

Panasonic

AJ-D910WB

2/3" IT-3CCD DVCPR050 Camera/Recorder
(PAL:625)



DVCPR050

16:9/4:3 Switchable Camera/Recorder that provides Low-Light Shooting and Superior 4:2:2 Digital Quality

The AJ-D910WB camera/recorder provides impressive digital performance at a very reasonable price.

At its heart is a DVCPR050 VTR section that assures the superior picture quality needed for news gathering and other professional applications.

The camera section is equipped with our newly developed 600,000-pixel IT-3CCD, with wide aspect ratio compatibility that lets the operator switch instantly between 16:9 and 4:3 aspect ratios.

The AJ-D910WB excels at nighttime shooting, too, with F13.0 (2,000-lux) sensitivity, +46 dB gain-up, and low smear.

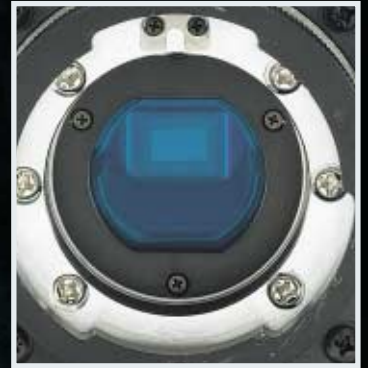
The VTR section features the advanced DVCPR050 format (50 Mbps), which assures superior images by recording a 4:2:2 digital component signal at a low compression ratio of 3.3:1. The unit can also record in the standard DVCPR0 format (25 Mbps) to provide extended recording time.

Weighing only 6.6 kg in full operating condition, the compact AJ-D910WB combines high-end performance and top features with all the mobility needed for news gathering in the field.



High-Sensitivity and Low Smear

The IT-3CCD's 600,000 pixels assure outstanding picture quality, with an S/N ratio of 61 dB and a full 750 lines of horizontal resolution. This new CCD boasts F13 (2,000-lux) sensitivity and, thanks to a gain increase of up to 46 dB, allows shooting in lighting as dim as 0.11 lux. The smear level is extremely low for an IT-CCD. This makes the AJ-D910WB particularly effective for nighttime news gathering, where the contrasting problems of dim and bright lighting often pose difficulties.



16:9/4:3 Aspect Ratio Switchable

The AJ-D910WB's CCDs feature a light-receiving section that adapts to the wide 16:9 aspect ratio. The aspect ratio can be instantly switched between the conventional 4:3 and wide 16:9 modes. When the optional wide-type AJ-VF20W viewfinder is used, the viewfinder screen changes automatically to match whichever aspect ratio the operator selects.



4:2:2 Quality Recording of DVCPR050

DVCPR050 lets you create high-end video productions — such as TV commercials with chroma key, multi-layering and computer graphics — with 4:2:2 component video recording and playback on convenient 1/4" tape. Featuring a 3.3:1 compression ratio, picture degradation is minimal during both compression and decompression, so the 4:2:2 images retain their superior quality.



DVCPR050/DVCPR0 Switchable Recording

The AJ-D910WB can record in both the DVCPR050 and DVCPR0 formats. In DVCPR050 you can record 33 minutes of high-quality 4:2:2 pictures onto a compact 1/4-inch cassette tape, while in DVCPR0 mode recording time is doubled*. Letting you emphasize either picture quality or recording time, this single, all-purpose unit brings outstanding quality to every application from ENG to EFP.

*When the AJ-D910WB records in the DVCPR050 format, the recording time will be half that indicated on the DVCPR0 cassette tape.





VTR Setting Panel



Front Camera Operation



Rear Connector Panel

Compact and Lightweight, with Low Power Consumption

The AJ-D910WB is remarkably compact and lightweight for a 4:2:2 camera/recorder. Thanks to a small, light 1/4-inch VTR mechanism, the entire unit weighs only about 6.6 kg in full operating condition. Power consumption is about 29 W — which together with the compact tapes and viewfinder provides suitable mobility for news gathering.

10-bit A/D, 16-bit Digital Signal Processing

Digital circuitry provides outstanding picture quality while assuring that characteristics remain stable regardless of temperature change, aging or vibration. Operation is easy and maintenance is minimal. Camera setups can be quickly and easily adjusted, even on location.

