## Stern's

## MULLARD '5-10' POWER AMPLIFIER

### Incorporating PASSIVE CONTROL UNIT

We offer this popular and very successful AMPLIFIER COMPLETE to SPECIFICATION but incorporating improvements in the general layout.

This in no way affects the excellent performance of the amplifier but provides for simple construction which enables even an inexperienced constructor to successfully complete the assembly without difficulty.



Model 510/RC

#### ONLY HIGH GRADE COMPONENTS ARE INCORPORATED.

The design is intended for a simple domestic installation combined with GENUINE HIGH QUALITY REPRODUCTION. The CONTROL UNIT facilities are similar to those on the more elaborate Preamplifier-Control Unit, but the input requirements to fully drive the Power Amplifier to 10 Watts are, in comparison, restricted. The input sensitivity is 600 mV. on both Radio and Gramophone inputs, therefore medium and high output crystal pick-ups, together with most RADIO TUNING UNITS, are perfectly well suited to operate with the Amplifier.

The CONTROL UNIT is separate and completely enclosed; it is normally fitted with six fixing screws to the Amplifier Chassis as shown in the illustration. In this condition it can be assembled into a cabinet as a complete UNIT, but if it is desired to use the control unit remote from the Main Chassis it can be easily detached by removal of the six screws and by extending the Switch, Heater and Audio Leads up to a length not exceeding 18 inches.

We incorporate SPECIFIED COMPONENTS and NEW MULLARD VALVES. We also give the purchaser the choice of two ULTRA-LINEAR OUTPUT TRANSFORMERS—one by PARMEKO LTD., and the other by PARTRIDGE. This is recognised as one of the best U/L Output Transformers made today. It ensures maximum undistorted output and the widest frequency range. We also supply a PARMEKO MAINS TRANSFORMER, which has extra power available to supply a Radio Tuning Unit amounting to 250 Volts at 35 m/a and a separate heater winding 6.3 volts 2½ amps.

POWER OUTPUT-10 Watts 0.1% Harmonic Distortion at 400 c/s.

FREQUENCY RESPONSE-Flat within 1 db (relative to response level at 1 K/c) from 5 c/s to 30 Kc/s.

POWER RESPONSE—Flat from 30 c/s to 15 Kc/s.

SENSITIVITY-600 m/volts for 10 Watts output.

CONTROLS-(1) Mains On/Off. (2) Bass. (3) Treble. (4) Volume. (5) Selector Switch giving Radio, Gram 78, Gram L.P.

**DIMENSIONS**— $10'' \times 8\frac{1}{2}'' \times 6\frac{1}{2}''$  high.

HUM AND NOISE LEVELS-65db below 10 Watts. Watts.

VALVE LINE-UP-EF86, ECC83, EZ81 and two EL84's in Push-Pull.

INPUT SOCKETS FOR—(1) Gram Unit. (2) Radio Tuning Unit.

GRAM-Motor A.C. Take-off provided on Chassis.

POWER CONSUMPTION-Approx. 60 Watts.

SPEAKER-3 or 15 ohm P.M. speakers can be used. (Selected by Switch on rear of Chassis)

The Chassis has a neat hammered gold finish and is supplied with a highly polished PERSPEX FRONT PANEL in White or Black.

#### THE COMPLETE ASSEMBLY MANUAL IS AVAILABLE FOR 2/3

#### PRICE SUMMARY

Description	A=Assd. K=Kit.	Cash	Deposit	Terms Per Month	Carr. & Ins.
510/RC AMPLIFIER INCORPORATING PARMEKO	A	£16. 0. 0	£3. 4. 0	12 of £1. 4. 6	7. 6
O/P TRANSFORMER INCORPORATING PARTRIDGE O/P TRANSFORMER	K A K	£12. 0. 0 £17. 6. 0 £13. 6. 0	£2. 8. 0 £3.10. 0 £2.14. 0	9 of £1. 4. 0 12 of £1. 6. 5 12 of £1. 0. 4	7. 6 7. 6 7. 6

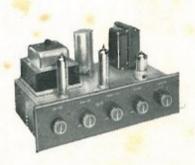
#### STERN'S MULLARD "3-3" QUALITY AMPLIFIER

Model 33/RC

DEVELOPED FROM THE VERY POPULAR 3-VALVE 3-WATT AMPLIFIER DESIGNED IN THE MULLARD LABORATORIES — provides the Home Constructor with a simple yet HIGH QUALITY AMPLIFIER ideally suited for small domestic installations.

