



THOMSON-CSF

TTV 1650

COLOUR CAMERA CHANNEL



FEATURES

The TTV 1650 camera channel has been designed and developed for a wide variety of TV applications ; owing to its high technical performance and sensitivity, small weight

and handiness, this channel is also an essential facility in production studios and outside broadcast equipment.

The TTV 1650 colour camera channel is a two-unit TV equipment comprising : a camera equipped with 2/3" pick-up tubes and a 19" camera control unit containing all the electronic circuits and setting controls required for operational needs.

DESCRIPTION

The TTV 1650 camera channel consists of the following basic units :

- the camera with its lens assembly and viewfinder,
- the camera control unit,
- the remote-control panel used to operate the major functions from a remote position : iris, black level, gain...

The camera is a light-alloy unit fitted with its front lens assembly, filter wheel and optical beam splitter.

The electronic circuits consist of :

- 3 preamplifiers,
- 6 scanning amplifiers,
- a low and high voltage power supply,
- video amplifiers and beam optimization amplifiers.

The rear of the camera is fitted with switches controlling the R-G-B registration, G and the external video to the viewfinder.

- A talkback system provides for communications between the CAMERA and the CONTROL ROOM.

The camera control unit performs a number of major functions such as :

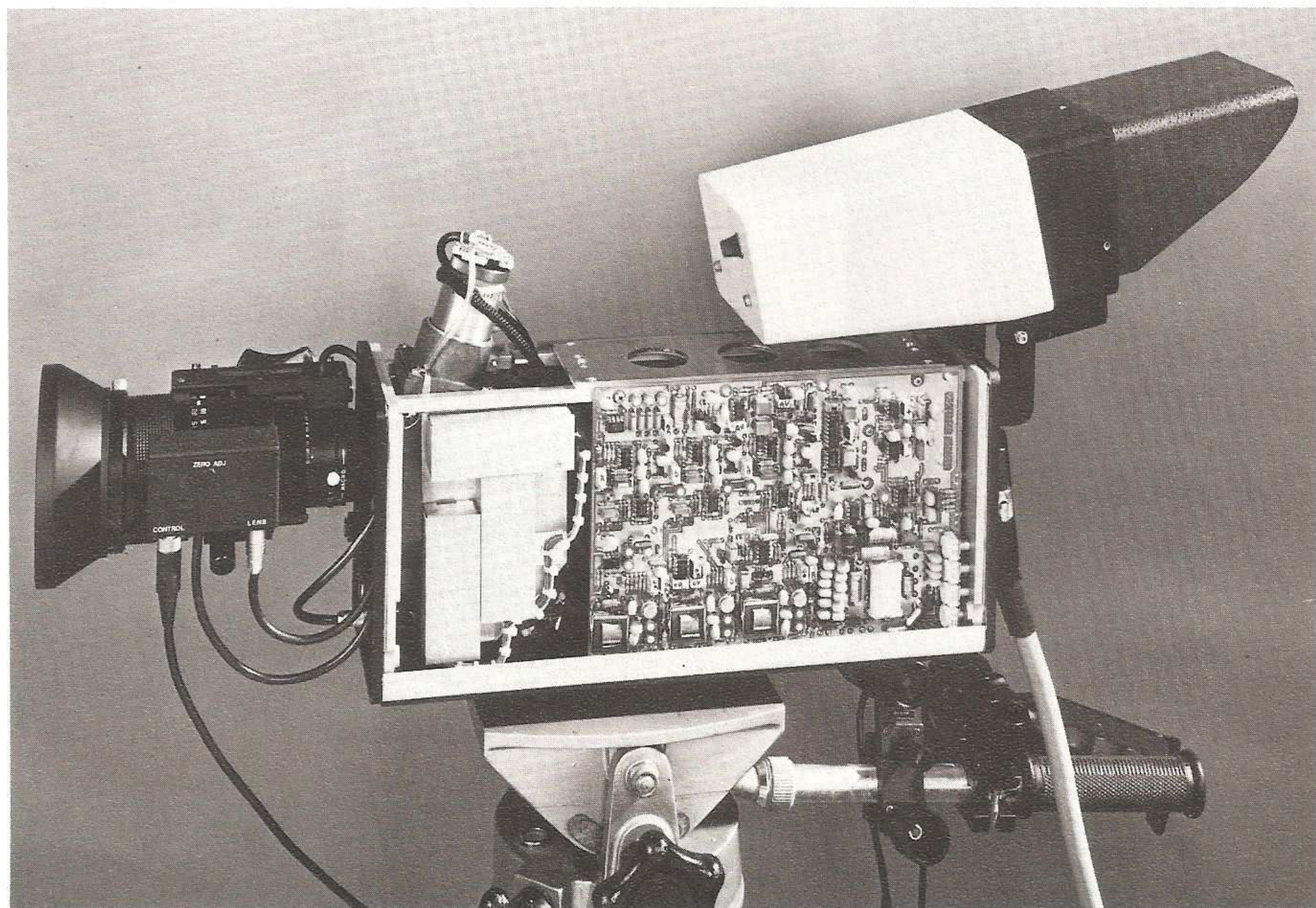
- automatic correction of light diffusion in the lens,
- cable length equalization from 0 to 250 metres in 50-metre steps,
- + 6 dB video gain switch for low light levels,

