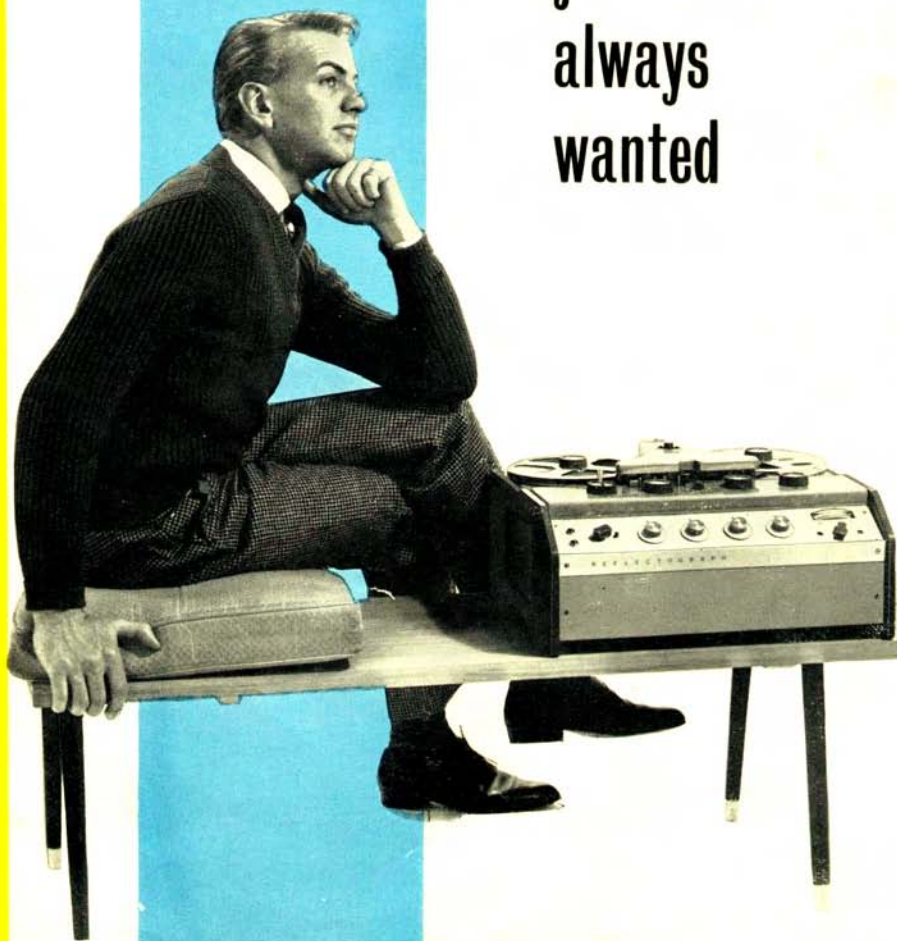


REFLECTOGRAPH

Pamphonic

present the

**tape recorder
you have
always
wanted**

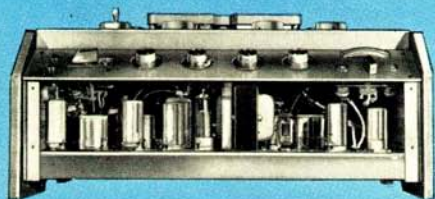


The home recorder with the professional specification

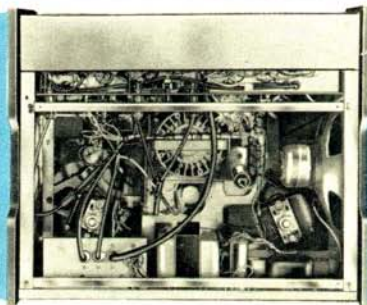
This is the *quality* tape recorder. You will find that possessing one is almost infinitely rewarding in the entertainment and pleasure it gives you. And, though the Reflectograph Tape Recorder is a very special recording instrument, you don't have to be technically minded to use it or appreciate it. This recorder is for *you* if you have a critical ear for music and sound generally, and you want your tape recorder to give you first class results every time. It's for you if your standards are a little higher than the average. This is the tape recorder you would really like to own.

The Reflectograph Tape Recorder is built, all through, to the standards demanded by a professional – yet is designed especially for use in the home. It is attractively styled by Douglas Scott, F.S.I.A. and constructed as a single unit.

