HITACHI
Hitachi Denshi, Ltd.



Color Television Camera

FP-1011B

The FP-1011B is one of the FP-1010 series color television cameras whose excellent quality and performance have earned them a high reputation. The FP-1011B consists of a camera head and a camera control unit with a remote control panel which enables major camera operations from it. Since the remote control panel can be separated from the camera control unit up to 100m, the remote control panel can be located quite far from the camera control unit. Similar to the FP-1010, the FP-1011B can be used as a "self-contained camera" with the optional self-contained kit (only for NTSC color system). The FP-1011B is provided with three SATICON tubes; however, the Plumbicon** or Vidicon tube version cameras are also available. The 7" viewfinder is tiltable and detachable.*
Performance of the new FP-1011B is enhanced by the listed features which provide ease of operation, stability, and minimal set-up time.
These features make the FP-1011B ideal for use in educational broadcasting, CATV origination, software production and hospitals as well as in professional broadcasting.

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FEATURES

■ **Pickup Tubes**
The SATICON*, featuring a high resolution and a uniform sensitivity over the entire visible light range, provides a sharp picture and excellent colorimetry. The built-in bias light reduces lag under the inadequate lighting condition.

■ **The RP-1011B Remote Control Panel Controls Many Functions**
* Stand-by, Pedestal, Black balance, Operate switch
* Master pedestal
* Iris control (Auto-Manual)
* Color paint
* Color temperature
* Auto white
* White and black balance
* High gain switch (+6dB)
* Camera-bar switch
* Intercom system with adjustable amplifier
* Tally system

■ **3-way Synchronization System**
External pulse drive (standard), genlock drive (option), and internal drive (option) are available, providing an ultimately flexible system.

■ **Self-contained Format Possible (Only for NTSC color system)**
The FP-1011B can also be used as a self-contained camera by plugging optional printed circuit boards into the camera head and exchanging an adaptor.

■ **Automatic Iris Control Circuit**
Manual operation also can be effected from the remote control panel.

■ **Built-in Digital-memory-type, White Balance Circuit**
Either manual or automatic white balance can be selected. The built-in digital memory reproduces pictures without color tone variations.

■ **Combined Color Temperature Compensation**
Combined use of optical (color-temp. filter disc) and electronic (R.G.B. gain balance control) methods render very delicate color temperature compensation possible through the wide range of 3200°K to 8000°K. An ND filter is also built-in.

■ **Built-in H-detail Circuit and Vertical Image Enhancer**
An H-detail circuit is provided internally to enable producing sharp pictures. The vertical image enhancer is available as an option.

■ **+6dB Switch (High Gain)**
Provision of this feature enables camera operation under inadequate lighting.

■ **Tiltable 7" Viewfinder**
Large, tiltable 7" viewfinder offers optimum brightness and high resolution, assuring precise viewing ease.

■ **Built-in Encoder**
NTSC or PAL color composite signals can be obtained from the built-in encoder, without employing an additional unit (IQ encoder for NTSC color system). Independent R.G.B. (Red, Green, Blue) outputs are also provided for use in chroma keying.

■ **Built-in Color Bar Generator**

■ **Color Painting Function**
Fine color balance control permits complicated color matching of several cameras.

■ **Built-in Cable Compensator**
Permits a distance between the camera head and CCU up to 300 meters (1000 ft).

