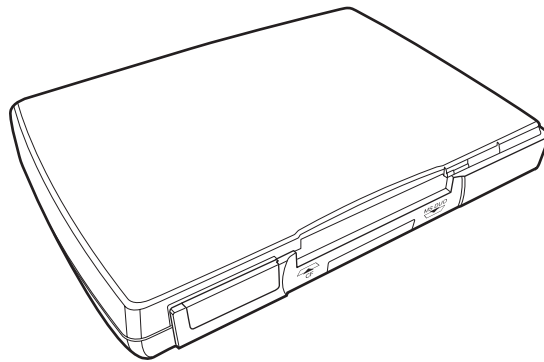
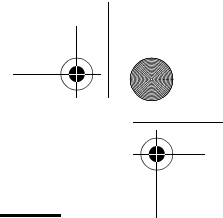
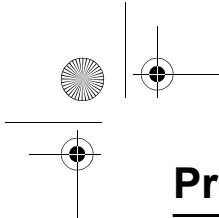


MPEG-4 Personal Video Recorder



User Manual



Preface

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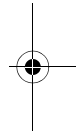
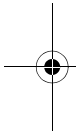
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Safety Information

Please read the following safety instructions, and keep the user manual for later reference.

- Use only the power adapter supplied with the product.
- Do not place the product near any source of heat or expose it to direct sunlight.
- Do not attempt to connect any computer accessory or electronic product without instruction from qualified service personnel. It may result in risk of electric shock.
- Do not expose the product to moisture. Never spill any liquids on the product.
- Do not place the product in regions with extreme temperatures.



Routine care

Wipe the product with a soft cloth. Do not use abrasive powders or solvents, such as benzene or thinner. When you leave the product unused for a long time, unplug the AC adapter from the outlet.

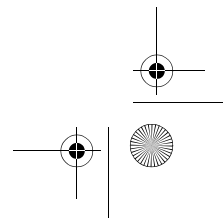
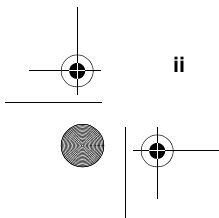


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1. Overview

Congratulations on purchasing the MPEG-4 Personal Video Recorder. Now you can enjoy quality multimedia anywhere you go and record your favorite video programs from a variety of video sources. The MPEG-4 recorder also plays back your favorite audio tracks, displays image files, and provides rich video clips for your Sony PSP with its recording format support.








Refer to this user manual for detailed descriptions about the product and instructions for using it.

Features

The MPEG-4 recorder allows you to:

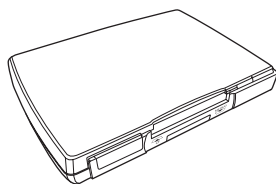
- display images (jpg, gif, and bmp formats)
- play audio files (mp3 and wma formats)
- play videos (ASF, AVI, MP4 formats)
- record video from a TV, DVD, VCR or camcorder

A Compact Flash Card or a Memory Stick Duo Card may be installed in the recorder for storage.



Package contents

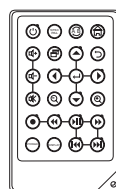
MPEG-4 recorder



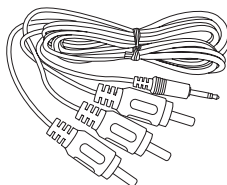
Power Adapter



Remote Control



Component cables (x2)



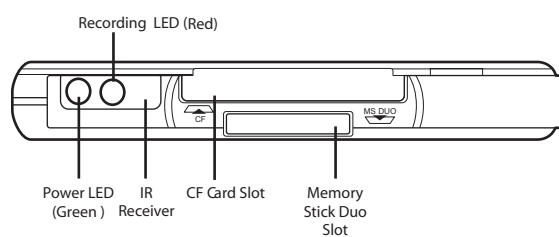
User Manual



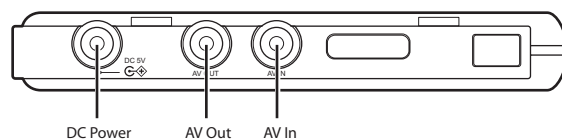
About the MPEG-4 recorder

Refer to the following sections for information about the hardware components of the recorder.













