



. . . the first name in *High Fidelity*



“TL/12 PLUS” POWER AMPLIFIER

SUCCESSOR TO
THE WORLD-FAMOUS TL/12 “POINT ONE”^{*} POWER AMPLIFIER

DESIGNED BY HAROLD J. LEAK
for
THE PROFESSIONAL ENGINEER and THE MUSIC-LOVER AT HOME

TRADITIONAL LEAK ENGINEERING AND CRAFTSMANSHIP

“I can most certainly say at this stage that the workmanship and finish are of a quality which I have never before encountered in the radio industry, despite the fact that my association with the industry in one capacity or another extends back over 27 years. I think you are to be congratulated all the more on this achievement in view of the increasing tendency nowadays towards inferior workmanship and design.”

Part of a letter from a purchaser of the TL/12 amplifier who is a very well-known engineer and whose identity is known to the Editor of “*Wireless World*.”

^{*} “POINT ONE” is the Trade Mark of H. J. Leak & Co., Ltd. It was originally applied to the first power amplifiers having a total distortion as low as point one of one per cent., when, in June, 1945, H. J. Leak, M.BRIT.I.R.E., revolutionised the performance standards for audio amplifiers by designing the original “POINT ONE” series.

FUNCTION

The TL/12 PLUS power amplifier has been designed to give the highest possible fidelity. In electrical performance, reliability, appearance and craftsmanship, it is in advance of the earlier TL/12 and similarly acceptable to the professional communications engineer.* For broadcast monitoring, recording etc., the amplifier can be supplied with line input transformer, input gain control, base plate and top cover.

For use by the music-lover at home, this amplifier will normally follow a Leak Varislope III or "Point One" pre-amplifier. The power output of 12 watts is ample for home use and adequate for our own lecture-demonstrations to audiences of several hundreds in small halls.

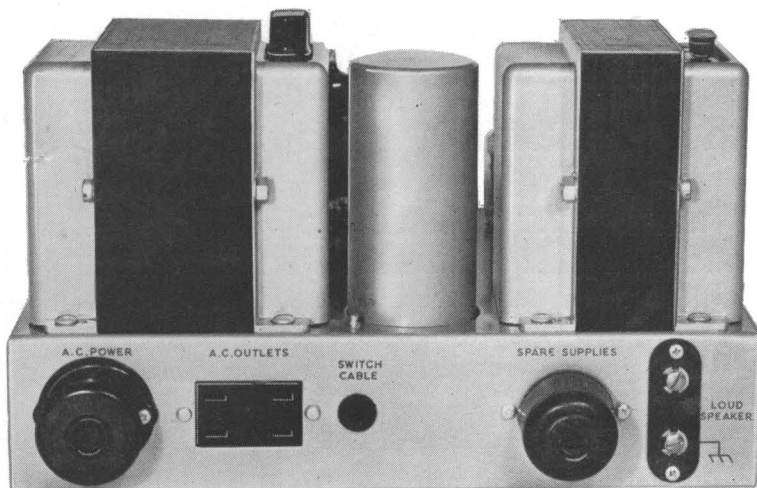
APPEARANCE AND FINISH

The TL/12 PLUS is finished in beige-gold stoved paint ; and all visible accessory fittings are in black. The general finishes are similar to the TL/12 and TL/10, which have operated for years in high-humidity, high-temperature locations such as Malaya and Hong-Kong.

It is appropriate here to mention one of the basic principles of LEAK design. From long experience and by extreme attention to design details during development work on the pre-production models, we enable our craftsmen to achieve a high output per man-hour. The labour costs thus saved offset the increased costs incurred for high-grade materials, components and finishes, and this together with quantity production (made possible only by a world-wide market) explains how quality products may be sold at reasonable prices.

CIRCUITRY

This is almost identical with the world-famous Leak TL/12, using a 3-stage triple loop feedback circuit, the main loop applying 26db of negative voltage feedback over the complete amplifier from input to output terminals. A low-noise, high-gain pentode feeds into a second-stage double-triode phase-splitter, which in turn feeds two push-pull output valves (tubes) arranged in the distributed-load condition. The output transformer is the same size as on the original TL/12, but the innovation of grain-orientated steel enables us to provide an even superior component.



* LEAK amplifiers are the choice of professional engineers such as the B.B.C. (over 500 delivered), the South African Broadcasting Corporation (600), ITV and many other Commonwealth and overseas broadcasting and TV systems, who use them for transmitting and/or monitoring (quality checking) the broadcasts to which you listen. Also, many of the gramophone records you buy are cut via LEAK amplifiers.

Valves (Tubes)

First stage — one EF86 or Z729 or 6267.
Second stage — one ECC81 or B309 or 12AT7.
Output stage — two EL84 or N709 or 6BQ5.
Rectifier — one GZ34 or 5V4 or 5AR4.

(International standard types of world-wide availability).

Power Output

14 watts r.m.s. maximum.

Total Harmonic Distortion

0.1% at 12 watts output (± 1 db) at 1,000 c/s.

