Television Auxiliary Units

THE FOLLOWING UNITS are commonly required in a complete television scheme and may be categorised into studio, outside broadcast and common auxiliaries.

Studio Auxiliaries

Synchronising Generator Locking Unit *Type BD 658*

This unit provides a means of locking a local sync. generator to a remote television system or outside broadcasting unit. When such a lock is established it is possible to mix between local and remote signals without the receiver losing synchronism. Sync. signals are separated from the remote signal in the incoming line clamp amplifier and compared in phase with the local sync. Any difference is translated into a voltage and this controls an oscillator operating at twice line frequency, the output of which is passed *via* a phase-splitting network and locks the local sync. generator. Power supplies are derived from a Type BD 654 regulated power supply unit.

The unit is assembled on a pan type chassis suitable for rack mounting.

Height 8¼ in (22 cm) Width 19 in (47 cm).

Synchronising Generator Changeover Panel *Type BD 672*

In the event of failure of one sync. generator in a television system, the outputs of a second such unit can be switched into the television system by means of this unit. Changeover may be controlled either locally or from a remote control desk.

The unit is assembled as a panel suitable for mounting in a standard 19 in. rack.

Monoscope Camera *Type BD 665*

The monoscope camera provides a standard television picture of definite quality which can be used for the alignment and checking of transmitters, studio equipment, transmission equipment etc. The output is of standard form with blanking but without synchronising signals.

The unit is built on to a 19 in. panel suitable for rack mounting. The chassis is fitted vertically, the monoscope tube, which is housed in a hinged mu-metal screen, and all valves being assembled on the face of the unit, and all other components at the rear. A front cover encloses all else but the operating controls.

DATA SUMMARY

Inputs:

(*a*) Regulated DC supply: 200 mA at 250 V.
(*b*) Centring supply: 200 mA at 2 V.
(*c*) AC supply: 115 or 230 V, 100 W.
(*d*) Field drive.
(*e*) Line drive.
(*f*) Blanking signal.

Outputs: Picture and blanking signals at 1·5 V peak-to-peak white positive.

HF response: Within ± 1 db up to 8 Mc/s.

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

Height: 17½ in. (44 cm).

Grating Generator *Type BD 659*

The grating generator provides a video signal which when reproduced on a picture tube has the appearance of a grating formed by a series of horizontal and vertical bars. These bars are of

uniform duration and spacing in terms of time, and any departure of this pattern from uniformity is, therefore, a measure of the non-linearity of the deflection circuits of the device concerned. In order to facilitate measurement, the number of bars and their width is made variable in both directions.

All components are assembled on a panel 12¼ in. (31 cm) high and suitable for mounting in a 19 in. (48 cm) rack.

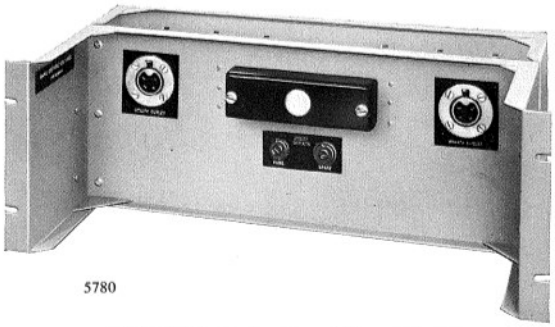
Production Unit *Type BD 662*

This is a small desk unit designed to enable the producer to speak to all operating personnel. It naturally incorporates a microphone and key type switches which make connection to various points in a television system. Headphones may be plugged into the jacks provided to enable the producer to hear a mixed output from the camera operators' microphones in one ear and programme sound in the other. Alternatively a standard handset may be used, its microphone would then replace the high-quality microphone.

Mains Distribution Panel *Type BD 634*

Two editions of this unit are available to accommodate both single and three phase supplies. It provides a mains distribution point and has nine available outputs and two utility outlets which are fused and suitable for the connection of test equipment etc. Indicator lights show the prevailing operating conditions.

All components are assembled on a 19 in. (48 cm) panel, which is 7 in. (18 cm) high.



5780

Mains Distribution Panel Type BD 634.

Power Distribution Panel *Type BD 806*

For providing a distribution point for the output of a regulated power supply unit, (*e.g.* a Type BD 630 unit), this panel has 5 outputs and is employed when a centralised power unit is preferable to several similar units of lower ratings.

Communication Patching Panel *Type BD 657*

Basically a jackfield, this unit provides for six-way communication or cueing patching facilities. It is assembled on a standard 19 in. (48 cm) panel, 7 in. (18 cm) high.

Coaxial Patching Panel *Type BD 669*

Suitable for patching between ten inputs, such as video, synchronising signals etc., the Type BD 669 unit consists essentially of ten Musa type coaxial connectors mounted on a standard 19 in. (47 cm) panel 1¾ in. (4·4 cm) high. Patching is by means of U links or patching cords etc., as required.

Talkback Amplifier *Type BD 698*

This unit is normally employed when no Type BD 641 communication unit is included in a television system, and provides the necessary amplification for a high quality microphone in a talkback system. It is built on to a 19 in. (48 cm) panel suitable for rack mounting and is 7 in. (18 cm) high.

