



Endoscope Digital Video Recorder (SDV-02) User Manual





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IMPORTANT INFORMATION

Before you use the product, please read and retain the instruction. We do not assume any liability arising out of improper operation.

GENERAL INFORMATION

Endoscope DVR(Digital Video Recorder)

- Professional borescope
- Portable Media Recorder and Player
- Long duty hour
- 3.5" Extra-wide view angle TFT

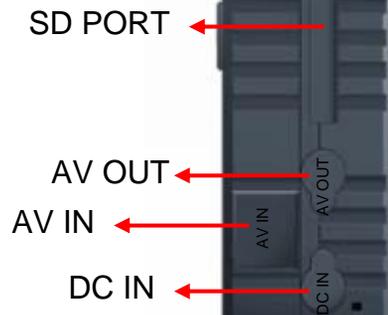
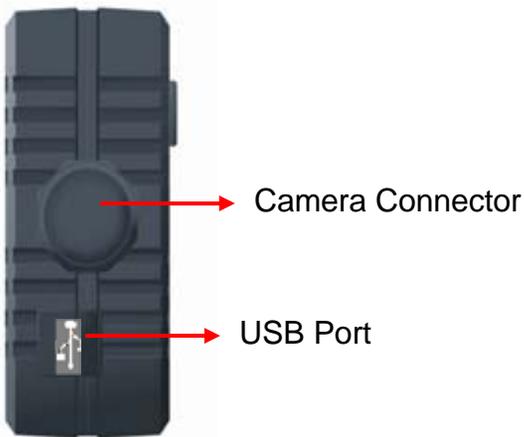
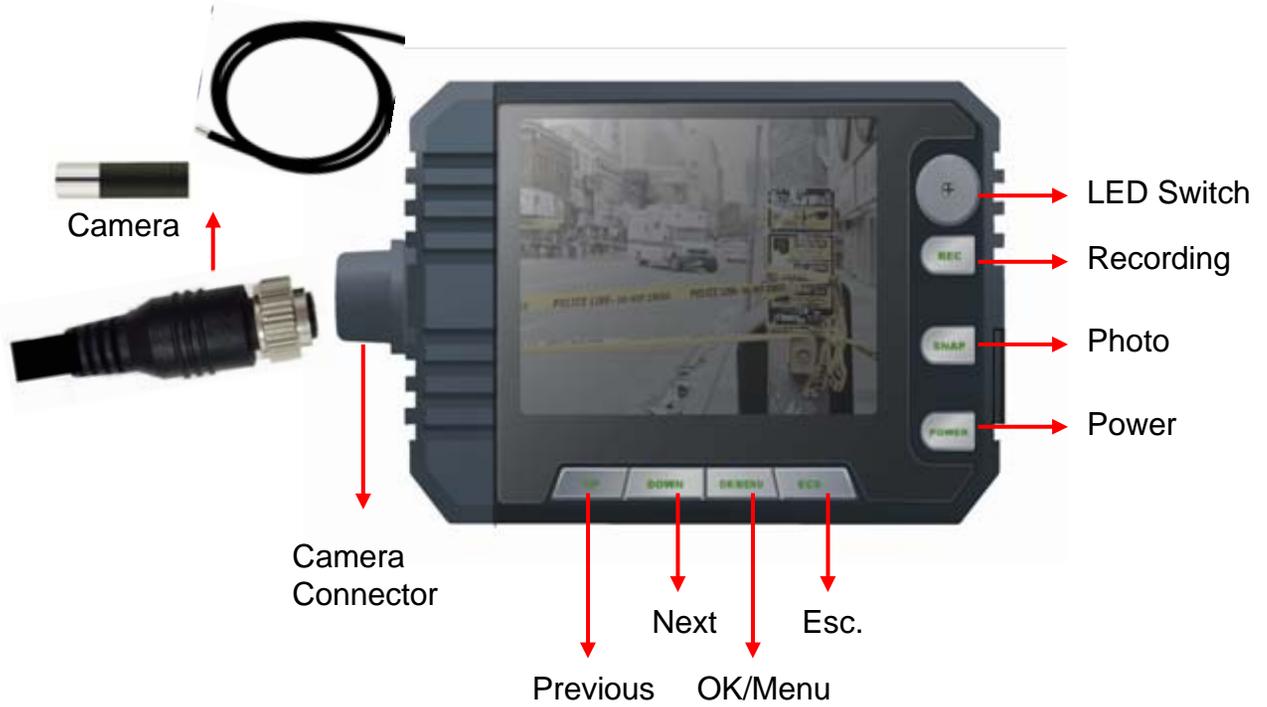
Main Features

