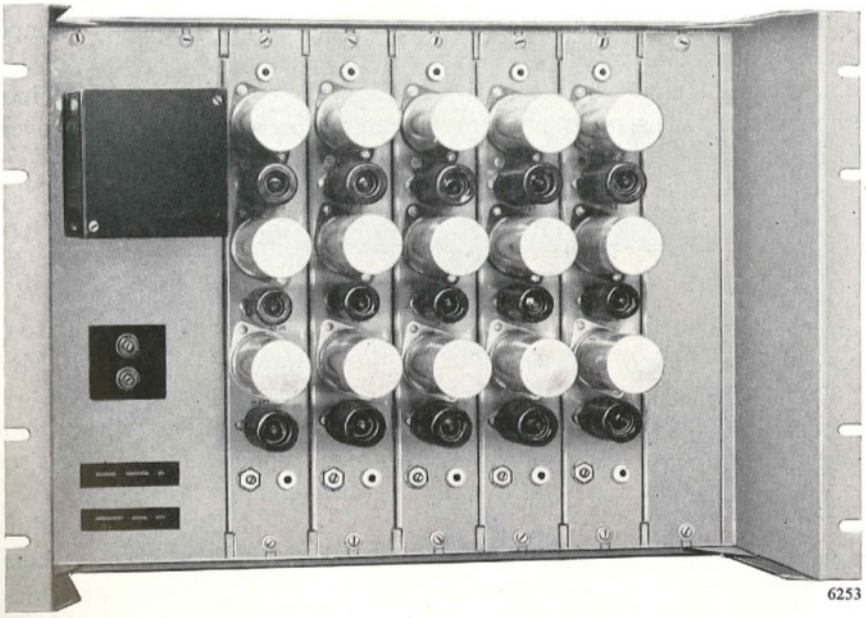
# Vision Distribution Amplifiers

## *Type BD661 Studio*
## *Type BD674 Mobile*




THE TYPE BD 661 Vision Distribution Amplifier is a five-way equipment and provides a means of distributing vision signals, driving and blanking pulses or sync. signals at standard level from one or more sources to one or more coaxial cables. It comprises five strip-type Vision Amplifier Panels, Type 2107 mounted in a Vision Amplifier Frame, Type BD 831, together with a Regulated Power Supply Unit, Type BD 654.

The amplifier in each panel has an input impedance that is high compared with 75 Ω. This permits the operation of a number of individual amplifiers in parallel from a common 75 Ω source or, alternatively, the use of one or more units as bridging amplifiers. The output circuit of each is designed to feed a 75 Ω line. Input and output connectors are provided in duplicate on each individual amplifier to facilitate parallel connections using coaxial cables. At the final amplifier of a looped series the second coaxial socket must be fitted with a 75 Ω terminating plug.

Two units of a vision distribution amplifier may be employed in conjunction for a number of special purposes. Two units of an amplifier, with inputs and outputs looped, can be used to feed a 75 Ω line with a matched source impedance. Two units of an amplifier may also be used to mix two different signals into a common output circuit.

The vision amplifier frame consists of a vertical pan-type chassis suitable for mounting in a 19-inch rack or cabinet. Vision amplifier panels are fitted in the frame with all valves, pre-set gain controls and other major components at the front and the minor components assembled at the rear.

A heater transformer is also mounted on the frame.

The equipment is finished in light grey glossy enamel at the front and white enamel at the rear with cadmium-plated fittings.

The mobile equipment Type BD 674 offers the same facilities as the Type BD 661 but on four channels only. It is built into a standard Marconi mobile case with carrying handles and it incorporates its own regulated power supply chassis. A mains voltage tapping switch and voltmeter are mounted, together with fuses, on a small panel at one end of the case. A connector panel mounted at the other end of the unit includes duplicate input and output connectors for each independent amplifier, mains input socket and utility outlet.

The exterior of the mobile distribution amplifier is finished in light grey rivel with chrome-plated fittings, and the interior is finished in white glossy enamel with cadmium-plated fittings.

## CIRCUITS

The two equipments are identical so far as their circuits are concerned. Each individual amplifier comprises two triode stages, a pentode stage and an output stage using a triode-connected pentode. Resistance-capacitance inter-stage coupling is used, with low-frequency compensation giving a satisfactory AC response down to 50 c/s. Cathode current feed-back incorporating LF phase correction is applied over the last three stages.

## DATA SUMMARY

**Inputs:**

(*a*) Mains supply.
Consumption: Type BD 661 300 VA.
Type BD 674 400 VA.

(*b*) Vision Signal:

| | |
|---|---|
| BD 661A | 1·4 V max. p–p white negative |
| BD 661B, BD 674A | 1·0 V max. p–p white positive or negative |

Pulse Signal:

| | |
|---|---|
| BD 661A | 4·0 V max. p–p negative |
| BD 661B, BD 674A | 2·0 V max. p–p negative |

(*c*) Type BD 661: Five independent high impedance Inputs.
Type BD 674: Four independent high impedance Inputs.

(*d*) Regulated DC supply, 250 V 360 mA (Type BD 661 only).

**Outputs:**

As corresponding signal inputs, but designed to work into 75 Ω.

**Performance:**

HF response: ±0·1 dB up to 6 Mc/s; between +0·1 and −3 dB up to 10 Mc/s rel. to general response.
Rise time: 0·07 μs with less than 2% overshoot.
LF response: Passes 50 c/s square wave with negligible tilt.
Gain: −4 dB to +4 dB, adjustable.
Amplitude non-linearity: Less than 2% sync. or peak-white compression.
Crosstalk: Less than −60 dB between amplifiers.
Noise and hum: Less than −60 dB rel. to 1 V signal output.

**Dimensions:**

| | Height | Width | Depth | Weight |
|---|---|---|---|---|
| *Vision distribution amplifier Type BD 661* | 12¼ in. (31 cm) | 19 in. (48 cm) | 9½ in. (24 cm) | 36 lb (16·3 kg) |
| *Mobile distribution amplifier Type BD 674* | 16 in. (41 cm) | 8½ in. (22 cm) | 26½ in. (66 cm) | 66 lb (30 kg) |

Marconi

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