

## OPTICAL

- Interchangeable lenses :
  - FUJINON :  
f/1.7, 12-to-1, 9-108 mm
  - ANGENIEUX :  
f/1.8, 15-to-1, 9.5-143 mm
  - SCHNEIDER :  
f/1.8, 10-to-1, 10-100 mm

All above lenses are fitted with automatic iris and servo zoom. Zoom lens rocker switch on camera handle provides variable speed control of zoom range. Provision for manual control of iris and zoom.

- Three-position filter wheel :
  - filter A : clear for 3000° K light,
  - filter B : for 6500° K light,
  - filter C : opaque.
- Beam splitter, with f/1.4 R.G.B. prism and integral bias light system.

## VIDEO

### • Sensivity :

With an illumination of 2500 lux (3000° K) on a white chart of 60 % reflectance, f/4 aperture, the signal-to-noise ratio will be greater than or equal to 46 dB on the green channel. Bandwidth limited between 100 kHz and 5 MHz.

- **Horizontal resolution** at 4 MHz at picture centre  $\geq 25$  % without contour enhancement, tube limited, correctable to 100 % with image enhancer.

### • Geometry distortion :

- 1 % of picture height inside circle,
- 2 % of picture height outside circle

### • Gamma correction :

Continuously adjustable gamma from 0.45 to 1, including 0.9 gamma of pick-up tubes.

### • Registrations :

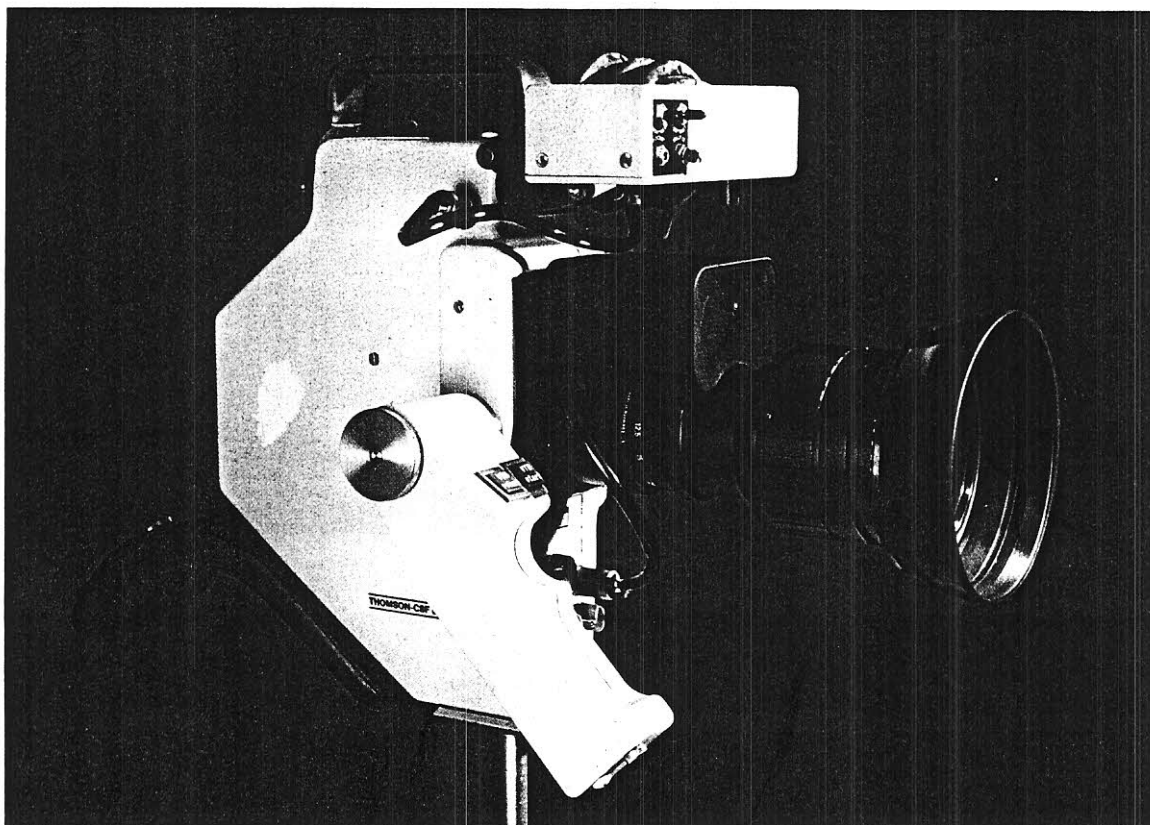
- 0.1 % of picture height in zone 1.
- 0.2 % of picture height in zone 2.
- 0.5 % of picture height in zone 3.



