

HITACHI



Z-V1B

The Z-V1B Digital Camera

General

The Hitachi Z-V1B one piece camera/recorder is containing both digital 2/3" 470.000 (PAL) pixel 3-CCD color camera and a DVCPRO format VTR.

The Z-V1B is compact, lightweight and of low power consumption. The Z-V1B is provided with the optimal functions and performance such as high picture quality and sensitivity, mobility, dust-proof, damp-proof, etc which are required for an Electronic News Gathering (ENG) Camera/Recorder.

In addition, both the camera section and the VTR section employ Digital Signal Processing (DSP) system to improve picture quality and built-in small memory card to allow save and recall of camera setting information data.

Features

Camera section

- Low smear high sensitivity 2/3-inch 470.000 (PAL) pixel CCD
- The camera features a high signal-to-noise ratio (61dB(PAL)) and drastically improved sensitivity (minimum illumination 0.5 lx with F1.4 lens-stop) with + 24 dB high gain mode and the ULTRA GAIN (+12dB) function. Thus sharp, clear picture is obtained under low light scene that can not be produced by conventional CCD cameras.



Specifications Camera Section

Color system	PAL
Optical system	2/3", f1.4 prism
Pickup system	RGB 3-chip system
Imaging device	2/3" CCD (with micro lens) 470,000 pixel (PAL)
Sync system	Internal or genlock
Hor. resolution	850 TV lines (luminance signal, at center, DSA:ON, DTL:OFF)
S/N	61 dB typ. (PAL) (Gamma: 1, DTL:OFF, Gain:OdB, Y-OUT)
Standard sensitivity	2000 lx, f11.0
Minimum illumination	0.5 lx, f1.4/0.8 lx, f1.8 (GAIN: +24dB, ULTRA GAIN:ON)
Gamma correction	0.35 to 1.0 (ON/OFF switchable)
Geometric distortion	Below measurable limit (excluding lens)
Registration	Less Than 0.05% (excluding lens)
Optical filter	1: 3200K 2: 5600 +1/4ND 3: 5600 4: 5600 + 1/32ND
Vertical color correction	2H
Lens mount	2/3" bayonet type (flange focal distance = 48 mm in air)
Gain selector	L (LOW): OdB M (MID): +6/+9/+1 2 dB H(HIGH): + 1 2/+1 8/+24dB AGC: 0-24 dB (at FULL AUTO mode) with RC-Z2/Z21:0 to + 24dB (in 3dB step)
DTL control	DTL LEVEL, DTL FREQ, FLESH TONE, HIGH CHROMA, LEVEL DEP, CRISP, H/V BAL, SOFT DTL, etc.
ULTRA GAIN	Gain is increased by approx. 12 dB by switching the read-out of CCD (This work with only Gain selector: H and drop the horizontal resolution)
CCD drive mode	Preset:1/60, 1/250, 1/500, 1/1000, 1/2000s,
CC FRAME	Lock scan: 50 ~ 2000s in 1H steps) Automatic Electric Shutter (AES) (at FULL AUTO mode): (Shutter speed varies in 1H steps to equivalent of 4 f stops)

Viewfinder (GM-9)

Input signal	VS 1.0Vp-p
CRT	1.5" B/W
Resolution	Approx. 600 TV lines (horizontal center)
LED display	B (Battery warning), T (Tally), S (Save)
Controls	Brightness, Peaking, Contrast, Front Tally ON/OFF
Power supply	+ 9V DC, 1.4 W approx
Mass	Approx. 0.6 kg

VTR Section

Video Performance (Playback with standard playback VTR)

Bandwidth	0 Hz to 5.75 MHz + 1.0 dB/ - 3.0 dB (luminance)
S/N	55 dB
K factor (2T pulse)	Less than 2%
Y/C delay	Less than 20ns

Audio performance (Playback with standard playback VTR)

Sampling frequency	48 kHz (Synchronized to video)
Quantization	16 bits/sample
Frequency response	20 Hz to 20 kHz \pm 1.0 dB (at reference level)
Dynamic range	85 dB or more (at 1kHz, AWTD)
Distortion	Less than 0.1% (at 1kHz, operating level)
Wow and flutter	Below measurable limit
Head room	20 dB
Emphasis	T1=50 μ s, T2=15 μ s, (can be turned ON/OFF)

VTR Tape Running System

Tape speed	33.820 mm/s
Recording/playback time	Approx. 63 min. (using the AJ-P63MP)
FF/REW time	Approx. 3 min. (using the AJ-P63MP)

Input/Output Signals

Input

AUDIO IN CH1/CH2	MIC/LINE switchable
(XLR 3-pin, male)	MIC: -60/ -50/ -40 dBu (selectable with menu) LINE: -6/0/ +4 dBu (selectable with menu)
MIC IN	
(XLR 3-pin, female)	-60/ -50/ -40 dBu (selectable with menu) 3 k Ω balanced
GENLOCK IN (BNC)	1.0 Vp-p 75 Ω
TIME CODE IN (12-pin)	0.5 V to 18 Vp-p

Output

CAMERA OUT (BNC)	1.0 Vp-p, 75 Ω
VIDEO OUT (BNC)	1.0 Vp-p, 75 Ω
AUDIO OUT	+4 dBu, balanced, low-impedance CH1/CH2/MIX (selectable with menu)
(XLR 3-pin, female)	
AUDIO CH1/CH2 OUT	-20 dBu, unbalanced, low-impedance (12-pin, combined with TC IN/OUT)
VTR	26-pin, option
TIME CODE OUT (12-pin)	1.0 Vp-p, 75 Ω
PHONES 1.0 Vp-p, 75Ω	Mini-jack

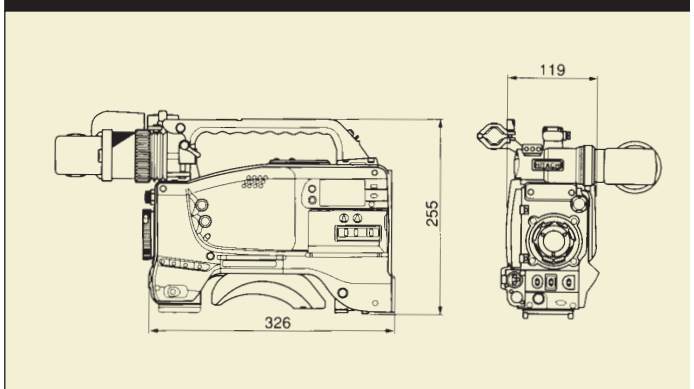
Others

DC IN (XLR, 4-pin, male)	11 to 17 V DC
DC OUT (4-pin)	11 to 17 V DC, Maximum current:0.1 A
LENS	12-pin
REMOTE	4-pin

General

Power supply	+ 12 V DC, 24 W approx.
Operating temperature	0 to + 40 $^{\circ}$ C
Storage temperature	- 20 $^{\circ}$ to + 60 $^{\circ}$ C
Operating humidity	Less than 85% (RH)
Continuous operating time	Approx. 80 min. (using Anton Bauer Trimpak 14 batteries)
Mass	approx. 6 kg (including main unit, VF, lens, battery pack)
Dimensions	119 (W) x 255 (H) x 326 (D) mm

Dimensions



The specifications and appearance are subject to change without notice for improvement.

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