- Support Mini USB 1.1
- Recorded data can be transferred into PC to play.
- It can play PC media files on TV through DVR.
- Support external memory card - SD card (Up to 2G)

➤ WARNING

Only 5V adapter is acceptable, please do not connect any other adapter or it may cause of serious damage.

PRODUCT OVERVIEW





INTERFACE DESCRIPTION

This device contains three modes :

Preview mode	The DVR will be in preview mode when power on. While the camera is connected with DVR, the DVR screen will display the real-time image. You may start the video recording or snap photos under this the mode.
Review mode	To review recorded files.
Menu mode	DVR settings and file management.

Notes: When DVR is in the function mode, it will automatically go back to preview mode if there is no action taken in 10 seconds.



BUTTON USAGE



Function Key	Preview Mode	Review Mode	Menu Mode
UP	Enter review mode to review saved files.	Go to last photo or video file.	Move cursor up to select a function.
DOWN	Enter review mode to review saved files.	Go to next photo or video files.	Move cursor down to select a function.
OK/MENU	Enter menu mode.	Delete photo or video files.	Enter the selected function.
ESC	Go back to preview mode.	Go back to preview mode.	Go back to preview mode.
REC	Start and stop video recording.	Go back to preview mode.	Go back to preview mode.
SNAP	Take photos.	1. While reviewing photos, it functions as "Next." 2. While playing video, it functions as "Start/Stop playing."	Show software information (for DVR maintenance use only.)

FUNCTION SELECTION

Menu



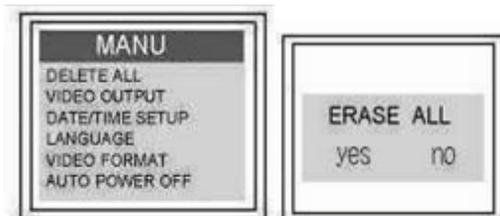
Press MENU to enter function selection. Press UP or DOWN to move cursor to make selection and press OK to enter the selected function.

There are six functions under menu, a brief introduction for each function is as follow:

DELETE ALL
VIDEO OUTPUT
DATE/TIME SETUP
LANGUAGE
VIDEO FORMAT
AUTO POWER OFF

DELETE ALL

When enter the delete function, the screen will show up a "yes" "no" box, press UP or DOWN to make yes or no selection, press OK to delete file or quit.



VIDEO OUTPUT

While the DVR is connected with TV (please use AV out cable), the video image may be switched between TV and DVR screen under this function.



DATE/TIME SETUP

To setup date and time, please press UP or DOWN to move between year/mon/date, and hour/min/sec. Press REC to adjust the number. Select the Display ON/OFF for time to or not to show on the snapped pictures.



LANGUAGE

Select language for DVR operation. Currently only English is available.



VIDEO FORMAT

For TV output format setting, NTSC/PAL.

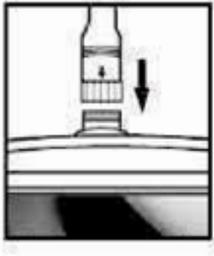
AUTO POWER OFF

To setup a time for auto shut down for power saving.

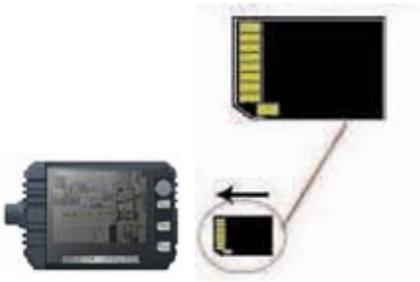


OPERATING DVR

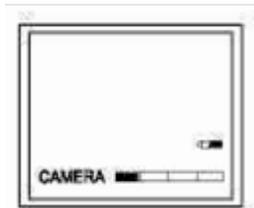
BASIC OPERATION



1. Please connect camera with DVR and screw it up.

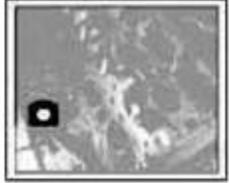
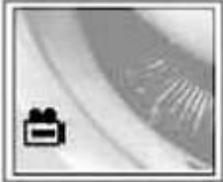


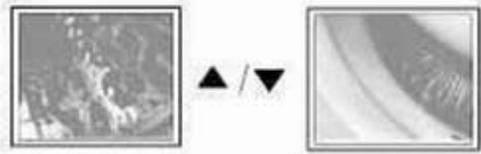
2. Insert SD into SD port, please mind the insertion direction of SD card.