**THOMSON-CSF**

# TTV 1602

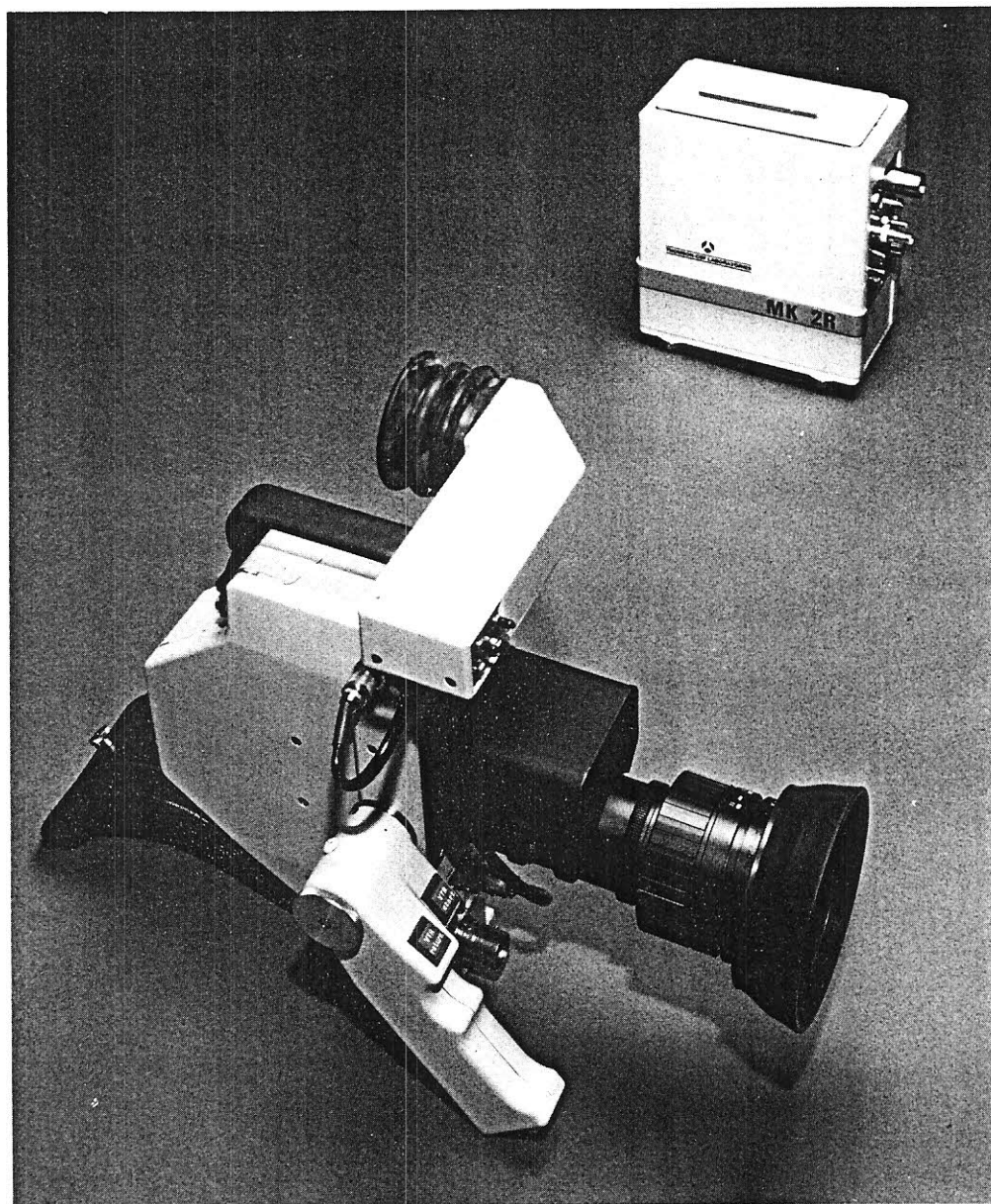
**"MICROCAM"<sup>®\*</sup> MK 2R**



## FEATURES

- Lightweight miniature portable colour camera, highly suitable for ENG applications.
- Three 2/3" Plumbicon<sup>\*</sup> tubes.
- Distribution of complete camera circuits into two units: camera head and electronics pack, for maximum flexibility and portability.
- Operating simplicity of a 16 mm movie camera.
- Low power requirements.
- Interchangeable lenses.
- Completely self-contained viewfinder.
- Used in conjunction with a portable VTR, two operators can ensure a 2-hour programme in field reporting with complete mobility. In case of urgent news events requiring immediate transmission, the system may be completed with a small mobile transmitter which permits on the scene live transmission.

<sup>®\*</sup> T.M. of THOMSON-CSF  
<sup>\*</sup> T.M. of N.V. PHILIPS



## MAIN FUNCTIONS

- 2-line image enhancer with comb filter and crispening and level-dependent aperture.
- Masking (with ON/OFF switch) for matching colorimetry to studio cameras.
- Bias light.
- Three-position sensitivity switch, 0 dB, + 6 dB and + 12 dB.
- Built-in colour bar generator.
- Adjustable flare compensation.
- Built-in sync pulse generator with genlocking capability.

- Camera warm-up (stand-by).
- Internal camera head set-up controls : over-scan switch, focus rock switch, test pulse switch for checking each channel with a standardized target current, - 6 dB pre-amp gain switch.

## AUTOMATIC CONTROL CIRCUITS

- Automatic colour balance circuitry that automatically balances to either black or white scene elements. "Keep-alive" nickel cadmium battery holds digital memories while changing main battery. Charged from main battery automatically while camera is in use.

## DESCRIPTION

The complete MICROCAM consists of two units :

- camera head with lens and viewfinder,
- electronics pack.

The camera contains complete video signal build-up circuits :

- video preamplifier-amplifier,
- horizontal and vertical scan,
- bias light shading,
- pick-up tube power supply.

The electronics pack contains :

