

# VSDV20L & VSDV20LM

VSDV20L Mini Digital Video Recorder and VSDV20L

Mini Button Camera

VSDV20LM Mini Digital Video Recorder and VSDV20LM

Motion Activation Camera

## Operating Instructions

Before operating the unit, please read this manual thoroughly, and retain it for future reference.



FC CE RoHS

## **WARNING**

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

## **Attention**

The electromagnetic fields at the specific frequencies may influence the picture of the recorder.

**Be sure to read the following before using the recorder and the mini camera.**

### **Trial recording**

Before you record one-time events, you may want to make a trial recording to make sure that the recorder and the camera are working correctly.

### **Notes on image data compatibility**

Playback of moving images recorded with your recorder on other equipment and playback of moving images recorded or edited with other equipment on your recorder are not guaranteed.

### **Do not shake or strike the recorder**

In addition to malfunctions and inability to record moving images, this may render the SD card unusable or image data breakdown, damage or loss may occur.

### **LCD screen and mini camera**

Be careful when placing the camera near a window or outdoors. Exposing the LCD screen or the lens of camera to direct sunlight for long period may cause malfunctions.

### **Back up recommendation**

To avoid the potential risk of data loss always copy data to a disk.

## Table of Contents

### Getting Started

Identifying the part of the mini DVR.....	4
Identifying the part of the mini camera.....	4
LCD screen indicators .....	5
Preparing the power supply .....	6
Inserting the SD card .....	7

### Basic Operations

Recording moving images from VSDV20L mini button camera.....	8
Recording moving images from VSDV20LM motion activation camera.....	9
Recording moving images from TV set.....	10
Playing back moving images .....	10
Playing back moving images on personal computer.....	10
Playing back moving images on TV screen.....	12
Delete recorded files .....	12

### Setting Operations

Setting the storage.....	13
Setting the record format .....	14
Setting the resolution .....	16
Setting the display.....	17
Setting the date and time.....	18
Setting the format.....	19
Setting the LCD off time.....	20

### Specifications

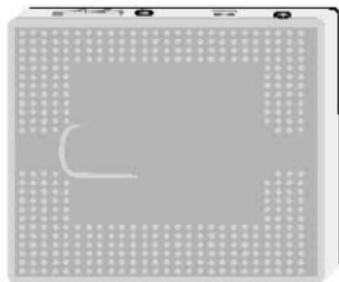
VSDV20L.....	22
--------------	----

### Accessories

Accessories .....	23
-------------------	----

### Getting Started

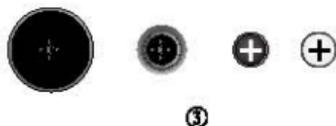
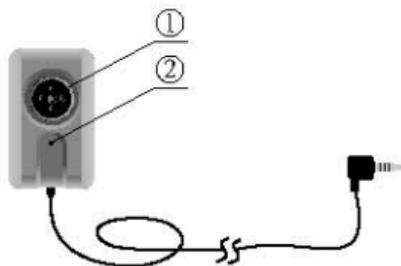
#### Identifying the parts of the mini DVR



- ① 2" TFT LCD Screen
- ② AV In jack to connect with the Mini camera / TV
- ③ USB jack to connect with PC
- ④ AV Out jack to connect with TV
- ⑤ [ R / P ] Record / Playback switch
- ⑥ [ ●/▶ ] Play / Stop key

- ⑦ [ ▶▶ ] FWD / Select key
- ⑧ [ ◀◀ ] REV / Select key
- ⑨ Mini SD Card Slot
- ⑩ [ ◀ ] Return key
- ⑪ LED Indicators
- ⑫ [ ⏻ ] Power key

