

Stern's

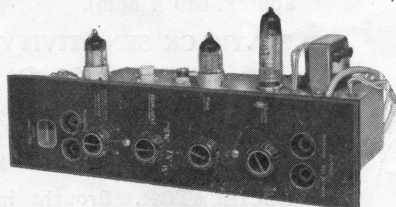
MODEL HF/TR3 COMPLETE TAPE AMPLIFIER

INCORPORATING 3 SPEED TREBLE
EQUALISATION BY MEANS OF THE
LATEST **FERROXCUBE POT
CORE INDUCTOR**

AVAILABLE AS A COMPLETE
KIT OF PARTS **£12.15.0d.**

ALTERNATIVELY FULLY ASSEMBLED
AND TESTED **£16.10.0d.**

(Carr. & Ins. 6/- extra.)



TERMS ASSEMBLED UNIT ONLY.

HIRE PURCHASE. Deposit **£3.6.6d.** and 12 monthly payments of **£1.4.2d.**

This high quality Amplifier is based entirely on the very successful "TYPE A" design completed in the MULLARD LABORATORIES, it is one of the best we have experienced and in our opinion better than most Tape Amplifiers normally incorporated in the high priced commercially made Tape Recorders. We incorporate ONLY NEW HIGH GRADE COMPONENTS including MULLARD VALVES, true High Fidelity recordings are obtainable whilst "Hi Fi" reproduction is assured by the use of the latest GILSON OUTPUT TRANSFORMER.

It can be supplied for use with the following Tape Decks—
TRUVOX, COLLARO, BRENNELL, LANE, MOTEK.

When ordering please advise for which Deck, and we will then provide for the correct matching requirements.

THE FOLLOWING CONTROLS and INPUTS ARE PROVIDED :—

INPUT JACK 1. Used for recordings direct from a MICROPHONE, a CRYSTAL SET, a RADIO JACK, and LOW OUTPUT PICK-UPS.

INPUT JACK 2. Used for recording from a RADIO SET, a RADIO TUNER, or from any AMPLIFIER or PR-AMPLIFIER. Also Record Players having CRYSTAL OR MAGNETIC PICK-UPS.

VOLUME CONTROL. Adjusts the "RECORDING MODULATION LEVEL" on record and also acts as the volume control during playback, or when used as a straight Amplifier.

RECORD/PLAYBACK/AMPLIFIER SWITCH. A three position switch that is self explanatory. The Amplifier position is provided so that the amplifier may be used as a straight gramophone amplifier.

STONE CONTROL. Operative on Replay only Variable Treble Attenuation.

EQUALISER SWITCH. A three position switch providing correct equalisation for 3 $\frac{1}{2}$, 7 $\frac{1}{2}$ or 15 in/sec speeds. It incorporates a resonant circuit containing the Ferroxcube Inductor.

RECORD LEVEL INDICATOR. This is a "Magic Eye" Recording Level Indicator and by observing it in conjunction with adjustment of the volume control, you can set the modulation level of your recording.

OUTPUT JACK 3. Used to connect an EXTENSION SPEAKER to the Amplifier.

OUTPUT JACK 4. MONITOR OR LOW LEVEL OUTPUT. Used for feeding a recorded tape to an external Amplifier to amplify the recorded signal for use in halls, etc. This Jack may also be used to monitor with high impedance headphones on record.

ADDITIONAL USES OF THE AMPLIFIER. In the AMPLIFIER position, any input applied to either Jack No. 1 or Jack No. 2 will be reproduced by the recorder speaker, thus it will be seen that the amplifier can be used as a GRAMOPHONE RECORD REPRODUCER, or for direct reproduction from a MICROPHONE, RADIO TUNER UNIT, CRYSTAL SET, RADIO JACK, Etc.

TECHNICAL SPECIFICATION. MODEL HF/TR3 AMPLIFIER.

- **RECORDING SENSITIVITY.** Measured at 1Kc/s. Audio Current 200 μ A.

JACK No. 1 MICROPHONE. 2.5 mV for peak recording level (Impedance 2 Meg-ohm).

JACK No. 2 RADIO. 300 mV for peak recording level (Impedance approx. 680 k ohm).

- **PLAYBACK SENSITIVITY.** Measured at 5KC/S.

(a) 15 in/sec 5.2 mV FOR 3 WATT POWER OUTPUT.

(b) $7\frac{1}{2}$ in/sec 2.8 mV FOR 3 WATT POWER OUTPUT.

(c) $3\frac{3}{4}$ in/sec 1.1 mV FOR 3 WATT POWER OUTPUT.

LOW LEVEL OUTPUT AT JACK No. 4 = 120 mV.

- **OSCILLATOR.** Brought into circuit on record. Frequency 51/54 Kc/s (approx.)

- **ERASE.** 60 dB down at full output.

- **OVERALL NOISE LEVEL.** 50 dB below signal at full output.

- **FREQUENCY RESPONSE.**

Playback characteristic to the specification of the International Consultative Committee (C.C.I.R.)

Recording characteristic arranged to give flat frequency response in conjunction with this replay characteristic.

Treble Boost incorporated during record and Bass Boost during replay. Separate equalisation provided for tape speeds of 15, $7\frac{1}{2}$ and $3\frac{3}{4}$ in/sec.

15 in/sec \pm 3 dB relative to the level at 1 Kc/s from 35 c/s to 16 Kc/s.

$7\frac{1}{2}$ in/sec \pm 3 dB relative to the level at 1 Kc/s from 50 c/s to 13 Kc/s.

$3\frac{3}{4}$ in/sec \pm 3 dB relative to the level at 1 Kc/s from 50 c/s to 6 Kc/s.

- **VALVE COMPLIMENT.**

V1. EF86

Input stage for both recording and playback functions.

V2. ECC83

(a) On Record Equaliser Stage and Output Stage.

(b) On Playback Equaliser Stage and A.F. Amplifier.

V3. EL84

(a) On Record Oscillator.

(b) On Playback Power Output.

V4. EM81

Magic Eye Tuning Indicator-out of circuit on playback.

V5. EZ81

Rectifier (located in Power-Pack)

OA81

Germanium Diode Tuning Indicator rectifier.

- **INPUT PANEL AND FUSE.**

MAINS INPUT SOCKET—Mains ON/OFF Switch—Voltage Adjustment Panel—and 2 Amp $1\frac{1}{4}$ " Tubular Fuse.

- **OPERATION.** A.C. MAINS 200/250 VOLTS 50 CYCLES PER SEC.

- **GENERAL.**

Size of AMPLIFIER CHASSIS 11 x 6 x 6 inches high.

Size of POWER PACK 6 x 5 x 4 inches high.

- **A PORTABLE CASE** is available to incorporate the TRUVOX Mk IV or COLLARO Mk IV Tape Decks, it is robustly and attractively made and is finished in High Grade Rexine, with gilt Escutcheon and gilt locks, concealed pocket for microphone and mains lead. Has a Cream Pistol grip carrying handle.

PRICE £5.0.0 (Plus 5/- carriage and insurance).

STERN RADIO LTD.

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