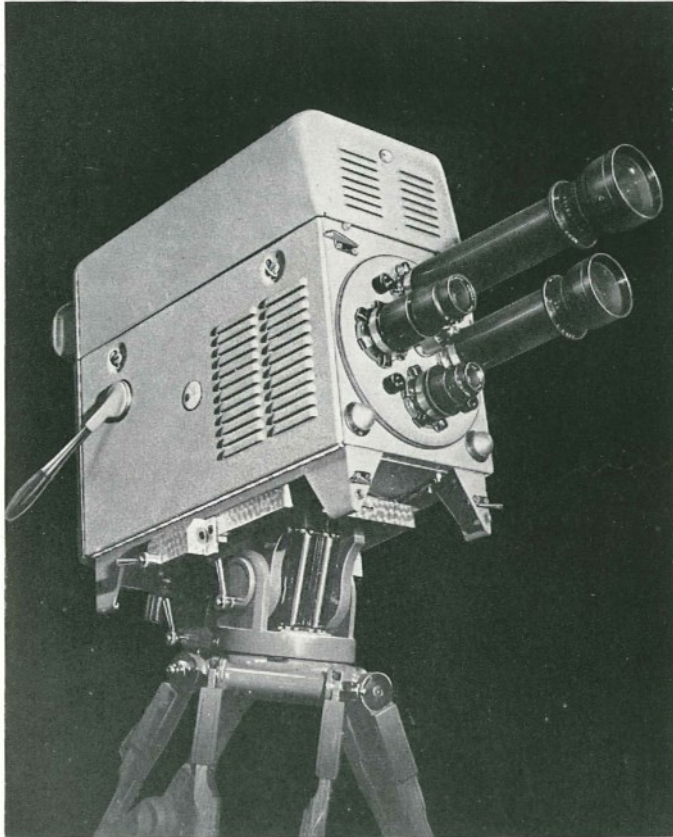




## Image Orthicon Camera *Type BD624* Electronic Viewfinder *Type BD625*



5567

A VARIETY of techniques are at present employed in the design of television cameras. The Marconi Company has aimed to produce a small, compact unit, suitable for both studio and outdoor operation and giving the finest overall performance while, at the same time, being suitable for operation on all present-day transmission systems. This has been achieved by the use of the image orthicon tube.

### FEATURES

*Extreme sensitivity.* The camera can operate down to as little as one foot-candle incident illumination.

*Adaptability.* Equally suitable for outdoor operation in poor light and for general studio scenes.

*Versatility.* The camera can be panned over scenes of varying illumination with a minimum of control adjustment.

*Lens turret.* The small size picture area allows for the use of a four-position lens turret which can accommodate telephoto and other lenses of long focal length.

*Depth of focus.* The use of relatively small lenses and a small aperture results in a depth of focus far exceeding that of any other type of camera for a given light condition.

*Electronic viewfinder.* Signals are fed back from camera control to give the operator a properly adjusted picture.

*Simplicity of control.* The absence of shading control and the high standard of operational stability allow one vision operator to control several camera channels.

*Indication and communication.* The camera operator is provided with communication with other points in the television system, and cue lights at the front and rear of the camera indicate to artists and operators which camera is 'on the air'.

### GENERAL

The camera is housed in a substantial sheet-metal case of rigid construction which contains the circuits for—supplying and deflecting the image orthicon tube, raising the vision signal to a suitable level for transmission to the camera control, and a line frequency operated camera tube EHT supply. It has a V block at the base for sliding into a panning head (see page 107).

The optical system is operated from the rear of the camera and focusing is effected by means of an external handle having a 180° movement. The camera tube and its associated deflection assembly moves relative to the lens when focusing.

The viewfinder clips on to the top of the camera and receives its power supplies and input signals from it *via* an automatically connected plug and socket.

The extreme sensitivity of the Image Orthicon makes the use of an optical viewfinder impossible since such an instrument cannot be operated at as

low a light level as the camera tube. An electronic system also eliminates additional lenses.

Whilst the camera is reasonably waterproof, a cover is supplied for mobile purposes to protect it from long exposure to heavy rain. This cover is constructed of a transparent plastic on a suitable framework, care being taken not to stop the normal ventilation of the camera. The cover not only protects the camera, but will also cover the head and shoulders of the camera operator.

### LENSES

Lenses with focal lengths of 2 in. ( $f/1.9$ ), 3 in. ( $f/1.9$ ), 5 in. ( $f/3.5$ ), and 8 in. ( $f/4.5$ ), are supplied as standard with the camera equipment, together with two neutral density filters having transmissions of 10% (density 1.00) and 1% (density 2.00). Other types of lens, 12 in. ( $f/4.5$ ), 17 in. ( $f/5.6$ ), 25 in. ( $f/5.8$ ), 30 in. ( $f/9.4$ ) and zoom, are also available as required.

### DATA SUMMARY

**Inputs:** (a) Mains and DC supplies (standard).  
(b) Line and field drive pulses.  
(c) Vision signal for viewfinder.

**Output:** Picture signal to camera control chassis.

**Resolution:** Better than 500 television lines.

**Colour response:** Close to standard visual response.

**Sensitivity** (using Type 5820 or P807 image orthicon): 10–20 ft candle incident illumination at  $f/5.6$ .

**Signal-to-noise ratio:**

Better than 30 db peak-to-peak signal/RMS noise.

**Shading:** No variable shading effects.

**Black level:** Established in camera tube.

**Geometry:** Linearity better than 2%.

#### Dimensions:

|            | Height            | Width                | Depth               | Weight             |
|------------|-------------------|----------------------|---------------------|--------------------|
| Camera     | 14 in.<br>(35 cm) | 10½ in.<br>(26.6 cm) | 25 in.<br>(63.5 cm) | 70 lb<br>(31.8 kg) |
| Viewfinder | 9 in.<br>(23 cm)  | 10 in.<br>(25.4 cm)  | 22 in.<br>(56 cm)   | 37 lb<br>(16.8 kg) |

**Marconi**

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