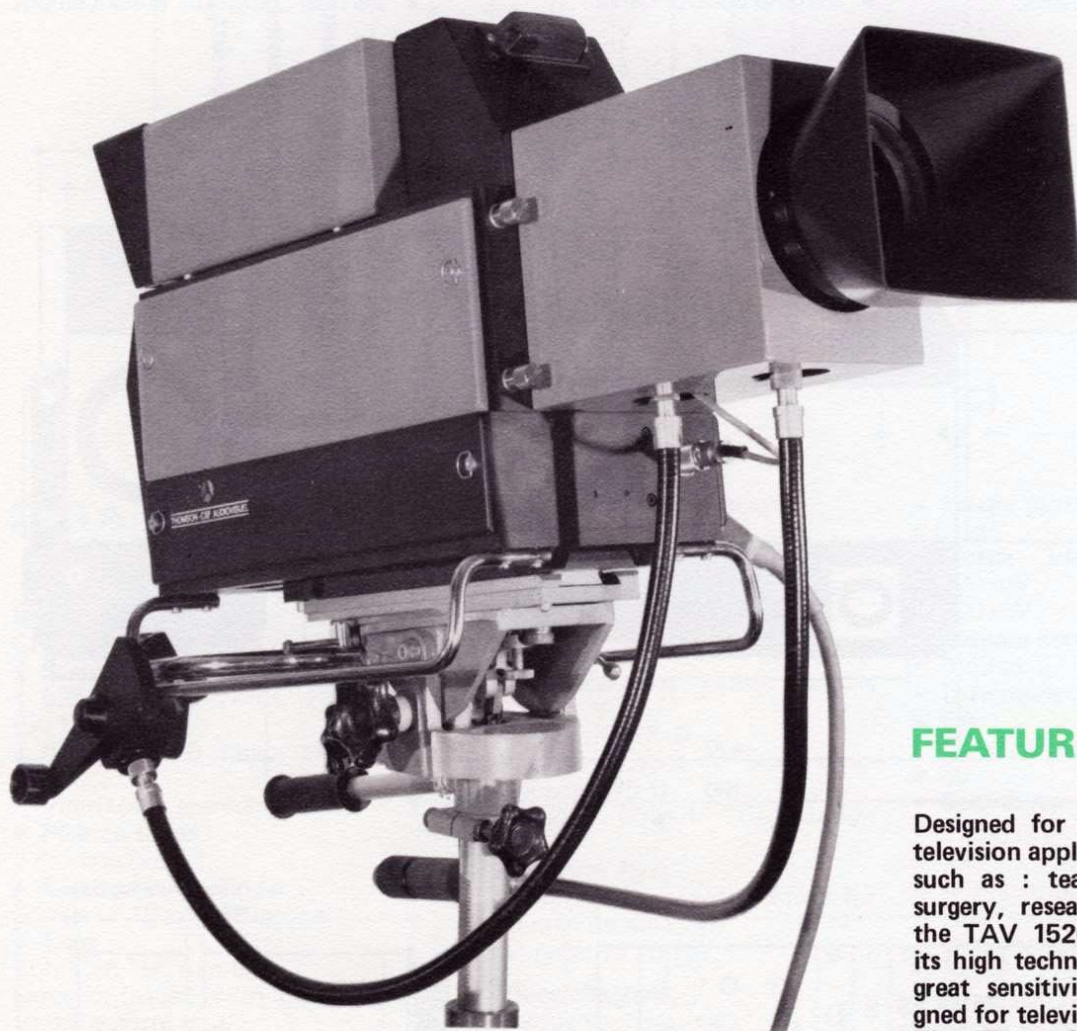




THOMSON-CSF

TAV 1520

COLOUR CAMERA CHANNEL



FEATURES

Designed for closed circuit colour television application in many fields such as : teaching, medicine and surgery, research, communication, the TAV 1520 colour camera with its high technical performance and great sensitivity is specially designed for television studios.

The TAV 1520 colour camera channel consists of a camera fitted with three 1" Plumbicon* tubes and a 19" control unit embodying most of the electronic circuits and operational controls.

