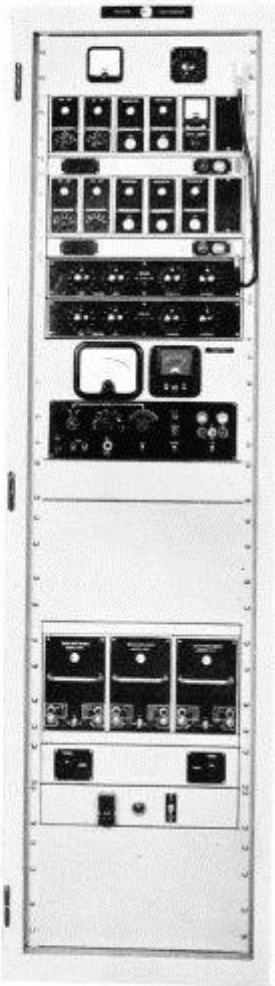
Audio Amplifiers and Programme Input Equipment

THE FOLLOWING comprehensive range of audio amplifiers consists of a series of small plug-in units using miniature valves or transistors and printed-wiring boards.

The amplifiers are robust and are readily adaptable to a wide variety of sound studio requirements.



8287

Plug-in audio amplifiers in a cabinet arrangement.

Microphone/ Programme Amplifier Type 3086

A general-purpose unit, usable as a microphone, booster or programme amplifier.

Microphone/ Programme Amplifier Type 5110

This unit is similar to the Type 3086 but has an adjustable gain control.

Line Amplifier Type 3087

For use as a booster amplifier after a line equalizer.

Trap-valve Amplifier Type 3088

These amplifiers are used when a single source of modulation is required to feed several output lines.

Isolation Amplifier Type 4585

This has a similar function to the Type 3088, but with an output impedance of 600 Ω.

Limiter Amplifiers Types 2770 and 4619

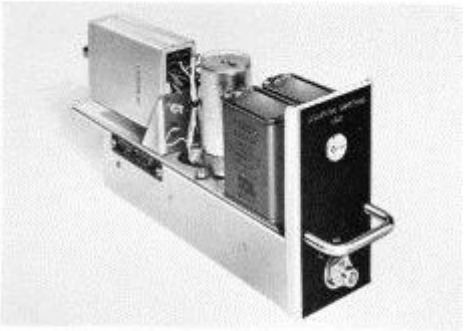
Two high-quality amplifiers which are electrically similar. The Type 2770 is used for the Sound Programme Input Panel Type BD 959.

Tone Source Unit Type 4582

Produces a constant tone at 400 or 900 c/s from zero level to +4 dBm, or +4 to +8 dBm.

Power Supply Unit Type 4550

A unit to provide power supplies for a number of amplifiers.



Type 5109A. 90

Ancillary units

Various other units are also available including Feedmeter Panel Type 4641 and Feed and Indicator Assembly Type 4645. The latter can be connected to the Feedmeter Panel by means of a multi-way plug-in lead.

Other units are the Supply Unit Switch Panel, and the High Level Input Unit.

Sound Programme Input panels Types BD 969A and BD 969B

These p.i.e panels form a further application of the system of unit amplifiers described. The mounting panel occupies 8¾ in. of a standard 19 in. rack and carries three plug-in runner assemblies comprising a Limiter Type 4619, either a P.P Meter Unit, Type 6288, or a V.U Meter Unit, Type 6289 (see page 42), and a Power Supply Unit Type 6290, which also incorporates a feed meter.

8356

Data Summary

Amplifiers

Type Number	Purpose of unit	Input level max. *dBm*	Input impedance *ohms*	Voltage gain *dB*	Output level max. *dBm*	Output impedance *ohms*	Noise level *dBm*	± *dB* frequency response 30–15,000 c/s
3086	Microphone and programme amplifier, fixed gain	−25	30 or 600	45	+20	600	−75	0·7
5110	Microphone and programme amplifier, variable gain	−45 to −25	30 or 600	45 to 65	+20	600	−75 to −55	0·7
3087	Booster amplifier for use with line equalizers, variable gain	−20 to +10	600	10 to 40	+20	600	−75	0·7
4585	Isolation amplifier for sound distribution to lines, variable gain	0 to +20	10,000	0 to 20	+20	600	−75	0·7
3088	Trap-valve amplifier for sound distribution to lines, ring main, etc., variable gain	0 to +20	10,000	0 to 20	+20	75	−75	0·7
4619 and 2770	Limiting amplifiers, variable	−10 to +10	600	30	0 to +20	600	−70	1·0

