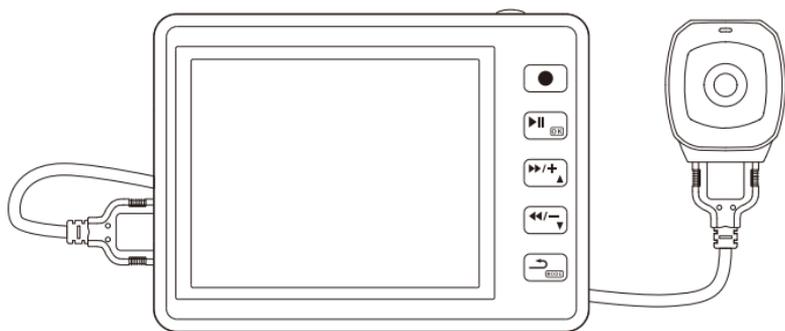# High Definition Video Camera

Split Type Mini Full HD DVR with 2.5"LCD

Full HD 1080P

(the camera will be different if you choose a non-pinhole HD camera)

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 of 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

Basic Operations

Table of Contents

System Setup

Specification

Accessories

Identifying the parts of the recorder
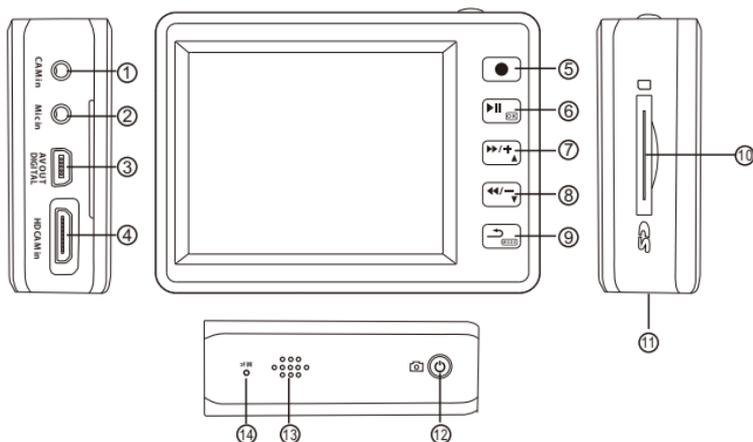
1. Extra camera in
2. External microphone in
3. USB port (2.0USB transfer/AV-OUT/wired control/DC-in)
4. HD camera in
5. Record
6. Play／OK
7. Up/Fast forward/EV +
8. Down/Fast backward/EV-
9. Return Menu/ Preview mode/playback mode
10. SD card slot
11. Tripod thread
12. Power/photo
13. Speaker
14. Built-in microphone

LCD screen indicators

1. Recording resolution
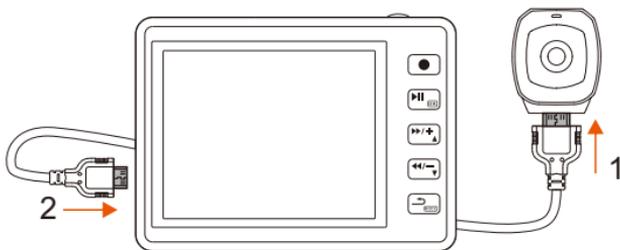2. Picture quality
3. Remaining time of memory
4. Motion detection symbol
5. Cycle recording symbol
6. Battery indicator
7. Date indicator (year/month/date)
8. Time indicator (hour/min/sec)
9. Remaining picture numbers

Other symbols
● REC   Recording
☐ 5M   Photograph/Pixels
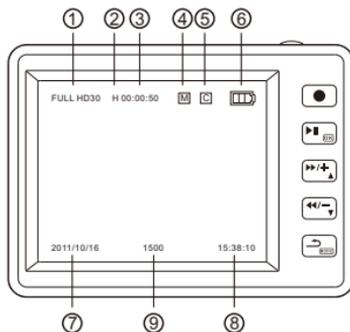
How to install the camera

1. Use mini HDMI cable to connect the camera
2. Connect the cable to DVR

Basic Operations

A. Installing the battery pack:

1: Open the back cover (refer to picture 1).
2: Insert the battery pack in the right direction (refer to picture 2).
3: Close the battery cover (refer to picture 3).
Remarks: If the recorder will not be used for a long time, please remove the battery.
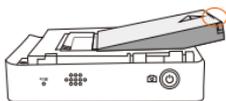
picture 1   picture 2   picture 3

B. Installing the SD card

1: Open the SD card slot cover.

