

Marconi 322 Series

V322B STUDIO VIDICON CAMERA



Electronic Viewfinder

A 7 inch high-brightness picture monitor forms an integral part of the V322B camera. Sealing of the picture tube faceplate eliminates the ingress of dust. The high quality deflection yoke ensures accurate picture geometry and excellent overall focus. Brightness and contrast controls are provided adjacent to the tube face. All other controls are internal and preset. With the exception of the high voltage rectifier, the viewfinder is fully transistorized.





Lens Turret

The manually operated lens turret accepts four 16 mm. type "C" mount lenses and permits selection of lenses having focal lengths of $\frac{1}{2}$ to 4 inches (15—100 mm.) or 1 to 6 inches (25—150 mm.). The turret is actuated manually by means of protruding spokes, numbered to identify the selected lens, which can be retracted for transit purposes or to indicate the absence of a lens.

Picture Quality

The V322 camera provides a standard of picture quality previously associated only with much more costly equipment. A major factor in achieving this is the employment of a higher than normal Vidicon focussing flux, the effect of which is to raise considerably the resolution limit imposed by the Vidicon itself, together with a precision scanning yoke of very superior design. To obtain the fullest advantage of this arrangement, the camera has been designed to utilize the new separate mesh Vidicon, which offers a substantial improvement in picture uniformity and corner resolution over the conventional tube, although use of the latter is not precluded.

Simplicity of Operation

The multiplicity of operating controls normally associated with a television camera has been completely eliminated with the V322. Operation is limited to three simple actions—switch-on, adjust the lens iris for satisfactory contrast, adjust the capstan focussing handle for the sharpest picture. No other operating control is provided and no further adjustment is normally necessary.

Entirely Self-adjusting

Resetting the lens iris, subsequent to initial adjustment, is rendered unnecessary by virtue of a circuit which automatically maintains a constant output from the camera regardless of changes in illumination as great as 2,000 times. The effect of this circuit is to maintain the brightness of white picture information at a predetermined level by adjustment of the Vidicon sensitivity.

Furthermore, absolute black in the picture is also maintained at a preset level by means of the Automatic Black-level Control Circuit, a major feature of this equipment. This circuit operates by compensating for the variations in Vidicon dark current, which result from variations in sensitivity adjustment and ambient temperature, and which normally result in substantial variations of picture quality.

Thus, these two automatic circuits together maintain the contrast range and grey scale of the picture as they are initially set, despite wide subsequent variations of the ambient operating conditions.

Stabilization of d.c. voltages and careful circuit design ensure independence of supply voltage variations up to ± 10 per cent.

Solid-state circuits

The use of solid-state devices for all active circuit components other than the Vidicon, the high voltage rectifier and the cathode ray tube ensures the utmost performance, stability and reliability achievable with current techniques. Minimization of size, weight and heat dissipation are additional consequent advantages.

Mechanical Construction

The construction of the V322B camera has been designed to achieve maximum accessibility for servicing. With the side panels open, the camera main printed boards can be inspected and rapidly removed. Removal of the top cover provides easy access to the viewfinder monitor which can also be detached from the camera unit. Electrical inter-connection of the camera and viewfinder is by means of a multi-way plug and socket.

The full Marconi range of system elements, including synchronizing generators, switching and mixing equipment, telecine, production talk-back unit, distribution equipment and displays, supplements the basic equipment.

