Naturally
Top Hat
- 23 **MUSIC FOR LOVERS** Ebb Tide
Sleepy Lagoon
Tenderly
Paradise
My Ideal
All Alone
Charmaine
Unchained Melody
Laura
Fascination
- 24 **THE GOLD RECORD THE HOLLYWOOD ALL STARS** Smoke Gets in Your Eyes
Kewpie Doll
Who's Sorry Now
Return to Me
Patricia
Tom Dooley
It's All in The Game
To Know Him is to Love Him
Drummer Boy
Only Make Believe
My Happiness
Mr. Success
- 25 **SOUND OF MUSIC** Sound of Music
Goatherd
My Favourite Things
Ordinary Couple
16 going on 17
How Can Love Survive
Climb Every Mountain
Maria
Farewell
Doh Re Mi.
- 26 **TRIBUTE TO WOODY HERMAN (AL GOODMAN ORCHESTRA)** Wood choppers Ball
Northwest Passage
Apple Honey
Goosey Gander
Four Brothers
Blue Flame
Wild Root
Bijou
Blowin' Up a Storm

HEADPHONES

S. G. BROWN



SUPER 'K' 3C 501-1

SUPER 'K' HEADPHONES

Designed for high fidelity reproduction, these headphones incorporate an extremely comfortable plastic covered headgear, with plastic earpads which support the whole assembly on the bone structure of the head, rather than on the ears. Input lead is to one side only, and stereo wiring is available. Standard D.C. resistance 24Ω each earpiece. Standard impedance 26Ω at 1,000 c/s. Code No. 3C.S01/1.

List Price £6 17 0 (B)



DYNAMIC 3C. 1100/1

DYNAMIC HEADSET 3C 1100

As its name implies, the equipment embodies high efficiency electrodynamic transducers and possess excellent frequency response characteristics which adequately cover the range 20-15,000 c/s.

Frequency response: ± 6 dB. over a range 20-8,000 c/s. with response well maintained up to 15,000 c/s.

Impedance at 1,000c/s.: 8ohms.

Price £6 0 0 (B)



CANADA 3C 1000

CANADA TYPE HEADPHONES

HA10 Professional studio type headphone. Frequency: 30-10,000 c/s. ± 3 db. Harmonic distortion less than 2%. Max. acoustical output: 130dB.

Ambient noise attenuation: 40dB. at 1 K/c. Sharpe liquid filled seals.

Plugs: 3 circuit phone stereo, 2 circuit phone mono.

Impedance: Stereo 8 ohms.—3K ohms., Mono 4 ohms.—6K ohms.

Price £17 15 0 (B)

HA10



HA10LMD

HA10LMD Professional studio type headphone with boom-mounted microphone.

Phones: Same as HA10.

Microphone: 48 ohms. dynamic close-talking, —37dB. attenuation at 4 at 1 K/s.

Frequency: 50 c/s.—10,000 c/s., 12dB. peak at 4,000 c/s.

Price £36 13 0 (B)

MICROPHONES & ACCESSORIES

A K G

K50 DYNAMIC HEADPHONES

TECHNICAL DATA

Frequency range: 20-25,000 c/s. Normal power requirement: 0.156 mW. (=250 mV.) per unit for a sound pressure level of 95 dB. Maximum undistorted continuous power level: 127 db. (90 mW. at 6 volts) per unit, with distortion under 3% (20-25,000 c/s.) Translation efficiency: 1mW. input (=630mV.) per unit will produce 106 dB. sound pressure level Distortion: 1% or less at 1 mW. input (20-25,000 c/s.). Impedance: 400 ohms. per unit \pm 20% over the range 20-25,000 c/s. Connection cable: 4-wire cable, 5'9" long (1.75 m.). Finish: crystal-clear ear cups, light gray bail and drive capsules. Weight: K50: 4.6 ozs. net (130 g.), shipping weight: 1 lb. 12.8 ozs. (850 g.). K50/1: 5.3 ozs. net (150 g.), shipping weight: 1 lb. 12.8 ozs. (850 g.). Connection: stereo/mono. Mono: systems in series 800 ohms., parallel 200 ohms.



ACCESSORIES

Matching transformer U50, rubber ear cushions Z50.