2: Insert SD card with the " ▢ "mark facing toward the SD slot as illustrated (refer to picture 1).

C. Installing the camera

1: Insert the camera into recorder (refer to picture 2).

picture 1   picture 2

A: Start/Stop Recording
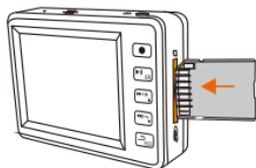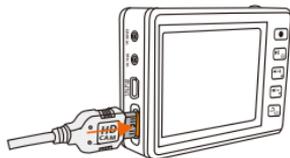
Press [⏻] button (hold on for 2 seconds) to switch on recorder.
Press [⏺] button to start recording.
Press again [⏺] button to stop recording and return to preview mode.

B: EV Adjustment
EV can be adjusted in record/preview mode
(as in the picture).
EV adjustment range:-1.7~+1.7
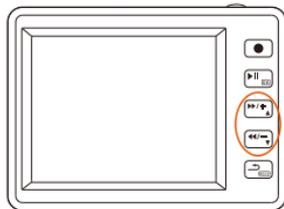
C: Record with a wired controller

1: Connect wired remote controller and device via DIGITAL port (refer to picture 1).
2: Press [REC] button on the wired control (hold for 2 seconds) to power DVR on.
3: Press [REC] to start recording, indication light of recording bright (red),recording (refer to picture 2).
4: In the process of recording, press [REC]on wired remote controller to stop recording, till indication light off, recording stop (refer to picture 3).

picture 1   picture 2   picture 3

4
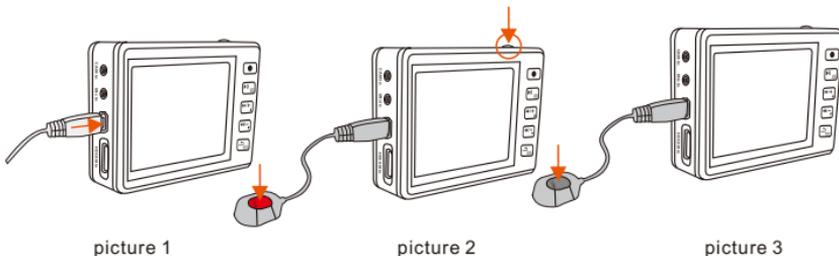
D: Using the Enhanced Wired Control (optional)

supports auto recording and stop recording on power

1: DC input: DC 10V~42V
2: Connect Enhanced Wired Controller to the DVR via USB port (refer to picture 1).
3: Connect Enhanced Wired Controller and DC 10V~42V power cable (refer to picture 2).

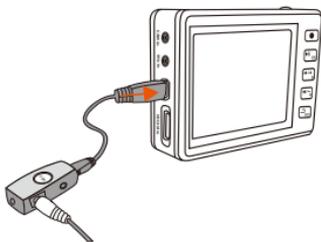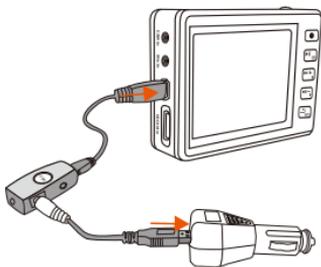picture 1   picture 2

Once device detects DC 10V~42V power supply, it will start recording automatically.
While recording, if the power supply stops, the device will stop recording automatically.
The stop recording delay time can be set in the system setup.

