

PHILIPS



TELEVISION EQUIPMENT

Compact Television Camera, Type EL 8000



Universal applications in education, industry, traffic and communication

Great reliability and less maintenance

Extremely simple operation due to automatic signal control

Built-in RF modulator enables direct display on TV sets

A large range of available lenses with or without remote control

Requires little space; easy to mount

The Compact Television Camera is a self-contained and easily handled camera which can be used in circumstances where ease of operation is necessary and only small working spaces are available. It is, therefore, eminently suitable for the many different applications of closed circuit television. The camera and a television receiver connected by cable is all that is needed to form a complete television system.

A vidicon pick-up tube which is characterised by ease of operation and great reliability is used.

All drive and control circuits and the power

supply unit are housed in the camera. The control circuits are largely automatic and, therefore, apart from switching on and off, operation is confined to focusing and diaphragm adjustment.

Many lenses, including those with zoom features, can be used on the camera, the most sensitive having apertures of $f/0.95$

The camera delivers two signals: a modulated High Frequency Signal which can feed up to thirty television receivers, and a Synchronized Video Signal for one or more monitors. The connection cable between camera and receiver may have a maximum length of 400 metres.

The camera circuits are printed on Epoxy resin plates which can be hinged out for easy access.

Because of its careful mechanical and electrical construction, the camera needs little or no readjustment or maintenance, even over long periods.

PRINCIPAL CHARACTERISTICS

- Fully transistorised circuitry, except for the video input stage, to cut power consumption, give long life and reliable operation.
- Nuvistor input, for good signal-to-noise ratio.

Power supply:

110, 117, 220, and 234 V \pm 10%;
50 or 60 c/s; adjustable by means of
voltage selector.

Power consumption: 13.5 W, $\cos \varphi = 0.8$ **Minimum illumination of object:**

(diaphragm 0.95)
normal sensitivity: 10 lux
extra sensitivity: 4 lux

Range of automatic "Va" control:

light variations from: 1 : 2⁸ (256 x)

Resolution:

modulation depth: 50 % at 5 Mc/s; visible
on monitor with RTMA test slide: 7 Mc/s
(550 lines)

Geometry:

\pm 1 % within a circle with a diameter
equal to the picture height;
 \pm 2 % in the remaining area

Video output:

1.4 V_{pp} VBS signal across 75 Ω

RF output: 30 mV across 75 Ω or
250 mV across 75 Ω

Ambient temperature:

normal: -10... + 45 °C (tropic proof)
without cover or with perforated cover:
-10... + 65 °C

Dimensions (height x width x depth):

100 x 175 x 330 mm (4 x 7 x 13 in)

Weight: 5 kg (about 11 lb)

Vidicon tube: 1-inch vidicon
with 0.5-W or 2-W cathode

Lenses: 16-mm cine or TV lenses
with "C" mount

Coaxial plugs:

Suhner, type CM 03175
Philips, type EL 8498/01

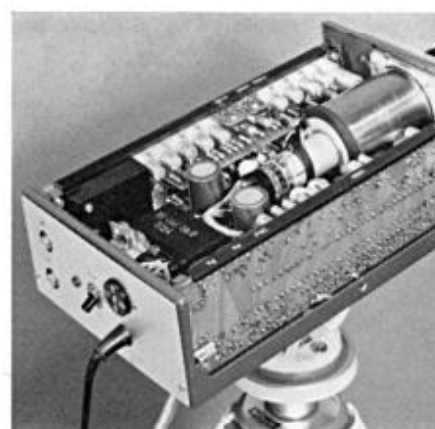
- Automatic control of the target voltage (Va) within an illumination range of 1 : 250. As a result high picture quality is maintained, and noise and edge shadow almost eliminated.
- The maximum value of the automatic Va control can be preset between 15 V and 75 V. Thus the Va control can be made to meet great differences between the mean and maximum brightness of the scene.
- The amplifier sensitivity can be tripled if light conditions are extremely unfavourable. The bandwidth is then slightly reduced and the target voltage lowered in order to retain a good signal-to-noise ratio, and keep edge shadows within reasonable limits.
- A beam current stabiliser obviates the need for readjustment over long periods of operation and when the vidicon tube ages.
- A high frequency booster offers a modulation depth of 50 % at 5 Mc/s.
- An LF correction matches the amplifier characteristic to the various types of vidicon.
- An adjustable sync. amplitude control enables the sync. amplitude values of several cameras to be matched to give the same black level on all receivers.
- By a simple modification in the camera circuitry synchronisation can be effected externally, so that all cameras have the same line frequency.
- The value of the modulated HF output signal can easily be changed from 30 mV to 250 mV.
- Provision has been made for remote control of:
 - target voltage;
 - limiting the target voltage;
 - beam current;
 - focusing current;
 - sensitivity booster, (with reduction of the target voltage);
 - stand-by switch to suppress beam current and target voltage, to lengthen the life of the target.

TECHNICAL DATA**System:**

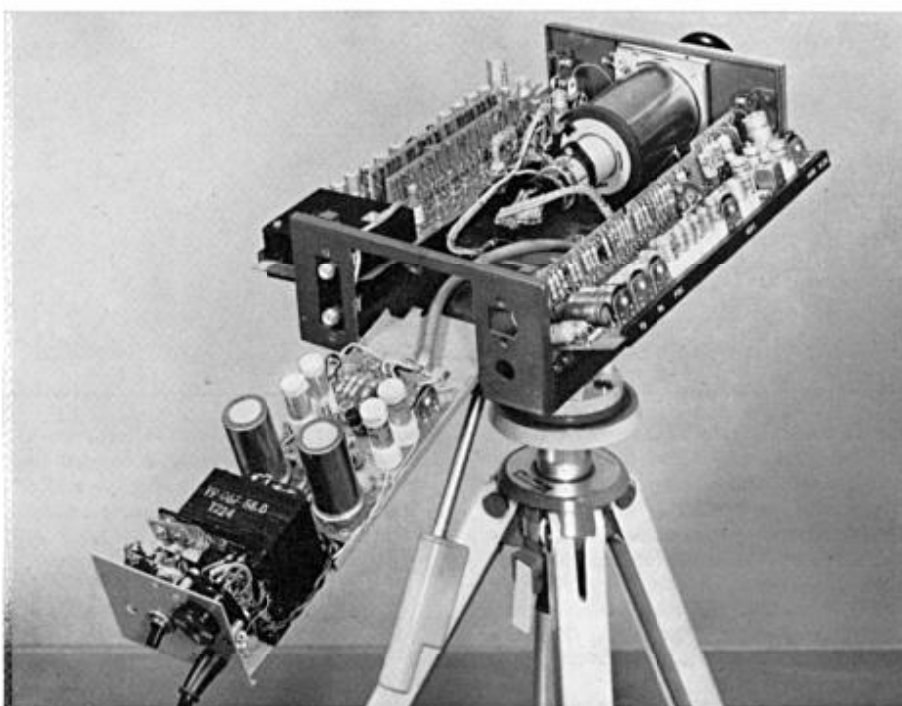
625 lines - 50 fields/s; random interlaced
525 lines - 60 fields/s; random interlaced



Rear view of the camera



Rear view without cover



The camera is easily accessible for maintenance and servicing since the side panels can be hinged down and the rear panel can be pulled out. The right-hand rear side of the camera shows two holes for connection of an external sync. generator and a remote control cable.