

## MD9000

Shaped for Professional-Style Shooting

### Digital Quality in a Shoulder-Style Camera

All the compact convenience of the Mini DV format plus the shoulder-mount stability you need for professional applications. The result? Stunning DV picture quality for video production that's sure to satisfy. Plus you can show your creative flair with the plentiful manual controls and in-camera digital effects. Connects easily to a PC for computerized editing and webcasting.



**2.5-inch**  
Smart-Turn  
LCD Monitor



New Shoulder-Type Design



Manual Focus Ring

**800,000**  
Pixels CCD

Clear 800,000-pixel CCD

**15X** OPTICAL ZOOM  
**750X** DIGITAL ZOOM

15x Optical Zoom & 750x Digital Zoom

**Progressive**  
Photoshot

Progressive Photoshot

**Mic Input**  
Level Control

Adjustable Mic Level

**SUB REC**  
BUTTON

Sub Rec. Button & Sub Zoom Lever

**DV IN/OUT**  
Analogue IN/OUT

DV IN/OUT & Analogue IN/OUT Terminals

**SUPER**  
IMAGE  
STABILIZER

Super Image Stabilizer

**ZOOM**  
MIC

Zoom Microphone

**Playback**  
Digital Zoom

Playback Digital Zoom

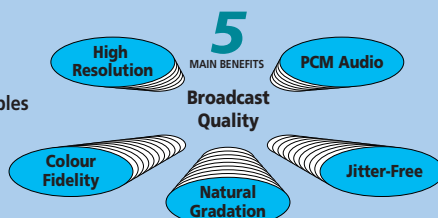
**PCM**  
AUDIO DUBBING

PCM Audio Dubbing

Mini DV Digital Video Cassette PAL

#### Superior Digital Recording

The DV format's 8-bit digital recording enables the broadcast-quality image and sound previously unimaginable in a consumer video camera. Digital recording also means long-term data stability even after repeated editing.



#### Lower Power Consumption and Longer Recording Time

**LONGRUN**  
LITHIUM  
BATTERY

Completely redesigned circuitry has successfully reduced camera power consumption. Using a lithium-ion battery pack, you get more recording time than ever. So, outdoors and other places where recharging would be difficult, you can shoot longer without worrying about recharging.

## Shoulder-Type Design

### Built-in Zoom Microphone

In proportion to the zoom setting of the lens, the two ECMs (electret condenser microphones) adjust automatically to bring sound and images together for exceptional atmosphere. "Tele" mode provides high directionality to pick up the sound of distant subjects.

### Manual Focus Ring

The large, easy-to-hold focus ring gives you quick, precise focus control. It lets you take both subtle, delicate shots and bold, expressive shots.

The stability of shoulder-mount shooting, packed into a high-mobility compact package. Complete with large grip and zoom lever, plus a wide-diameter focus ring for smooth, positive operation.



### External Stereo Microphone Included

Connecting the external microphone lets you record high-quality sound while you shoot.

### Large Eyecup

By contacting the camera at three points – the large eyecup, the grip belt, and the shoulder pad – you gain outstanding stability compared to a conventional "handy type" camera.

### 2.5" Colour LCD Monitor

Swiveling over a 270 degree range, the monitor makes it easy to take extreme high-angle or low-angle shots. The monitor can also be rotated so your subject can confirm his or her appearance as you shoot.

## Excellent Picture

**800,000  
Pixels CCD**

### Clear 800,000-pixel CCD

The 800,000-pixel CCD gives you superb clarity to take full advantage of the high resolution capability of the DV format. Now you can shoot and preserve important events with greater detail than ever.

**15X OPTICAL  
750X DIGITAL**

### 15x Optical Zoom & 750x Digital Zoom

Alongside the sharpness and strength of 15x optical zoom, you now have access to the amazing 750x magnification of digital zoom for close up shooting of distant objects far beyond the range of the naked eye.

**Progressive  
Photoshot**

### Progressive Photoshot

Progressive Photoshot captures the image data and temporarily stores it in two separate field memories. The two images of exactly the same moment are then combined for no time lag, eliminating the need for simulations. This results in 1.5 times the resolution of standard-recorded stills for a beautifully clear and brilliant picture.

**SUPER  
IMAGE  
STABILIZER**

### Super Image Stabilizer

An extra-large capacity 800,000-pixel CCD helps compensate for camera shake with no sacrifice in picture quality. The function works with a variety of Digital Effects.

## High Quality Sound

**PCM  
AUDIO DUBBING**

### PCM Audio Dubbing

For better than CD fidelity select the 16-bit, 48kHz mode. To let background music or narration be added later without affecting previously recorded audio or picture, switch to 12-bit, 32kHz mode.

**Mic Input  
Level Control**

### Adjustable Mic Level

In addition to the standard AUTO mode, you can select from two manual modes on the menu. MANUAL (AGC) adds Auto Gain Control to user settings, which avoids distortion from

sudden loud noises. In MANUAL (NO-AGC), sounds are faithfully recorded according to user settings in direct relation to their actual intensity and unlimited by AGC, for extra dynamic audio tracks.

## Flexible Shooting

**SUB REC  
BUTTON**

### Sub Rec. Button & Sub Zoom Lever

Besides the controls on the camera body, there is a REC start/stop and zoom lever on the top of the hand grip. This is particularly helpful for smooth operation when shooting from low angles.

