

Portable Video Recorder

ER-330MG/MT/MA Quick User Guide



Guidelines for Safe and Efficient Use

- Do not expose your product to liquid or moisture or humidity.
- Do not use or store your product in humid or corrosive location or extreme high or low temperatures. Uses your product under recommended operation temperatures.
- Do not attempt to take out SD card while it is recording before 10 seconds. Failure to do so might entail a risk of files damage .
- Do not attempt to disassemble or modify your product. Only manufacturer authorized personnel should perform service.
- Recommends use of manufacturer original accessories for safe. Use of third-party accessories may pose a risk to safe or product malfunction.
- Please follow local traffic laws and regulations for the use of your product. Always pay full attention to driving and pull off the road and park before connecting or operating your product.
- Please refer the user manual in CD disk for detail description

FEATURES

- Small size and versatility for mobile surveillance and video recording
- Camera easily mounts in almost any vehicle and any place.
- Easily record the intruders or driving condition in front of you.
- Capture video for legal and/or insurance purposes.
- High resolution color images up to 1280x960.
- Two record mode: MPEG4 and MJPEG with wide fps selection
- Three selectable resolution: 1.3M, VGA, QVGA
- Selectable voice recording & Time and Date stamp & loop recording
- Three power options: Car DC 12-24V/DC 5V power cord , AC 100-240V/DC 5V adaptor (optional) or 2 AAA alkaline batteries
- Uses SD/SDHC memory card up to SDHC 32GB (not included)

ACCESSORIES



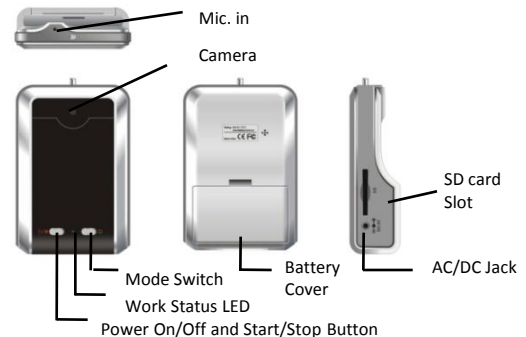
Camera

Power link

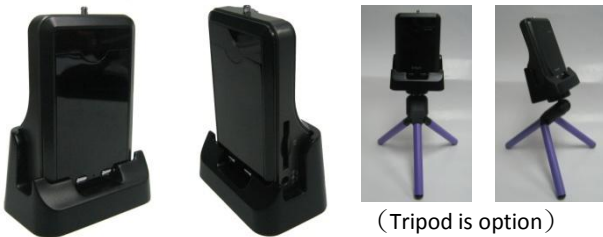
Fix foundation

CD ROM

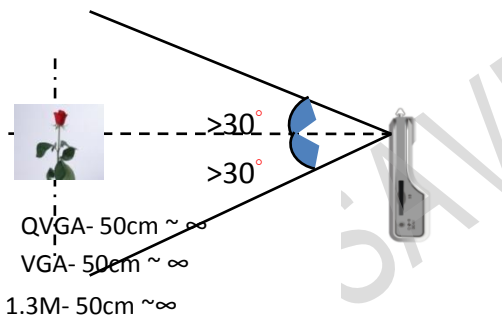
PRODUCT DESCRIPTION



USING DIAGRAM OF FIXED FOUNDATION



RECORD ANGLE AND FOCUSING DISTANCE



INSTALLATION AVI PLAYER

- Install provided PVR AVI player CD in your computer
- Please select "**Language**" to read the detail user manual for setup.
- Please choose "**Next**" for all of selection in setup process.
- Please press "**Finish**", installation will be processed and finished.

SAVE CAMERA SETTINGS

- Insert SD card in your PC and choose "FAT32 32K" to format.
- Open installed AVI play application, choose "**Options**" -> "**Camera Settings**".
- Preset **Record mode**: MPEG4 (real time) and MJPEG (real time).
- Select **Resolution**: 1280x960 / 640x480 / 320x240.
- Select **Banding filter**: 50Hz or 60Hz in the country, it will minimize the flickers on videos under indoor lighting. Please visits <http://kropla.com/electric2.htm> for worldwide frequency list.
- Select **Frame rate**: MJPEG @ 1~15fps and MPEG4 @ 15~30fps.
- Select **Time-slice of Movie clip**: the duration of recorded video file.
- Select **Mic. Volume** for voice recording.
- Select SD card **drive location** in your computer.
- Select "**Looping**" to repeat continuously recording when memory is full. (No function in ER-330MG)
- Select **Timestamp** for Date/Time stamping. (No function in ER-330MG)
- Select **Format SD card** to format SDHC card to FAT32 32KB.
- Click "**OK**" to save the camera settings in SD card.

