

FP-60S

Studio Color Television Camera



HITACHI
Hitachi Denshi, Ltd.

Hitachi FP-60S, a Full Performance Color Studio Use Adopting Newly Developed Prism and Three 1-inch SATICON Pickup Tubes

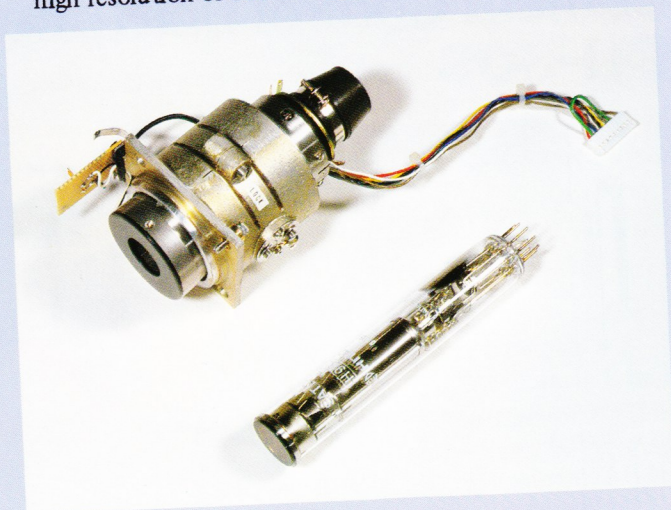
The Hitachi FP-60S Color TV Camera adopts newly developed prism optics and three 1-inch SATICON* pickup tubes, featuring superb resolution, signal-to-noise ratio and color rendition. The camera head, of sturdy die-cast aluminum construction, can be used for studio use as well as field applications under severe operating conditions.

*Trademark

Features

■ Prism optics and 1-inch SATICON tubes

The newly developed prism optics and 1-inch SATICON tubes provide a high signal-to-noise ratio of 52dB and a high resolution of 600 TV lines.



■ Built-in Automatic Beam Optimizer

An Automatic Beam Optimizer developed by Hitachi greatly extends dynamic range and reduces comet-tailing.

■ Built-in bias light

A built-in bias light assures image reproduction with minimized afterimages.

■ Built-in test signals

Built-in test signals facilitate presetting of the input/output levels of each module. The color encoder can also be easily preset by special test signals without employing a vector scope.

■ Tiltable viewfinder

A tiltable viewfinder uses a 7-inch CRT and provides a clear picture. A high-grade viewfinder is available as an optional item to provide pictures of higher brightness and higher resolution.