3. Press  (power button) **3 seconds** to turn on/off DVR. The SD and power volume will show on the screen while power on and disappear after 5 seconds.

OPERATING DVR

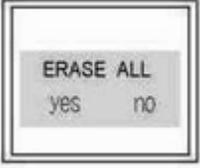
<p>SNAP</p>	<p>Under the preview mode, press “SNAP” button or hold it, the screen will continually display the photo.</p>  <p>Status: After finishing snapping, the screen will go back to preview mode automatically.</p>
<p>REC (Recording)</p>	<p>1. Under the preview mode, press “REC” button to start recording.</p>  <p>Status: The recording sign displayed at the left bottom corner shows it's recording.</p> <p>2. Press “REC” again to stop the recording.</p> <p>Status: The recording sign will disappear at the left bottom corner while the recording ends.</p> <p>Reminder: No matter it's under the displaying mode or function mode, simply just press “REC” button to go back to preview mode to take a snap shot or record the video.</p> <p>Attention: Press “SNAP” button during the recording, the recording will be stopped and the file will be saved immediately, then a snap shot will be taken.</p>

<p>View Photo and Video</p>	<div data-bbox="625 310 1106 464" data-label="Image"></div> <ol style="list-style-type: none">1. Under the preview mode, press “UP “ or “DOWN” <p>Status: It will display the previous photo or Video.</p> <ol style="list-style-type: none">2. Then, press “UP” or “DOWN” to view the previous or next photo or video. <p>Status: The files are arranged in the sequence of video/photo taken time.</p> <p>Addition: When switch to the Video File, the DVR will automatically play the Video file till the end, and then go back to next photo or Video.</p>
<p>Date/ Time Setup</p>	<ol style="list-style-type: none">1. Press OK. <div data-bbox="719 1087 963 1297" data-label="Image"></div> <div data-bbox="986 1087 1230 1297" data-label="Image"></div> <ol style="list-style-type: none">2. Press “UP” or “DOWN” to switch to DATE/TIME. <ol style="list-style-type: none">3. Press “OK” button. <ol style="list-style-type: none">4. Press “SNAP” (increase) or “REC” (decrease) to adjust the year. <ol style="list-style-type: none">5. Press “DOWN” to move the blinking square to the next to-be-adjusted item. <ol style="list-style-type: none">6. Repeat Step 4 and 5 until the DATE/TIME are correct. <ol style="list-style-type: none">7. After finishing the setting, Push “OK” to quit.

<p>Display or Hid DATE/TIME</p>	<ol style="list-style-type: none">1. Press "OK" button2. Press "UP" or "DOWN" to switch to "Date/Time"3. Press "OK"4. Press "UP" or "DOWN" to switch to Display Option5. Press "SNAP" to switch between this function. <p>Status: Push "SNAP" once to switch to "on" and push again to "off."</p> <ol style="list-style-type: none">6. After finishing setting, Push " OK " to end setting.7. Press "ESC" to go back to preview mode. <p>P.S.: When settled time displays on the monitor, the time information will be showed on the snapped photos as well.</p>
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<p>Video Out/In to an External Monitor</p>	 <ol style="list-style-type: none">1. Plug AV cable into the AV port on the right side of DVR. <p>Note: Please correctly plug another end of connector into an external monitor.</p> <ol style="list-style-type: none">2. Press "OK"3. Press "UP" or "DOWN" to switch to Video Output function.4. Press "OK," the images will be sent to the external monitor. <p>Note: This function will automatically detect whether the AV cable has been plugged, if the AV cable is not plugged and implement this function, the images will be automatically switched back to the DVR screen .</p>
<p>Adjust Video-Out Format</p>	<ol style="list-style-type: none">1. Press "OK"2. Press "UP" or "DOWN" to switch to Video Format.3. Press "OK"4. Press "UP" or "DOWN" to select NTSC or PAL.5. Press "OK"