Front view

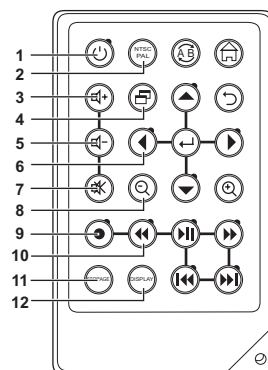


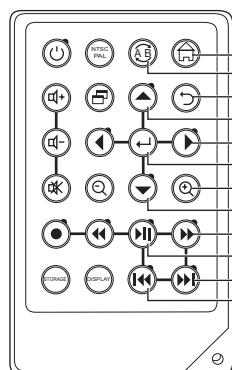
Rear view



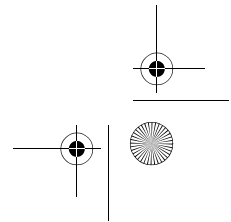
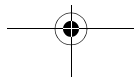
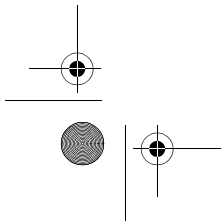
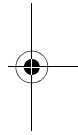
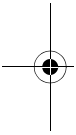
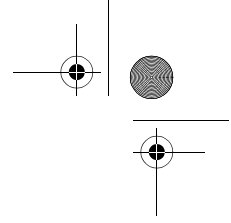
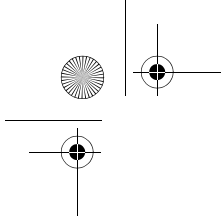
About the remote control

Icon	Description
1. 	Turns on the power
2. 	Switches between NTSC and PAL system
3. 	Increases the volume
4. 	Enters the setting menu
5. 	Decreases the volume
6. 	Scrolls left
7. 	Mutes all sound
8. 	Zooms out
9. 	Start to record and stop recording
10. 	Rewinds playback of video and audio files
11. 	Switches between CF card and Memory Stick Duo.
12. 	Turn on and off the on screen display





Icon	Description
13.	Returns to the top menu
14.	Repeats playback of selected audio/video file.
15.	Returns to the previous menu
16.	Scrolls up
17.	Scrolls right
18.	Confirms selection of menu item
19.	Zooms in
20.	Scrolls down
21.	Fast Forwards playback of video and audio files
22.	Plays or pauses playback of photo, video and audio
23.	Plays the next photo, video and audio files
24.	Plays the previous photo, video and audio files



2. Getting started

This chapter describes the preliminary steps required to set up the recorder and how to make connections before starting to use the device.

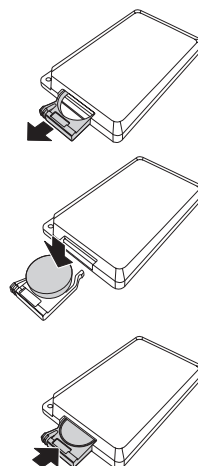
Installing the remote control battery

Follow these instructions to insert the remote control battery:

1. Push in the clip at the side of the battery holder.
2. Pull battery holder out.

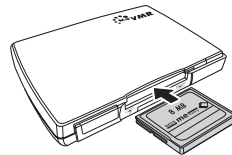
3. Insert the battery as shown, while noting the correct polarity.

4. Push battery holder and snap it in place.



Inserting the Compact Flash (CF) Card

Push the CF card into the CF card slot until it is firmly in place.



To remove the card, grip the CF card and pull gently.



Inserting the Memory Stick (MS) Duo Card

Push the MS Duo card into the MS Duo card slot until it is firmly in place. Ensure the front side of card is face down.

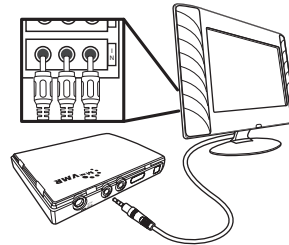


To remove the MS Duo card, grip the MS Duo card and pull gently.



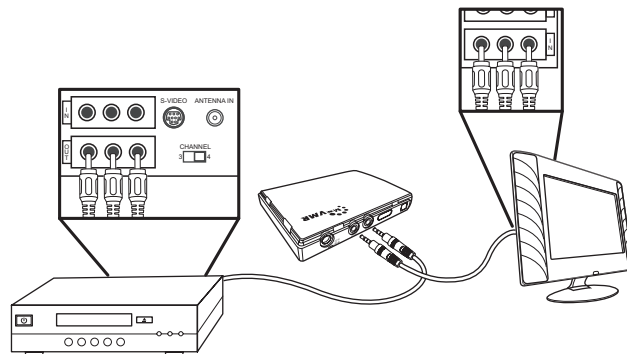
Connecting to a TV (viewing only)

Connect the A/V connectors (red, white, and yellow) of the A/V cable, to the corresponding input connectors on the TV. Connect the other end to the AV Out socket at the back of the recorder.