ONLY HIGH GRADE COMPONENTS ARE INCORPORATED—We do not use "surplus or cheap" types.

In presenting this Amplifier we have strictly adhered to the design as created by the MULLARD TECHNICIANS, but we have effected improvements on the original component lay-out and also in the appearance of the completed Amplifier. We have also incorporated switching for Gram and Radio Inputs and a MAINS TRANSFORMER of very generous size, thus providing sufficient extra power to supply a Radio Tuner Unit.



The sensitivity of the Amplifier permits the use of nearly all types of Crystal Pick-ups, such as those incorporated on the popular B.S.R. COLLARO and GARRARD Record Players, and most Radio Tuning Units. We incorporate SPECIFIED COMPONENTS and NEW MULLARD VALVES, including the latest PARMEKO OUTPUT TRANSFORMER.

#### TECHNICAL SPECIFICATION

POWER OUTPUT

3 Watts at 1% total harmonic distortion.

FREQUENCY RESPONSE

Flat within ± 1db relative to the response level (at 1 Kc/s) from 35 c/s to 30 Kc/s.

CONTROLS

(1) Mains On/Off Switch. (2) Bass. (3) Treble. (4) Volume Control. (5) Selector Switch giving Radio-Gram L.P.-Gram 78 positions.

INPUT SOCKETS FOR

(1) Gram Unit. (2) Radio Tuning Unit.

VALVE LINE-UP

(1) EF86 as voltage amplifier. (2) EL84 in the output stage. (3) EZ81—Rectifier.

OVERALL DIMENSIONS

Assembled Amplifier is 10 in. x 6 in. x 6 in. high, the Front Panel is 11 in. x 3 in.

TONE CONTROL

Maximum Treble Cut: Approximately 20 db at 10 Kc/s. Maximum Bass Boost: Approximately 15 db at 70 Kc/s.

SENSITIVITY

Radio: 100 m/V for 3 Watts. Gram: 100/150 m/V for 3 Watts.

HUM and NOISE LEVELS

70db below 3 Watts.

RADIO TUNER

Additional power is available of 250 Volts 30 m/a and 6.3 Volts 1½ amps.

SPEAKERS

Provides for 3 or 15 ohm type (state requirement).

The complete Chassis has a neat hammered gold finish and the PERSPEX CONTROL PANEL is highly polished in Black or White each being styled to blend with modern furnishings and presents a very attractive finish.

Alternatively we supply it FULLY ASSEMBLED and READY FOR USE for .. .. .. £11.10. (plus 6/6d. Carriage and Insurance)

TERMS-DEPOSIT £2. 6. 0. 9 monthly payments of £1. 3. 0.

ENQUIRIES
and
MAIL ORDERS TO . . .
STERN RADIO LTD.
6-12 Tudor Place,
Tottenham Court Road

London, W.1

MUSeum 6128/9

DEMONSTRATIONS and SHOWROOMS at

# STERN RADIO LTD.

109, FLEET STREET, LONDON, E.C.4

Telephone: FLEET STREET 5812-3
Hours of Business: Weekdays 9 a.m. to 6 p.m.
Saturday 9 a.m. to 1 p.m.

PREMIER RADIO

23, TOTTENHAM COURT ROAD, LONDON, W.1.

Telephone: MUSeum 3451-2

Hours of Business: 9 a.m. to 6 p.m. THURSDAY to 1 p.m.