Price £7 10 0 (B)

K58 K59 HEADPHONE-MICROPHONE COMBINATIONS

TECHNICAL DATA K58

HEADPHONES:

Frequency range: 20-25,000 c/s. Normal power requirement: 0.312 mW. (=250 mV.) for a sound pressure level of 95 dB. Maximum undistorted continuous power level: 127 dB. (180 mW. at 6 volts) with distortion under 3% (20-25,000 c/s.). Translation efficiency: 2 mW input (=630 mV.) will produce 106 dB. sound pressure level. Distortion: 1% or less at 2 mW. (=630 mV.), (20-25,000 c/s.). Impedance: 200 ohms. \pm 20% between 20-25,000 c/s. (both earphone connected in parallel).

MICROPHONE:

Frequency range: 100-12,000 c/s. (for speech at 5 cm. distance). Impedance: 290 ohms. Average output: approx. 0.5 mV. (for speech at 5 cm. distance). Average discrimination: -22 dB. at 1,000 c/s., -37 dB. at low frequencies and -15 db. at high frequencies. Weight: 5 ozs. net (140 g.), shipping weight: 1 lb. 12.8 ozs. (850 g.).

Price (K58) £13 10 0 (B)

TECHNICAL DATA K59

MICROPHONE:

Frequency range: 70-12,000 c/s. (at a speech distance of approx. 5 cm.). Frequency response: \pm 3dB. based on standard curve (measured at a dist. of 5 cm. from artificial voice). Directional characteristic: sensitive only in close proximity (up to 10 cm.). Impedance: 60 or 200 ohms. Average output: approx. 0.5 mV. (200 ohms.), (for speech at 5 cm. distance). Average discrimination against undesired noise: 35 dB. at 200 c/s., 26 dB. at 1,000 c/s., 15 dB. at 5,000 c/s., compared with a diffuse sound field whose source lies at a distance of 1 metre from the microphone and which produces the same sound pressure as the sound source at a distance of 5 cm. Cable connection: microphone capsule connected to balanced 2-pole shielded cable.

HEADPHONES:

Frequency range: 20-25,000 c/s. Average power requirement: 0.156 mW. at a level of 250 mV., delivering 95 dB. sound pressure level per system. Maximum undistorted continuous acoustic output: 127 dB. spl. per system with an input level of 6 volts at 90 mW., with a total harmonic distortion of less than 3%. Translation efficiency: 1 mW. input at 630 mV. will produce 106 dB. spl. per system. Total harmonic distortion: (throughout entire range) 1% or less at 1 mV. input. Impedance: 400 ohms. per system \pm 15%. Cable connection: headphones with 2 x 1-pole shielded cable led out separately from microphone (headphones normally in series).



ACCESSORIES:

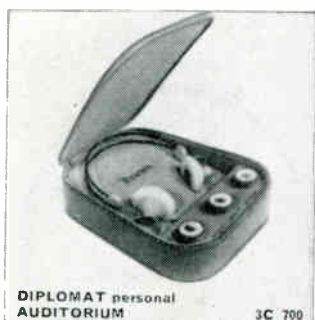
Z50 rubber ear cushions for exclusion of outside sounds W59 windscreen with particularly favourable attenuation (higher than 25 dB.).

Price (K59) £22 0 0 (B)

HEADPHONES & ACCESSORIES

S. G. BROWN

THE DIPLOMAT "PERSONAL AUDITORIUM"



The "Personal Auditorium" is a new and fascinating approach to personalised listening in the home. It provides the ultimate in musical appreciation, which can be enjoyed by any member of the family.

By a simple connection to your tape recorder, amplifier, or record player—you can enjoy a full symphony without disturbing 11 plus home work—or a little one sleeping. In fact you can be carried away into a world of your own choosing without actually leaving the fireside.

The Diplomat headset has been developed to provide a lightweight and attractive instrument of advanced design—using new ceramic piezo—electric transducers. These possess an excellent response over a wide range of audio frequencies.

To extract the full benefit from these, the headset is teamed with a control unit, housed in a most attractive zip-topped carrying case. This provides control of parameters which are of prime importance for high fidelity reproduction, particularly in the case of stereophonic equipment. It provides the following control facilities:—

- (a) Independent control of sound level for each earpiece, providing balance and level adjustment on stereophonic and monophonic listening.
- (b) Channel mixing on stereophonic, which is essential when listening on headphones, if the full potentialities of such recordings are to be realised. The mixing control has a very wide range of adjustment and will give monophonic, true stereophonic, or two channel listening, as desired. The mixing control is only operative on stereophonic systems.
- (c) Switched selection of input impedance, giving matching to 15 ohms. or 600 ohms. per channel on stereophonic or 7.5, 30, 300 or 1,200 ohms. on monophonic depending upon method of connection, since the two channels can be wired in series or parallel when connected to monophonic equipment.