#### Identifying the parts of the mini camera



- ① Lens
- ② Microphone
- ③ Interchangeable buttons and screws

## LCD screen indicators

### Playback Mode



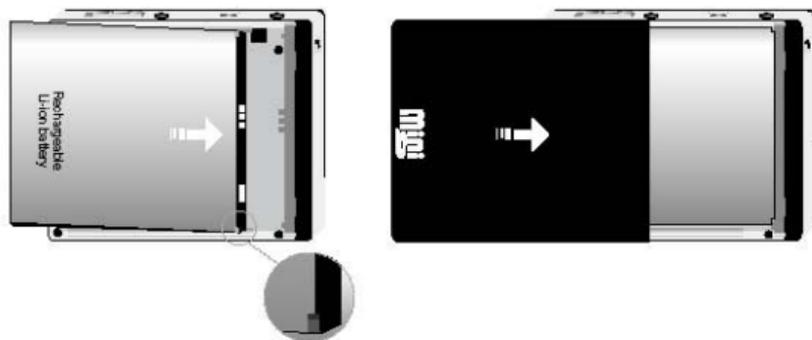
### Recording Mode



- ① Playback icon
- ② Recorded Files
- ③ Recording symbol
- ④ SD card symbol, it is appeared when a SD card is inserted into your DVR, otherwise no symbol appears.
- ⑤ VGA: 640 X 480  
QVGA: 320 X 240  
SVGA: 160 X 120
- ⑥ V/A: Video + Audio Recording / Video Recording
- ⑦ Battery indicator
- ⑧ Date/Time indicator
- ⑨ Remained recording time refer to flash memory or SD card capacity.

### Preparing the power supply

Your DVR can operate with Sony-Ericsson mobile phone battery pack (BST-33 series)



### Installing the battery pack

Open the cover by slightly pushing and pulling it back.

Insert the battery pack with the corner of “” facing toward the battery compartment as illustrated.

Close the battery cover.

### Charging the battery pack

Connect the AC power adapter with the USB port on your DVR. The charge lamp lights up when charging begins. When the charge lamp goes off normal charge is completed.

### Charging time

Battery pack capacity	Fully charging time
720 mAh	120 min.
960 mAh	180 min.

## Battery life

### Movie mode recording

Battery pack capacity	Continuous recording time
720 mAh	120 min. (fully charged battery)
960 mAh	150 min. (fully charged battery)

### Movie mode playback

Battery pack capacity	Continuous playing back
720 mAh	120 min. (fully charged battery)
960 mAh	180 min. (fully charged battery)

## Inserting the SD card



Insert a mini SD card with the “” mark facing toward the SD slot as illustrated.

## Recording time of memory capacity

SD card capacity	640 X 480	320 X 240	160 X 120
512 MB	Approx. 28 min	Approx. 102 min	Approx. 341 min
1 GB	Approx. 55 min	Approx. 200 min	Approx. 666 min
2 GB	Approx. 111 min	Approx. 400 min	Approx. 1333 min
4 GB	Approx. 222 min	Approx. 800 min	Approx. 2666 min

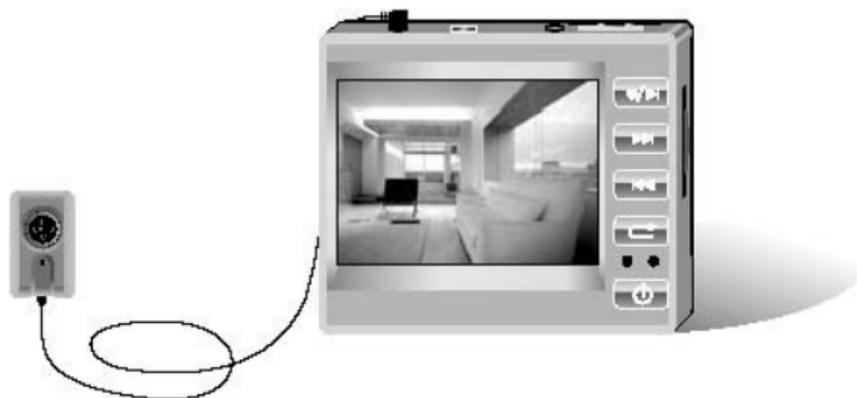
### Notes

Never remove the mini SD card or turn off the power while the access lamp is lit up.

### Basic Operations

#### Recording moving images from VSDV20L mini button camera

Moving image is recorded in AVI format.