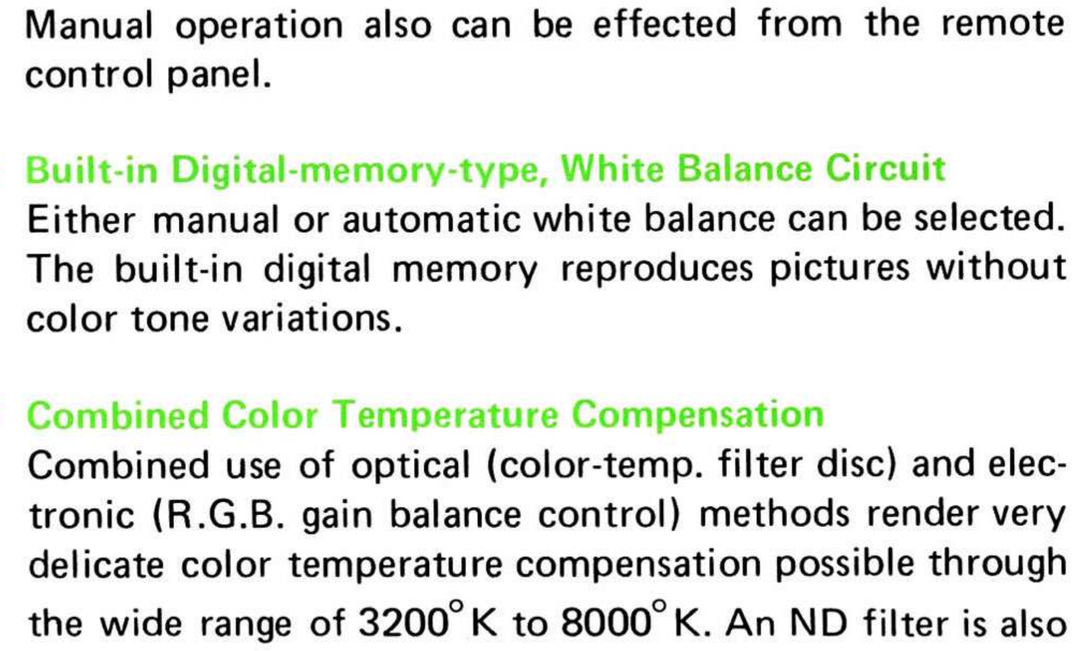
■ **Built-in Masking Amplifier (Option)**
Enables fine color rendition control.

■ **Built-in Test Signals**
Sawtooth signals for level correction in individual units of the camera control unit, and pulse signals for checking encoder characteristics are provided, thus facilitating adjustment.

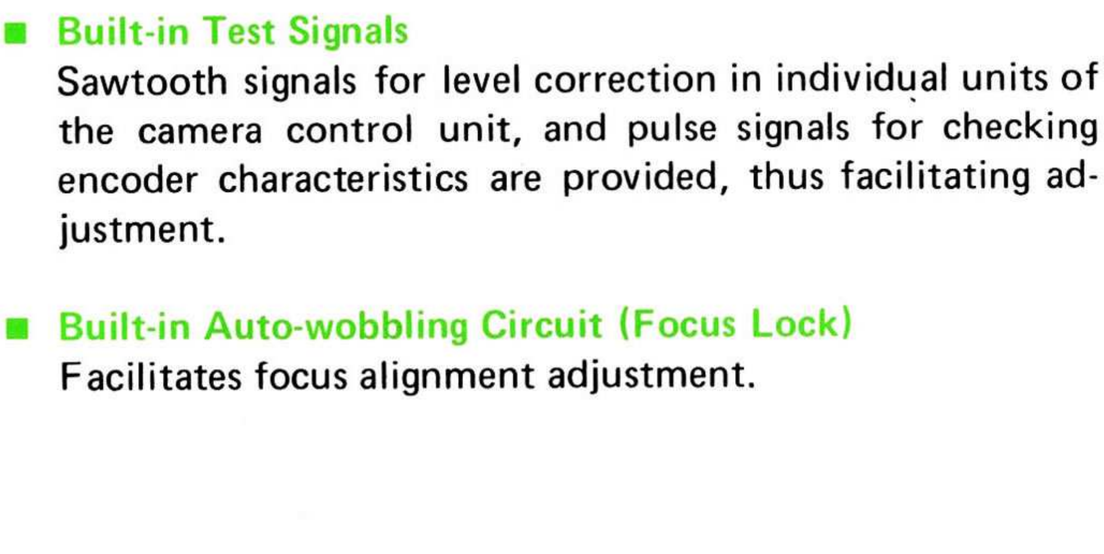
■ **Built-in Auto-wobbling Circuit (Focus Lock)**
Facilitates focus alignment adjustment.