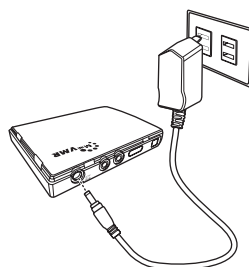
Connecting to a TV, DVD player, VCR or camcorder (recording)

Connect the A/V connectors (red, white, and yellow) of the A/V cable to the corresponding output connectors on the TV set, DVD player, VCR, or camcorder. Connect the other end to the AV In socket at the back of the recorder. Connect the second A/V cable to the AV Out socket as described in the previous section.





Connecting power

Connect the power adaptor to the DC-in socket on the rear panel of the recorder. Plug the other end of the adaptor into a power outlet.



Turning the MPEG-4 recorder on

Once the recorder is plugged in, the green power LED turns on. Press the  button on the remote and the system turns on. Press the  button again to turn off the recorder.

3. Using the MPEG-4 Recorder

Now that you have set up the recorder, you are ready to start using it to view your favorite images, listen to audio tracks, watch videos, and record videos. This chapter provides detailed instructions for these tasks and for using the OSD (On Screen Display) menu.

Viewing pictures



The recorder is able to display.JPG, .GIF and .BMP image file formats.

Displaying images

To display still images:

1. Highlight the Photo menu using the ◀ ▶ keys
2. Press ↵ to access the file list.
3. Use the ▼ ▲ keys to highlight the required file and press ► to play the file.

Photo menu



To access the Photo Menu press . The following three functions are available:

SLIDESHOW

To set up a photo slide show, follow the procedure below:

1. Press the button to access the photo menu.
2. Use the keys to decide if **ALL** photos, the **FOLDER** or **OFF** will be used in the slide show.
3. Use the key to return to the menu.
4. Using the keys, select a photo for the slide show by pressing the button on the remote control. The screen icon will change from to].
5. Press to play the slide show.

Note: If **All** is selected for the slide show then all pictures will appear in the show. If **Folder** is selected then only those images in the current folder are displayed. When turned **Off**, only the current image is displayed.

6. Whilst playing you can use and to zoom out and in of the picture.

7. Pressing **DISPLAY** will show the following: File information, Background Volume, Current Date and Time, and the zoom amount.

BACKGROUND MUSIC

1. Use the **◀ ▶** keys to turn **ON** or **OFF** the background music function.
2. While the background music is turned on, the music will be played in the slide show.

DELETE FILES

To delete a file:

1. Highlight a photo from the main menu, go to the music menu and in delete press **↵**.
2. You will be asked to confirm **YES** or **NO** and press **↵** to confirm your selection.
3. If multiple files are selected, they can be deleted at once.

Listening to music










The recorder is able to play both .WMA and .MP3 audio file formats.

Playing audio

To play an audio file:

1. Highlight the Audio menu and press \leftarrow to access the file list.
2. Use the ∇ \blacktriangle keys to go to the required file and press \gg to play the file.

Whilst playing audio you can use the following functions:

	Decrease volume		Fast forward
	Increase volume		Rewind
	Mute volume		Play previous audio track
			Play the next audio track

Music menu



To access the Music menu press \square . The following two functions are available:

REPEAT

Use ◀ ▶ to choose **Off**, **Single**, **Folder** or **All**

Note: Select **Off** to turn the repeat function off, **All** repeats all tracks, **Single** will repeat only a single track, and **Folder** will repeat all tracks in the folder.

DELETE

To delete a music file:

1. Highlight a music track from the main menu, go to the music menu and in delete press ↵.
2. You will be asked to confirm **YES** or **NO** press ↵ to confirm your selection.

Watching videos










The recorder is able to play ASF, .AVI and .MP4 image file formats.

Playing videos

1. Highlight the Video menu and press \leftarrow to access the file list.
2. Use the $\nabla \blacktriangle$ to go to the required file and press \blacktriangleright to play the file.

Whilst playing the video, you can use the following functions:

	Decrease volume		Fast forward
	Increase volume		Rewind
	Mute volume		Play previous video clip
			Play next video clip

Video menu



To access the Video Menu, press \square . The following two functions are available:

REPEAT

Use ◀ ▶ to choose between **Off**, **Single**, **Folder** or **All**.

Note: Select **Off** to turn the repeat function off, **Single** to repeat just the current selection, **Folder** to repeat all in the folder, or **All** to repeat all videos.

DELETE FILES

To delete a video file:

1. Highlight a video clip from the main menu, go to the video menu and in delete press ↵.
2. You will be asked to confirm **YES** or **NO** press ↵ to confirm your selection.