#### Start Recording

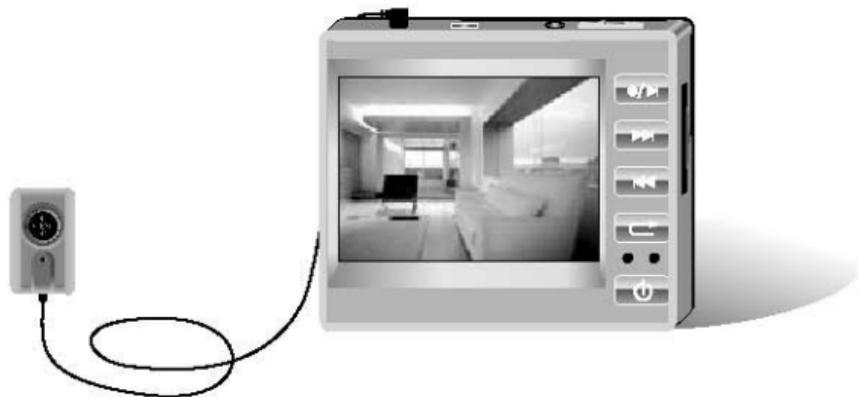
- ① Slide [ R/P ] key toward the position of [ R ] and connect the mini camera as illustrated.
- ② To recording moving images, press and hold the power button for 3 second to turn on the DVR.
- ③ Press [ ●/▶ ] key to start recording, yellow lamp is flickering during recording, "●Rec" shows on the right-up corner of the screen at same time.
- ④ The mini DVR screen will be automatically turn off after 3 min. Press [ ●/▶ ] or [ ▶▶ ] or [ ◀◀ ] key to turn on the screen.

#### Stop Recording

- ① Press [ ●/▶ ] key again to stop the recording.

### Recording moving images from VSDV20LM motion activation camera

Moving image is recorded in AVI format.



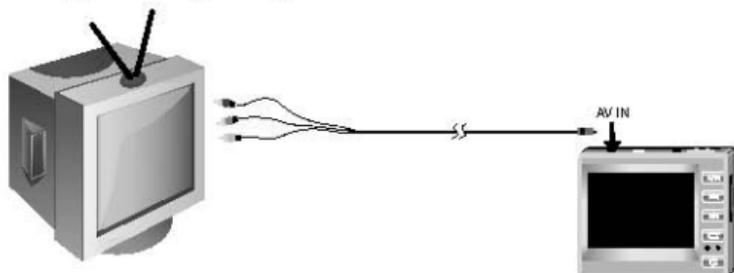
#### Start Recording

- ⑥ Slide [ R/P ] key toward the position of [ R ] and connect the motion activation camera as illustrated.
- ⑦ To recording moving images, press and hold the power button for 3 second to turn on the DVR.
- ⑧ When the motion activation camera detects a moving object, the DVR will automatically start recording. Yellow lamp is flickering during recording, [ ●Rec ] shows on the right-up corner of the screen at same time.

#### Stop Recording

- ⑨ When the moving object disappears from the screen, the DVR will automatically stop the recording.

### Recording moving images from TV set



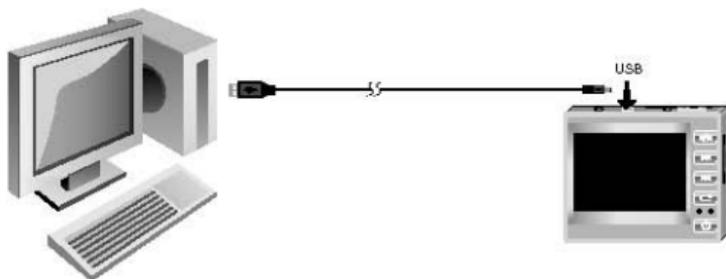
#### Start recording

- ① Slide [ R/P ] key toward the position of [ R ] and connect the mini camera as illustrated.
- ② Following the same procedure as recording from mini camera.

### Playing back moving images

- ① Slide [ R/P ] key toward the position of [ P ]
- ② Turn on the DVR.
- ③ Select the desired moving image with the [ >>> ] or [ <<<< ] key.
- ④ Press [ ●/▶ ] key to play back the selected moving image.
- ⑤ Press [ ●/▶ ] key to stop playing.
- ⑥ Press [ ↻ ] key to return the recorded file list.

### Playback moving images on personal computer



- ① Turn on the power of your personal computer
- ② Insert a SD card into your DVR, and turn on the power of your DVR.
- ③ Connect one end of the USB cable to the USB jack of your DVR and the other end to the USB connector on your personal computer.
- ④ Press [  ] key to select "Mass Storage"
- ⑤ Open "My Computer" on Windows and double click the newly recognized drive. The moving image list inside the SD card is displayed.
- ⑥ Select and double-click the desired moving images from the list.