### Manual Functions for Creative Flexibility

Let your true creativity shine, with a wealth of manual controls at your fingertips. Of course, you can also switch to auto mode, ideal when you need to start shooting at a moment's notice.

### Manual Focus Adjustment

For quick and sure manual focusing, this ring is large and easy to hold.

### Manual Iris Adjustment

You have full control with 14 settings, from fully open at F2.0, through minimum aperture at F16 and fully closed. In dark situations you can go beyond open aperture brightness by adding gain over a 7-step range: 0, +3, +6, +9, +12, +15, +18dB.

### Manual Shutter Speed

You can adjust the shutter speed in 14 steps, from 1/50 second to a fast 1/8000 second.

### Manual White Balance

The MD9000 provides three preset modes (Auto/Indoor/Outdoor), and one adjustable mode (Set) to let you shoot images with natural colour rendition even when lighting or other conditions preclude Auto White Balance setting.

**SP/LP  
MODE**

### SP/LP Recording

With the LP-mode compatible MD9000, 2-hour recording is now possible on a single 80-minute cassette. You'll appreciate this capability when shooting long continuous events.

\* If a cassette recorded in LP mode on a Panasonic DV camera is played on other manufacturers' equipment, noise may occur in some cases.

## Non-Linear Editing

**DV IN/OUT  
Analogue IN/OUT**

### DV IN/OUT Terminal

For high-quality non-linear digital editing on a computer, this lets you connect easily to a PC's IEEE 1394 port. Since the signal is transmitted as digital data, there is no picture quality degradation. It's ideal for Internet webcasting and other new IT-age video applications as well. You can also transfer to or from another camera equipped with an IEEE 1394 port.

### Analogue IN/OUT Terminals

Via the analogue inputs on this camera, you can convert VHS or other analogue video to Mini DV format. With digital versions of your old footage, you can then perform non-linear editing and archive your stock on DV with virtually no loss of picture quality.

## Creative Functions

### Plentiful Digital Effects

For creative video expression, try these versatile digital effects. The most frequently used effects are available at the touch of a button, so you can apply them as you shoot.\*<sup>1</sup> Other effects\*<sup>2</sup> are menu accessible. Almost all effects\*<sup>3</sup> can also be added during playback (via analogue output only).

\*<sup>1</sup> Wipe, Mix, Strobe, Gain-up, Tracer, Mirror and Mosaic

\*<sup>2</sup> Negative, Black & White, Sepia and Solarization

\*<sup>3</sup> Gain-up is available only while shooting

**Playback  
Digital Zoom**

### Playback Digital Zoom

During playback you can select any part of an image and digitally magnify it up to ten times – ideal for picking faces out of a crowd.

### Other Features

- 5-mode programme AE: sports, portrait, low-light, spot light, and surf & snow
- Continuous digital photoshot (0.7-second intervals)
- 3-mode digital search: Scene, Photo and Blank
- Linear time counter and time code indication
- Back light compensation
- Infra-red remote controller

### Standard Accessories

• AC Adaptor • Battery Pack (Lithium-Ion) • Infra-Red Remote Controller • External Stereo Microphone • S-Video Cord • AV Cord • Shoulder Strap • Head Cleaning Tape

### Optional Accessories

• AC Adaptor (VW-AD9E/B) • Rechargeable Lithium-Ion Battery Pack (CGR-D08S, CGP-D14S, CGR-D16S, CGP-D28S, CGR-D53S) • Car Battery Charger (VW-KBD2E) • Car Adaptor (VW-KA7E) • Wide Conversion Lens (VW-LW4307ME) • Filter Kit (VW-LF43WE) • Tripod (VZ-CT55E) • DV Cable (VW-CD1E)

\* Some accessories are not available in some countries.

## NV-MD9000EN Specifications

Power source:	Battery pack: 7.2V, AC adaptor: 7.9V
Power consumption:	LCD monitor on: 3.8W LCD monitor off: 3.0W
Tape format:	Mini DV (Digital VCR SD format)
Recording/playback time:	SP: 80 min. with DVM80 LP: 120 min. with DVM80
<b>VIDEO</b>	
Recording format:	Digital component
Television system:	CCIR: 625 lines, 50 fields PAL colour signal
Video output:	1.0Vp-p, 75 ohms terminated
<b>AUDIO</b>	
Recording format:	Digital PCM stereo: 16 bit (48kHz/2ch), 12 bit (32kHz/4ch)
Audio output:	316mV, 600 ohms
Mic input:	-70dBV, 5.6 kohms (M3)
Image sensor:	1/4-inch CCD
Lens:	15:1 variable speed power zoom lens, F1.8, focal length: 3.1 – 46.5mm, filter diameter: 43mm

Viewfinder:	0.44-inch colour LCD
Monitor:	2.5-inch LCD monitor
Digital interface:	DV input/output (IEEE1394)
Weight (approx.):	2kg (without battery pack and DV cassette tape)
Dimensions (approx.):	213 (W) x 225 (H) x 432 (D)mm

### AC Adaptor

Power source:	AC 100 – 240V, 50/60Hz
Power consumption:	20W
Weight:	Approx. 165g (without battery pack)
Dimensions:	Approx. 70 (W) x 45 (H) x 116 (D) mm

- Weight and dimensions shown are approximate.
- Design, functions and specifications are subject to change without notice.
- All monitor pictures are simulated.
- This video camera is compatible with tapes that bear the Mini DV logo only.

# Panasonic