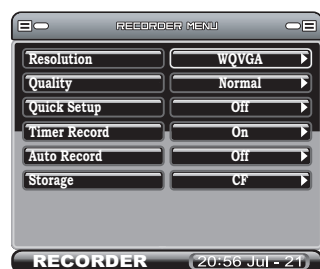
Recording video

Simple record

To start a recording:


1. Highlight the record function on the main menu and press ↵.
2. Change the channel on the input device i.e. TV, DVD, VCR or Camcorder.
3. Press the ● key to record.
4. To finish recording press the ● key again.
5. Press the 🏠 key to return to the main menu.
6. To view the recorded item see "Playing videos" on page 16.

Recorder menu



Resolution

To select a resolution:

1. Highlight the record section and press  to access the **Recorder Menu**.
2. Use the ◀ ▶ keys to choose between QVGA, WQVGA, and TV VGA.

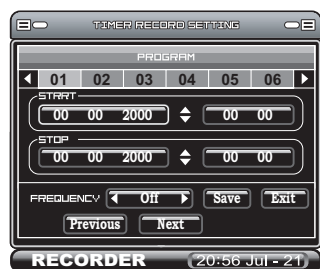
Quality

To choose the quality of the recording highlight, the quality menu and use the ◀ ▶ keys to choose either Normal or Economic in QVGA and WQVGA option. Use the ◀ ▶ keys to choose Super Fine, Fine, Normal or Economic in TV VGA option.

Quick setup

Use the ◀ ▶ keys to choose between OFF, 1hr, 2hrs or 3hrs recording.

Timer record



To access the timer record function, scroll down and press the \downarrow key.

The screen is divided into functional areas:

PROGRAMS

The recorder has 6 available recording programs. Use the following settings to setup each program.

Use the $\leftarrow \rightarrow$ key to scroll between the programs and use the \downarrow key to select the program.

START AND STOP TIMES

1. Use the $\leftarrow \rightarrow$ key to move between the date and the time.
2. Press \downarrow to highlight each section and then use the $\blacktriangledown \blacktriangle$ keys to choose the appropriate number.
3. Press \downarrow to complete.

FREQUENCY

The frequency function allows you to choose when this recording is activated.

1. Use the ▼ ▲ keys to choose between **OFF**, **Once**, **Daily** or **Weekly**.
2. Press ↵ to save.

Auto record

Use the ◀ ▶ keys to turn **ON** or **OFF**. If the auto record turns on, it will automatically start to record when there is a video source input and the recording will stop if the source is turned off.

Storage

Use the ◀ ▶ keys to choose between Compact Flash or MS Duo memory cards.

Setup menu



Use the \leftarrow key to access the menu.

DATE AND TIME

To change the date and time:

1. Press \leftarrow to highlight a selection yellow.
2. Use the \blacktriangledown \blacktriangle keys to change the value.
3. Use the \blacktriangleleft \blacktriangleright keys to move between fields.
4. Press \leftarrow when complete.

LANGUAGE

The default language of the recorder is English. If you would like to change it to the other available languages, follow these instructions:

1. Go to the **setup** menu and press \leftarrow .
2. Using the down arrow \blacktriangledown go to the language bar.
3. Use the \blacktriangleleft \blacktriangleright arrows to select the required language.
4. Press Home to return to main menu.

FORMAT DISK

To format the Compact Flash memory card:

1. To format the memory card, scroll down to the Format disk section and Press **↵**.
2. Select **YES** to confirm formatting or **NO** to cancel.

TV OUTPUT

To select the TV output:

1. Use the **◀ ▶** keys to choose between NTSC or PAL.
2. The NTSC
PAL button on the remote control will provide the same function.

UPGRADE DEVICE FIRMWARE

To upgrade firmware:

1. Get firmware upgrades from the website.
2. Copy the latest version of firmware onto either a compact flash card or a MS Duo card.
3. Insert the card into the recorder and press **↵**.

FACTORY RESET

To restore all settings to the factory default:

1. To restore factory settings, scroll down to the Factory Reset function section and press **↵**.
2. Select **YES** to confirm reset or **NO** to cancel.

File browsing



The file browser allows you to view the contents of both the Compact Flash card and the MS Duo card at the same time.

By pressing you can select a file.

Data management menu



To access the Data Management Menu press . The following two functions are available:

COPY

The files can be copied from CF card to MS Duo card or vice versa. Also, the files can be copied to a different folder of the same memory card.