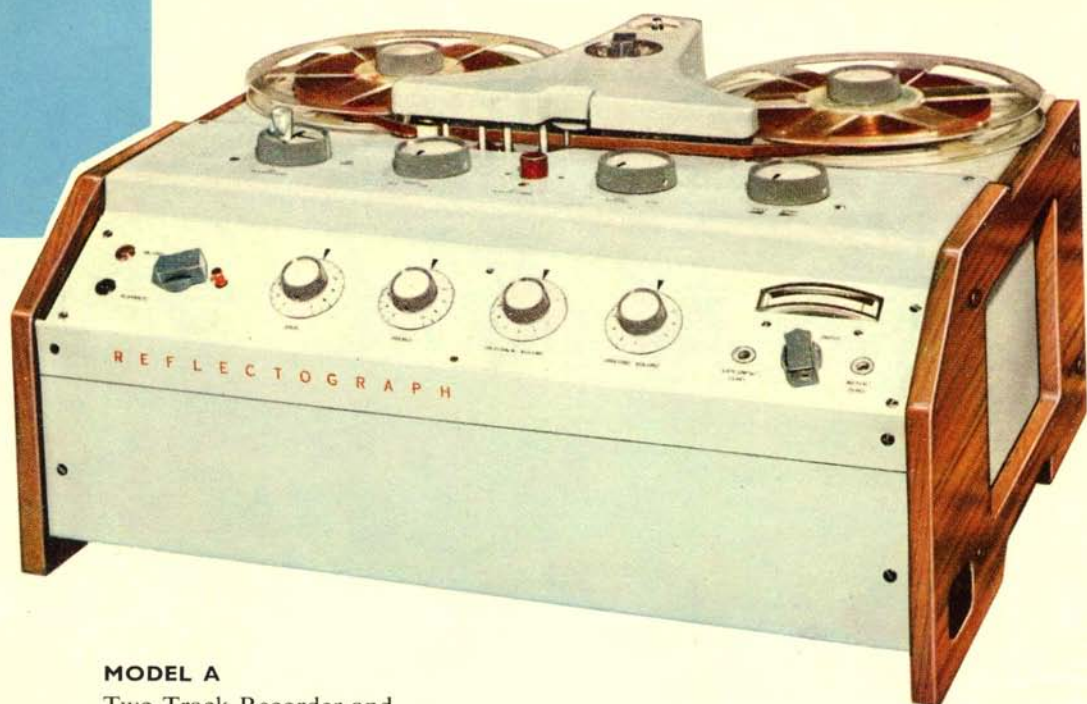
Reflectograph instruments are covered by Patent Application 1109/60. Registered Design 895860. World Patents pending.



Front view of amplifier showing accessibility of components when front trim is removed.



Underside view of recorder – note unit construction on rigid frame.



MODEL A

Two Track Recorder and

MODEL B

Four Track Recorder have an identical appearance as above except that Model B incorporates a track change switch and two additional sockets for connecting the playback head direct to an external amplifier.

MODEL D

Two Track Playback Deck and pre-amplifier is finished in the same style.

Accessories included with Reflectograph Models A and D. Plastic dust cover. Empty 7 in. reel. Two screened plugs. Chromium plate for Bib Splicer. Allen key for deck knobs. Instruction Manual.

MODEL B. As Model A plus 2 screened leads with plugs at each end for connecting playback head sockets to external amplifier.

MODEL	FACILITIES	PRICE
A	2 TRACK RECORD AND PLAYBACK	105 GNS
B	4 TRACK RECORD AND PLAYBACK. $\frac{1}{2}$ OR $\frac{1}{2}$ TRACK STEREO PLAYBACK BY ADDING EXTERNAL AMPLIFIER	115 GNS
D	2 TRACK PLAYBACK DECK WITH PRE-AMP OUTPUT	75 GNS

For the technical user . . .

SPECIFICATIONS

MODEL "A" TAPE DECK:

Three Motors: Direct drive synchronous capstan motor. Two Garrard side motors.

Tape Speeds: $7\frac{1}{2}$ and $3\frac{3}{4}$ i.p.s.

Tape Speed Control: Switched two-speed capstan motor.

Spool size: Up to $8\frac{1}{2}$ in.

Wow and Flutter: At $7\frac{1}{2}$ i.p.s. better than 0.2% R.M.S.

Starting and Stopping: Less than 1 sec.

Tape loading: Visible placing across heads.

Magnetic heads: $\frac{1}{2}$ -track, enabling recordings to be made on 2 tracks. Reflectograph Type E.1 Erase; Type R.1 Record; Type P.1 Playback.

Tape Wind: Controlled by single knob electrical wind with mechanical "park" position. Less than 45 secs. for 1,200 feet of tape.