TYPICAL CONNECTION

TYPICAL CONNECTION OF EXTERNAL PULSE DRIVE VERSION



TYPICAL CONNECTION OF GENLOCK DRIVE VERSION



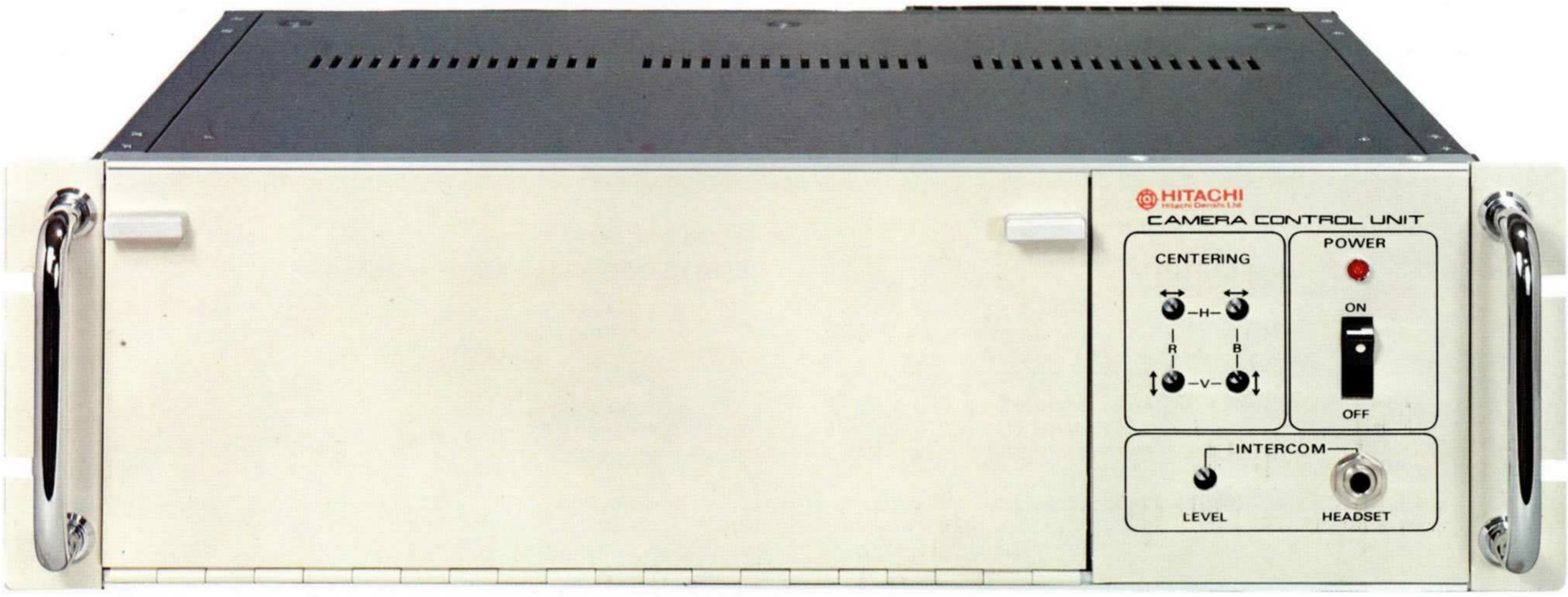
www.tvcameramuseum.org

Hitachi Color Television Camera FP-1011B





REMOTE CONTROL PANEL RP-1011B



CAMERA CONTROL UNIT CU-1011B

STANDARD COMPOSITION

Camera head	FP-1011B	1
Viewfinder	VM-703	1
Camera control unit	CU-1011B	1
Remote control panel	RP-1011B	1
Camera cable 15m (45 ft)	CC-015C	1
Remote cable 10m (33 ft)	C-102FA	1
Iris servo cable	RX-001A	1
Extension board (I, II)		1 set
Fuses		1 set
Registration chart		1
Service manual		1
Operation manual		1