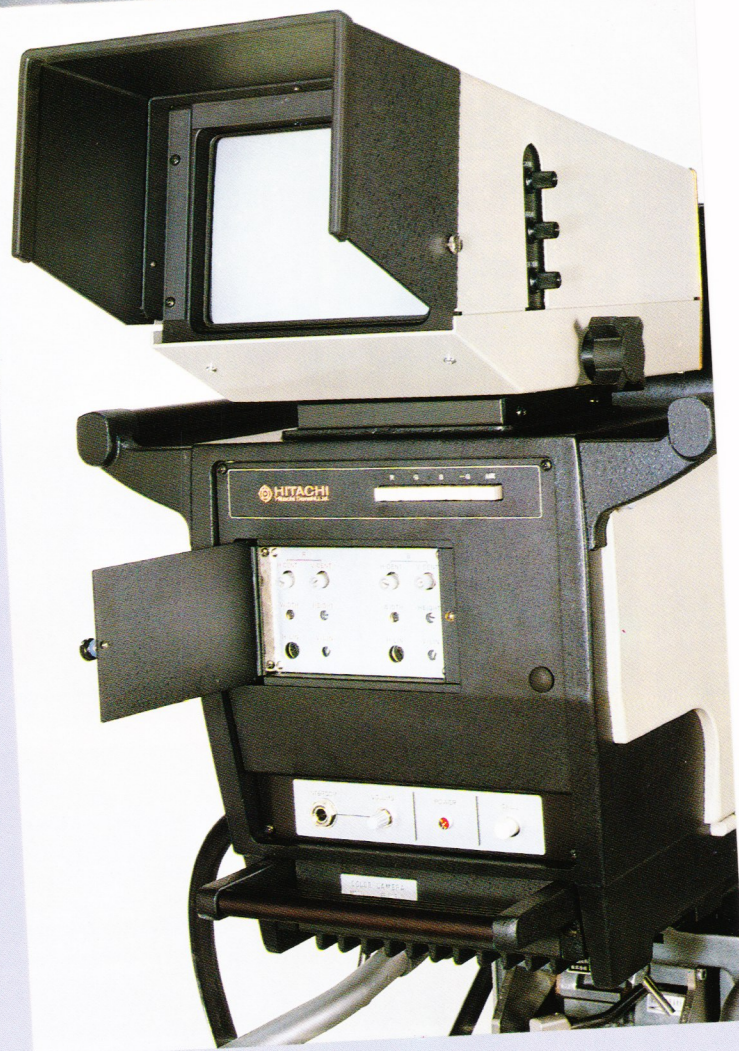


■ Combined color-temperature compensation method

By the combined use of a color temperature conversion filter method featuring superior color reproduction and an electronic color temperature compensation method featuring better sensitivity, fine color temperature compensation is ensured for variations of light sources over a wide range. An ND filter is also built in.



Television Camera for m Optics



- **Built-in iris servo amplifier**

A built-in iris servo amplifier and a servoed zoom lens combine to maintain the amount of incident light at an optimum level. Manual control is also possible.

- **Built-in shading correctors**

Built-in correctors for modulation shading and black shading provide accurate color balance.

- **Extra video gain**

With extra video gain (+6dB and +12dB), the FP-60S can be used under low lighting conditions.

- **Built-in contour enhancer**

Sharp, clear pictures can be obtained by use of the H-detail and 1H delay vertical contour enhancer. As an optional item, a 2H delay vertical contour enhancer is also available.

- **Auto white balance**

Digital memory type automatic white balance produces stable and high-quality images over a long period. White balance can also be set manually.

- **Painting**

A "Painting" control is provided on the remote control panel for optimum color balance among the cameras. "Painting" is inactivated by switch operation.

- **Masking amplifier (option)**

A masking amplifier is available for fine color adjustment.

- **Automatic wobbling compensation**

An automatic wobbling circuit facilitates alignment adjustment.

- **Negative G signal for registration adjustment**

A negative G signal is provided for registration adjustment.

- **R, G, and B signal outputs**

Noncomposite R, G, and B signal outputs are provided for chroma key etc.

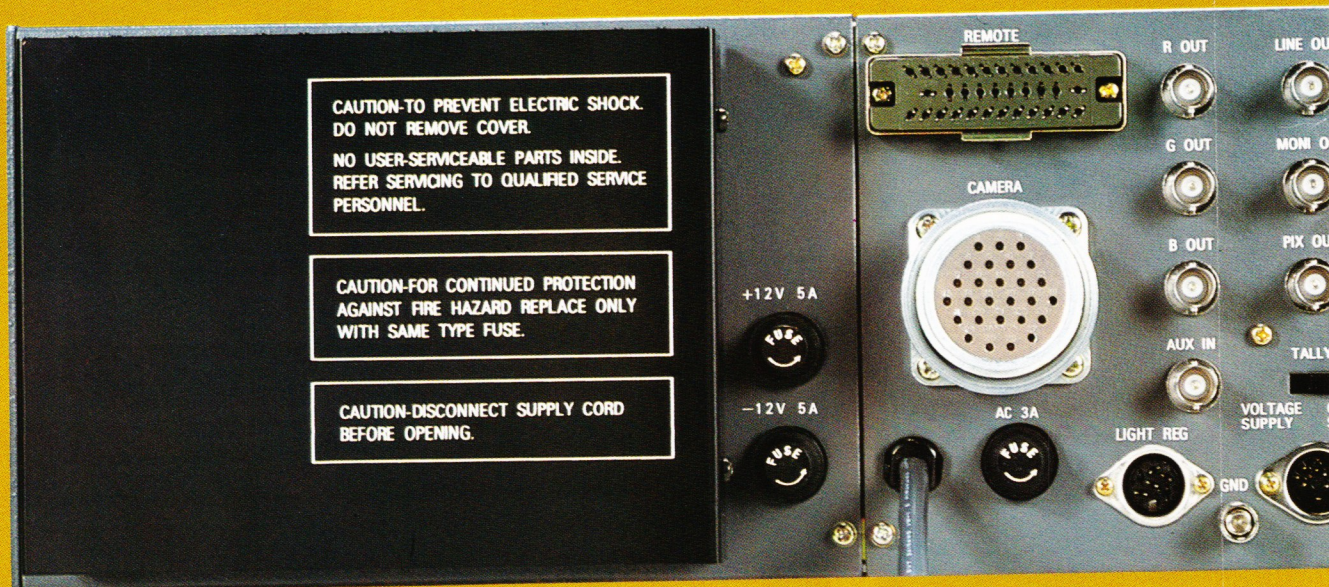
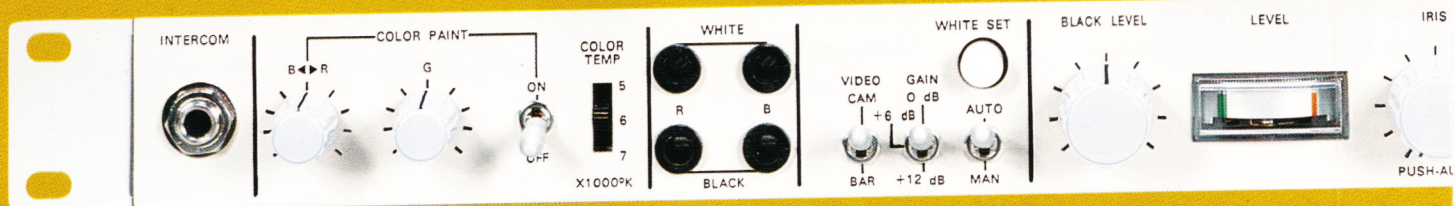
- **Level meter**