Tone Source Unit Type 4582

Frequency:
400 or 900 c/s ±2%, switchable.
Output level: 0 to +4 dBm (Edn. A) or +4 to +8 dBm (Edn. B) adjustable. Indicated on voltmeter calibrated in volts and dBm.
Output impedance: 10 Ω balanced.
Distortion:
At 0 dBm output, not greater than 0·2%.
At max. output, not greater than 0·5%.
Power consumption:
300 V d.c, 75 mA. 6·3 V a.c, 0·5 A.
Valves:
Z729–1. Z719–1.

Power Supply Unit Type 4550

Outputs:
H.T: 300 V (120 mA max.).
L.T: Two outputs each 6·3 V a.c. (3·5 A max. each output).
Equivalent source impedance: Less than 1 Ω.
Regulation:
H.T: Output constant to within 0·1 V from no-load to full-load.
L.T: 10%.
A.C ripple: Less than 1 mV.
Power supplies: 100–125 V or 200–250 V (in 5 steps) 50–60 c/s, single-phase a.c.
Power consumption:
40 W (approx.) on no-load.
165 W (approx.) on full-load.
Valves: 12E1–1 ECC83–2
GZ32–1 QS83/3–1.

Sound Programme Input Panels
Types BD 969A and BD 969B
Input impedance: 600 Ω balanced or unbalanced.
Output impedance: 600 Ω balanced.
Gain: −20 dB to +30 dB (adjustable).
Maximum output: +20 dBm.
Frequency response: ±1 dB from 30 to 15,000 c/s.
Distortion: At +12 dBm output.
Less than 0·5% at 60 c/s.
Less than 0·3% at 1000 c/s.
Noise level: 70 dB below threshold of limiting.
Power supplies: 100–125 V or 200–250 V, 50–60 c/s AC.

DIMENSIONS OF UNITS

	Height	Width	Depth	Weight
Type 2770	8 in. (20·3 cm)	4¾ in. (12 cm)	9¼ in. (23·9 cm)	8 lb (3·63 kg)
Type 3086	5 in. (12·7 cm)	2 13/16 in. (7·1 cm)	11 9/16 in. (29·4 cm)	2½ lb (1·14 kg)
Type 3087	5 in. (12·7 cm)	2 13/16 in (7·1 cm)	11 5/8 in. (29·4 cm)	2¾ lb (1·25 kg)
Type 3088	5 in. (12·7 cm)	2 13/16 in. (7·1 cm)	11 5/8 in. (29·4 cm)	4 lb (1·82 kg)
Type 4550	8¾ in. (22 cm)	5 11/16 in. (14·2 cm)	11 3/8 in. (29·6 cm)	17 lb (7·75 kg)
	Height	Width	Depth	Weight
Type 4582	5 in. (12·7 cm)	2 13/16 in. (7·1 cm)	11 5/8 in. (29·4 cm)	2¾ lb (1·25 kg)
Type 4585	5 in. (12·7 cm)	2 13/16 in. (7·1 cm)	11 5/8 in. (29·4 cm)	3 lb (1·37 kg)
Type 4619	5 in. (12·7 cm)	5 11/16 in. (14·2 cm)	11 5/8 in. (29·4 cm)	7¾ lb (3·52 kg)
Type 5097	5 in. (12·7 cm)	2 13/16 in. (7·1 cm)	11 5/16 in. (29·4 cm)	3½ lb (1·59 kg)
Type 5110	5 in. (12·7 cm)	2 13/16 in. (7·1 cm)	11 5/16 in. (29·4 cm)	2½ lb (1·14 kg)
BD 967	5 in. (12·7 cm)	5 11/16 in. (14·4 cm)	11⅝ in. (29·6 cm)	8 lb (3·64 kg)
Type 5109A	5 in. (12·7 cm)	2 13/16 in. (7·1 cm)	11 5/16 in. (29·4 cm)	2½ lb (1·14 kg)
BD 969A and BD 969B	8¾ in. (22 cm)	19 in. (48 cm)	11¼ in. (29 cm)	