

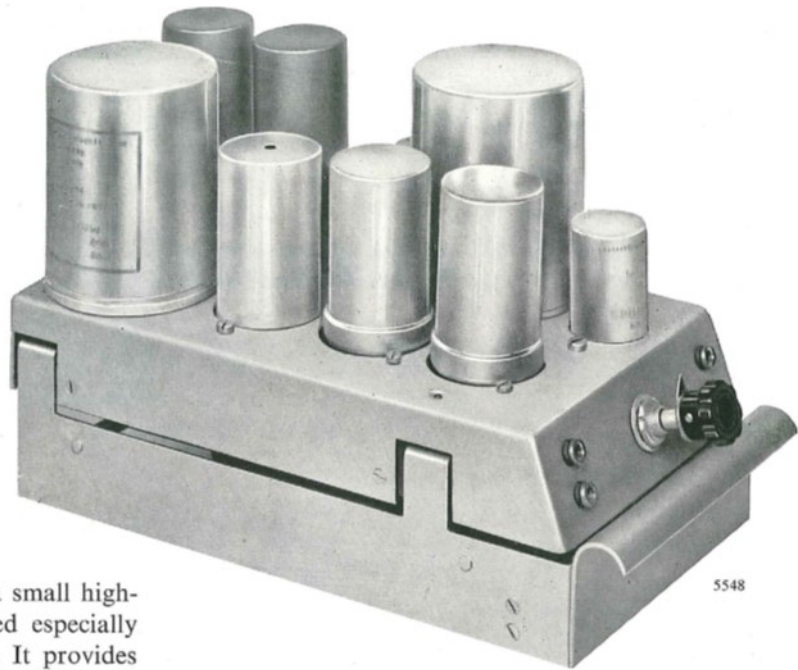


## Loudspeaker Amplifiers

### *Types BD 516 and BD 513*

#### **6-Watt Loudspeaker Amplifier**

##### *Type BD 516*



THE AMPLIFIER Type BD 516 is a small high-quality, high-gain amplifier designed especially for broadcast monitoring purposes. It provides a peak power output of 6-8 watts for driving several studio and control room loudspeakers and can be used for monitoring the programme, talk-back or recording.

The circuit consists of a single pentode stage resistance-capacity coupled to a phase splitter, which in turn drives two pentodes in push-pull. Negative feedback is applied from a tertiary of the output transformer to the cathode of the first stage.

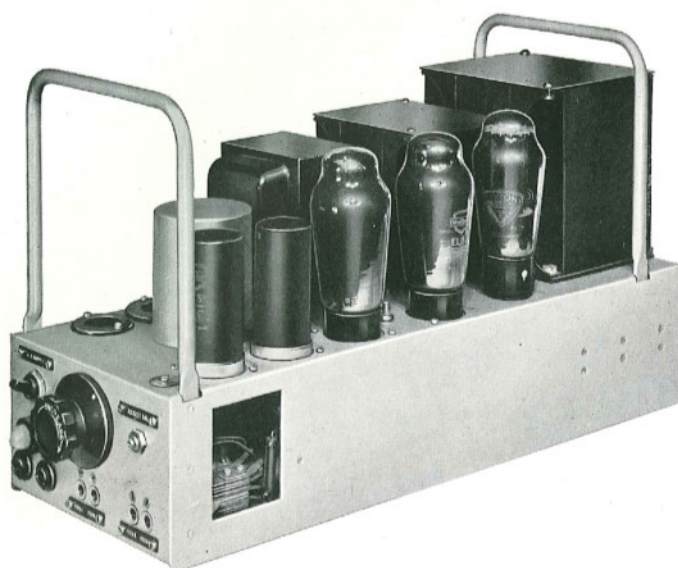
All connections to the unit are made through a standard plug-in contact strip which enables the amplifier to be changed or removed for inspection in a matter of seconds.

To prevent microphony the amplifier is shock mounted. This is achieved by constructing the

chassis in two parts and then joining these by means of rubber shock absorbers. The upper part carries all the components and wiring and the lower consists of the runner bars and contact strip.

#### **20-Watt Loudspeaker Amplifier *Type BD 513***

The Amplifier Type BD 513 is a high-power amplifier of exceptional quality designed for driving a concert hall loudspeaker, or for studio monitoring. It would normally be used in conjunction with a Marconi studio control desk



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but its compactness and fine performance make it eminently suitable for a wide variety of other applications.

The circuit consists of a pentode input stage followed by a phase splitter driving two pentodes in push-pull. Negative feedback is applied from a separate winding on the output transformer to the cathode of the first stage.

The amplifier and power pack are contained on a single chassis which is provided with two handles for lifting purposes. These handles also form protective supports when the unit is being serviced. A volume control, on-off switch, mains fuses and valve feed jacks are mounted at one end of the chassis. The mains input, and audio input and output connections are taken to two plugs let into the top of the chassis.

### DATA SUMMARY

	Type BD 516	Type BD 513
<b>Input impedance:</b>	30, 150, 300, 600 or 5000 $\Omega$ balanced or unbalanced 10,000 $\Omega$ for bridging	As BD 516
<b>Output load impedance:</b>	4, 8 or 16 $\Omega$	As BD 516
<b>Load/source ratio:</b>	12 : 1	10 : 1
<b>Power gain:</b>	Bridging 57 db $\pm$ 2 db Matching 62 db $\pm$ 2 db	Bridging 44 db $\pm$ 2 db Matching 59 db $\pm$ 2 db
<b>Frequency response 20 to 20,000 c/s:</b>	$\pm$ 1 db	$\pm$ 1 db
<b>Signal/noise ratio for 1 W output:</b>	80 db	70 db
<b>Output power and distortion at 60 c/s:</b>	6 W for 1.0% distortion	10 W for 0.3% distortion 20 W for 1.0% distortion
<b>Power supplies:</b>	300 V, 80 mA, DC 6.3 V, 2.6 A, AC	100-130 or 200-250 V 40-60 c/s, single-phase AC mains
<b>Dimensions (overall):</b>		
Height	5 $\frac{3}{4}$ in. (14.6 cm)	10 $\frac{1}{4}$ in. (26 cm)
Width	4 $\frac{3}{4}$ in. (12 cm)	6 $\frac{1}{2}$ in. (16.5 cm)
Depth	9 $\frac{3}{8}$ in. (23.8 cm)	19 in. (48.3 cm)
Weight	8 $\frac{1}{2}$ lb (3.8 kg)	40 lb (18 kg)

*Marconi*

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