Ikegami

CCD, Compact, Lightweight, ENG Camera

HL-53

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The HL-53 is a broadcast colour camera, incorporating newly developed IT (Interline Transfer) CCD image sensors. Ikegami's advanced technology has been fully utilized to achieve not only this compact, lightweight design, but also faithful colour reproduction, enhanced resolution and high S/N ratio. Since a VCR interface is incorporated, the HL-53 can be used in conjunction with a Betacam VCR without the aid of any adaptor.

A newly developed IT CCD with a total number of 480,000 pixels (PAL), 400,000 pixels (NTSC) delivers enhanced picture quality, ensuring satisfactory image quality even in the HI-GAIN position with a dramatic reduction in fixed pattern noise. Furthermore, great reduction of smear has been achieved by the improvement of CCDs and drive circuits in comparison with existing Inter Line CCD cameras'. The HL-53 also takes full advantage of the characteristics of CCDs such as long service life, reduced image lag, low power consumption, and no burn-in.

The HL-53 delivers high-quality images with a S/N ratio of 60dB (PAL), 62dB (NTSC) and horizontal resolution of 700 lines, and weighs only 3.2kg (6.8 lbs.) including the 1.5" viewfinder, so that greater operational flexibility is assured for the camera operator.

▮ Features

● Optics
Featuring a newly designed optical system with a high-sensitivity prism, the HL-53 has the excellent spectral characteristics of the HL-79E, HL-95, and HL-55. Ikegami's original CCD mounting technique, not only achieves precision CCD positioning, but also helps preventing from registration errors due to changes in temperature.

● Low-pass filter
A newly developed optical low-pass filter has obtained a considerable reduction in more patterning while making best use of the high modulation factor of a CCD.

● Electronic shutter
Since this camera employs a 6-step electronic shutter, high resolution is assured under various shooting conditions.
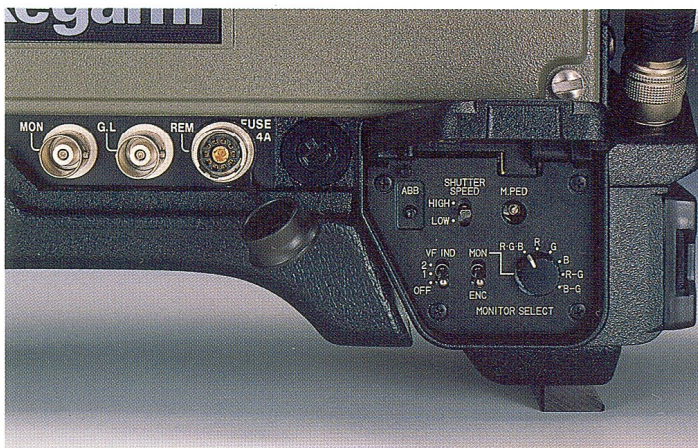
● Genlock function
Since the camera head incorporates a genlock circuit, time-code lock operation can be achieved when the HL-53 is docked with a VCR.

● White shading correction
The HL-53 incorporates independent HV-sawtooth and HV-parabola white/black shading correction for R, G, and B. It also has internal circuitry for correcting lens extender induced white shading.

● Dynamic DTL
The dynamic DTL circuit compensates for loss in lens peripheral resolution.

● MIX DTL
The horizontal MIX DTL ensures high-quality picture characteristics at all times.

● Auto black balance
The black level can be easily matched without the aid of instrumentation.

● SMPTE colour bar generator (NTSC only)
The internal SMPTE colour bar generator permits accurate monitor adjustment.

● Audio monitor speaker
Audio output from a VCR can be monitored through a built-in audio monitor speaker.

● Audio level controller
The VCR audio level can be adjusted as appropriate, with the audio level controller, together with the audio level marker displayed in the viewfinder.

● Docking with a VCR
Incorporating a Betacam VCR interface, the HL-53 and a Betacam VCR can be used in combination. This allows easier operation and better mobility in ENG applications.

● Highlight compression
Wide dynamic range for contrasty images, along with the auto knee circuit, permits the optimal reproduction. The knee aperture correction function assures reproduction of high-level images with excellent definition.

● Iris offset
The iris offset function enables shooting in the auto iris mode, even in contrasty backlit scenes.

● VF indicators
The camera and VCR operating conditions can be checked with the LEDs and character indicators in the viewfinder.

● VF markers
The center and safety area markers can be displayed in the VF to facilitate framing the camera shot. These markers can be turned on and off as necessary.

● Remote control
The HL-53 has a digital remote control terminal which can be used even when docked with a VCR. (The remote controller is an optional item.)
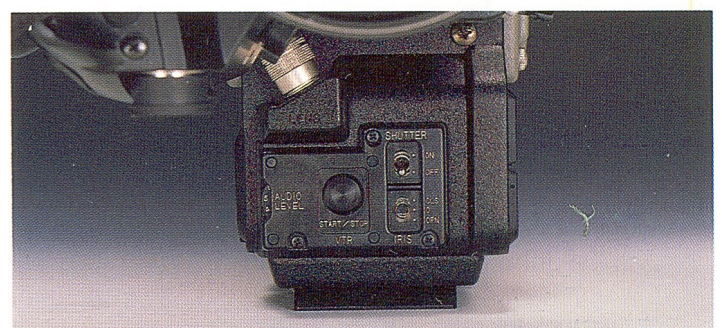
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■ Specifications