The Headset is exceptionally well engineered and elegantly styled, and has a general colour scheme of smoke grey. A 5 ft. length of 4-way flexible cable is fitted for connection to the main equipment.

Code Nos. 3C.700/1 Black, 3C.700/2 Pigskin, 3C.700/3 Ivory.

List Price £15 15 0 (B)

SPARE PARTS FOR BROWNS EQUIPMENT

Code No.	Description	Price
		£ s. d.
Hospital and Standard 'F' type High Impedance (Codes 3C.402/1 and 3C.400/1)		
106151	Diaphragm	each 1 0
106354	Circular Stirrup	each 4 6
106147	Neckband Hospital type	each 7 0
100177	Grey Plastic Cord	each 9 6
100093	Thimble	gross 10 0
106154	Coil Set 2,000 Ω D.C. Res.	set 9 6
106358	Headband type 'F'	each 9 0
7093	Anti-Dermatitis Rubber Earpads	each 3 0
Super 'K' Stereo (3C.501/1)		
3076	Cord 4-way P.V.C. single	each 9 0
HV3225	Rubber Caps	each 6 6
No Number	Earpad grey Plastic	each 6 6
Pillowphones Sponge Type M/C High Impedance (6C.101/1)		
6561	Transformer c/w cord, 600 Ω	each 1 12 6
6537	'J' Unit	each 1 18 0
40206	Cord Cleats	gross 1 2 6
6569	Sponge Cover	pair 6 6
6564	Sponge Cover	
6566	Fabric Bag	each 2 6
Pillow Phones Immersible M/C (6C.104/1)		
41853	Membrane	each 6 6
676	M/C Unit	each 1 15 6
HD304	Top Covers	each 3 0
HD305	Lower Covers	each 3 0
6562	Plastic Cord	each 5 0
No Number	Transformer with cord	each 1 14 6
Pillowphone Immersible M/I type (6C.102/1)		
6562	Plastic Cord	each 5 0
HD304	Top Plastic Covers	each 3 0
HD305	Lower Plastic Covers	each 3 0
6146	Earpiece M/I type	each 1 10 6
Stethoscope Headset (5C.600/1 and 5C.100/2)		
100203	Conduction tube assy. (S/A)	each 11 0
100189	Spring	each 3 6
23567/C13	Grey P.V.C. tube	each 5 6
100055	Earplug	each 1 0

MICROPHONES & ACCESSORIES

RESLO

MINIATURE RIBBON TYPE RBT

Figure of '8' Polar diagram. Attachment threads $\frac{1}{8}'' \times 26$ or $\frac{3}{16}'' \times 27$ RBT 'T' Base RBTS 'T' Base with Switch. Each available in three impedances. Alternative Cable Sets available any impedance. Cable Colour Code: White Dot 30-50 ohms. Blue Dot 600 ohms. Red Dot Hi-Z. Frequency response ± 3 dB. 30 c/s. to 16 K/c/s.

Price RBT/L 30-50 ohms. ...	£11 0 0 (C)
Price RBT/M 600 ohms. ...	£11 10 0 (C)
Price RBT/H Hi-Z ...	£11 10 0 (C)
Price RBTS/L 30-50 ohms. ...	£13 10 0 (C)
Price RBTS/M 600 ohms. ...	£14 0 0 (C)
Price RBTS/H Hi-Z... ...	£14 0 0 (C)

X

12-2-0
+5%



RBT



Cardioid Ribbon CR2

CARDIOID RIBBON TYPE CR2

15 dB. Discrimination Front to back. CR2L 30-50 ohms. CR2M 250 and 600 ohms. CR2H 30 ohms. and Hi-Z. Frequency response smoothly maintained 50 c/s. to 15 Kc/s., level ± 5 dB. 100 c/s. to 12 Kc/s.