* Registered trade mark of N.V. PHILIPS* of Holland

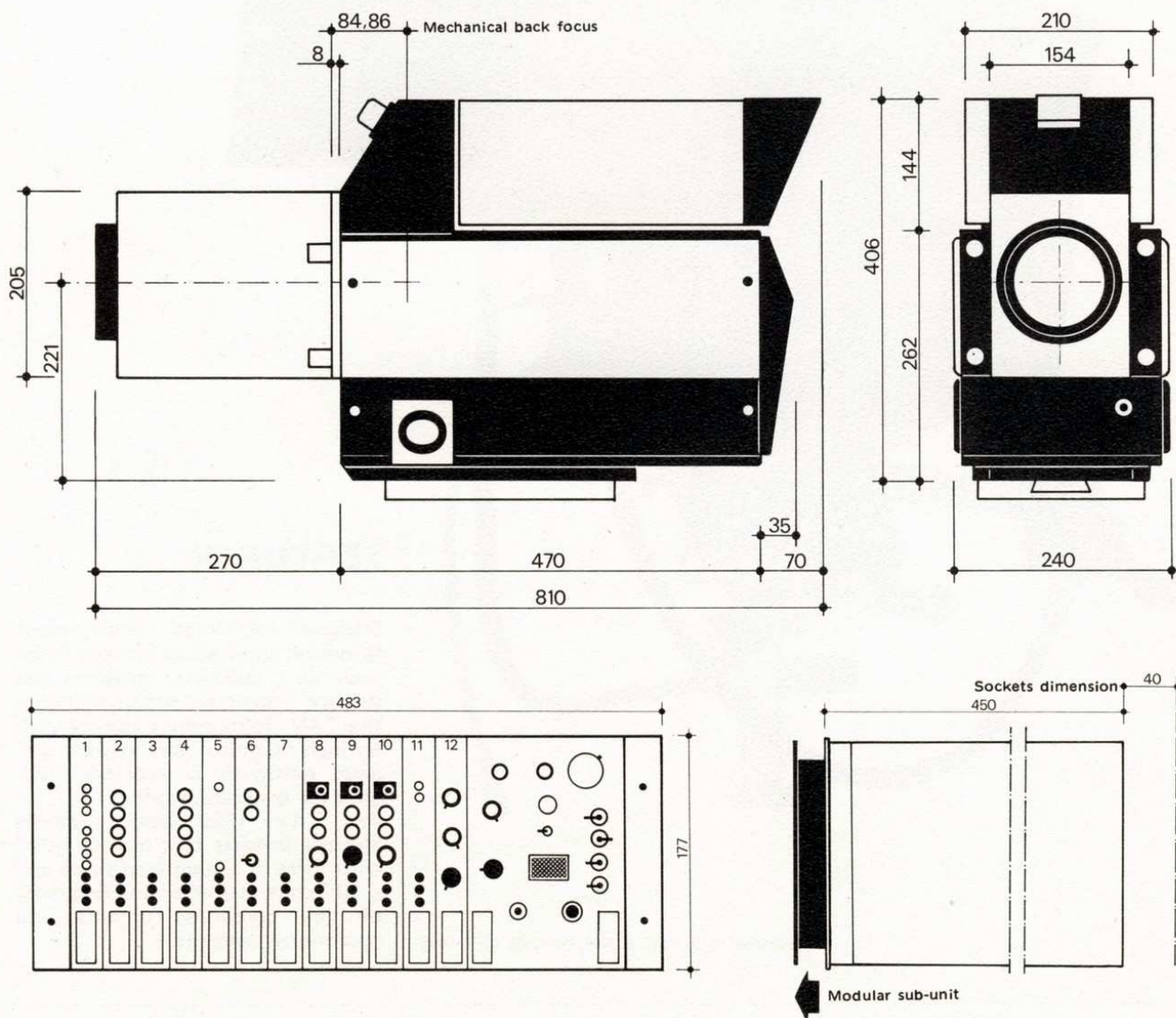
DESCRIPTION

STANDARD FEATURES

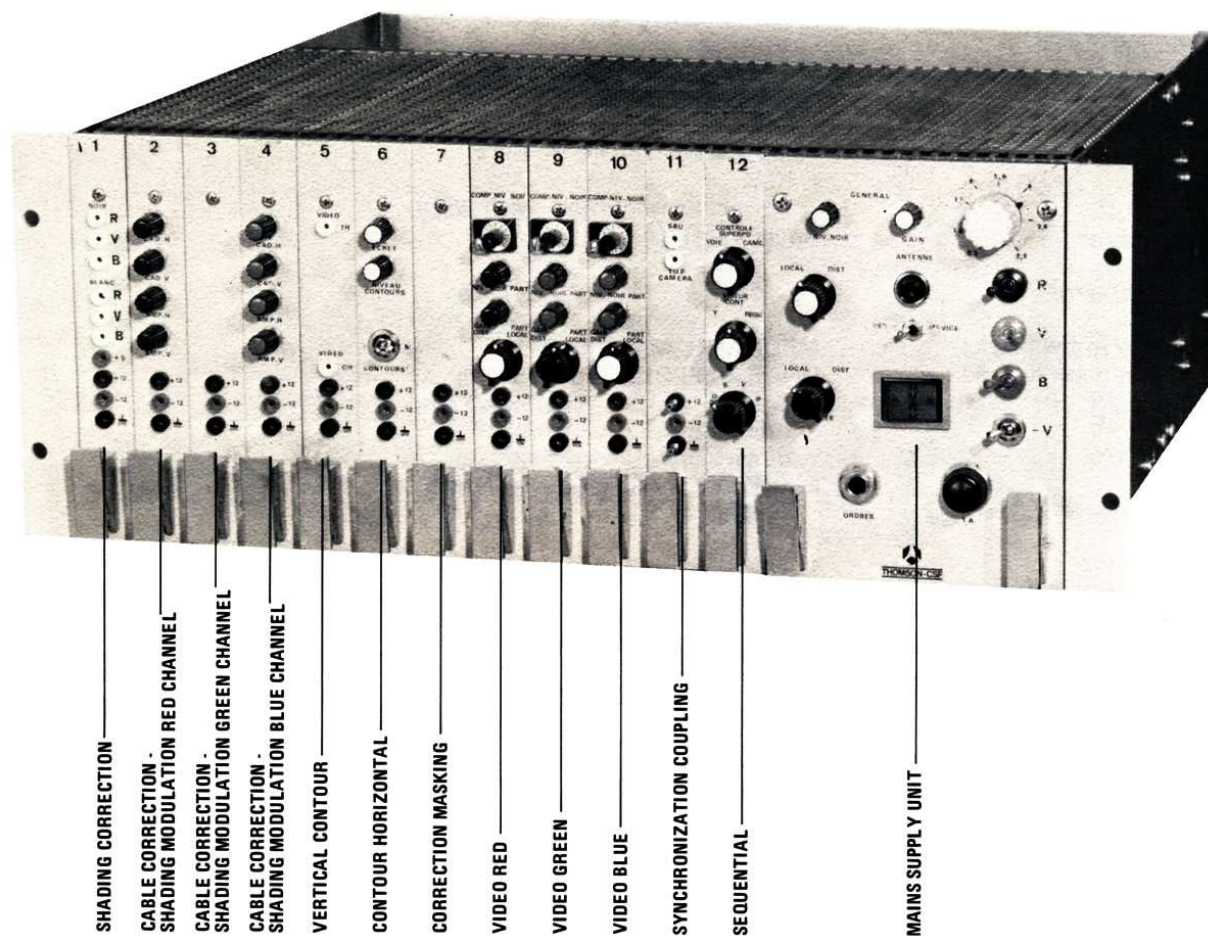
- Manual "Iris" control. The optical beam splitter is equipped with a data display of the aperture to the control unit.
- Rear mounting of pick up tubes.
- V and H shading correction : uniformity of primary colours in the whites.
- Automatic light level control.
- Automatic capping and blocking of pick up tubes in stand-by position.
- Sawtooth test generator.
- Scanning tube protection in case of a synchronization failure.
- Camera/CCU cable length compensation (250 m max in 50 m steps).
- Horizontal contour enhancement.
- Masking correction.
- Two-way intercom system : camera/CCU, production.
- 3 synchronization types :
 - by SBU 1 signal
 - by SBU 2 signal
 - by 2 of 4 CCIR signals (mixed blanking and mixed synchronization).
- Remote control panel.
- Registration control from CCU or viewfinder).
- Viewfinder with 18 cm CRT fed with :
 - Y,
 - or registration control,
 - or external video.
- This equipment allows a sequential oscilloscope to be used.
- Hour counter for Plumbicon operating time.
- Camera skis, carrying handles and protective cover.