Scene File on PCMCIA SRAM Card

The camera's setup file can be saved on an IC (PCMCIA SRAM) card. Creating and saving a variety of files lets you quickly and easily adapt the AJ-D910WB to different shooting situations. This feature also provides unprecedented ease when setting up two or more AJ-D910WBs with the same parameters.

Picture Link for More Efficient Non-Linear Editing (Optional)

The AJ-D910WB introduces a new function that enhances editing operations on non-linear editors such as the DVCPRO50 AJ-DE97. When equipped with the optional AJ-YAP900P board, the unit saves Picture Link data consisting of an icon, time code and title for each recorded scene, and lets the operator mark the scene as desired. This Picture Link data is written onto the tape, and can be viewed when the cassette is loaded into the non-linear editor. The operator can then choose to upload only the marked scenes, for a big improvement in editing efficiency.

Digital Creativity

The AJ-D910WB's digital circuitry has made possible a host of creative image-processing functions. Because corrections can be controlled numerically, you can create the exact pictures you want - another feature only digital processing offers.

- 2-D Low Pass Filter eliminates cross colour.
- Dynamic Detail corrects resolution loss around the lens.
- Flesh Detail suppresses wrinkles and blemishes to assure pleasant complexion rendering.
- Thin Detail provides clearer, sharper images by narrowing detail edge widths.

- Variable Detail Frequency controls horizontal and vertical detail. The peak frequency for horizontal detail can be selected in five steps between 2.5 and 5.5 MHz.
- Dark Detail corrects details in dark areas.
- Digital Gamma allows adjustment of the gamma between 0.35 and 0.75 in steps of 0.01, without changing the white balance.
- Auto Knee lets you freely change the knee point and makes automatic adjustments according to ambient light intensity.
- Digital Scanning corrects 6 types of colour phase (R-G, R-B, G-R, G-B, B-R, B-G) and stores correction values in memory.
- Easy-to-use Digital Shading makes simple work of even complicated shading corrections.

4-Channel Digital Audio

Full 48-kHz/16-bit digital audio can be recorded on all four channels.* This assures the superior sound quality and reliability demanded in high-end video production.

*The AJ-D910WB records the same audio onto CH1/CH3 and onto CH2/CH4.

Synchro-Scan Electronic Shutter

The electronic shutter offers speeds of 1/60, 1/120, 1/250, 1/500, 1/1000 and 1/2000 sec, plus synchro-scan capability (1/50.6 to 1/248 sec.).



Side Connectors

"SUPER GAIN" Enables 0.11-Lux Shooting Illumination

The super gain button boosts gain by a full +30, +36, +43, or +46 dB, for high-quality shooting even in dim lighting. This makes it possible to record subjects in lighting all the way down to 0.11 lux. (F1.4, +46 dB).

"SUPER IRIS" for One-Button Backlight

Pressing the Super Iris button adjusts the iris to provide correct exposure when a subject is backlit, such as when the subject moves from outside daytime light into a dark room.

Programmable Gain Selector

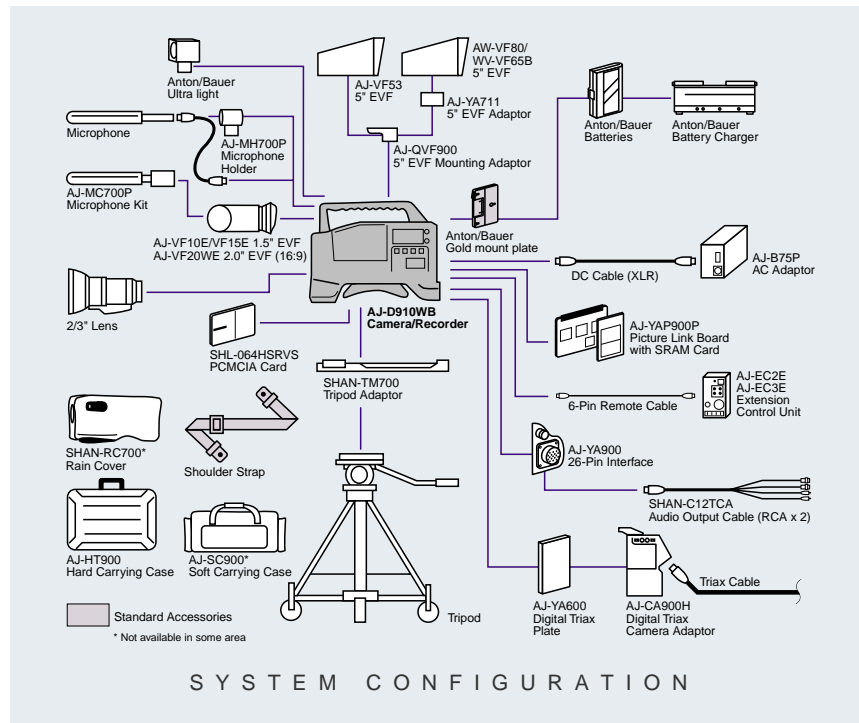
The programmable 3-position gain switch lets the operator select a low, medium or high gain. A total of 14 settings are available (-3, 0, +3, +6, +9, +12, +15, +18, +21, +24, +30, +36, +43 and +46 dB), giving the operator outstanding control.