●Mechanical

Dimensions (WHD) 96×230×176mm
3.7×9.0×6.1 inches

Weight 3.2kg (6.8 lbs.) (with 1.5" VF)

Lens mount Bayonet (compatible with HL-95/79E)

Optical filter

1	2	3	4
3000 K	5600 K	5600 K +1/4ND	5600 K +1/16ND

●Electrical

DC input signal 12V (11~16V)

Power consumption 14W

External sync input signal for genlock VBS 1Vp-p or BBS 0.45Vp-p

Return video signal VBS or VS 1Vp-p

MIC input −60dBm

Tally input Power/Contact (with CA-53)

Intercom 2-wire/4-wire (with CA-53)

Sensitivity 2000 lux F f5.6

Gain switchable 0, +12, +18dB (STD)
0, +12, +24dB
0, +6, +12dB
0, +6, +18dB
*Selectable by internal links

Signal to Noise Ratio 60dB (PAL), 62dB (NTSC) (Typical)

Resolution H: 700TVL
V: 450TVL (PAL), 400TVL (NTSC)

Video output signal VBS 1Vp-p, 75 Ω, 1 output
Component output 1ch
R.G.B. output 1ch

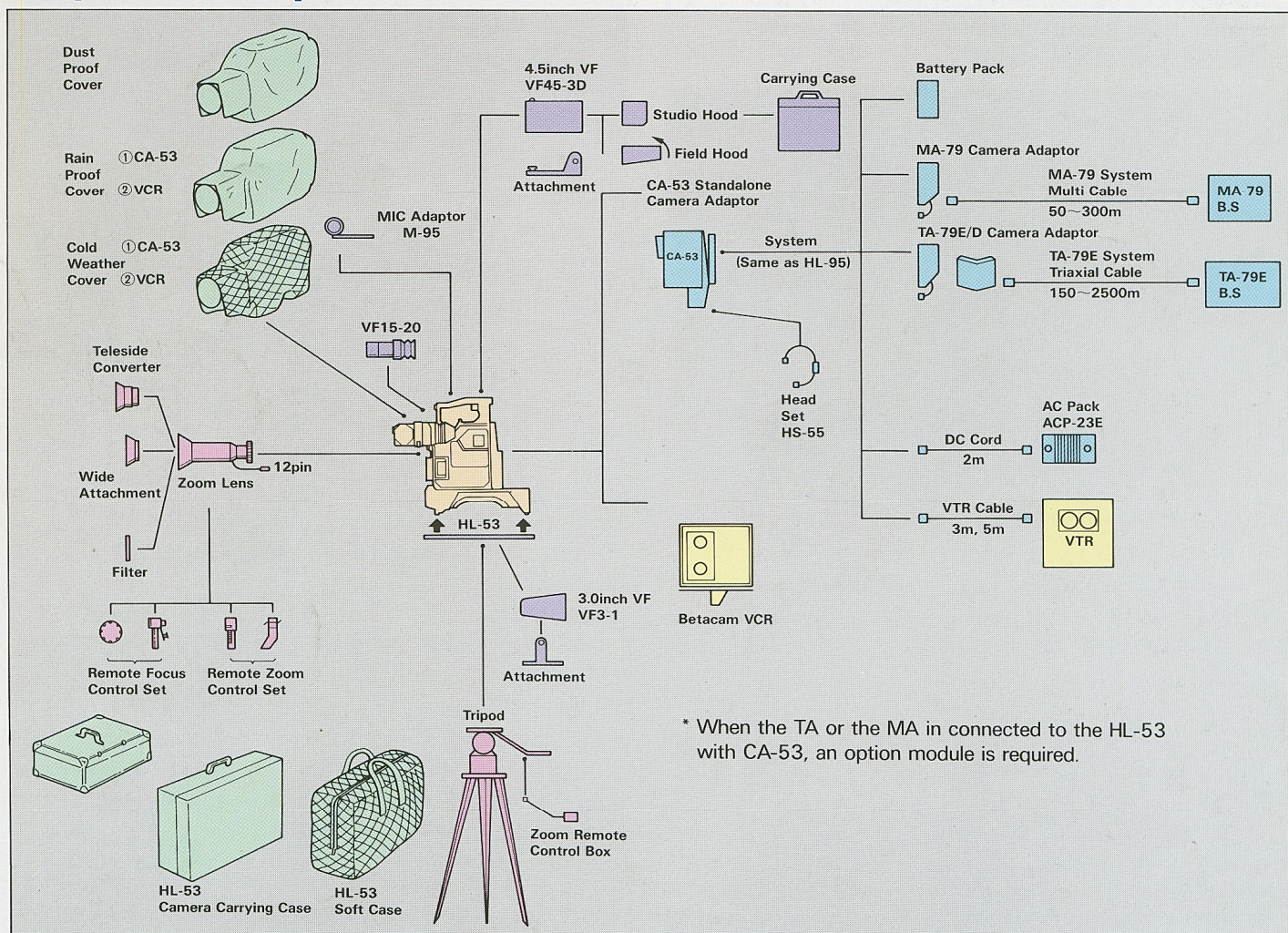**VF video** R+G+B (normal) or Monitor output signal selected by the monitor switch

Monitor output signal R, G, B, R-G, B-G, R+G+B, ENC

Shutter speeds 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000 seconds.

■ System Setup

* When the TA or the MA in connected to the HL-53 with CA-53, an option module is required.

Design and specifications are subject to change without notice.