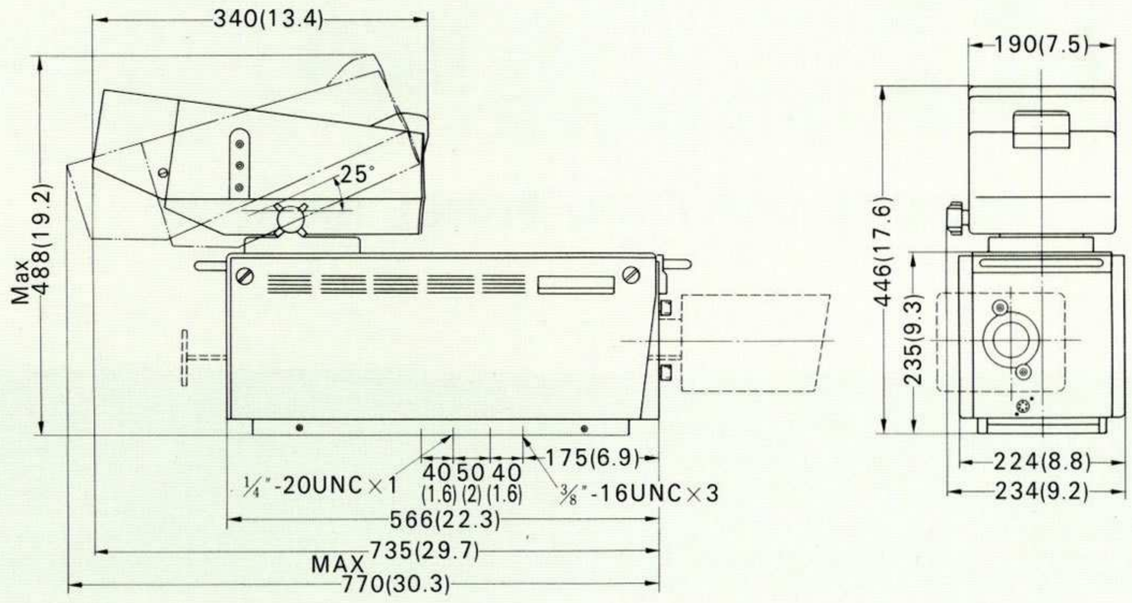
OPTIONAL ACCESSORIES

Self-contained Kit (for NTSC)	A-401 (for NTSC),	A-411 (for PAL)
Internal sync unit	A-43IN (for NTSC),	A-431P (for PAL)
Genlock unit	A-404 (for NTSC),	A-414 (for PAL)
Vertical enhancer unit	A-407	
Masking unit		
Zoom lens		
Cable drive type:	C5X20RW-1 5:1 F1.8,	C8X18RW-1 8:1 F2
	M10X16ARW-1 10:1 F1.8	
Push rod type:	C5X20RP-1 5:1 F1.8,	C8X18RP-1 8:1 F2
	C10X16BRP-1 10:1 F2.5	C10X16ARP-1 10:1 F1.8
C-mount adaptor		

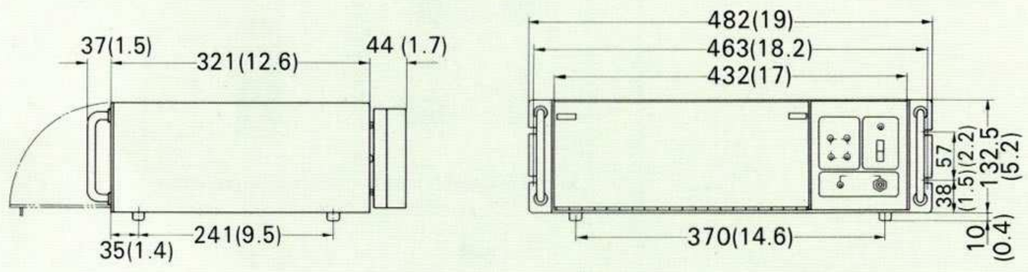
EXTERNAL VIEW

DIMENSIONS: mm (in)

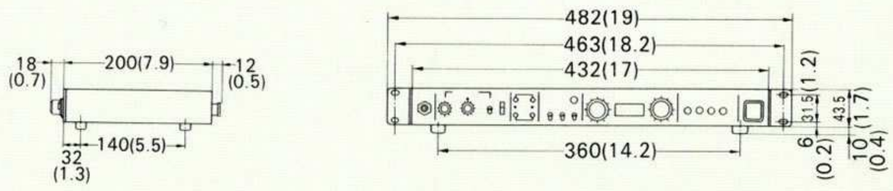
CAMERA HEAD FP-1011B



CAMERA CONTROL UNIT CU-1011B



REMOTE CONTROL PANEL RP-1011B



Specifications are subject to change without notice.