Auto White and Black Balance

The AJ-D910WB's white balance and black balance levels are preset at the factory to adapt to different CC filters. You can also store adjustment values of white balance in memory for each filter.

Full-Colour Playback

The AJ-D910WB can play back pictures in black and white on the viewfinder or in full colour on an external TV monitor via the VIDEO OUT terminal. This lets the field team check recorded pictures



on-site and allows microwave transmission.

Colour Bar and Audio Reference Signal Output

The AJ-D910WB features built-in generators for EBU or SNG standard colour bar and 1 kHz audio reference signal. These add extra convenience with setting and maintenance procedures when recording in the field.

Backup VTR Connector (26-pin, option)

The optional AJ-YA900 26-pin connector lets you connect the AJ-D910WB to a variety of portable VTRs. This lets you record with the AJ-D910WB while making a backup recording.

Compatible with Anton/Bauer Digital Battery

The AJ-D910WB is equipped with a gold mount plate for mounting an Anton/Bauer digital battery system. When the digital battery is in use, the remaining power is displayed in real time on the EVF. When using an Anton/Bauer Ultra Light, the lighting on/off and recording start/stop can be linked together.

Additional Features

- Variable choice of optional viewfinder; standard 4:3 aspect ratio AJ-VF10E, high grade 4:3 aspect ratio AJ-VF15E or high grade 16:9/4:3 switchable AJ-VF20WE
- One-touch camera status report
- One-touch rec review function
- Compatible with various battery systems
- Built-in EBU time code generator/reader and TC IN/TC OUT connectors
- Built-in gen-lock function
- Phantom power supply (for DC 48V or 12V phantom mic)
- Built-in monitor speaker
- Extension camera control with optional AJ-EC2E/AJ-EC3E

Standard Accessories

- Shoulder strap
- Anton/Bauer gold mount plate (installed)





AJ-YAP900
Picture Link Board with SRAM Card (4MB)



AJ-VF10E
Standard 1.5" EVF for 4:3



AJ-VF20WE
2" EVF 16:9/4:3 switchable



SHL-064HSRVS
PCMCIA SRAM Card (64KB) for Scene File



AJ-VF15E
High Grade 1.5" EVF for 4:3

AJ-VF53/AW-VF80/WV-VF65B
5" EVF

AJ-QVF900
5" EVF Mounting Adaptor

AJ-YA711
5" EVF Adaptor

AJ-YA900P
26 pin Interface Adaptor

AJ-MH700P
Microphone Holder

AJ-B75P
AC Adaptor

AJ-EC2E/AJ-EC3
Extension Control Unit

AJ-HT900
Hard Carrying Case

AJ-SC900P
Soft Carrying Case
(Not available in some area)
SHAN-RC700
Rain Cover
(Not available in some area)

DVCPRO M-size Video Cassettes

Model No.	Time (50M)	Time (25M)	Length
AJ-P66MP	33 min.	66 min.	137 m
AJ-P46MP	23 min.	46 min.	96 m
AJ-P33MP	16 min.	33 min.	70 m
AJ-P24MP	12 min.	24 min.	51 m
AJ-P12MP	6 min.	12 min.	27 m
AJ-CL12MP			Cleaning Tape