A level meter facilitates presetting of the black level and black balance.

- **Built-in color bar generator**

A built-in color bar generator facilitates color matching among cameras and the adjustment of color monitors. Changeover between active video and color bias is made on the remote-control panel.

- **Intercom with sound level control**

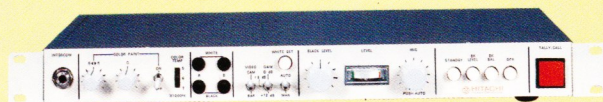




Remote Control Panel (RCP)

RP-60S

Remote control cable: 10m (Std.) 100m (Max.)
(between RCP and CCU)



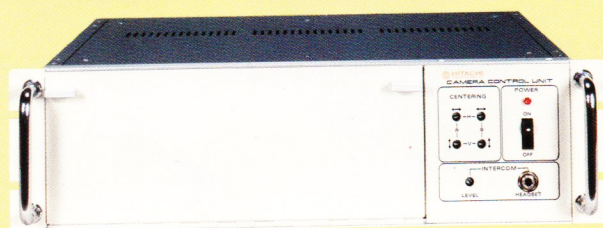
Control items:

- | | |
|--------------|-----------------------------------|
| Iris | Color Temperature Selection |
| Master Black | Auto White Balance |
| Red Black | Painting |
| Blue Black | Video Gain Selection (0/+6/+12dB) |
| Red Gain | Camera/Bar Selection |
| Blue Gain | Tally Call |



Camera Control Unit (CCU)

CU-60S



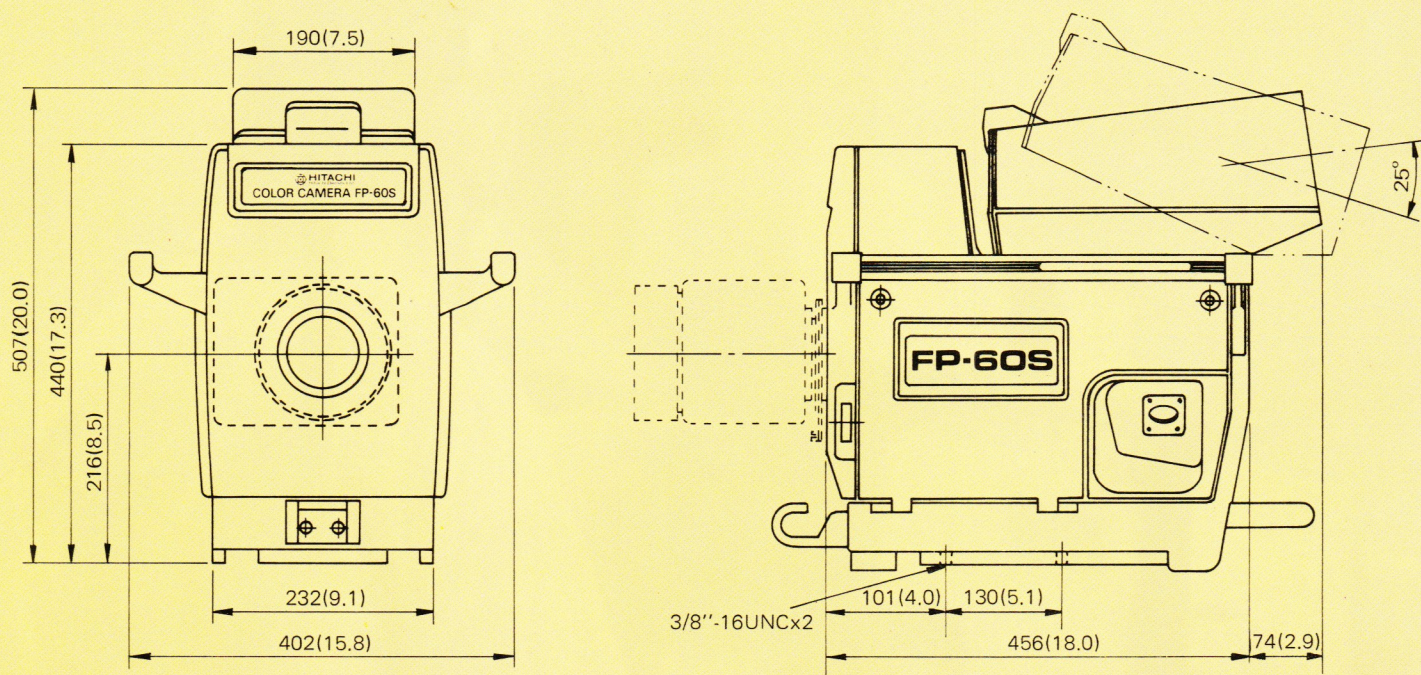
Control items:

- | | |
|-----------------------------------|------------------|
| Cable Compensation
(max. 300m) | Blue V-Centering |
| Red H-Centering | Detail ON/OFF |
| Red V-Centering | Intercom |
| Blue H-Centering | |



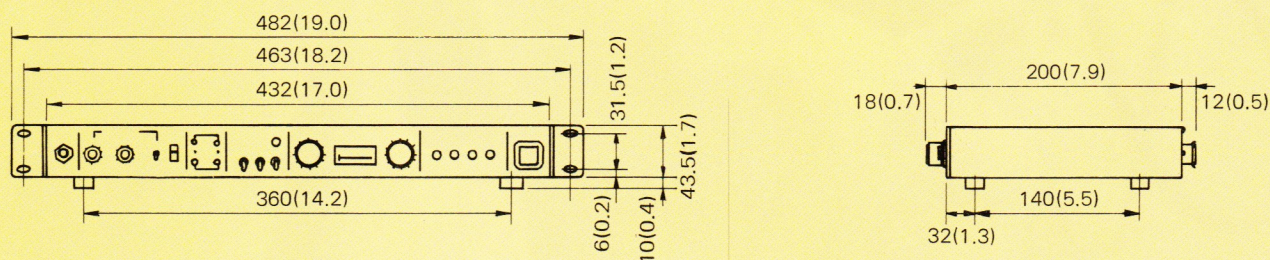
External View

CAMERA HEAD FP-60S



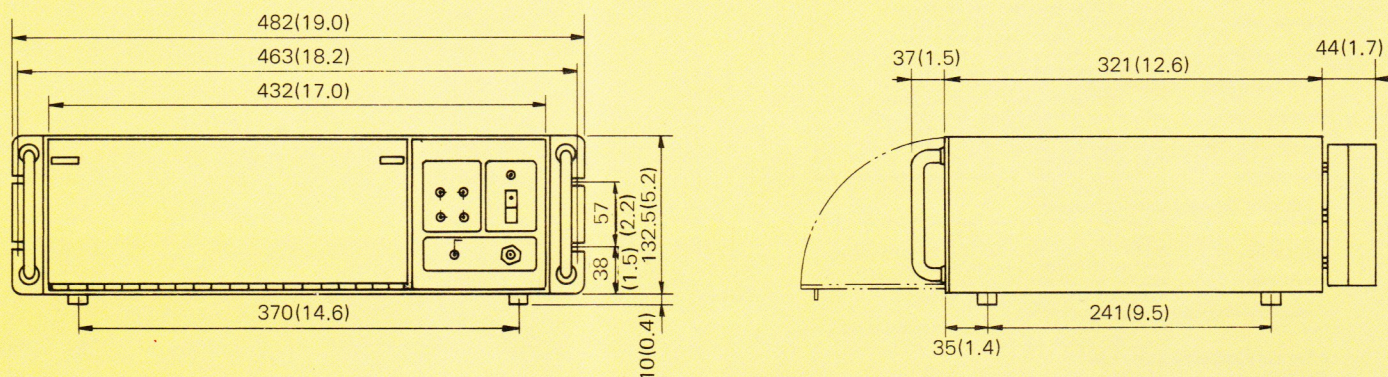
Dimension: mm (in)