Note:
1: This function will depend on the system having a charged battery.
2: In stand by or recording mode, user can turn on LCD to preview.
3: In stand by or recording mode, user can connect device to another monitor to preview.
4: In recording mode, user can connect external MIC to device to enhance the audio quality.
Sound from internal MIC and external MIC will be recorded together.
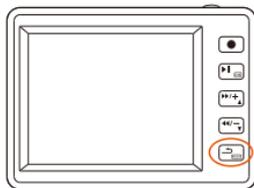
Taking Photos

1: Press [⏻] (hold on for 2 seconds)to power on DVR.
3: Press [⏻] to take photos.
*Photo Resolution: 5.0Mega Pixels; Photo Dimension: 2560x1920

How To Playback

Only in standby mode the videos could be played back
Press [🖾] to go to the playback list.
Press once again to shift the videos and photos
(refer to picture 1).

picture 1

Press arrow keys to choose the file to be played.
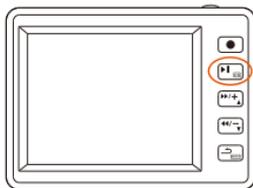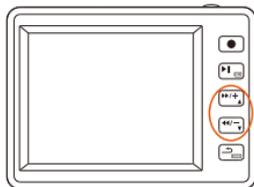
Press [🖾] to start playing.

During the playing back
Press Up and Down key to adjust volume.
Press left and right keys to fast forward or rewind.

To Delete a File

Choose the file you want to delete. Press and hold the "🖾" button for 2 seconds,
and then confirm to delete the selected file.

To Protect a File

Choose the file you want to protect. Press the " ⏻ " button, and then
confirm to protect the selected file.

Movie playback

Choose the movie and press [OK]

(Movie playback-1)

Press [OK] to play/pause;
Press [Right] / [Left] to fast forward
/ fast backward;
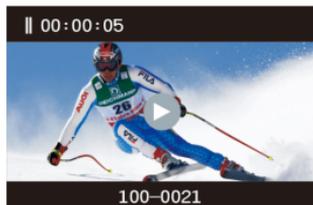
(Movie playback-2)

Photo Playback

Choose the photo and
press [OK] to show the selected picture.

(Photo playback-1)

Press [OK] to enter into a picture slide show;
Press [OK] again to stop slide show;
Press [Left] / [Right] to choose previous
/next picture.

(Photo playback-2)

HOW TO CONNECT

A. Power supply Connection

DC IN

Connect power supply to：DIGITAL jack on DVR
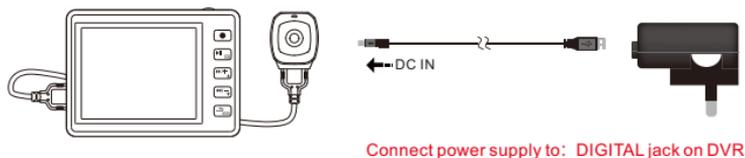
B. Connect to Computer via USB

USB

Connect USB cable to：DIGITAL jack on DVR
                      USB jack on Computer

C. Connect to TV via AV / OUT

AV OUT

Connect AV / OUT cable to：AV / OUT jack on DVR
                          AV / IN jack on TV
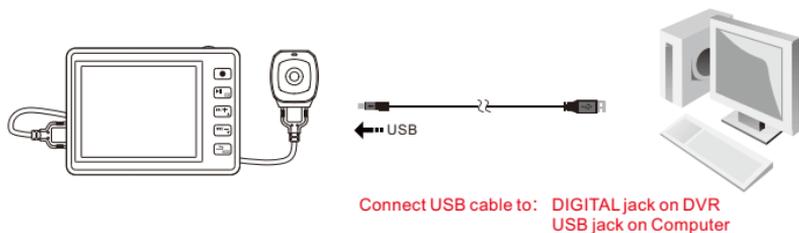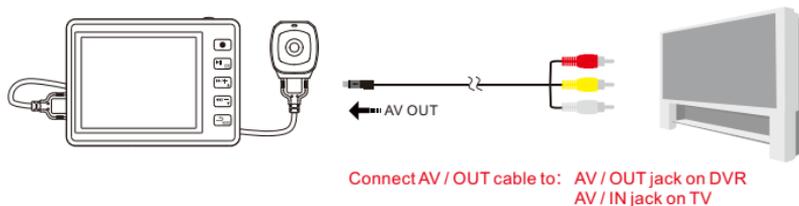
D: **External MIC Connection (Optional)**

MIC-IN

Connect external MIC to take more and better audios

System Setup

1: Press [⬚] times to enter system setup menu;
2: Use [UP] / [Down] to choose;
3: Press [OK] to confirm;
4: Press [⬚] to quit.