S P E C I F I C A T I O N S

GENERAL

Power Supply:	DC 11V to 17V
Power Consumption:	29W (without VF)
Operating Humidity:	Less than 85%
Operating Temperature:	0°C to +40°C
Storage Temperature:	-20°C to +60°C
Weight:	About 4.0 kg About 6.6 kg in full-operation
Dimensions (W x H x D):	122.5 x 204 x 313 mm
Continuous Rec Time:	About 80 min. with Anton/Bauer Trimpac 14 battery

CAMERA SECTION

CCD Elements:	2/3" IT CCD (x 3)
Picture Elements:	600,000 pixels
Optical Filters:	CC: Cross, 3200K, 4300K, 6300K ND: CLEAR, 1/4ND, 1/16ND, 1/64ND
Quantization:	10 bits
Sampling Frequency	18MHz
Gain:	Programmable: -3/0/+3/+6/+9/+12/ +15/+18/+21/+24/+30 dB Super Gain: +30/+36/+43/+46 dB
Sensitivity:	2000 Lux at F1.3.0
Minimum Luminance:	0.11 Lux at F1.4, +46 dB
Sutter Speed:	1/60, 1/120, 1/250, 1/500, 1/1000 and 1/2000 sec.
Syncro Scan Shutter:	1/50.6 to 1/248 sec.
Video S/N:	61 dB (typical)
Horizontal Resolution:	750 TV lines at centre
Vertical Resolution:	450 TV lines, 500 TV lines (Super-V)
Registration Error:	Less than 0.05% (whole zone, without lens distortion)
Optical System:	F 1.4 prism system
Lens Mount:	2/3" Bayonet type

VTR SECTION

Tape:	1/4" DVCPRO M-size cassette tape
Tape Speed:	67.708 mm/s (DVCPRO50)
Max Rec Time:	Approx. 33 min (DVCPRO50), 66 min (DVCPRO) using AJ-P66MP
FF/REW Time:	About 3 min. (using AJ-P66MP)

Video

Sampling Frequency:	Y: 13.5MHz, Pb/Pb: 6.75MHz
Quantization:	8 bits
Error Correction:	Reed Solomomn Product Code
Compression Method:	DCT and Variable-length Coding
Compression Ratio:	3.3:1 (DVCPRO50), 5:1 (DVCPRO)
Bit Rate:	50 Mbps (DVCPRO50) 25 Mbps (DVCPRO)
Band Width*:	Y: 30Hz to 5.75MHz, +1.0/-3dB Pb/Pb: 30Hz to 2.75MHz, +1.0/-3dB
S/N Ratio*:	More than 55 dB
K Factor(2T)*:	Within 2%
Y/C delay*:	Within 20 ns

Audio

Sampling Frequency:	48kHz (sync. with video)
Quantization:	16 bits
Frequency response:	20Hz to 20kHz, ±1.0dB (reference level)
Dynamic range:	More than 85dB (1kHz, AWTd)
Distortion:	Within 0.1% (1kHz, reference level)
Wow & Flutter:	Below measurable limit
Head room:	18 dB
Emphasis:	T1=50µs, T2=15µs(ON/OFF)

Input

Audio IN:	XLR x 2 (CH1/CH3, CH2/CH4), MIC/LINE switchable, more than 10 kΩ, balanced, MIC: -60/-50/-40dBu, LINE: -6/0/+4dBu
MIC IN:	XLR x 1, balanced, 3 kΩ -60/-50/-40dBu selectable, Phantom +48V (On/Off)
Genlock IN:	BNC x 1, 1.0Vp-p 75Ω
TC IN:	BNC x 1, 0.5 to 8.0Vp-p, high impedance

Output

Camera OUT:	BNC x 1, 1.0Vp-p 75Ω
Video OUT:	BNC x 1, 1.0Vp-p 75Ω
Audio OUT:	XLR x 1 (CH1/CH2/MIX selectable) 0dBu, balanced, low impedance
TC OUT:	BNC x 1, 1.5Vp-p, low impedance
Phones:	Stereo mini jack x 1

Others

DC IN:	XLR 4 x 1 DC11V to 17V
DC OUT:	4P x 1, DC11V to 17V, 100 mA
Lens:	12P x 1
ECU:	6P x 1
EVF:	20P x 1
VTR:	26P x 1 (option)

*The specifications given above were measured by playing back tapes recorded by this unit on standard DVCPRO50 VTRs. Weight and dimensions shown are approximate. Specifications are subject to change without notice. These products may be subject to export regulations.

Panasonic

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