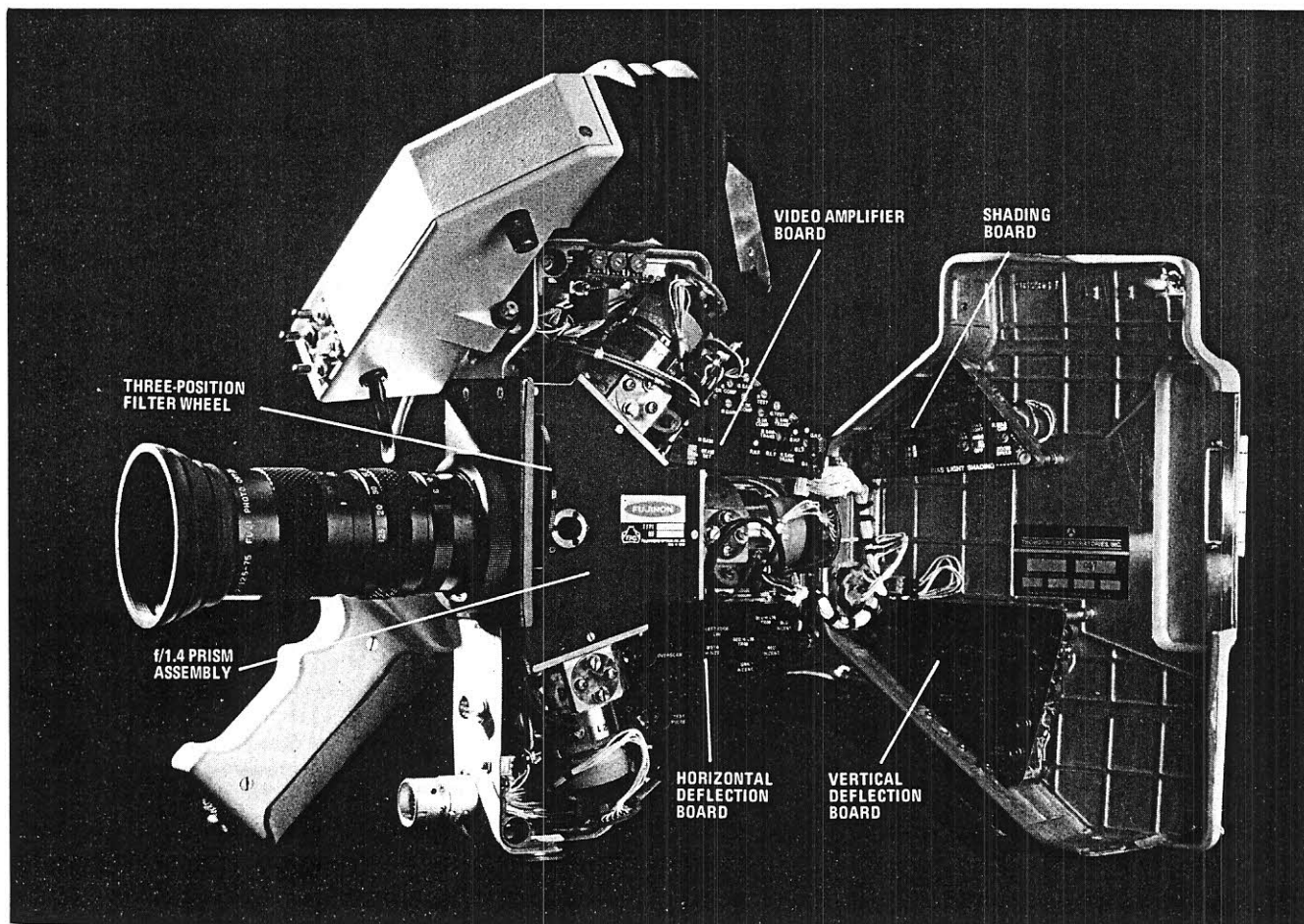
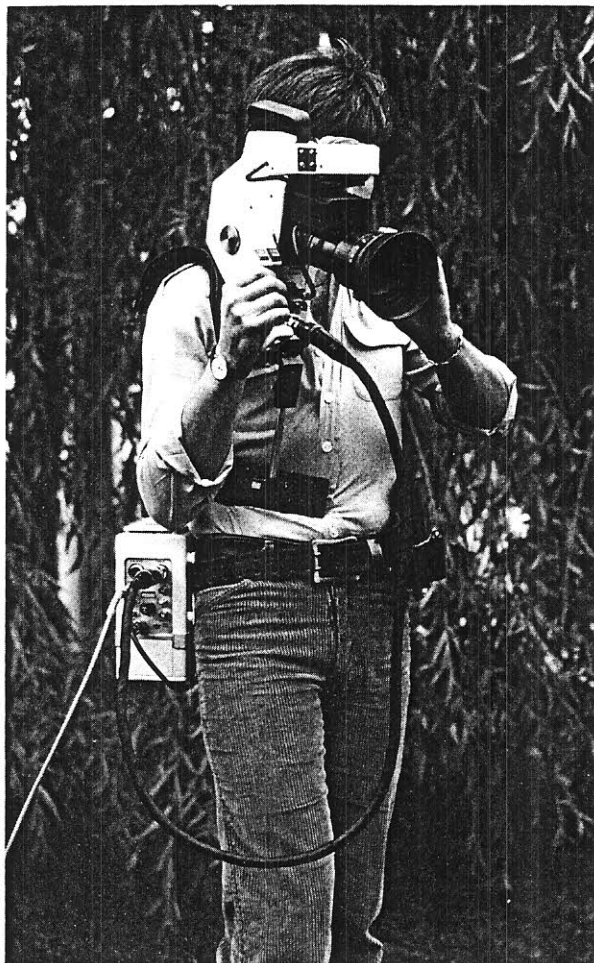
- the dc - dc converter,
- video amplifier,
- encoder with colour bar generator,
- sync pulse generator,
- genlock.