### Image file storage destinations and image files

For Windows XP users (the drive recognizing the DVR is "D")

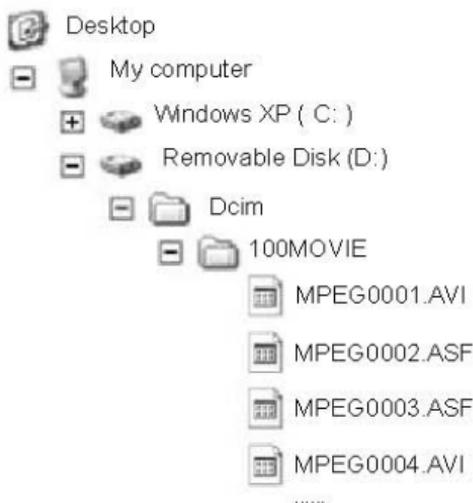
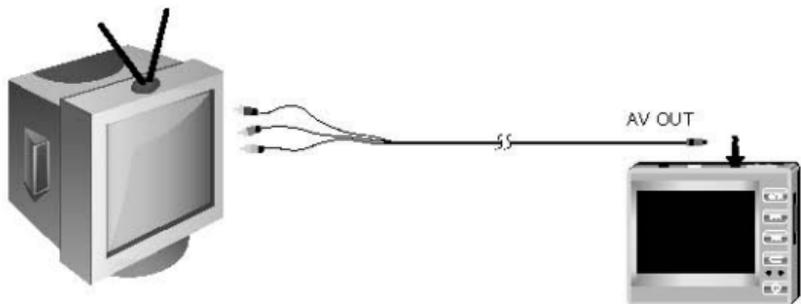


Image files recorded with your DVR are listed in folder of "100Video". The meaning of the file names are as follows. 0000 stands for any number within the range from 0001 to 9999.

### Playback moving images on TV screen



- ① Connect the AV connecting cable to the AV output jack of your DVR and to the AV input jack of the TV.
- ② Turn on the TV, then start playback on your DVR (refer to Setting display). The recorded files appear on the TV screen.

### Delete recorded file

- ① Slide [ R/P ] key toward the position of [ P ], turn on your DVR, and then by long press [ ●/▶ ] key until “Delete” appear on the screen showed as below:



- ② Select “” to delete the current file or select “” to cancel the operation.

## Setting Operations

Slide [ R/P ] key toward the position of [ R ], turn on your DVR by long pressing [ ⏻ ], and then press [ ⏪ ] key until “Setup” menu appear on the screen.

### Setting the storage

- ① Select “Storage” from the Setup menu with [ ⏪ ] or [ ⏩ ] key and then press [ ⏪/⏩ ].



- ② Select a desired memory as recording media with [ ⏪ ] or [ ⏩ ] key and then press [ ⏪/⏩ ]:

- Nand Flash - Build-in flash memory (about 45MB)
- MSDC - Mini SD card
- U Disk - Minimemory storage (optional item)



- ③ Press [ ⏪ ] key back to Setup menu.

## Setting Operations

### Setting the record format

- ① Select “Record” from the Setup menu with [ **▶▶** ] or [ **◀◀** ] key and then press [ **●/▶** ].



- ② VSDV20L DVR combine with VSDV20L button camera

Select video + audio recording with [ **▶▶** ] or [ **◀◀** ] key to record video and audio, and then press [ **●/▶** ] :



Select video recording with [ **▶▶** ] or [ **◀◀** ] key to record video only, and then press [ **●/▶** ] :



- ③ VSDV20LM DVR combine with VSDV20LM button camera  
Select video + audio recording with [ >>> ] or [ <<< ] key to record video and audio in motion activation mode, and then press [ ●/▶ ]:



Select video recording with [ >>> ] or [ <<< ] key to record video only in motion activation mode, and then press [ ●/▶ ]:



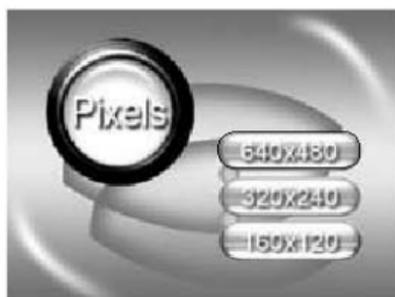
- ④ Press [ ⏪ ] key back to Setup menu.

