

**AJ-FDV2200**

**Ajoka**  
Micro surveillance solutions

## **FLASHLIGHT CAMERA**



## **USER MANUAL**

**IMPORTANT:**

**READ THESE INSTRUCTIONS BEFORE USE AND RETAIN FOR FUTURE REFERENCE.**

## **I. INTRODUCTION**

Thank you for purchasing AJ-FDV2200 Flashlight Camera. This manual details the operation of the product. Please read it carefully and keep it for future reference.

AJ-FDV2200 is a flashlight digital video recorder, which is an Innovative ALL-IN-ONE PORTABLE solution for Flashlight, Camera and Digital Video Recorder. It is ideal for instant MPEG4 Video Recording for Security Applications.

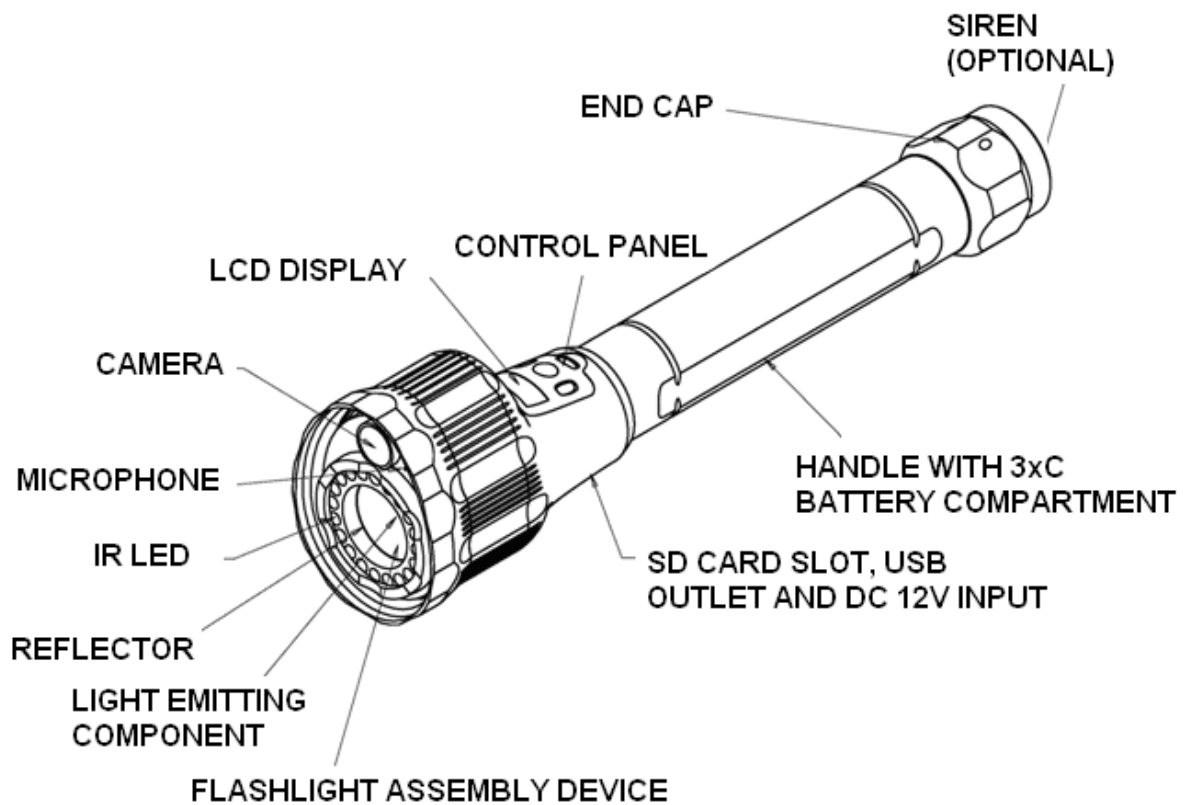
## **II. FEATURES**

- High powered White LED flashlight
- Highly Durable with precision tooled aluminum housing
- Compact size and portable DVR System
- Support up to 2GB external Mini SD Card flash storage
- MPEG4 Video Recording
- Support 1.5 Hours VGA recording with 1 GB Mini SD card
- Built-in CMOS Color VGA Sensor (640x480)
- Night Vision support
- Backup using USB1.1 compatible interface
- Easy operation with one touch control
- LCD Status Display with backlight
- Clock Display
- Built-in Ni-MH Charger (12V input)