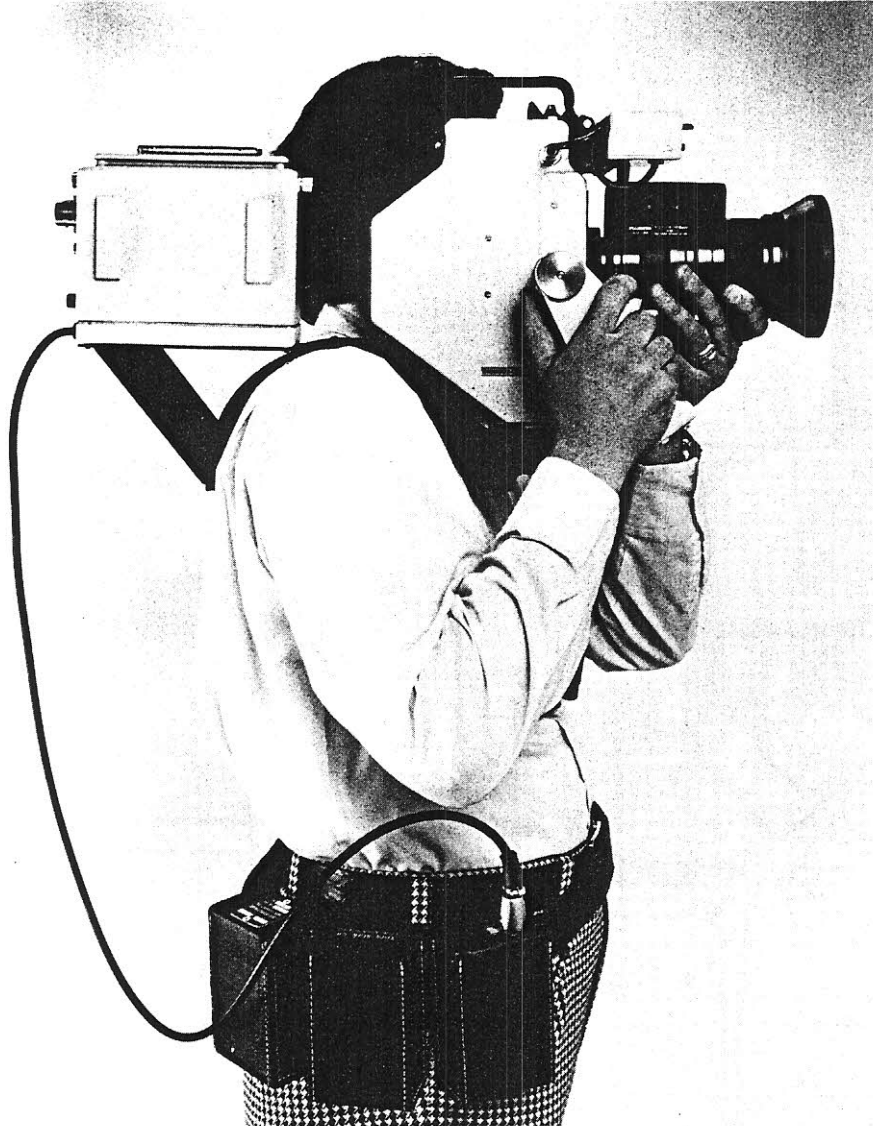


## DATA SUMMARY

### ELECTRICAL

- Three 2/3" lead oxide tubes.
- Scanning standards : 625 lines, 50 fields/s.
- Systems : SECAM - PAL.
- Total power consumption : 28 W
  - camera : 9.5W
  - viewfinder : 1.5W
  - electronics pack : 17 W
- Automatic shut-down at the end of battery life, so nickel cadmium cells do not deep discharge.
- Camera warm-up is 4 seconds from stand-by and 10 seconds from off.
- Operating temperature range : - 20°C to + 50°C.
- On-air cue lamp on front of viewfinder with switchable ON or OFF.





## • Camera input and outputs.

### □ Input signal for genlock :

Colour video composite signal, 1 V/75  $\Omega$ .

- Horizontal phase adjustable 1  $\mu$ s delay, 4  $\mu$ s (SECAM) or 2  $\mu$ s (PAL) advance.

- 360° adjustment of phase sub-carrier in PAL.

### □ Output signals :

- Encoded video output, SECAM or PAL : 1 V/75  $\Omega$ .

- Monitoring output : 1 V/75  $\Omega$ . Red or Green or Blue or Red-Green or Blue-Green.

### □ VTR connector :

- encoded video,
- VTR return video,
- ON-OFF,
- end of tape tally,
- on-air tally,
- sync tally signal.

## VIEWFINDER

- Completely self-contained.

- 1 1/2-inch CRT.

- Hinge mounted.

- Two-inch diagonal magnifier.

- 150-foot lamberts (500 nits) high-light brightness with full DC restoration.

- EHT : 6.9 kV.

### • Displays :

- video level indication via zebra pattern at flesh-tone level,

- iris position indicated by vertical pulse at top of picture,

- tape remaining indicated by proportional bar at top of picture.

