

Preliminary

HITACHI

Digital Color Camera

SK-900



14-bit Analog to Digital converters

Outstanding Features

- 14-bit Analog to Digital converters provides a wide dynamic range and contribute to a high signal to noise ratio.
- Digital video processing using the latest Hitachi LSI technology.
- The Switchable 16:9 / 4:3 aspect ratio modes enable flexible program production.
- The NEW Triax system achieves a low noise picture at the output of the CCU.
- The new developed 1,230 K pixel CCD with micro lens provides

high sensitivity, high resolution and low vertical smear(-140dB).

- 5 ECC Filter and Optical Filter as combination use.
- Gray Scale Auto Setup needs no special chart.



The remote filter wheel

From a single button on the RU-777JY control panel, one can easily adjust the color temperature of the scene in continuous fashion without having to stop production for camera adjustments.

The SK-900 therefore provides a wide dynamic range of scene color temperature and scene brightness compensation with the employment of Neutral Density light attenuation provided by its remotely controlled filter wheel and its continuously variable electronic color temperature control.

14-bit ADC with newest DSP

- RGB CCDs' outputs are converted Analog to Digital by 14-bit (=16384 steps) with High dynamic range. Hitachi is leading developer for High performance CPU & DSP in Broadcast Field. Hitachi's latest generation 0.18 μ m VLSIC processor with 3 million gates. 30-bit internal processing to achieve dynamic range with superb video stability, Maintenance Free.
- Video output from CCD can be processed to Encoder Without Video Loss.
- NO Adjustment is necessary with potentiometer for Maintenance. Daily video adjustment & setup can be controlled easily via MENU or Remote Control Panel.



Other DSP Function of SK-900

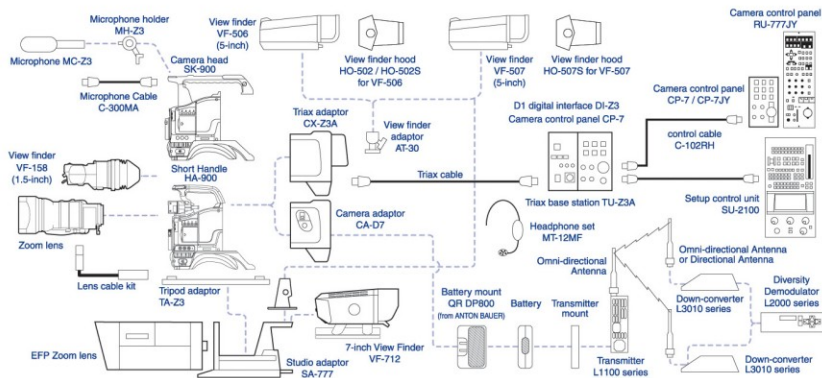
- Automatic flesh-tone detection, Dual flesh-tone settings.
- DTL : High Chroma DTL, Dual Flesh Tone Detail & 360° Color-Vector Detail.
- Triple Masking System : 6 Vector Color Correction, Linear Matrix, Flesh-tone masking.
- Gamma : Special Gamma.

Electronic Color Compensation (ECC)

- Electronic Color Compensation is controlled from the RU777JY.
- 5 ECC filter 3200K, 4300K, 5600K, 6300K, 8000K .
- 1 optical filter disk(OPT FIL) and electric filter (ECC FIL) as combination use.



Studio System Configurations



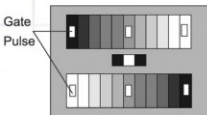
New View Finder Adaptor and Short Handle

Optional New View Finder Adaptor AT-900 and Handle HA-900 offer low position of 5-inch View Finder.



Gray-Scale Automatic Setup

- Gray-Scale Automatic Setup adjusts White, Black, Gamma and Flare automatically at the same time.
- No special chart is needed.
- Quick setup is possible with several sets of camera at the same time (with SU-2100).



New CCU (Triax Base Station)

Excellent picture and signal quality are achieved with New and improved RF circuits. Cable lengths up to 1900 meters (14.5 mm Fujikura cable) may be used with this FM-modulated triax cable transmission system.

Other Optional Functions of Triax

Independent 2-Channel Intercom system Trunk Video.

Camera control panel RU-777JY

One-touch continuously variable color temperature is controlled from RU-777JY.

SU-2100 setup control unit

The half rack SU-2100 setup control unit provides access and complete control for up to 12 SK-900 cameras.