### Setting the resolution

- ① Select “Pixels” from the Setup menu with [▶▶] or [◀◀] key and then press [●/▶].



- ② Select a desired image size with [▶▶] or [◀◀] key, and then press [●/▶]:



- ③ Press [◀] key back to Setup menu.

## Setting the display

- ① Select “Display” from the Setup menu with [▶▶] or [◀◀] key and then press [●/▶].



- ② Select a desired display with [▶▶] or [◀◀] key, and then press [●/▶]:

- LCD - Playback on LCD screen
- PAL - Playback on TV screen with PAL system
- NTSC - Playback on TV screen with NTSC system



- ③ Press [◀] key back to Setup menu.

## Setting Operations

### Setting the date and time

The date, hour and minutes are recorded onto the movie image.

- ① Select “Date/Time” from the Setup menu with [ ▶▶ ] or [ ◀◀ ] key and then press [ ●/▶ ].



- ② Select “Time stamp” to determine date/time stamp to be displayed in a recording file by ON or OFF.



- ② Select “Time set” to set the year, month, day, hour or minute item you want with [ ●/▶ ] key and then press [ ▶▶ ] or [ ◀◀ ] to enter the number:

dd-mm-yyyy

hh-mm



- ③ Press [ ◀ ] key back to Setup menu.

### Setting the format

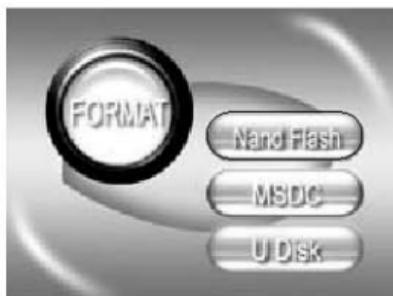
- ① Select “Format” from the Setup menu with [ ▶▶ ] or [ ◀◀ ] key and then press [ ●/▶ ] .



## Setting Operations

- ② Select a desired memory to be formatted with [▶▶] or [◀◀] key and then press [●/▶]:

- Nand Flash - Build in flash memory (about 45MB)
- MSDC - Mini SD card
- U Disk - Minimemory storage (optional item)



- ③ Press [↶] key back to Setup menu.

### Setting the LCD OFF time

- ① Select "LCD OFF" from the Setup menu with [▶▶] or [◀◀] key and then press [●/▶].



② Select LCD auto turn off time with [:] key, and then press [ ●/▶ ] :

- 1 minute
- 5 minute
- Never



③ Press [ ⏪ ] key back to Setup menu.

## Specifications

### ► VSDV20L/VSDV20LM DVR

Digital Screen	:	2" TFT LCD
Recording Formats	:	AVI
Recording Resolution	:	640 X 480, 480 X 240, 160 X 120 Pixels
Frame rate	:	30 fps
Built-in Flash Memory	:	45MB
SUB jack	:	High-speed USB 2.0
AV Input jack	:	3 rings with ø 2.5 mm
AV Output jack	:	3 rings with ø 2.5 mm

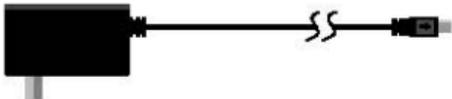
### ► VSDV20L Mini button camera

Imaging sensor type	:	1/3" color CMOS
TV System	:	PAL/NTSC/EIA
Horizontal definition	:	420 TV lines
Minimum illumination	:	3 LUX
Dimensions	:	34 x 22 x 10 mm
Power supply	:	DC 5V

### ► VSDV20LM Motion cativation camera

Imaging sensor type	:	1/3" color CMOS
TV System	:	PAL/NTSC/EIA
Horizontal definition	:	420 TV lines
Minimum illumination	:	3 LUX
Dimensions	:	34 x 22 x 10 mm
Power supply	:	DC 5V

**Accessories**

AV In/Out cable	 A black AV cable with three separate connectors on one end and a single connector on the other.
USB cable	 A standard black USB-A to USB-B cable.
Rechargeable Li-ion Battery 720mAh 960mAh (Option)	 A rectangular, silver-colored rechargeable Li-ion battery with a black label.
AC charger	 A black AC power adapter with a USB-B connector on one end and a USB-A connector on the other.
SD Card (Option)	 A black SD card with a white label that includes the 'max' logo and '1.0'.

Printed in China

Copyright © 2008 All rights reserved



Recycled paper

---