### Tally lights :

- on air (red),

- low battery warning (yellow),

- VTR status (green),

- colour balance warning (red).

### • Controls :

Brightness, contrast, focusing with peaking for optimum picture crispness.

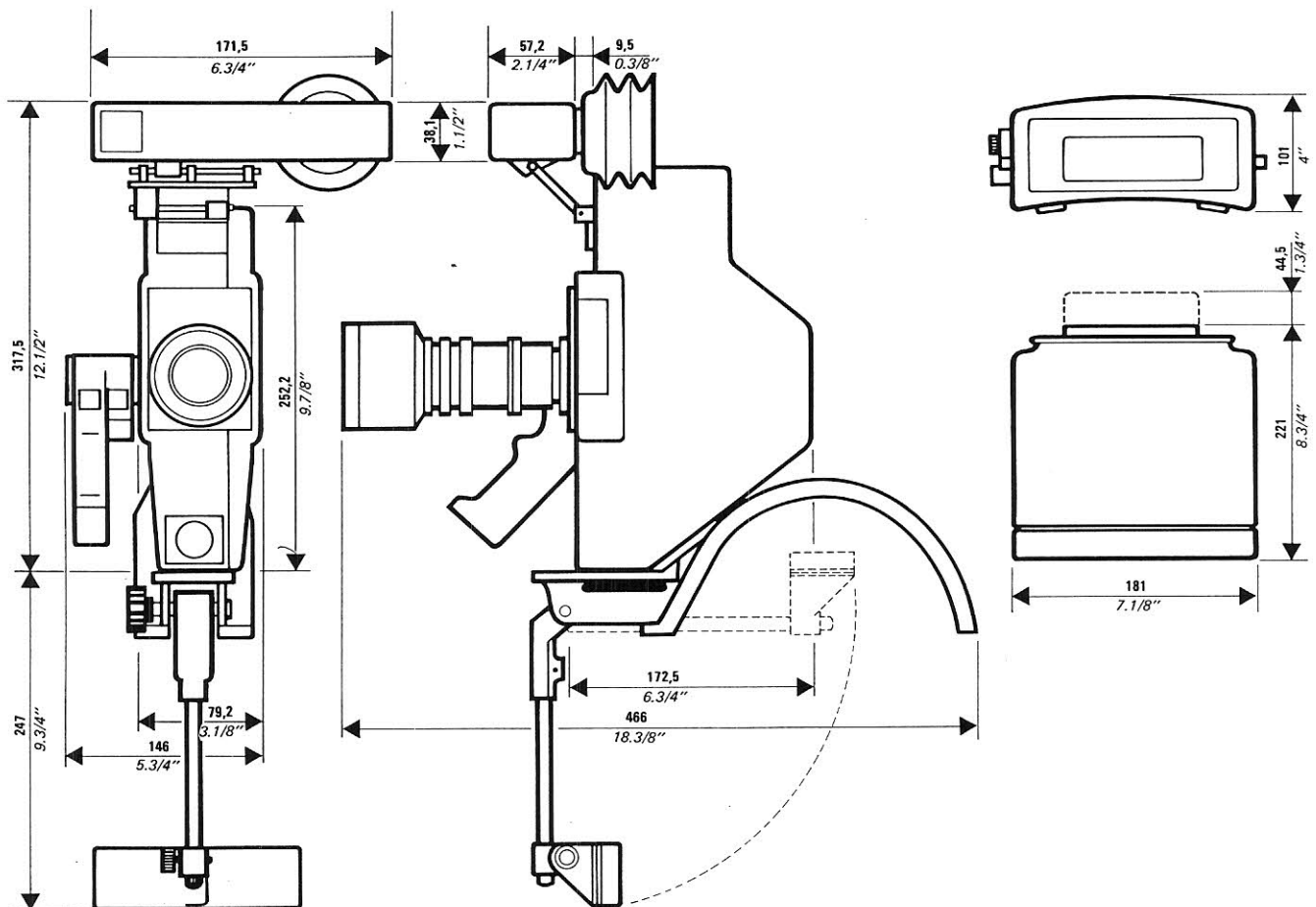
## MECHANICAL

### • Weight :

- camera with viewfinder, without lens : 3.5 kg,
- electronics pack : 3 kg,
- camera cable : 0.5 kg.

Total weight : 7 kg.

### • Dimensions : see below drawing.



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



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