



# MD90 User Manual

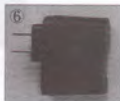
(Version 1.0)



Thank you for purchasing MD90 DV recorder. To ensure correct use, please read this manual carefully. This recorder can be used as a mini DVR and a photo camera. It's easy to operate, and popular in the fields of business, education, security, evidence taking, law enforcement, network video chat, etc.

### Packing Contents:

- |                  |                    |
|------------------|--------------------|
| 1.MD90 main unit | 4.CD               |
| 2.USB cable      | 5.Clip and bracket |
| 3.User manual    | 6 .Power adapter   |



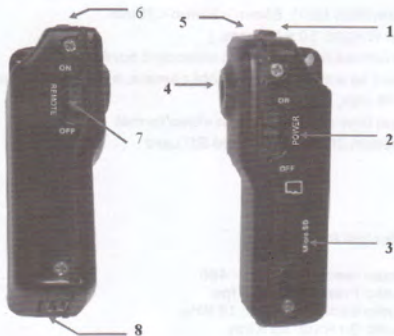
## Features

- . Size(Main Unit): 55mm×20mm×20mm
- . Net Weight: 50 g (approx.)
- . Advanced high definition video and pure audio
- . Used as a mini DVR, a photo camera, a PC camera, an USB disk, etc
- . Real time recording in avi video format
- . Support 2G /4G /8G Micro SD card

## Technical Parameter

- . Video resolution: 640×480
- . Video Frame Rate: 30 fps
- . Audio Sampling Rate: 16 KHz
- . Audio Bit Rate: 65 Kbps
- . Battery: Lithium-ion
- . Battery Run Time: Over 100 minutes
- . USB interface: USB 1.1

## Overview :



- |                          |                 |                       |
|--------------------------|-----------------|-----------------------|
| 1. Record/Stop Button    | 2. Power Switch | 3. Micro SD Card Slot |
| 4. Lens                  | 5. Mic          | 6. Indicator lights   |
| 7. Remote Control Switch | 8. USB Jack     |                       |

**Note: For non remote control operation, please put the Remote Control Switch to OFF position.**

## MD90 Operation Guide

(For main unit operation without remote control, please put the Remote Control Switch to OFF position. For remote control operation guide, please refer to the files included in CD.)

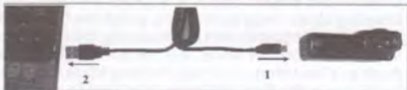
### 1. Insert Micro SD Card

Before you turn on the recorder, be sure to insert a compatible Micro SD card into the slot. Without the card, the recorder will not function work, and the red and green lights will twinkle. After a few seconds, the recorder will shut down automatically.

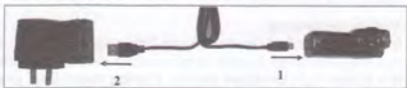
### 2. Charge the battery:

MD90 has an internal, rechargeable battery. Before you can start using the recorder, you must charge the battery first. The battery can be charged by following ways:

#### 1) By connecting to PC:



#### 2) By power adapter:



During charging, the red light twinkle, when the battery's power is full, the red light keeps on.

### 3. Turn on/off the recorder:

Put the **Power Switch** to "ON" position, the recorder will turn on, the red light is on for a few seconds, and then the blue light turns on. Now the recorder is in Video Record Standby Mode.

At any time, move the **Power Switch** to "OFF" position, will turn the recorder off.

**Note:** if you move the **Power Switch** to "OFF" position during recording, the current recording file will not be saved. Please save the file first before turn off the power. File saving time will be longer if the recording time is longer, please wait patiently.

### 4. Video/Photo mode switching:

**Enter Video Mode:** Every time you turn the recorder on, it will be entered Video Record Standby Mode, the blue light is on.

**Enter Photo Mode:** When the recorder is in Video Record Standby Mode (blue light is on), press the Record/Stop button 3 times quickly and continuously, the recorder will enter Photo Standby Mode, and the green light will be on.

**Back to Video Mode:** In Photo Standby Mode (green light is on), press the Record/Stop button 3 times quickly and continuously, the recorder will back to Video Record Standby Mode, the blue light is on.

### 5. Video recording:

In Video Record Standby Mode (blue light is on), Press the **Record/Stop** button once to start video recording, the green light twinkles slowly. During recording, press the **Record/Stop** button again, will stop recording, and start saving the recorded video file. After file saving finished, the blue light turns on and waiting next recording.