Mobile Auxiliaries

Emergency and Test Signal Switching Unit *Type BD 639*

The Type BD 639 unit provides the following facilities:

Permits sync. generator changeover in an emergency.

In the event of a failure to the vision mixer in a television system, it connects a predetermined camera channel direct to line.

Allows test signals from a monoscope or mobile sync. generator Type BD 668 to be switched to line for test purposes.

The Emergency and Test Signal Switching Unit Type BD 639.

Voltage Control Unit *Type BD 640*

This unit consists of a 'Variac'-controlled bucking and boosting transformer in series with the mains input, and maintains standard the voltage level, (of 115 or 230 V), to the equipment thereby obviating the need for tap changing to meet variations in mains voltages. It is normally used in a vehicle, and having a handling capacity of 12 kVA, can supply the complete sound and vision equipment, link equipment and vehicle lighting, ventilating fan etc. All circuits are fused and metering and alarm facilities are incorporated.

Mains Power Distribution Box *Type BD 643*

Forming a mains distribution point, this unit is suitable for connection to either a single or three-phase supply and provides up to twelve outputs. Indicator lamps are incorporated.

Dimensions: (approx.)

Height	*Width*	*Depth*	*Weight*
9 in.	12 in.	3 in.	4 lb
(23 cm)	(30 cm)	(8 cm)	(1·8 kg)

Image Orthicon Transport Case *Type BD 666*

Used when spare Image Orthicon tubes are carried by an outside broadcast unit, this case is specially designed and tailored to take the tubes. Approx dimensions: 6 in. × 6 in. × 20 in. (15 cm × 15 cm × 51 cm).

Monoscope Camera *Type BD 617*

Similar to the Type BD 665 unit described above, the mobile monoscope camera is housed in a carrying case and incorporates its own power supply unit.

Dimensions: (approx).

Height	*Width*	*Depth*
16 in.	8½ in.	26 in.
(41 cm)	(22 cm)	(66 cm)

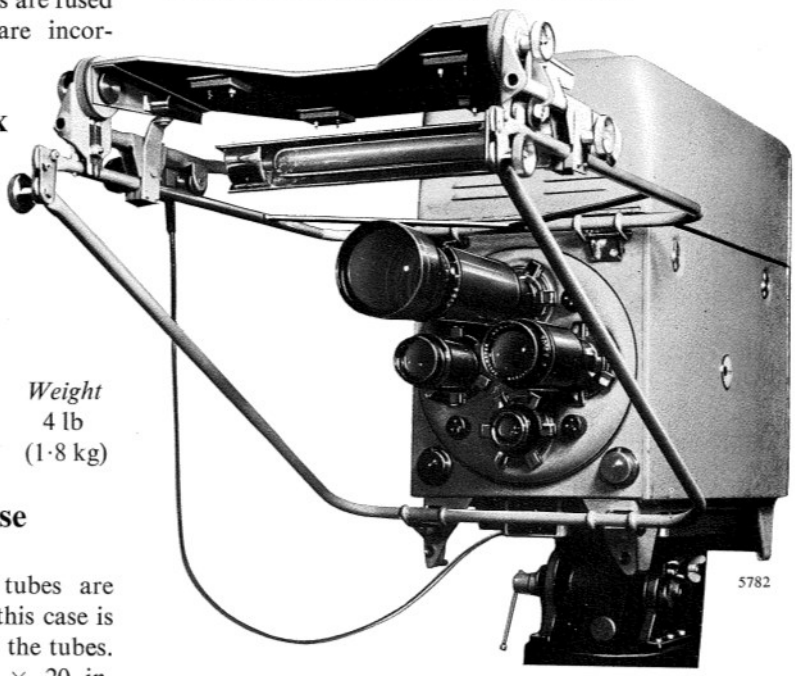
Common Auxiliaries

Test Meter *Type BD 642*

This is a three-inch instrument, fitted into a small case which is provided with a lead and plug for connecting into any regulated power supply unit and can be used for voltage and current measurement.

Caption Holder *Type BD 673*

This holder is designed to be fitted on to the Image Orthicon Camera and will hold one caption. This is illuminated, a utility outlet on the camera providing the lighting current.



The Caption Holder Type BD 673 fitted to the Image Orthicon Camera. It is illuminated and hinges down when required.

Camera Cable Test Set *Type BD 667*

This set enables insulation and continuity tests to be carried out in the complex camera cable. Connection is made to the cable by plug and socket, and the individual leads may be switch selected for testing purposes.

Receiver Monitor *Type BD 614*

Suitable for use as a receiver and also as a monitor, this unit incorporates a 16 in. metal tube

Monitor *Type BD 688*

The Type BD 688 unit has a 12 in. tube and may be used for monitoring at any point in a television system.

Image Orthicon Tube

The 'Image Orthicon' is an extremely sensitive pick-up tube and can be operated with as little as one foot-candle incident illumination. It is, of course, used exclusively in the Marconi camera and is also available separately as the Type P 807, a wide spaced (low light), panchromatic tube with high beam cut-off voltage.

The 'eye' of the television camera —the Image Orthicon Tube.

5783

Marconi

MARCONI'S WIRELESS TELEGRAPH COMPANY LIMITED

Head Office: Marconi House, Chelmsford

Telephone: Chelmsford 3221. *Telegraphic Address: Expanse, Chelmsford*