Price CR2L 30-50 ohms. ...	£11 10 0 (C)
Price CR2M 600 ohms. ...	£12 0 0 (C)
Price CR2H Hi-Z ...	£12 0 0 (C)

+5%

PENCIL RIBBON TYPE PR (non swivel)

Characteristic as RB. PRL 30-50 ohms. PRM 250 and 600 ohms. PRH Hi-Z and 30-50 ohms. Frequency response extends from 50 c/s. to 16 Kc/s., level ± 5 dB. 100 c/s. to 10 Kc/s.

Price PRL 30-50 ohms. ...	£9 0 0 (C)
Price PRM 250 and 600 ohms. ...	£9 10 0 (C)
Price PRH Hi-Z and 30-50 ohms. ...	£9 10 0 (C)

+5%



MPD



RBTS Miniature Ribbon with switch

DYNAMIC TYPES PD & MPD

All purpose including recordings and high quality public address. MPD supplied with Lavalier attachment, but can be used on stands with A922 flexible stem, and the PD is supplied with plastic standholder. Frequency range—smoothly maintained from 50 c/s. to 15 Kc/s.

Price MPDL 30/50 ohms. ...	£10 0 0 (C)
Price MPDH Hi-Z ...	£14 0 0 (C)
Price PDL 30/50 ohms. ...	£11 10 0 (C)
Price PDS/L 30/50 ohms. with switch	£13 0 0 (C)
Price PDM 250 or 600 ohms. (Dual)	£12 10 0 (C)
Price PDH Hi-Z (40K ohms.) or 30/50 ohms. (Dual) ...	£12 10 0 (C)
Price PDS/H Hi-Z or 30/50 ohms. with switch ...	£14 0 0 (C)

+5%



Pencil Dynamic Type PD



Pencil Ribbon PR (Non-swivel)

MICROPHONE ACCESSORIES

Stands: Floor Stand (Adjustable) MS100	£7 10 0
Table Stand (Adjustable) MS200	£4 5 0
Desk Stand (Circular) MS300	£2 5 0
Desk Stand Type MS400 (Foam Pads)	£2 0 0
Desk Base Type MS500 ...	£1 15 0
Extra for muting switch on types MS400 and MS500 Stands only ...	15 0 (C)

+5%

MICROPHONES & ACCESSORIES

RESLO

STEREO MICROPHONE MOUNT Type A910

Specially designed dual mounting bar for two microphones type RB/T. Knurled locking screws are provided at the ends which fix each microphone in the optimum stereo position. Ten yards of twin screened cable is supplied for each microphone. Pairs of microphones can be specially matched at a nominal charge. Price £6 12 6 (C)

TRANSISTOR COUPLERS

Type G.E.1. This coupler, designed for external use adjacent to the tape recorder or amplifier, gives a gain of 75-100, i.e. 35-40 dB. over the impedance range 30 to 600 ohms. Frequency response ± 1 dB. 50 c/s. to 15 Kc/s.

A Reslo three pin plug is supplied for connecting microphone lead to coupler. A 36" screened lead with screened jack plug is fitted for high impedance connection to tape recorder or amplifier. Self-contained battery type P.P.4 expected life 1,500 hours.

Price £8 0 0 (C)

Type G.E.2. This is similar in design to the G.E.1. but is in addition fitted with a 30/50 ohms. input transformer for balanced to earth input.

Price £12 0 0 (C)

L.T.U. 1 COUPLER

Built into Mu-Metal shielded, circular diecast casing, 3 pin plug supplied for balanced line connection for low impedance and screened jack plug for high impedance performance as M.T. 101. Length $2\frac{1}{4}$ " x $1\frac{1}{2}$ " Diameter. Frequency response ± 1 dB. 50 c/s. to 15 Kc/s. Price £4 7 6 (C)

TUBULAR SWITCH ADAPTOR A923

This unit, fitted at the top and bottom with the plug/socket assembly allows on/off switch facilities to be added to all unswitched Reslo microphones. Price £2 12 6 (C)

FLEXIBLE STEM A922

This consists of a length of flexible tubing laminated at each end with a 3 contact plug and socket. The wiring allows use with any standard Reslo microphone. Price £2 12 6 (C)

ACCESSORIES, ADAPTORS AND SPARES

	Retail Price U.K.
	£ s. d.
Ribbon Assembly (RB056A for RB and CR) (PR897A for PR)	1 17 6 (C)
Desk Stand Stem A924 Rigid Curved Stem	2 12 6 (C)
Microphone Cable per yard	1 6 (C)
MB329 Stand Top $\frac{1}{2}$ " x 26 BSB	5 6 (C)