If the continuous recording time is over 30 minutes, the recorder will save the current recording file, and then restart video recording automatically.

**Note:** To obtain perfect video, please place the recorder under enough illumination. Keep the recorder toward the target, and at least 50cm from the target.

### 6. Photo taking:

In Photo Standby Mode (green light is on), Press the **Record/Stop** button once to taking a photo, the blue light twinkles quickly during the photo taking.

#### **Notice:**

To obtain clear picture, please keep the recorder static and not shake during photographing.

### 7. Time setting

You can set or correct the time by following steps:

Edit a text file according to the format of "**TIME,2009/05/05/20:07:30**", Save the file as a text file and named it **TIMECFG.TXT**, then put this file under the root directory of the **recorder memory** when the recorder is connected to computer. When you power on the recorder, the time will be set up automatically.

The system time will be shown on the right bottom of recorded video or photo.

\*A sample file "timecfg.txt" is included in the CD, you can modify and use it directly

### 8. Connecting to PC

**. Connect the recorder to a computer:** When the recorder is in Standby Mode or shut down, you can connect the recorder to a computer by USB cable. The red light will be on at this time, after a while, a removable disk symbol will appear on the computer screen. The red light will twinkle (charging battery), or will keep on (battery power is full).

- Note: 1).** Please connect the recorder and computer firmly and securely. If no response for 30 seconds after connected, please disconnect the recorder, and reconnect again.
- 2).** Please do not connect the recorder to computer during video recording or photo taking.

**. Function as a removable disk:** When connect the recorder to PC, you can copy, move, or delete files stored in the micro SD card.

**Note:** It is highly recommended to copy the recorded video files into the hard disk of computer, and then to playback. Because of large amount of data flow, directly playback the video files stored in micro SD card, may cause the playback not smoothly.

**. Function as a PC camera:**

Before the first use as a PC camera, please install the driver named "USB Camera Driver V1.102.exe", which is included in CD. Move the cursor to this file, double-click to execute it, and then follow the installation tips to complete installation. When the recorder is shutdown, press and hold the Record/Stop button, and connect the recorder to the computer, after a while the USB video device sign will appear on the screen, release the button, and now you can use the recorder as a PC camera

**9. Auto power off function:**

The recorder will shut down automatically in following three conditions:

**. The battery's power is low** (at this time, the red light will twinkle for seconds, and then the recorder will save the file and shut down automatically)

**. The memory of the recorder is full** (at this time, the blue and red light will twinkle for seconds, and then the recorder will save the file and shut down automatically)

. When the recorder is in Standby Mode, without any operation for 5 minutes, the recorder will shut down to save power.

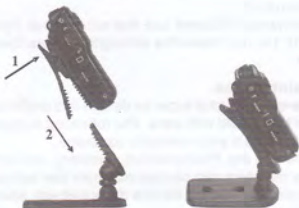
## 10. Installation:

With unique clip design and flexible installation, MD90 can be fixed on the backpack, hat, pocket, collar and other suitable locations per various monitoring demands.

1) Load the recorder into clip:



2) Load clip into bracket:



- 3 ) Unique bracket design can support wide angle shooting, pan: 360, tilt: 150, bracket can be mounted with nails, screws, or Velcro.



### Remarks

**Suitable situation:** Please follow State's law. Do not use the recorder illegally.

**Software update:** Please ask your distributor for software updating information..

**Record temperature:** Natural temperature

**Record humidity:** Natural humidity for life. This is not a waterproof product.

**Record luminance:** Please use the recorder at lightful environment. Do not make the strengthen rays focus on the recorder.

### Care and maintenance

Your device is a product of superior design and craftsmanship and should be treated with care. The following suggestions will help you protect your warranty coverage.

- Keep the device dry. Precipitation, humidity, and all types of liquids or moisture can contain minerals that will corrode electronic circuits. If your device does get wet, allow it to dry completely.

- Do not use or store the device in dusty, dirty areas. Its moving parts and electronic components can be damaged.
- Do not store the device in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the device in cold areas. When the device returns to its normal temperature, moisture can form inside the device and damage electronic circuit boards.
- Do not attempt to open the device.
- Do not drop, knock, or shake the device. Rough handling can break internal circuit boards and fine mechanics.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the device.