START TO USE & RECORDING

- Insert saved camera settings SD card to PVR (Portable Video Recorder).
- Connect the provided or Car cigarette lighter adaptor or AC adaptor or uses 2 AAA alkaline batteries.
- Press "**Power On/Off**" button to start the PVR, the Red LED light flickers, indicating that MPEG4 recording is started.
- Press "**Mode Switch**" button once to switch record mode to MJPEG, the Green LED light flickers, indicating that MJPEG recording is started.
- Press "**Mode Switch**" button once again to switch record mode to back MPEG4, the Red LED light flickers, indicating that MPEG4 recording is started.
- Press "**Power On/Off**" button again to stop recording and power off your PVR.

VIEWING ON A COMPUTER

- Power off your camera.
- Take out the SD card from camera and insert in your computer SD card reader. If your computer does not come with a built in SD card reader, you can purchase one at local electronics store.

PLAYBACK RECORDED FILES

- Open installed AVI application. Select "**File**" -> "**Open**", select file to play.

ZOOM IN/OUT IMAGE

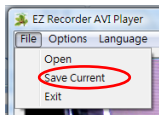
- Screen size adjustment:



1280x960 resolution: X0.5(D), X0.75, X1
640x480 resolution: X0.5, X0.75, X1(D), X1.25, X1.5, X2
320x240 resolution: X0.75, X1(D), X1.25, X1.5, X2

EXTRACT & SAVING IMAGE TO JPEG

- Click to pause playback. Click / to search forward/backward to desired image.
- Click "**File**" -> "**Save Current**" -> → finished.



MOTION SEARCH

- Click to pause playback. Go to "**Motion Search**" on right down side.
- Click to search forward or to search backward.

PVR Player provide for a useful function of 「Motion search」. During long term recording, such as in the room without person, it will no any image change unless somebody come in. 「Motion search」 can search and reach effectively and speedily in played video to the specific photo which is detected by “Motion Search” and stop if target area shows difference.

Threshold value can be setup from 1 to 10, the value is smaller, the comparison is more sensitive. when resetting, please remember to press 「pause」 before input value



Surveillance Motion search

File→**Open**→Select file→Open file→Play forward or backward→Select a picture as comparison standard→Press 「pause」→confirm 「Search level」→Press 「forward search」 or 「backward search」→ Auto Stop if differences of Photos are found → Repeat above steps if necessary.

Identification of Light and Beep

Green light: System operating state.

Green light.....Keep in flashing, it is MJPEG recording and file storage.

Red light: memory card abnormal or low storage capacity or low battery and system operating state.

Red light.....Keep in flashing, it is MPEG4 recording and file storage.

Red light.....Flash 3 times, power off after 1 sec., saving device problem.

Red light.....Flash 3 times, power off after 1 sec., storage space is not enough.

Red light.....Power off after flash 1 time, battery low.

Buzzer:

Buzzer.....2 short sounds, system entered the operating state.

Buzzer.....1 short sound, battery low.

Buzzer.....3 rapid beeps after 3 short sounds, without SD card.

Buzzer.....3 short beeps, system power off.

CAMERA SETTINGS

System Requirements

- PC with built-in SD card reader, or USB port to external card reader
- Windows 2000 / XP / Vista
- CD-ROM drive

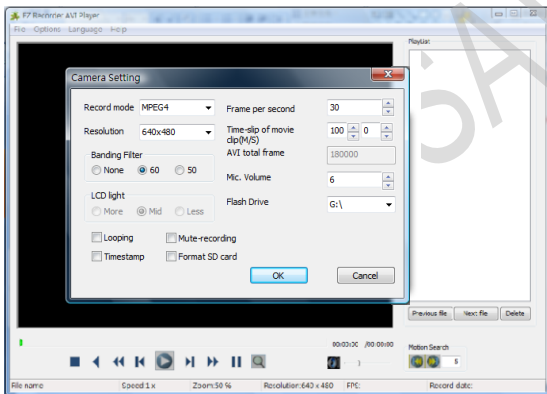
Language selection:

User can select suitable one in supplied languages to operate it.

Format SD card

Insert SD/SDHC card in your computer card reader, select **FAT32 32KB** to format the SD card.

Note: You are recommended to use the following brands or other major brand SD/SDHC card, **Adata / Apacer / Kingston / SanDisk / Silicon power / Transcend**etc Please use Class 6 with over 66 x speed SD card



Start Camera Settings

For the first time use of camera device, you need to save camera settings in a formatted SD card and then download the camera settings to camera device.