- full-range colour masking,
- black and white shading correction,
- horizontal and vertical contour enhancer,
- built-in sync generator with genlock,
- built-in SECAM encoder with bar test pattern generator (PAL encoder as an option),
- output signals from the C.C.U. : R, G, B, luminance and encoded output,
- built-in chroma-key circuit.

The unit incorporates such automatic features as :

- iris and lens servo drive,
- automatic black level balance,
- automatic colour balance.

These functions can also be controlled manually.





DATA SUMMARY

SPECIFIC CHARACTERISTICS

- PLUMBICON*, SATICON* or CHALNICON* 2/3" pick-up tubes,
- rear-mounting "Broadcast" grade yoke assemblies equipped with top quality screening.

ELECTRICAL CHARACTERISTICS

- 4-wire talkback providing + 12 dB level max. in both ways.
- Power requirements :
 - voltage : 117 V - 220 V - 240 V \pm 10 %,
 - consumption : 70 VA.

OPTICAL CHARACTERISTICS

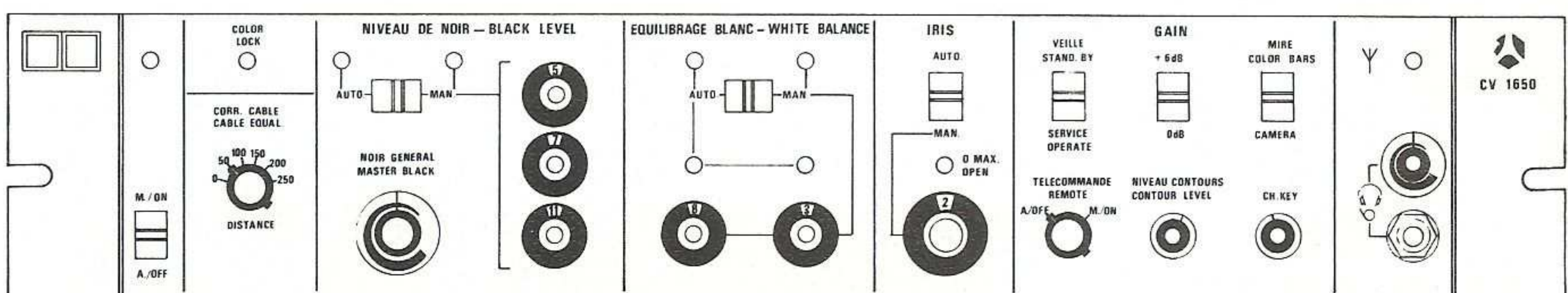
- The lens is equipped with a servo drive system allowing the IRIS to be operated either automatically or manually from the control room.
- The lens is fitted with a servo drive system by means of which the focusing distance can be controlled either through a handle to be mounted on the pedestal or by means of the rocker switch placed on the lens assembly. Focus can be controlled either directly or through a flexible cable and a handle.
- Wide F/1.4 beam splitter.
- 4-filter wheel.
- Standard bayonet mount allowing the use of a great number of lenses. The most currently used are : ANGENIEUX 15 x 9.5 D1 and FUJI A 12 x 9B.
- Beam splitter equipped with a bias light system.

VIDEO FREQUENCY CHARACTERISTICS

- Signal-to-noise ratio : 46dB (green channel : band width = 5 MHz ; signal = 200 nA ; $\gamma = 1$).
- Frequency response : 5 MHz \pm 1 dB.
- Resolution at 5 MHz :
 - SATICON* - 200 nA,
 - with no aperture correction : > 35 %,
 - with an aperture correction : 100 %.
- Geometry distortion :
 - 1 % within a circle having a diameter equal to the picture height,
 - 2.5 % outside this circle.
- Sweep registration (using H 8397A or XQ 1427 tubes) :
 - area 1 : 0.1 %,
 - area 2 : 0.2 %,
 - area 3 : 0.5 %.
- Masking :
 - positive or negative coefficient for the 3 channels.
- Gamma correction : fixed, 0.45 or 1.
- White clipping :
 - adjustable to 105 % of nominal signal.