Resolution Setup

SYSTEM

▶ RESOLUTION

QUALITY

RECORD MODE

WHITE BALANCE
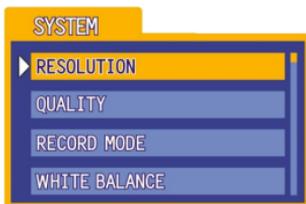
Display	Discription	Definition	fps
WVGA60P50	16: 9	WVGA 848x480	50
WVGA60P60			60
720P25	16: 9	720P 1280x720	25
720P30			30
1080P25	4: 3	1080P 1440x1080	25
1080P30			30
FULL HD25	16: 9	FULL HD 1920x1080	25
FULL HD30			30

Recording Quality Setup

SYSTEM
- RESOLUTION
- ▶ QUALITY
- RECORD MODE
- WHITE BALANCE
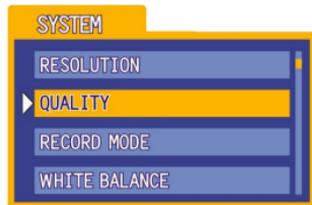
Resolution	Display	Bitrate	Resolution	Display	Bitrate
FULL HD 1920x1080	H	12Mbps	720P30 720P25 (1280x720)	H	8Mbps
	M	10Mbps		M	6Mbps
	L	8Mbps		L	4Mbps
1080P 1440x1080	H	12Mbps	WVGA 848x480	H	8Mbps
	M	10Mbps		M	6Mbps
	L	8Mbps		L	4Mbps

Record Mode Setup

Default Setting is PAL

SYSTEM
- RESOLUTION
- QUALITY
- ▶ RECORD MODE
- WHITE BALANCE
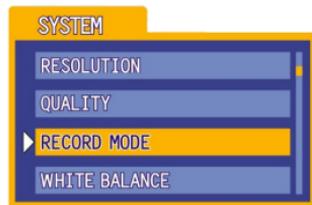
PAL	25 fps
	50 fps
NTSC	30 fps
	60 fps

White Balance Setup

Choose different white balance value under different conditions. Default is AUTO.

SYSTEM
RESOLUTION
QUALITY
RECORD MODE
▶ WHITE BALANCE

	AUTO
	Sunny
WHITE BALANCE	Cloudy
	Fluorescent
	Incandescent

External Microphone Volume Setup

Set the external microphone volume from 1 to 7; Default is 7.
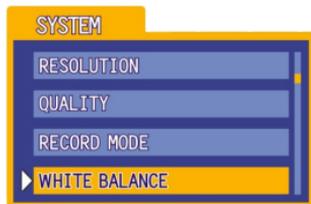When the external microphone is plugged in, audio from external
microphone and internal microphone will be recorded together.

SYSTEM
▶ EXTERNAL MIC VOL
INTERNAL MIC VOL
RECORD OVERWRITE
MOTION DETECTION
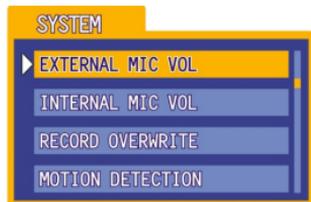
Internal Microphone Volume Setup

Set the volume of internal microphone from 1 to 7. Default is 7.
When the external microphone is plugged in, audio from external
microphone and internal microphone will be recorded together.

SYSTEM
EXTERNAL MIC VOL
▶ INTERNAL MIC VOL
RECORD OVERWRITE
MOTION DETECTION

Record Overwrite Setup

When Record Setup is active, there will be [C] on the screen.
Recorder will save a new file every 5 minute; When the SD card is nearly full,
system will delete the oldest file and replace it with new file.
Recommend to use this option together with the power adaptor.

| SYSTEM |
| --- |
| EXTERNAL MIC VOL |
| INTERNAL MIC VOL |
| ▶ RECORD OVERWRITE |
| MOTION DETECTION |

Motion Detection Setup

When motion detection is active, there will be [M] on the screen.
If any motion is detected, the system will start recording in 2 seconds.
Recommend to use this option together with the power adaptor.