ADAPTORS WITH INTERNAL THREADS

AR220 $\frac{1}{2}$ " x 26 to $\frac{3}{8}$ " x 27	5 6 (C)
AR221 $\frac{3}{8}$ " x 27 to $\frac{1}{2}$ " x 27	5 6 (C)

REDUCERS (Internal and External Thread)

AR222 $\frac{3}{8}$ " x 27 Ext. to $\frac{1}{2}$ " x 26 Ext. Coupler	5 6 (C)
AR223 $\frac{1}{2}$ " x 26 Ext. to $\frac{3}{8}$ " Int.	5 6 (C)
AR224 $\frac{1}{2}$ " x 26 Ext. to $\frac{3}{8}$ " x 26 Int.	5 6 (C)
AR225 $\frac{3}{8}$ " x 27 Ext. to $\frac{1}{2}$ " x 26 Int.	5 6 (C)
AR226 $\frac{1}{2}$ " x 26 Ext. Nipple x $\frac{3}{8}$ " long x $\frac{3}{16}$ " bore	5 6 (C)

PLUGS AND SOCKETS ETC.

A900 T.C. Extension Plug	12 6 (C)
A901 Line Extension Socket	15 6 (C)
A902 T.C. 3 pin Socket $\frac{1}{8}$ " dia.	9 6 (C)
A903 T.C. 3 pin Side Entry Plug	12 6 (C)
A920 T.C. 3 pin Plug mounted in Suspension Fitting	1 5 0 (C)
A921 Suspension Fitting only	12 6 (C)
Filter pads for the RB Series supplied free.	

A941 STAND DAMPER

This consists of two concentric sleeves secured to each other by rubber under compression. Both sleeves have $\frac{3}{8}$ " threads and thus the unit screws onto any stand. Retail Price 11/-

CABLE SETS

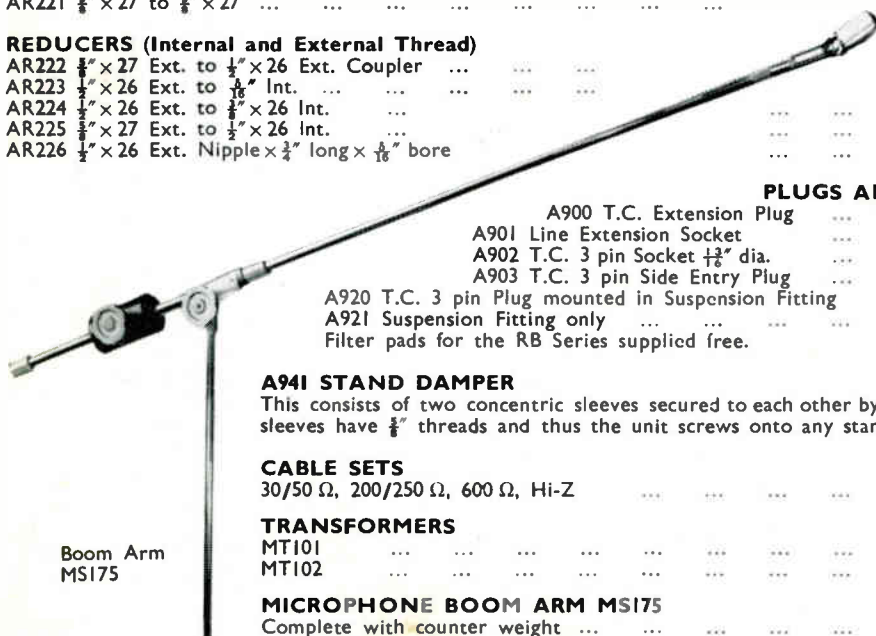
30/50 Ω , 200/250 Ω , 600 Ω , Hi-Z	£2 15 0 (C)
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TRANSFORMERS

MT101	£2 15 0 (C)
MT102	£3 0 0 (C)

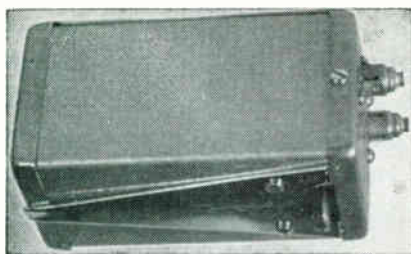
MICROPHONE BOOM ARM MS175

Complete with counter weight	£7 0 0 (C)
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Boom Arm
MS175