<p>Delete a Single Picture (only in Preview Mode)</p>	<ol style="list-style-type: none">1. Enter Preview Mode, press “UP” or “DOWN” to select picture or video which you want to delete.2. Press “OK” (“YES” “NO” box will show up)3. Press “UP” or “DOWN” to delete the pictures (“YES” is flashing at this moment)4. Press “OK” again and the picture will be deleted. <p>2 ways to cancel deletion:</p> <ol style="list-style-type: none">a. Press “ESC”b. Press “UP” or “DOWN” once again and then press “OK”
<p>Delete All Pictures</p>	  <ol style="list-style-type: none">1. In preview mode, press “OK” (MENU shows up)2. Press “UP” or “DOWN” to select “Delete All” function.3. Press “OK” again to enter this function.4. Press “UP” or “DOWN” to switch to “YES”5. Press “OK” again to delete all files.



The important safety instruction ought to be read before operating the product.

Electricity sound or smoke comes from AC adapter, it causes of electric shock and fire. In occasion, please turn off the power and plug out the AC immediately
If AC adapter is broken, the product temperature will increase it cause of damage the product and break down. Plug out the adapter from wall outlet immediately.
Use provided power source. Do not use other power sources it causes of fire or electric shock.
Do not touch AC adapter with wet hand.
Do not unplug the connection cord; take out main body of Adapter.
Do not bend or twist the cable, it causes of fire or electricity shock
Do not load any things on the power; it damages the cord and cause of electricity shock.
Use 110V or 220V only.
Do not use damaged cable, it causes of fire and electricity shock.
For added protection, if there is lighting or storm, please unplug the AC adapter it may be risk of electric shock or serious injury
If there is lighting outside, do not touch and reach to adapter.
Do not use either damaged product or malfunction state, it cause of fire or electricity shock. Unplug the power immediately. Do not try to fix the product yourself.
Please pull out connection cable and unplug when you carry DVR
Do not fall the product and keep children away. It causes of breaking the product.
Do not use the cable inadequate way such rolling neck with cable and do not give to who under 3 years
Do not replace or dismantle the product, it cause of hazard
Do not use in inadequate place or purpose, it causes of damage of product
While carrying the product, please unplug AC adapter.
Do not drop the product
While carrying DVR, be careful with shock. It could be main reason of breaking down
Do not place the product or cable near heat places.
If it is not used for a longer period of time, please unplug the AC adapter for the safety.
If you do not use for a long period, turn off the DVR and unplug the AC adapter.
Be careful with +, - of DC Jack.
If the memory card is not ejected correctly, contact technical support immediately. Do not force the card in/out of the slot as this could damage the memory card and or the unit itself.



SPECIFICATION

Insertion Tube & Light Source Specification

Image Sensor	CMOS Image Sensor
Resolution (Dynamic/Static)	320(H)*240(V) / 640(H)*480(V)
Size (Tip, insertion tube diameter)	Ø 6 mm
Frame rate	-30 fps
S/N Ratio	42 dB
Exposure	Automatic
White balance	Fix
Field of view (FOV)	67 °
Depth of Field (DOF)	1.5cm~10cm
Light Source	4 White LED

System Specification

Power	DC5V
Display	3.5" TFT LCD Monitor 320*240 Pixels
Interface	Mini USB 1.1 / AV out
Battery	Rechargeable Li-Polymer Battery (3.7V)
Video Output Format	NTSC & PAL
Recording Media	SD card (up to 2G)
Compression Format	MPEG4
Still Image Storage Format	JPEG (640*480)
Video Recording Format	ASF (320*240)
Language	English



Operating Temperature

DVR Operating temperature	-20 ~ 60 °C
Insertion tube operating temperature	-20 ~ 70 °C
Preserving temperature	-20 ~ 60 °C
Environment temperature when charging the device	0 ~ 40 °C

Function

Quick Snap
Quick Video Recording
Quick Review
AV Out
Video / Picture Viewer

List of Accessories

DVR
Insertion-Tube Camera
USB Cable
AV Cable
5V Adapter
Aluminum Carry Case