SPECIFICATIONS

Television standard		NTSC or PAL
Optical system		Paralleled dichroic mirror
Pickup tube		Three 2/3" tubes. — Standard: SATICON* (H9311 or equivalent) Option: Vidicon (20PE-13AB or equivalent) Option: Plumbicon** (XQ-1428 or equivalent)
Synchronization		EXTERNAL (Standard) or INTERNAL [by using optional unit A-401 (NTSC), A-411 (PAL)]
Resolution (Luminance)	**Horizontal**	SATICON* (Standard): more than 500 lines at center Vidicon (Option): more than 470 lines at center Plumbicon** (Option) more than 450 lines at center
	Vertical	more than 350 lines at center
Signal-to-noise ratio (Luminance)		SATICON* (Standard): Better than 50dB at standard conditions Vidicon (Option): Better than 48dB at standard conditions Plumbicon** (Option): Better than 46dB at standard conditions
Standard illumination (at F4 3200° K)		SATICON* (Standard): 1500 lux (150 fc) Vidicon (Option): 2000 lux (200 fc) Plumbicon** (Option): 1000 lux (100 fc)
Minimum illumination (at F1.8 3200° K)		SATICON* (Standard): 150 lux (15 fc) Vidicon (Option): 200 lux (20 fc) Plumbicon** Option): 100 lux (10 fc)
Geometric distortion		Less than 1.0% (within the central zone of diameter equal to 80% of picture height)
Registration error		Less than 0.1% (within the central zone of diameter equal to 80% of picture height) Less than 0.4% (within the central zone of diameter equal to picture height) Less than 1.0% (other than above-mentioned zones)
Gamma correction		0.45 to 1.0 (continuously adjustable)
Encoder		NTSC : IQ PAL : R-Y, B-Y
Video output		LINE: 1.0Vp-p (VBS) or 0.7Vp-p (VB or V) x 1 75Ω BNC MONITOR: 1.0Vp-p (VBS or VS) x1 75Ω BNC PIX: 1.0Vp-p (VS) x1 75Ω BNC R.G.B.: 0.7Vp-p (V) x3 75Ω BNC
Drive input	**Pulse drive version (standard)**	HD: 2 to 4Vp-p VD: 2 to 4Vp-p SYNC: 2 to 4Vp-p SC: 1 to 2Vp-p PID (for PAL type only): 2 to 4Vp-p (fH/2) } 75Ω or high impedance, BNC
	Genlock version (option)	Genlock signal: VBS or Black-Burst signal Sync: 0.3Vp-p ±3dB Burst: 0.3Vp-p ±3dB
Color temperature compensation		Optical: 3200° K, 5000° K, 8000° K or 5000° K + ND (5%). Changeable by rotary filter disc Electronic: 5000° K, 6000° K or 7000° K Switchable remotely at remote control panel
Lens mount		S-mount (C-mount adaptor is provided optionally)
Camera mount		3/8"-16UNC x 3 and 1/4"- 20UNC x 1
Camera cable		Core: 24, Diameter: approx. 16mm (5/8 in), Can be extended up to 300m (1000 ft)
Viewfinder		7" CRT CT-480B or equivalent
Ambient temperature		5 to 35° C (41 to 95° F)
Power requirements		U and C types: 120V AC, 60Hz E type: 220V AC, 50Hz K type: 240V AC, 50Hz } 130W (Including viewfinder, camera control unit and remote control panel.)
Dimensions (W x H x D)		Camera head: 224 x 235 x 566mm (8.8 x 9.3 x 22.3 in) Viewfinder: 190 x 196.2 x 340mm (7.5 x 7.7 x 13.4 in) Camera control unit : 432 x 132.5 x 321mm (17.0 x 5.2 x 12.6 in) Remote control panel: 432 x 43.5 x 200mm (17.0 x 1.7 x 7.9 in)
Weight		Camera head: 18.5 kg (40.7 lb) excluding viewfinder and lens Viewfinder : 6 kg (13.2 lb) Camera control unit: 14.3 kg (31.5 lb) Remote control panel: 3.5 kg (7.7 lb)

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