Open installed **AVI Play** application to start saving camera settings
Options -> **Camera Settings** -> complete the following selection:

1. Recording mode setting

MPEG4 → Set to VGA MPEG4 recording format ◦

MJPEG → Set to 1.3M MJPEG recording format ◦

Record mode **MPEG4** ▼

2. Recording resolution setting

1280 x 960 → 1.3M resolution camera

640 x 480 → VGA resolution camera

320 x 240 → QVGA resolution camera

Resolution **640x480** ▼

3. Voltage frequency setting

Banding Filter

None 60 50

None → Apply to electronic fluorescent lamp without area limitless.

60 Hz → Apply to Taiwan, Japan, America area.

50 Hz → Apply to for China, Japan, Europe area

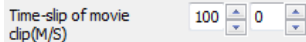
4. Frame per second

User can setup frames per sec. depend on different purpose.

Frame per second **30** ▲▼

5. Time-slice of movie clip

Size to make video recording film, user can set up the elasticity in accordance with demand of person .

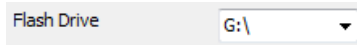


6. Mic. Volume

User can setup the volume from 1 to 10 depend on different purpose.

7. SD card location

Pointed the location of SD card.



8. Looping (No function in ER-330MG)

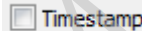
If selected, permits to overwrite old data when SD card memory is full.

If unselected, stops recording when SD card memory is full



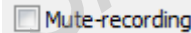
9. Timestamp

The timestamp is written in the film to make video recording.



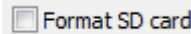
10. Mute-recording

Mute function during recording.



11. Format SD card

Make user to have a FAT32 32K format. Over 4G SDHC card need this format.



12. Save Camera Settings

Click "OK" to save all settings in SD card. Take out SD card and insert to camera device and power on. All settings will load into camera device. Camera settings is completed.

ER-330 series battery life time reference data:

	MPEG4-VGA battery life time	
Frame/sec.	Panasonic AAA LR03TTS/8B ALKALINE	Great AAA ENERGY_MICRO ALKALINE
30pcs	1Hr.	1Hr.
15pcs	1.7Hr.	1.7Hr.

	MJPEG-1.3M battery life time	
Frame /sec.	Panasonic AAA LR03TTS/8B ALKALINE	Great AAA ENERGY_MICRO ALKALINE
15pcs	1.5Hr.	1.5Hr.
1pcs	1.8Hr.	1.8Hr.

ER-330 series SD card recording time reference data:

	MPEG4-VGA SD card recording time			
Frame /sec.	4G card	8G card	16G card	32G card
30pcs	4Hr.	8Hr.	16Hr.	1.3D
15pcs	8Hr.	16Hr.	1.3D	2.6D

MJPEG-1.3M SD card recording time				
Frame/sec.	4G card	8G card	16G card	32G card
15pcs	40Min.	1.3Hr.	2.6Hr.	5.2Hr.
1pcs	10Hr.	20Hr.	1.7D	3.4D

Tips of application :

- Please continue to record more than 30mins in the first time to use PVR to make sure that the built-in battery was charged full, it can maintain the correct time in the next three days without power supply, if it hasn't been used over three days, you have to reset "camera settings" to make record time same as actual time.
- Usually, most manufacturers ship their SDHC card with FAT32 4096B format, in order to make sure that our product can operate normally to record and save video, please reformat your SD card with FAT32 32KB bit before use.
- Please avoid directly facing your camera lens to strong sunlight or backlight, it will cause glistening effect on video.
- The Max. recording time of MPEG4 can be set to 100 minutes, too big file will affect the saving time.


Standard accessories:

1. Camera Device 1pcs
2. Installation CD 1pcs
3. Quick guide manual 1pcs
4. Fix foundation 1pcs
5. AAA 4# alkaline battery 2pcs
6. 5V DC 500mA car charger 1pcs (ER-330MG/MA standard)
7. 5V DC /AC 100~240V 500mA 1pcs adaptor (ER-330MT standard)

Optional accessories:

1. Adjustable foundation (ER-330MT standard)
2. Windshield mount holder for Car use
3. Bicycle mount holder
4. Snake holder
5. SD card (Max. 32G)

Specification:

Model name	ER-330MG/MT/MA
Sensor	1.3M pixels CMOS image sensor
Sensitivity	0.9V / Lux -sec.
Frame per sec.	From 1fps to 30fps
Resolution	1280*960,640x480,320x240 pixel
Focusing	Fix. 0.5M~infinity
Exposure	Auto
White balance	Auto
Movie image	AVI format(MPEG4/MJPEG)
Still image	JPG format
Storage	SD Card, Max. to SDHC 32G
DC power	DC 5V 500mA 
Battery	2*AAA Alkaline Batteries
Operation temp.	45 °C to 0 °C
Storage temp.	65 °C to 0 °C
Dimension	90x57x26mm (L x W x T)
Computer OS	WIN2000/XP/Vista