*Registered trade mark.

FRONT PANEL OF THE CAMERA CONTROL UNIT



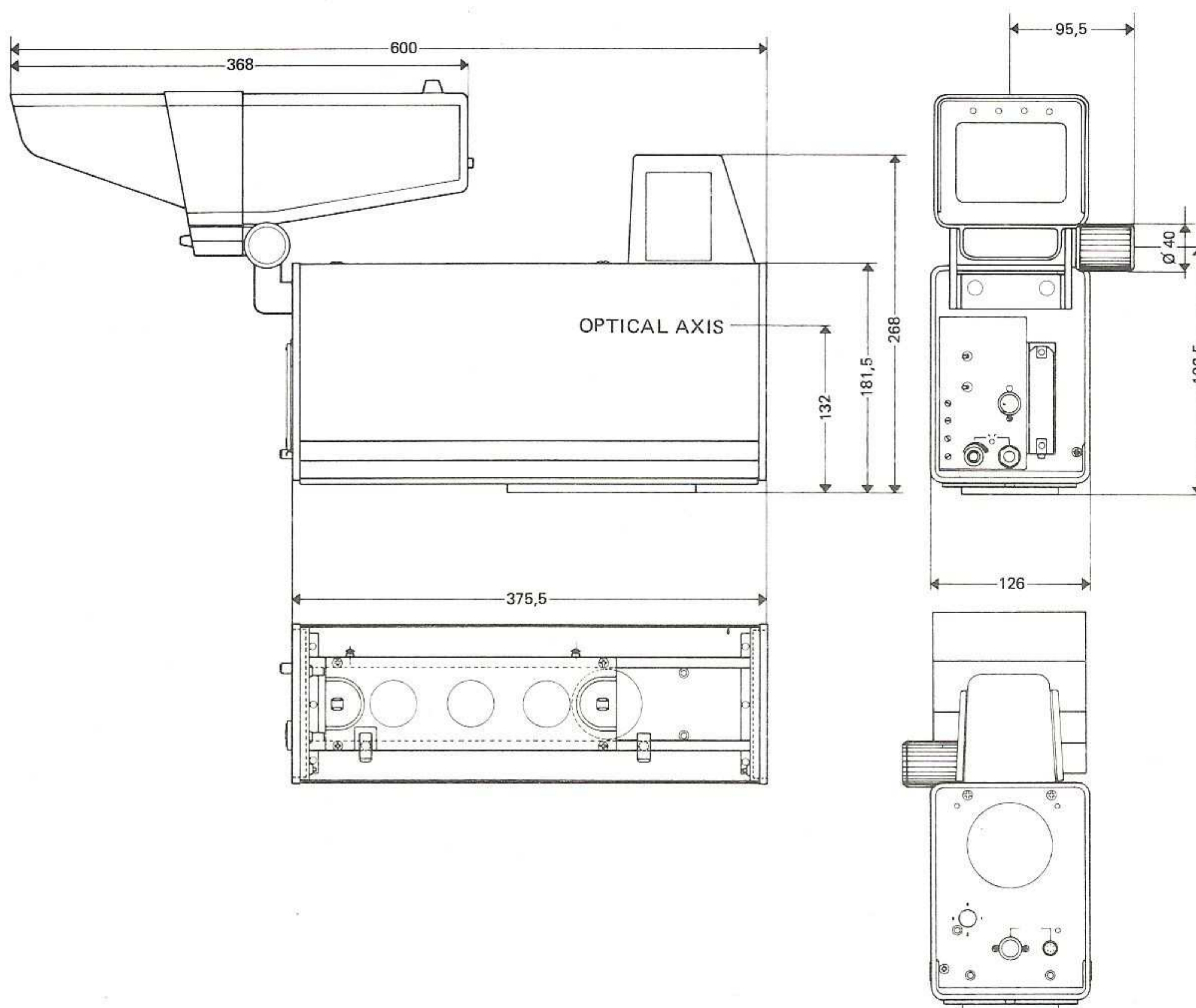
VIEWFINDERS

Two types of viewfinders can be used :

- 4 1/2" (11 cm) for studio applications,
- 1 1/2" (3.8 cm) for outdoor applications (shoulder-mounted use).

PHYSICAL CHARACTERISTICS

- Camera :
 - Weight : 7.4 kg, including 11 cm viewfinder, excluding lens assembly : 9.4 kg.
- Camera control unit :
 - Standard 19" 2U rack - Depth (excluding connectors) : 470 mm,
 - Weight : 4.8 kg.



The information contained herein is subject to confirmation at time of ordering.



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