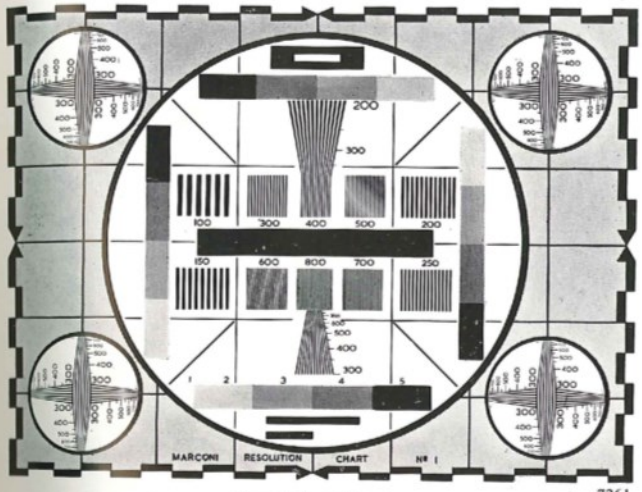
# Monoscope Cameras

## *Type BD 665 for Studio use*
## *Type BD 617 for Mobile use*




7261

*Resolution Chart.*

6110

*The Studio Monoscope camera with front cover removed.*

THE MONOSCOPE CAMERAS Types BD 665 and BD 617 are very similar and differ essentially in the way they are housed. The Type BD 665 is built on to a vertical pan type chassis suitable for rack mounting, whilst the Type BD 617 unit is fitted into a mobile case. The former is fitted with a front cover which encloses all components but leaves all operating controls accessible. A safety interlock is incorporated so that all high voltages are removed on removal of the cover. In the mobile unit, the operating controls are concentrated at one end of the case.

The camera has been designed to provide a standard television picture of known quality for the alignment and checking of transmitters, studio equipment, transmission equipment, etc. The output is of standard form with blanking and synchronising signals. The camera is normally provided with a monoscope tube having a pattern specifically designed for test and alignment purposes. However, should it be required to employ the equipment as a source of signals for station identification or like purposes, a special tube may be provided in accordance with the customer's requirements.

### CIRCUIT

The signal output of the monoscope tube is taken first to a three-valve negative feedback video amplifier which is followed by a single stage whose gain is variable. The signal is further amplified in another three-valve negative-feedback amplifier, at the output of which standard system blanking is added. At this point the signal is clamped by a double diode to remove spurious signals and to establish the black level. The signal is then clipped, to provide a clean blanking

*Mobile Monoscope Camera Type BD 617.* 6108

interval, and fed to an output amplifier arranged to feed into a 75 Ω line at the standard level. Synchronising pulses are added to the signal at the output. A cathode follower stage provides an additional output for monitoring purposes.

Standard vertical drive signals are amplified and shaped to saw-tooth form by one double-triode valve. Another double-triode valve with both sections in parallel constitutes the vertical deflection output stage which is linearised by negative feedback. The vertical deflection circuit comprises a set of low-impedance coils into which may be also injected a DC centring current.

Horizontal drive of standard form is likewise amplified and shaped. The resulting saw-tooth waveform is applied to a horizontal deflection amplifier feeding low-impedance coils *via* an output transformer. Electrical centring is again provided. Linearisation of the output current waveform is effected by means of negative feedback.

The HT supply for the monoscope tube and all valve heater supplies are taken from a common line transformer. The former is rectified by means of a rectifier tube in conjunction with a feedback circuit employing one section of a double-triode valve. This reduces both ripple and spurious fluctuations resulting from line-voltage disturbances. Focusing of the monoscope tube is effected by variation of the second anode voltage. Beam current is controlled by means of a bias circuit, the voltage of which is stabilised.

All power supplies for the studio monoscope camera are obtained from a standard regulated power supply unit Type BD 654, which is described on page 167. The mobile unit incorporates its own power unit.

## DATA SUMMARY

**Inputs:** (*a*) Field Drive, (*b*) Line Drive, (*c*) Mixed Blanking } at standard level according to system

(*d*) Power supplies: BD 617, 275 VA at 230 V or 117 V, 50–60 c/s AC.
BD 665, 125 VA at 230 V or 117 V 50–60 c/s AC
350 mA regulated DC at 250 V
350 mA centring supply at 2 V

**Outputs:** One line output and one monitor output, composite or non-composite at standard level according to system.

**HF response:** −3 dB at 7 Mc/s.

**LF response:** Passes 50 c/s square wave without distortion.

**Monoscope tubes:** RCA type 2F21 or Cathodeon type C912.

**Basic picture patterns:** Marconi Resolution Chart No. 1, Test Card 'C', RMA resolution chart.

**Dimensions:**

| | Height | Width | Depth | Weight |
|---|---|---|---|---|
| *Type BD 665* | 17½ in. (44 cm) | 19 in. (48 cm) | 10 in. (25 cm) | 35 lb (16 kg) |
| *Type BD 617* | 16¼ in. (41·5 cm) | 8⅝ in. (22 cm) | 26 in. (66 cm) | 76 lb (34 kg) |

Marconi

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