Hum and Noise

85db, ± 3 db, below 12 watts with a source impedance of 25,000 ohms.

Sensitivity

An input of 125mV at 1,000 c/s gives 12 watts output.

Frequency Response

± 0.5 db, 20 c/s to 20 kc/s.

Damping Factor

25, measured at 1,000 c/s.

Input Impedance

1 megohm, plus approximately 5 mmfd.

Stability Margins

Gain, 10db ± 3 db.
Phase, $20^\circ \pm 10^\circ$.

Loudspeaker Impedances

Loudspeakers of any impedance between 3 ohms and 20 ohms may be used. An adjustable plug on top of the output transformer selects three tappings, nominally 16 ohms, 8 ohms and 4 ohms.

Power Supply

200 - 250V 50 - 100 c/s.
or (alternative model)
100 - 125V 50 - 100 c/s.

A fused voltage selector plug is fitted on top of the mains transformer.

Consumption

75 watts (80 watts with Leak pre-amplifier).

Spare Supplies

The following supplies are available for a radio tuner unit from a socket at the rear :-

Heater : 6.3V, 2.1A A.C. max.

H.T. : 350V 40mA D.C. max., highly smoothed (0.2V r.m.s. ripple).

A double socket marked "A.C. Outlets" is fitted as a convenient source of power supply for gramophone motors, etc. Corresponding plugs, with 6-ft. (2 metre) cables are supplied with the amplifier.

Dimensions

10" \times 7 $\frac{7}{8}$ " \times 5 $\frac{15}{16}$ " high (25.4 \times 20 \times 15.2 cms.).

Weight

14.5 lbs. (6.58 kgs.).

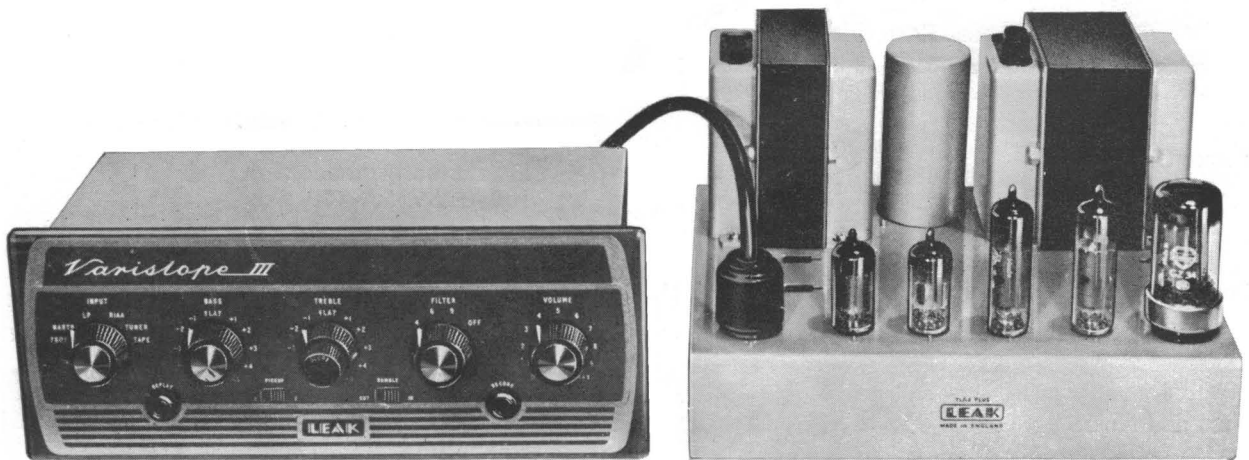
Fixing

Four brackets and screws are supplied for fixing the amplifier to a baseboard.

Price : £18 · 18 · 0d.

TO ENGINEERS IN COMMUNICATIONS ESTABLISHMENTS

We have a very wide experience of modifying our amplifiers to suit special requirements. As examples, meter switching can be incorporated and a variety of panel mountings have been arranged. Please do not hesitate to let us know your physical requirements. Kindly note that modifications are undertaken only on minimum orders of 100 amplifiers of one type.



“Varislope III” Pre-amplifier

TL/12 Plus Power Amplifier

The Varislope III pre-amplifier and TL/12 PLUS amplifier when used with the best available complementary equipment give to the music-lover a quality of reproduction unsurpassed by *any* equipment at *any* price. Even when the complementary equipment falls below that of the best obtainable, the use of these amplifiers will enable one to obtain very marked improvements in reproduction.

We shall be pleased to send you details of the LEAK Varislope III pre-amplifier, “Point One Plus” pre-amplifier, TL/25 PLUS amplifier, TL/50 PLUS amplifier, “Trough-Line” F.M. Tuner, and “Dynamic” moving-coil pickup.



H. J. LEAK & CO. LTD.

(ESTABLISHED 1934)

BRUNEL ROAD : WESTWAY FACTORY ESTATE : LONDON, W.3

Telephone:
SHEpherds Bush 1173 (4 lines)

Telegrams:
Inland: Sinusoidal, Ealux, London
Foreign: Sinusoidal, London