1. Files copied to a different memory card

In the File Browser, the left column is the source memory card and right column is the destination. Switch the storage in the left column in the File Browser by pressing storage. Highlight a file from the main menu, go to the Data Management menu and in copy press ↵.

2. Files copied to a different folder

Choose the same memory card by pressing storage. Highlight a file from the main menu, go to the Data Management menu and in copy press ↵.

DELETE

1. Highlight a file from the main menu, go to the Data Management menu and in delete press ↵.
2. You will be asked to confirm **YES** or **NO**. Press ↵ to confirm your selection.

4. Appendix

FCC Certification



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits

are designed to provide reasonable protection against harmful interference in a residential installation. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

You are cautioned that any change or modifications to the equipment not expressly approved by the party responsible for compliance could void your authority to operate such equipment.



CE Notice (European Union)

Marking by the symbol indicates compliance of this recorder to the EMC Directive and the Low Voltage Directive of the European Union. Such marking indicates that this recorder meets the following technical standards:

EN 55022 — "Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment."

EN 55024 — "Information technology equipment - Immunity characteristics - Limits and methods of measurement."

EN 61000-3-2 — "Electromagnetic compatibility (EMC) - Part 3: Limits - Section 2: Limits for harmonic current emissions (Equipment input current up to and including 16 A per phase)."

EN 61000-3-3 — "Electromagnetic compatibility (EMC) - Part 3: Limits - Section 3: Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current up to and including 16 A."

EN 60950 — "Safety of Information Technology Equipment."

EN 55022 emissions requirements provide for two classifications:

- Class A is for typical commercial areas.
- Class B is for typical domestic areas.

To determine which classification applies to your recorder, examine the FCC registration label located on the back panel of the computer. :

Troubleshooting

Symptom	Possible cause	Possible remedy
No video display.	Unit has no power.	Ensure that unit is plugged in correctly. You should see a green LED on the front panel if it is plugged in correctly. Refer to "Connecting power" on page 10.
	Cable connecting AV Out to video monitor is not properly connected.	Refer to "Connecting to a TV (viewing only)" on page 9 for information.
Remote control not functioning.	Obstruction in front of infrared sensor on recorder.	Ensure that a line of sight exists between the remote control and the sensor on the recorder.
	Low battery power.	Replace battery in the remote control.
CF card or MS Duo not recognized by the recorder	Card not inserted properly.	Refer to "Inserting the Compact Flash (CF) Card" on page 8 and "Inserting the Memory Stick (MS) Duo Card" on page 8 for information about proper handling of CF and MS Duo memory cards. Never force memory cards into the recorder.

Please visit the website to get the latest information about the recorder.

Specifications

Video encoder	PSP application	<ul style="list-style-type: none">• QVGA (320x240); MPEG4+AAC-LC, 30fps• 368 x 208 (16:9); MPEG4+AAC-LC, 30 fps
	recorder application	VGA (640x480); MPEG4+AAC-LC, 30 fps
Video decoder	<ul style="list-style-type: none">• MPEG-4 SP, MPEG-1 Layer 3 (MP3), 30 fps at D1 resolution• DivX 3.11 @ CIF resolution; 4.x; 5.x; 30 fps at D1 resolution• Quick time 6; MPEG-4 AAC-LC stereo, MP4 format at D1 resolution	
File formats	ASF, AVI, MP4	
Audio decoder	Codec	G.726
	MP3 decoding @ 30-320 kb/s CBR & VBR WMA	
Still image	Codec	JPEG decode (Baseline), BMP, GIF (animated not included)
Resolution	Up to 16M pixels (4096 x 4096)	
Thumbnails	Supported when the photo has the EXIF header	
Image Processing	Zoom in, Zoom out 1x/2x/4x	
Storage	Memory card	CF card, MS Duo card, MS Pro Duo card
TV system	Video Out Format	NTSC, PAL
Power source	External 5V AC/DC adaptor (100 ~ 240V, 1.4A)	
Dimensions and weight	118 x 87 x 18 mm, 140g	
Typical Recording Times on a 128MB Card		
MS Duo card	MPEG-4 Video recording time (30fps@320 x 240 resolution)	

128MB	Normal(768k)		Economic(384k)	
	22min 45sec		45min 31sec	
128MB	MPEG-4 Video Recording Time (30fps@368 x 208 resolution)			
	Normal(768k)		Economic(384k)	
	29min 38sec		44min 27sec	
128MB	MPEG-4 Video Recording Time (30fps@640 x 480 resolution)			
	Super Fine(2M)	Fine (1M)	Normal (768k)	Economic(384k)
	8min 32sec	17min 4sec	22min 45sec	45min 31sec

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