Position Indicator: Clock type.

Controls: 3-position function lever: Mains OFF/ON knob: Push button OFF; Motors $7\frac{1}{2}$ / $3\frac{3}{4}$ /OFF knob: Wind on/Wind back knob.

Splicer: Provision on deck for mounting Bib Tape Splicer.

AMPLIFIERS: Separate Record and Playback Amplifiers providing continuous monitoring from the tape with provision for instant comparison between input signal and recorded signal.

Controls: Record/Playback with safety button on record. Bass Cut/Boost with calibrated skirt marked for C.C.I.R. response.

Treble Cut/Boost with calibrated skirt marked for C.C.I.R. response.

Playback Volume with calibrated skirt.

Record Volume with calibrated skirt.

Tape/Input switch.

Frequency Response: At $7\frac{1}{2}$ i.p.s. to C.C.I.R. specification ± 2 dB 50 c/s - 10,000 c/s (± 3 dB 30 - 50 c/s and 10,000 c/s - 15,000 c/s). At $3\frac{3}{4}$ i.p.s. ± 2 dB 45 c/s - 7,500 c/s.

Signal/Noise Ratio: Better than -45dB (unweighted including hum).

Input Sensitivities: High Gain: not more than 6mV for peak record level. Low Gain: not more than 0.25V for peak record level.

Output Voltages: From pre-amplifier 150 mV R.M.S. medium impedance. From LF amplifier 3 watts across 15 ohms.

Erase and Bias Frequency: 63 Kc/s.

Tape Speed Equalizing: Automatic for $7\frac{1}{2}$ and $3\frac{3}{4}$ i.p.s. Record level: Meter indicator, edgewise reading with coloured and calibrated scale.

Output Sockets: Head pre-amplifier. External Speaker (15 ohms).

Amplifier Construction: Separate record and playback amplifiers across front of instrument. Access to valves by removing screws from front panel.

Valves: 1 EF86; 2 6BR8; 1 ECC82; 1 ECC83; 1 EL84; 1 6AM5; 1 EZ80.

Monitor loudspeaker: Special Goodmans 10 in. by 7 in. high quality elliptical high flux, low field.

Dimensions: 20 in. long, 16 in. deep, 10 in. overall. Weight: 50 lbs. approx.

MODEL "B"

As for Model "A" except for:

Magnetic heads: $\frac{1}{4}$ -track, enabling recordings to be made on 4 tracks. Reflectograph Type E.4 Erase; Type R.4 Record; Type P.4 Playback.

Signal/Noise Ratio: -40 to -42dB (unweighted including hum).

Variations between tracks: Not greater than ± 1 dB at 1,000 c/s.

Tape/Input switch enables instant comparison of Input signal and signal recorded on tape. New "Slim-line" duo colour peak record level meter.



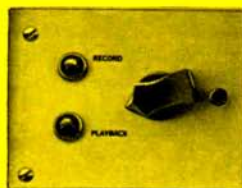
Fast Wind Control - single knob - all electric, will not break or stretch even the thinnest tape.



Motor speed control showing "off" position where self contained Reflectograph amplifiers may be used as straight amplifiers for disc or radio. Off Play/Record button provides instant stop during recording or playing.



Record/Playback selector switch showing red and green warning lights and Record Safety button.



Function lever - solenoid operated in Play/Record position providing additional Fail/Safe facility in case of A.C. mains failure. Metallic strip auto-stop.



Clock type tape position indicator may be manually reset by rotation of knurled knob in centre of clock face. Model B only, track change switch selects track to be recorded or played back.



Bass and Treble cut lift Tone Controls with matching calibrated skirts avoiding parallax. Controls of similar finish are provided for Record and Playback volume.



what the experts say...

Extracts from the Technical Report by Percy Wilson, M.A., in "The Gramophone", June, 1960.

"These are two of the most ambitious tape recorders that I have yet tested. For they have been designed to give a professional performance and at the same time styled for domestic use. And both objects have been achieved.

There is not the least doubt that the operation of these instruments has been reduced to the greatest possible simplicity; whilst wear and other troubles arising from use have been minimised.

The fast wind and re-wind operations are, or can be, considerably faster than usual yet they are guaranteed not to impose excessive strain even on the thinnest tape, and they are always under perfect control. Both are performed by turning a single knob – clockwise for re-wind and counter-clockwise for wind on. This also means, of course, that the two operations can be slowed down or alternated at will, thereby giving the usual professional facility for "inching", whereby the position of the tape relative to the heads can be readily adjusted to a fraction of an inch. This is a very pleasing facility possessed by very, very few non-professional tape recorders.