SYSTEM
EXTERNAL MIC VOL
INTERNAL MIC VOL
RECORD OVERWRITE
▶ MOTION DETECTION
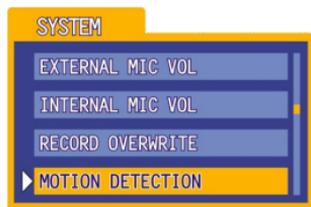
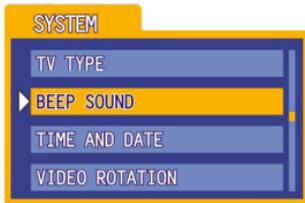| OFF	No Motion Detection
30 SEC.	Stop recording after 30sec, if no motion
1 MIN.	Stop recording after 1min, if no motion
3 MIN.	Stop recording after 3min, if no motion
5 MIN.	Stop recording after 5min, if no motion

TV Type Setup (PAL/NTSC)

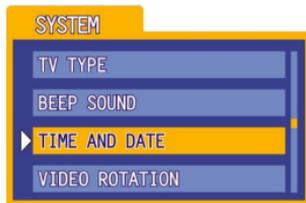To choose PAL/NTSC based on different countries.

SYSTEM
▶ TV TYPE
BEEP SOUND
TIME AND DATE
VIDEO ROTATION
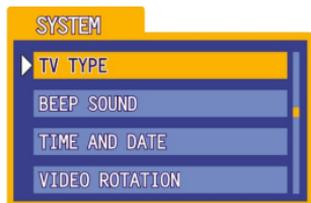
Beep Sound Setup

Choose [ON] / [OFF] to turn on/off the beep sound

```
SYSTEM
  TV TYPE
▶ BEEP SOUND
  TIME AND DATE
  VIDEO ROTATION
```

Video Rotation Setup

Choose [standard]/[inverted] to make the picture flip 180°

```
SYSTEM
  TV TYPE
  BEEP SOUND
  TIME AND DATE
▶ VIDEO ROTATION
```
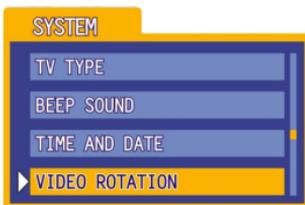
Time and Date Setup

Press On to enter into time and date setup; use [UP] / [Down] to increase or decrease the number and press [OK] to confirm.
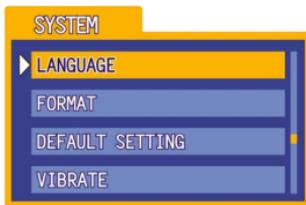
```
SYSTEM
  TV TYPE
  BEEP SOUND
▶ TIME AND DATE
  VIDEO ROTATION
```

Language Setup

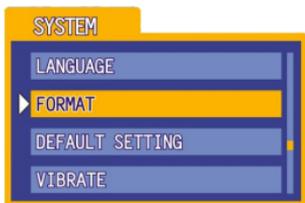Choose English/简体中文/繁體中文

```
SYSTEM
▶ LANGUAGE
  FORMAT
  DEFAULT SETTING
  VIBRATE
```

Format SD Card

To format the entire SD card
Please note: any files will be deleted included the locked files.

```
SYSTEM
  LANGUAGE
▶ FORMAT
  DEFAULT SETTING
  VIBRATE
```
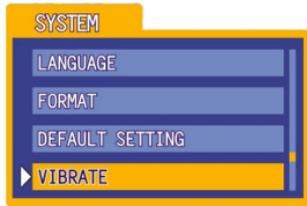
Default Setting Setup
Choose Yes, to restore the factory settings

SYSTEM
LANGUAGE
FORMAT
▶ DEFAULT SETTING
VIBRATE
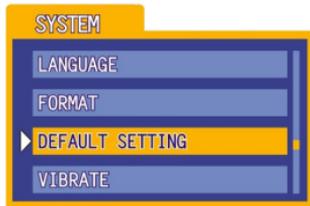
Vibration Setup
Choose [ON]/[OFF] to turn on/off the vibration indicator

SYSTEM
LANGUAGE
FORMAT
DEFAULT SETTING
▶ VIBRATE

Time Stamp Setup
If you choose the time stamp, then there will be a stamp showing the time on the video clip.