OPTIONAL FEATURE

- Vertical contour enhancement.



CONTROL UNIT



DATA SUMMARY

ELECTRICAL CHARACTERISTICS

• Scanning standard

- 625 lines 50 fields, 25 frames (50 Hz),
- 525 lines 60 fields, 30 frames (60 Hz),
- interlaced scanning order : 2.

• Pick-up tubes

3 Plumbicons 1"

• Electronic viewfinder

Screen of 18 cm in diagonal

• Lens

Zoom 16.160 mm f/2.2,
Servocontrolled with data display
to the control unit.
Provision for use with lenses up to
f : 1/1.6.

• Input signals

- External video,
1 V positive 75 Ω
- Two-way intercom system,
+ 12 dB, 600 Ω
- Cueing,
- 48 V

• External synchronization.

- SBU 1 and SBU 2,
1 V positive 75 Ω
- mixed blanking or mixed sync.
4 V negative 75 Ω

• Output signals

- 2 independent video outputs
RVB,
0,7 V positive 75 Ω
- 1 video output Y with sync.
1 V positive 75 Ω
- 1 video output "Registration
control",
1 V positive 75 Ω
- 1 staircase signal with contact for
sequential oscilloscope,
10 V negative 10 K Ω

• Video channels

- Frequency response
- green channel
5 MHz \pm 0.5 dB
- blue and red channels
3.5 MHz \pm 0.5 dB
- Total differential gain in the
3 channels,
 \leq 4 %
- Tilt on 50 Hz and 15 KHz signals
 \leq 2 %

• Master gain variation

\pm 6 dB

• Master black level variation

+ 200 mV

- 100 mV

• Gamma correction

- 0.45 or 1,
- Difference between channels
 \leq 2 %
- Contrast ratio
 \geq 30

• Sensitivity

- 1.500 lux,
- 250 lux possible with higher gain.
- Illumination : 3.200° K
- Relative lens aperture, 4 to 5.6,
- Reflectance coefficient, 0.6,
- Signal current in the green
channel 300 nA.

• Signal to noise ration

- Measurement conditions
- gamma : 1
- without masking and contour
enhancement,
- signal current : 300 nA.
- Green channel
 \geq 47 dB
- Red and blue channels
 \geq 37 dB

- **Green channel resolution**

- Signal : 300 nA
- Measurement conditions
 - frequency : 5 MHz
 - gamma : 1
- Without correction
 $\geq 30 \%$

- With correction : 100 %

- **Uniformity in the whites**

- Measurement conditions
 - illumination : 2.500 lux
 - gamma : 0.45
- Absolute error
 $\leq 10 \%$
- Differential error
 $\leq 4 \%$

- **Uniformity in the blacks**

- Measurement conditions
 - without light on pick up tubes
 - gamma : 0.45
- Absolute error
 $\leq 4 \%$
- Differential error
 $\leq 2 \%$

- **White clipping**

Adjustable range : 100 to 115 %

- **Geometry**

- Distortion ratio in a circle
 - $\emptyset = 80 \%$ of picture height :
 $\leq 1.5 \%$
 - $\emptyset =$ picture width : $\leq 2 \%$
 - rest of the picture : $\leq 3 \%$

- **Registration error**

- Registration tolerance in a circle

- $\emptyset = 80 \%$ of picture height :
 $\leq 50 \text{ ns}$
- $\emptyset =$ picture width : $\leq 100 \text{ ns}$
- rest of the picture : $\leq 200 \text{ ns}$

- **Power supply**

- Voltage
 117 V or 220 V
- Frequency
 50 Hz or 60 Hz.
- Permissible voltage variation
 $\pm 10 \%$
- Power consumption with view-
 finder : 150 VA.

MECHANICAL CHARACTERISTICS

- Camera with viewfinder and without lens
 - dimensions :
 $l = 520 \text{ mm}, d = 235 \text{ mm}, h = 410 \text{ mm}$
 - weight :
 33 kg
- Lens
 - dimensions :
 $l = 270 \text{ mm}, d = 155 \text{ mm}, h = 205 \text{ mm}$
 - weight :
 6 kg
- Camera control unit
 - dimensions :
 $l = 455 \text{ mm}, d = 19'', h = 5 \text{ U}$
 - weight :
 19 kg.

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

www.tvcameramuseum.org



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