What about the performance? Well, as I hinted at the beginning of this report, I regard the specification as extremely modest. In all respects, whether listening or measurement, the actual performance has been considerably better than the specification. . . . first is the very smooth and level response in the deep bass, I know of no other domestic recorder that can equal the Reflectograph in this respect.

I particularly admire the design of the deck itself. It is a masterpiece.

My congratulations go to all concerned in this outstanding effort."

U.S.A. "Saturday Review".

"Meanwhile, those of us who have long valued tape as a complement to discs have been taking a

close look at some of the new four-track machines, and, like many other visitors to the Audio Fair, I was profoundly impressed by the latest Reflectograph unit. One hesitates to judge tape recorders without personally putting them through exhaustive tests, but the Reflectograph is certainly the most handsomely styled and best finished machine of its type yet made in Britain, while its performance – as far as one could judge under Fair conditions – appears to be first-rate."

Extract from Summary – "Gramophone Record Review" Equipment Report.

REFLECTOGRAPH MODEL A

"SUMMARY: Our unanimous opinion is that the Reflectograph Model A is one of the most satisfying two-track tape recorders we have yet handled, irrespective of price. Classified as a semi-professional machine, its modest specification is exceeded in practice. Elegant seems to be the best word to describe its design and performance. Such refinements as fast wind-on and re-wind by variable knob control permitting 'inching' of the tape past heads, are important, but in our opinion are secondary to the inclusion of separate record and playback amplifiers and a tape/input switch, which allows direct comparison of incoming signals with the signals recorded on the tape. This continuous monitoring is a supreme test, and only manufacturers with complete confidence in their recorders dare fit this facility. Our listening jury highly praised the sound quality on playback of both its own recorded tapes, and commercial pre-recorded tapes, commenting that the internal 10 in. by 7 in. Goodmans unit would be more than acceptable to many listeners, but with a first-class external speaker, the sound quality is superb. The discriminating enthusiast cannot fail to be delighted with this new British machine."

DONALD W. ALDOUS.
DAVID PHILLIPS.

Invitation

Now - actually *listen* to the Reflectograph Tape Recorder - only then will you experience what a wealth of living sound you yourself can tape with this instrument. Go to your dealer today - he will be delighted to give you a special demonstration.



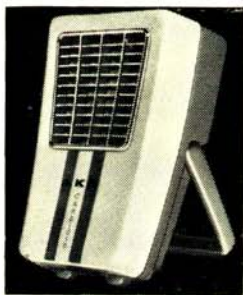
BIB ACCESSORY KIT
Comprises Bib Splicer, Scotch Splicing Tape, Cutters, 24 Tape labels and Data Card showing playing time of all tapes and selected orchestral works.
PRICE: 28/6



BIB RECORDING TAPE SPLICER
Enables tapes to be edited quickly and easily. Provision made on Reflectograph deck for installation of Splicer.
PRICE: 18/6 with full instructions.



CARRYING CASE CCA
is of wood covered in two tone roxine with nickel plated fittings. Reflectograph A or B may be permanently installed after removing the polished wood sides. The lid is completely detachable.
Dimensions: Height: 11½ in.
Width: 1 ft. 5½ in.
Length: 1 ft. 8 in.
PRICE: 7½ GNS.



D11N DYNAMIC DIRECTIONAL MICROPHONE
A newly designed dynamic microphone with cardioid characteristic produced specially for use with good quality domestic recorders. Its wide frequency range, and high level of sensitivity assure excellent results whenever used. The modern-style housing is particularly pleasing.
PRICE: £6. 10s. 0d.
SCREENED JACK PLUGS
PRICE: 7/6 EACH



D19B DYNAMIC DIRECTIONAL MICROPHONE
Cardioid characteristic and pronounced directional properties resulting in freedom from background noise assure very high standards of reproduction. A bass attenuation switch is incorporated.
PRICE: 17 GNS. including stand as illustrated.



PILLAR LOUDSPEAKER
A new design using a tuned column energised by two cone units. Very smooth response covering 45 c/s - 12 Kc/s and very high sensitivity. Domestically ideal, taking less than 1 sq. ft. floor space; visually and acoustically matched to the average living space. Finished in Sapele Veneer and Pale Blue or Bronze washable grille material.
PRICE: £18. 16s. 6d.

**PAMPHONIC
REPRODUCERS LTD**

Sales Office:
17, Stratton Street, London W.1
Telephone: Grosvenor 1926