SYSTEM
▶ TIME STAMP
LCD AUTO TURN OFF
SPLIT MODE
FIRMWARE VERSION
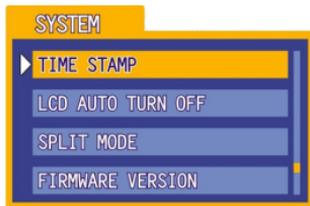
OFF	No time stamp
Date/Time	Date/Time format: 2011.01.01 21:21
Date	Date format: 2011.01.01
Time	Time format: 21:21

LCD Auto Turn OFF Setup
The LCD will enter into power-save mode after the set time

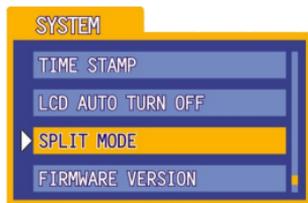| SYSTEM |
| --- |
| TIME STAMP |
| ▶ LCD AUTO TURN OFF |
| SPLIT MODE |
| FIRMWARE VERSION |
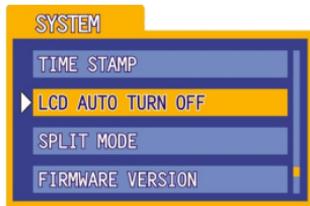
OFF	LCD will never turn OFF
30sec	LCD will turn OFF in 30sec
1min	LCD will turn OFF in 1min
5min	LCD will turn OFF in 5min

Split Mode Setup

System will save files every set time.
Please note: if the SD card is full system will stop recording.

SYSTEM

TIME STAMP

LCD AUTO TURN OFF

▶ SPLIT MODE

FIRMWARE VERSION

Default Setting	System will save file only when stop recording
2min	System will save files every 2minutes
5min	System will save files every 5minutes
15min	System will save files every 15minutes
30min	System will save files every 30minutes

Firmware

To check the firmware version

SYSTEM

TIME STAMP

LCD AUTO TURN OFF

SPLIT MODE

▶ FIRMWARE VERSION
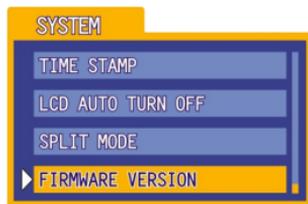
DVR

Digital Screen	2.5" 960×240 TFT LCD
Recording Format	MOV
Codec	H.264
Recording Resolution	1920X1080(30/25 fps)
	1440X1080(30/25 fps)
	1280X720(30/25 fps)
	848X480(60/50 fps)
Photo Resolution	2592*1944
Battery	3.7V 1400mAH (2.5hours recording)
Storage	Support Max: HCSD 64G(Class 4) (30mins for 4GB card @ Full HD)
AV Output Jack	USB Port
Camera in	ø2.5mm, RCA, 5V 300mA Out
1/4"-20 thread	Yes
USB Jack	High-speed USB2.0
DC Input	DC 5V 1.5A
External Microphone	3 rings with ø2.5mm
Dimension	75×55×20mm

Camera

Camera Degree	62°(140°: for a non-pinhole camera)
Low light Sensitivity	3LUX
Cable Length	1.5m
with back clip	

AC Wall Charger

Back clip cover

USB Cable

Wired Control
*with 2 Magic pads
*cable length:1.5m

AV Out Cable

Button Cover
(only for pinhole camera)

1400mAH Battery

2 bags of extra buttons
(only for pinhole camera)

DVR Holster

High Definition Video Camera

Split Type Mini Full HD DVR with 2.5"LCD

Full HD
1080P

(the camera will be different if you choose a non-pinhole HD camera)