SK-900 color camera head

Color system	PAL-B
Optical system	2/3-inch F1.4 prism
Pickup system	RGB 3-CCD system
Pickup elements	2/3-inch equivalent IT CCD 1038(H) x 1188(V) : 1230K pixels 980(H) x 1184(V) : 1140K pixels -140 dB 16 : 9
Sync system	Internal or genlock
Horizontal resolution	850 TV lines (at 4:3, center, DTL off, Y-OUT) 800 TV lines (at 16:9, center, DTL off, Y-OUT)
Vertical resolution	480 TV lines (at normal mode, center, DTL off, Y-OUT) 530 TV lines (at normal mode, center, DTL off, Y-OUT)
Moduration depth	more than 80 % (at 16:9, 5 MHz) more than 70 % (at 4:3, 5 MHz)
Signal to noise ratio	63 dB (PAL) typ. (Y=1, DTL off, gain: 0 dB, Y-OUT, DNR off) 65 dB (PAL) typ. (Y=1, DTL off, gain: 0 dB, Y-OUT, DNR on)
Standard sensitivity	F11 at 2000 lx
Minimum illumination	0.25 lx (at F1.4) / 0.4 lx (at F1.8)
filters remote control	3200 K, 5600 K +1/16 ND, 5600 K, 5600 K +1/64 ND and Electric CC
Lens mount	Bayonet (flange back : 48 mm in air)
Gain selection	L (low) 0/-3 dB M (medium) +6/+9/+12 dB H (high) +12/+18/+24 dB Remote control -3 to +24 dB (3 dB steps)
Ultra gain function	Sensitivity is increased approx. +12 dB by switching the readout mode of CCD. (horizontal resolution is lowered).
Digital gain function	Sensitivity is increased approx. +6 dB by internal processing of DSP.
Electric shutter	Preset mode : 1/100 (NTSC) 1/60 (PAL) 1/250, 1/500, 1/1000, 1/2000 second Lock scan mode : approx. 1/50 to 1/2000 second (1 H steps) Auto-electronic shutter (AES) mode : Shutter speed varied in 1 H steps CC frame mode :
Gamma correction	0.35 to 1.0 (on/off switchable)
Detail controls	DTL Level, DTL frequency, flesh tone, level dependent, crisp, H/V balance, soft DTL
Scene files	gain setting, detail, masking, gamma, electronic shutter, auto iris mode, auto knee, contrast
Setup card files	4 (scene files and other menu items)
Ambient temperature	operating: -10 to +45 °C (+14 to +113 F) Storage: -20 to +60 °C (-4 to +140 F)
Rated power supply	12 V DC / Stable operation in range of 10.5 to 17 V DC
Power consumption	Approx. 15.5 W (excluding view finder and camera adaptor)
Dimensions	125(W) x 268(H) x 160(D) mm (excluding camera adaptor)
Mass	Approx. 2.7 kg (6 lb) (Excluding view finder, lens and camera adaptor)

Input and Output signals

Input signals	
Genlock	VBS: 1.0 Vp-p ± 3 dB or Black Burst, 75 ohm
(multi-pin connector or BNC)	(sync 0.3 ± 0.1 Vp-p, burst 0.3 ± 0.1 Vp-p)
Viewfinder auxiliary input (multi-pin connector)	VBS: 1.0 Vp-p ± 3 dB, 75 ohm
Output signals	
Video output 1 (BNC)	VBS: 1.0 Vp-p, 75 ohm
Video output 2 (multi-pin connector)	VBS: 1.0 Vp-p, 75 ohm
Video output 3 (multi-pin connector)	(1) RGB RGB: 0.7 Vp-p, 75 ohm (2) Component VS: 1.0 Vp-p, 75 ohm R-Y, B-Y: 0.525 Vp-p, 75 ohm (3) Composite output VBS: 1.0 Vp-p, 75 ohm (4) Y/C outputs Y: 1.0 Vp-p, 75 ohm C: 0.3 Vp-p(burst), 75 ohm
Monitor output (BNC)	VBS: 1.0 Vp-p, 75 ohm
Audio outup (multi-pin connector)	20 dBm, 600 ohm / -60 dBu, high impedance

CAUTION : To ensure safe operation, please read the instruction manual before using this product.

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These products are manufactured at a factory which has received quality control system certification in accordance with the ISO international standards.



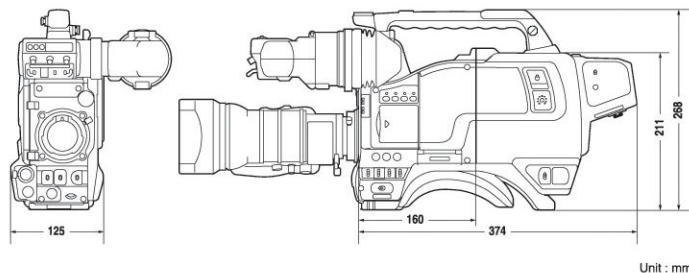
CERTIFICATE No. JMI-0062
ISO 9001/BS 5750P1
EN 29001/JIS Z9901

VF-158 1.5-inch viewfinder

Input signal	VS 1 Vp-p, 1K ohm impedance
CRT	1.5-inch monochrome
Resolution	Approx. 650 TV lines (horizontal center)
LED indicators	5 TALL: R.Tally G.TALLY: G.Tally EXT: lens extender SAVE/BATT: VTR SAVE and Battery warning MODE: Warning of non-standard camera status
Controls	Bright, contrast, pecking, Front tally on/off, Zebra on/off, Check on/off
Power supply voltage	12 V DC
Power consumption	Approx. 2.2 W
Mass	Approx. 0.8 kg (1.8 lb)

Specifications TU-Z3A/CX-Z3A

Video band width (Base band)	Y signal 10 MHz PB, PR signal 5 MHz RET, PROMPT signal 5 MHz
SDI output (option)	0.8 Vp-p, 75 ohm (x2)
Ambient Temperature	Operating: TU-Z3A 0 to +40 °C CX-Z3A -10 to +45 °C Storage : -20 to +60 °C
Power supply voltage	230 V AC, 50Hz
Power consumption	Approx. 130 W (AC operation, including SK-900/VF-507 and AUX POEWR OUT 50 W) TU-Z3A : Approx. 25 W (DC operation) CX-Z3A : Approx. 33 W (DC operation, including SK-900/VF-507)
Dimensions	TU-Z3A : 212(W) x 163(H) x 381(D) mm CX-Z3A : 135(W) x 196(H) x 215(D) mm
Mass	TU-Z3A : 9.0 kg (19.9 lb) CX-Z3A : 3.0 kg (6.6 lb)



These Specifications are subject to change without notice.