



## Distribution Amplifiers

*Vision, Type BD 853A* (18 OUTPUTS)

*Pulse, Type BD 853B* (9 OUTPUTS)

THE VISION DISTRIBUTION AMPLIFIER Type BD 853A will accept a single input consisting of a composite or non-composite vision signal at standard level but not exceeding 1.4 V peak to peak, or alternatively sync., line or field driving or blanking pulses at standard level but not exceeding 2 V peak to peak, and will give up to eighteen outputs at standard level.

The Pulse Distribution Amplifier Type BD 853B will accept a single input consisting of sync., line or field driving, or blanking pulses at standard level but not exceeding 4 V peak to peak and will give up to nine outputs at standard level.

### FEATURES

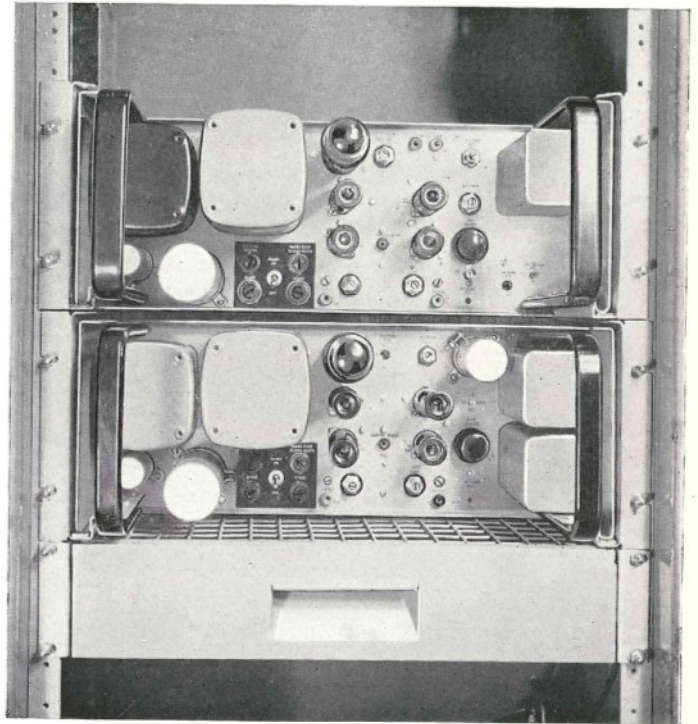
The outstanding feature of these amplifiers is the employment of transformers in the output stage. The resulting improvement in the matching of load to output valve permits the application of a number of output loads without increasing the HT current required. In consequence there is a substantial economy in power required and in space occupied in comparison with the alternative system employing one output valve per load.

Negative feedback is applied to the amplifiers and phase correction circuits are incorporated. These circuits ensure that the waveform of the input signal is maintained throughout the amplifiers.

The amplifier unit may be rapidly withdrawn from the frame which carries the input and output connections.

### GENERAL

Both amplifiers take the same mechanical form. The components are mounted on a vertical pan-



*A Vision Distribution Amplifier (upper) and a Pulse Distribution Amplifier (lower) mounted in a cabinet with a rack servicing table.*

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type chassis which slides into a supporting frame also in the form of a vertical recessed panel and suitable for mounting in a standard rack or cabinet. When the sliding unit is pushed home its connections are completed by a Jones-type plug and socket.

A Rack Servicing Table Type 2741 can be supplied which mounts under the amplifiers, and when withdrawn forms a convenient working support on which a unit, withdrawn from its frame, can stand for examination or testing, a

service jumper being available to complete the electrical connections. Each amplifier incorporates its own power supply unit.

### CIRCUITS

The vision distribution amplifier comprises the following stages: phase splitter, driver, and Class A push-pull output stage. The pulse distribution

amplifier consists of a cathode follower, voltage amplifier, cathode-coupled stage, driver and pentode output stage.

The anode load of the output stage in both amplifiers consists of two transformers, one covering low frequencies the other covering high frequencies, so that the entire frequency band required is effectively covered.

## DATA SUMMARY

### *Vision Distribution Amplifier Type BD 853A*

#### Inputs:

- (a) 91–127 V or 182–254 V, 50–60 c/s AC supply (consumption 75 VA)
- (b) Composite or non-composite vision signal at standard level, 1.4 V peak-to-peak max. or sync., blanking or drive pulses at standard level, 2 V peak-to-peak max. Input impedance is 75  $\Omega$ , but can be modified to provide high impedance.

**Outputs:** Up to 18 outputs at standard level, each 75  $\Omega$  impedance.

**Gain:** Nominally 0 dB, adjustable from +2 to -4 dB.

**Rise time:** 0.05  $\mu$ s approx.

**Overshoot:** 0.75% approx.

**LF response:** Negligible tilt on 50 c/s square wave.

**Crosstalk between outputs:** -40 dB at 100 kc/s, -37 dB at 1 Mc/s, -26 dB at 5 Mc/s.

**Differential non-linearity:** 0.75% for 2 V sawtooth at 10 kc/s.

### *Pulse Distribution Amplifier Type BD 853B*

#### Inputs:

- (a) 91–127 V or 182–254 V, 50–60 c/s AC supply (consumption 75 VA)
- (b) Sync., blanking or drive pulses, 4 V peak-to-peak max. High impedance bridging input.

**Outputs:** Up to 9 outputs at standard level, each 75  $\Omega$  impedance.

**Gain:** Nominally 0 dB. Adjustable from +1 to -8.5 dB.

**Rise time:** 0.1  $\mu$ s approx.

**Overshoot:** Negligible for input rise time of 0.1  $\mu$ s. 1% approx. for input rise time of 0.05  $\mu$ s.

**LF response:** 0.4% tilt on sync., 3% tilt on blanking, mainly on positive excursion.

**Crosstalk between outputs:** -49 dB at 50 c/s, -32 dB at 1 Mc/s, -21 dB at 5 Mc/s.

#### Overall dimensions:

	Height	Width	Depth
Type BD 853A	7 in.	19 in.	14 in.
Type BD 853B	(18 cm)	(48 cm)	(36 cm)
Weight:	Type BD 853A	28½ lb (12.9 kg)	
	Type BD 853B	33¼ lb (15.1 kg)	

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