WAL GAIN PRE-AMPLIFIERS & TAPE ACCESSORIES



MONO WAL GAIN

An impedance matching transistorised pre-amplifier, battery operated (3,000 hour life). Noise and distortion too low to measure, gain better than 100.
Size $3\frac{3}{8}'' \times 2\frac{1}{8}'' \times 2\frac{1}{8}''$

Price £5 10 0 (C)

Due to its compactness, long life and versatility, the Wal Gain can be mounted in any position, and has many applications in the Industrial, Commercial, Medical, Scientific Audio and Cine fields. In fact for any purposes where it is necessary to amplify a minute voltage into a useful output. Suitable for direct connection to tape head, or for use with low output pick-up, etc.

STEREO WAL GAIN

Transistorised, battery operated. Gives you the EXTRA GAIN you need, without hum or distortion. This version too has a number of applications including being used to provide extra amplification for microphones, or tape heads, or as a two channel mixer with resistive network. Each channel is independent of the other for stereo operation, cross talk between channels being better than +60db, and the Wal Gain can be used for operation on two separate mono channels. Also many Audio, Medical, Commercial, Scientific, Industrial and Cine applications.

Size $6\frac{7}{8}'' \times 2\frac{1}{8}'' \times 2\frac{1}{8}''$

Price £7 10 0 (C)



THE WAL BULK TAPE ERASER

THE IDEAL ACCESSORY FOR TAPE RECORDING

Wipes both tracks, perfectly 'clean' in under half a minute. Used in laboratories, colleges, schools, dealers' demo rooms, studios, offices, tape clubs, etc.—in fact by ANYONE who does a lot of tape recording and wishes to rapidly 'clean' up tapes ready for the next session.

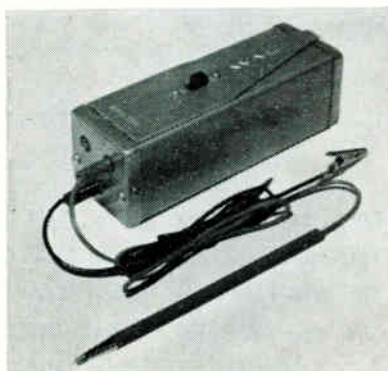
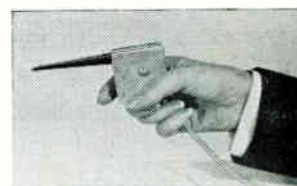
Price £6 18 6 (C)



THE NEW D-MAG

A Mains operated, pocket size head de-magnetiser, that provides a complete de-gaussing circuit. Especially designed for ERASING SHORT UNWANTED PASSAGES OF SOUND from tape or striped film. Demagnetising tape Deck heads, etc. A necessity for the professional and the amateur for tape and film editing.

Price £2 10 0 (C)



WALTRAK POCKET AUDIO OSCILLATOR

The accessory that Service Engineers, Radio and Laboratory technicians, keen enthusiasts consider a necessity in their kit. Battery operated, transistorised, supplied complete with probe, etc. for fault finding, 'dead' set checking, stereo matching, recording bias check, etc. Output 1,000 cps., sine wave. Over 2v max. Calibrated 1v., 0.1v., and 0.01v. tappings.

Price £6 10 0 (C)

Full technical leaflets are available on all WAL GAIN products from A. C. FARNELL LTD. on request.

SUNDRY ITEMS

				B.S.R.					
45 r.p.m. Adaptor Spindles for Monarch changer	Price	...	17/6	plus	2/11 P. Tax.	Total	20/5 (A)
AF333 Pick-up matching transformer	Price	...	...	...	...	...	£1 16 0 (C)
Clip-in 45 r.p.m. Adaptor for 7" records	(per doz.) Price	...	3/-	plus	6d. P. Tax.	Total	3/6 (A)
Minimum 2 gross lots	(per doz.) Price	...	1/6	plus	4½d. P. Tax.	Total	1/10½ (A)