REMOTE CONTROL PANEL RP-60S



Dimension: mm (in)

CAMERA CONTROL UNIT CU-60S



Dimension: mm (in)

Specifications

Optical system	High-transmission prism optics
Pickup tube	Three 1-inch SATICON (H9324) tubes
Scan standards	NTSC: 525/60 fields/sec, PAL-B: 625/50 fields/sec
Synchronization	External sync (Internal & Genlock possible)
Horizontal resolution	600 lines at center (G-ch.)
Signal-to-noise ratio	52dB (Gamma off, Detail off)
Standard illumination	2,000 lx (200 fc), 3,200°K, F4 (measured on a gray chart of 90% reflectance)
Minimum illumination	50 lx (5 fc), 3,200°K, F1.8, +12dB (measured on a gray chart of 90% reflectance)
Registration Zone 1	Less than 0.1% (within center circle of a diameter equal to 80% picture height)
Zone 2	Less than 0.4% (within center circle of a diameter equal to picture width)
Zone 3	Less than 1.0% (elsewhere)
Shading compensation	Modulation and black shading compensation
Gamma correction	0.45 to 1.0 (variable)
Color temperature compensation	Optical: 3,200, 4,700, 6,000°K, and 6,000°K + ND 6.3% Electronic: 5,000, 6,000, 7,000°K (switchable)
Encoder	NTSC: IQ, PAL-B: UV
Lens mount	Bayonet mount
Video outputs	LINE 1.0Vp-p (VBS) or 0.7Vp-p (VB or V) 75Ω BNC
	MON. 1.0Vp-p (VBS or VS) 75Ω BNC
	PIX 1.0Vp-p (VS) 75Ω BNC
	R ch. 0.7Vp-p (V) 75Ω BNC
	G ch. 0.7Vp-p (V) 75Ω BNC
	B ch. 0.7Vp-p (V) 75Ω BNC

Drive inputs	HD	2 to 4Vp-p	Negative
	VD	2 to 4Vp-p	Negative
	SYNC	2 to 4Vp-p	Negative
	SC	1 to 4Vp-p	Sine wave
	PID (PAL)	2 to 4Vp-p	fH/2
	BF (PAL)	2 to 4Vp-p	Negative
Genlock signal	Composite (VBS) or black burst		
Camera cable	15m (Std.) 300m (Max.)		
Remote control cable	10m (Std.) 100m (Max.)		
Operating temperature	Camera head with VF-702A -20 to +40°C (-4 to +104°F)		
	Camera head with VM-702 -10 to +40°C (14 to 104°F)		
	CCU 0 to +40°C (32 to 104°F)		
Power requirements	U & C types	120V AC, 50/60Hz	} approx. 150W
	E type	220V AC, 50Hz	
	K type	240V AC, 50Hz	
Dimensions (WxHxD) and Weight	Camera head	402 x 507 x 456 mm (15.8 x 20.0 x 18.0 in.) approx. 26 kg	
	VF	190 x 196 x 340 mm (7.5 x 7.7 x 13.4 in.) approx. 6 kg	
	CCU	482 x 132.5 x 321 mm (19 x 5.2 x 12.6 in.) approx. 14.5 kg	
	RCP	482 x 43.5 x 200 mm (19 x 1.7 x 7.9 in.) approx. 3.5 kg	

Suggested Composition

Camera head FP-60S	1
Viewfinder VM-702 (with indoor-use hood)	1
Camera control unit CU-60S	1
1H V-Enhancer A404 (NTSC), A414 (PAL)	1
Remote control panel RP-60S	1
Camera cable (15m)	1
Remote cable (10m) C-102RA	1
Iris servo cable	1 set
Extension boards (one each for Camera head and CCU)	1 set

Optional Accessories

Internal sync unit A401 (NTSC), A451 (PAL)
Genlock unit A431N (NTSC), A461 (PAL)
High-grade viewfinder VF-702A
2H V-Enhancer unit A424N (NTSC), A424P (PAL)
Masking unit A407
Zoom lens K10X15RW-1 F1.8, 15 to 150 mm (cable drive)



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Specifications are subject to change without notice.