GARRARD

Plastic Centre-hole Adaptor for 45 r.p.m. records	...	...	Price	...	9d.	plus	1½d. P. Tax.	Total	10½d. (A)
Centre Spindles for RC88-RC98	...	...	52764	Price	8/10	plus	1/5 P. Tax.	Total	10/3 (A)
Drive Bands for RC72-RC75-RC80 and GDT3 unit (per pair)	...	...	52685	Price	1/3	plus	3d. P. Tax.	Total	1/6 (A)
Inter wheels for RC72, RC75, RC80 and T unit	...	...	465248	Price	5/9	plus	11d. P. Tax.	Total	6/8 (A)
Inter wheels for RC90	...	...	50873	Price	6/3	plus	1/- P. Tax.	Total	7/3 (A)
Inter wheels for RC110-RC111	...	...	51325	Price	6/6	plus	1/1 P. Tax.	Total	7/7 (A)
Inter wheels for RC120-RC88-RC98-3 Speed	...	...	52567	Price	4/11	plus	10d. P. Tax.	Total	5/9 (A)
Inter wheel for 4HF	...	...	55568	Price	8/5	plus	1/4 P. Tax.	Total	9/9 (A)
Inter wheels for 301	...	...	51858	Price	8/3	plus	1/4 P. Tax.	Total	9/7 (A)
Inter wheels for Type T Mk. I	...	...	52856	Price	4/11	plus	10d. P. Tax.	Total	5/9 (A)
Inter wheels for Slimline and AT6	...	...	58220	Price	3/3	plus	7d. P. Tax.	Total	3/10 (A)
Idler wheel for GL58	...	...	...	Price	13/8	plus	2/3 P. Tax.	Total	15/11 (A)
Inter wheels for RC120 Mk. II, RC88-RC98-4SP-TA Mk. II 209-210, RC88 Mk. II Lab Type A	...	...	53883	Price	4/11	plus	10d. P. Tax.	Total	5/9 (A)
LRS1 45 r.p.m. Adaptor Spindle for RC80M and RC90	...	...	...	Price	20/3	plus	3/4 P. Tax.	Total	23/7 (A)
LRS3 45 r.p.m. Adaptor Spindle for RC88-RC98, A70	...	...	...	Price	24/9	plus	4/- P. Tax.	Total	28/9 (A)
LRS2 45 r.p.m. Adaptor Spindle for RC110-RC111-RC120-RC121	...	...	...	Price	20/3	plus	3/4 P. Tax.	Total	23/7 (A)
LRS4 45 r.p.m. Adaptor Spindle for RC120-RC121 Mk. II	...	...	...	Price	20/3	plus	3/4 P. Tax.	Total	23/7 (A)
LRS4/W 45 r.p.m. Adaptor Spindle for 210	...	...	...	Price	20/3	plus	3/4 P. Tax.	Total	23/7 (A)
LRS5 45 r.p.m. Adaptor spindle for Autoslim	...	...	...	Price	15/-	plus	2/5 P. Tax.	Total	17/5 (A)
LRS6 45 r.p.m. Adaptor spindle for Autoslim De-Luxe AT6	...	...	...	Price	15/-	plus	2/5 P. Tax.	Total	17/5 (A)
Stroboscopes	...	...	...	Price	...	...	...	...	1/- (C)
Record Arm Selector Caps	...	...	...	Price	6d.	plus	1d. P. Tax.	Total	7d. (A)
LRS9, LAB80	...	...	...	Price	26/5	plus	4/4 P. Tax.	Total	30/9 (A)
LRS10 1000, 2000, 3000, 50, 60, AT6 Mk. II	Price	15/-	plus	2/5 P. Tax.	Total	17/5 (A)

E.M.I.

Rubber Drive Bands	Price	3/-	plus	6d. P. Tax.	Total	3/6 (A)
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LENCO

Spare Idler wheels	Price	13/8	plus	2/3 P. Tax.	Total	15/11 (C)
Spare sets, Mounting Springs, Nuts, etc.	Price	11/3	plus	2/- P. Tax.	Total	13/3 (C)
Spare Mains Switches	...	...	...	Price	7/6	plus	1/3 P. Tax.	Total	8/9 (A)
45 r.p.m. Clip-in adaptors (12 per card)	...	...	...	Price per doz.	3/6	plus	7d. P. Tax.	Total	4/1 (A)
Sets Mounting Springs (Lenco)	...	...	...	Price	11/3	plus	1/10 P. Tax.	Total	13/1 (A)