## **III. PARTS INCLUDED**

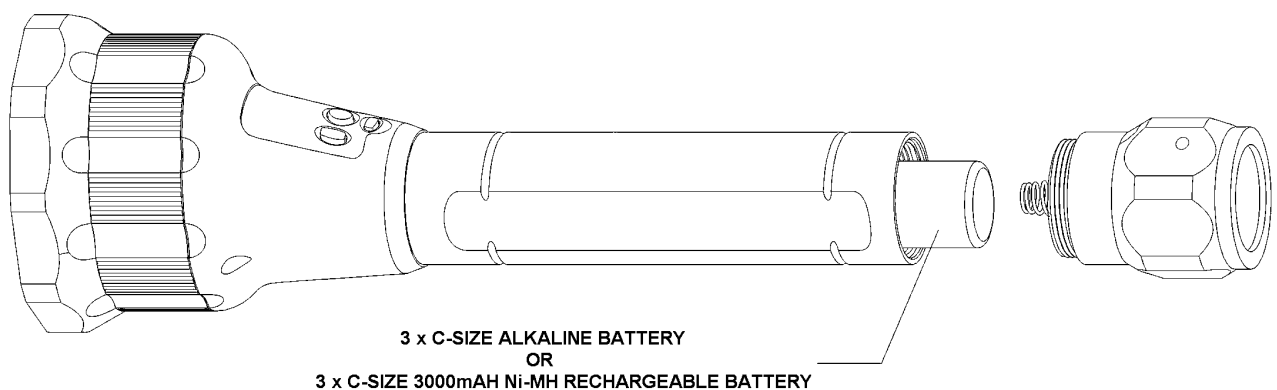
- 1 x Flashlight Camera
- 1 x USB Cable
- 1 x User Manual
- 1 x 12V AC-DC Adaptor for Charging (Optional)
- 1 x Cigarette Lighter Charging Plug (Optional)

#### IV. Functional Block Diagram



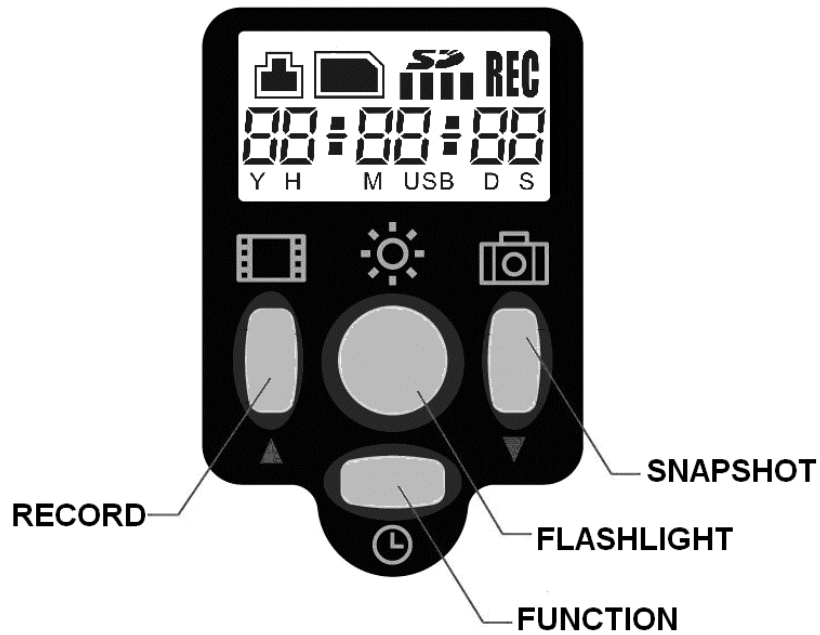
#### V. Before Use





Remove the End Cap of AJ-FDV2200 and install 3 pieces of C-size Ni-MH rechargeable battery or 3 pieces of C-size alkaline battery (battery not included). Tighten the end cap afterwards.



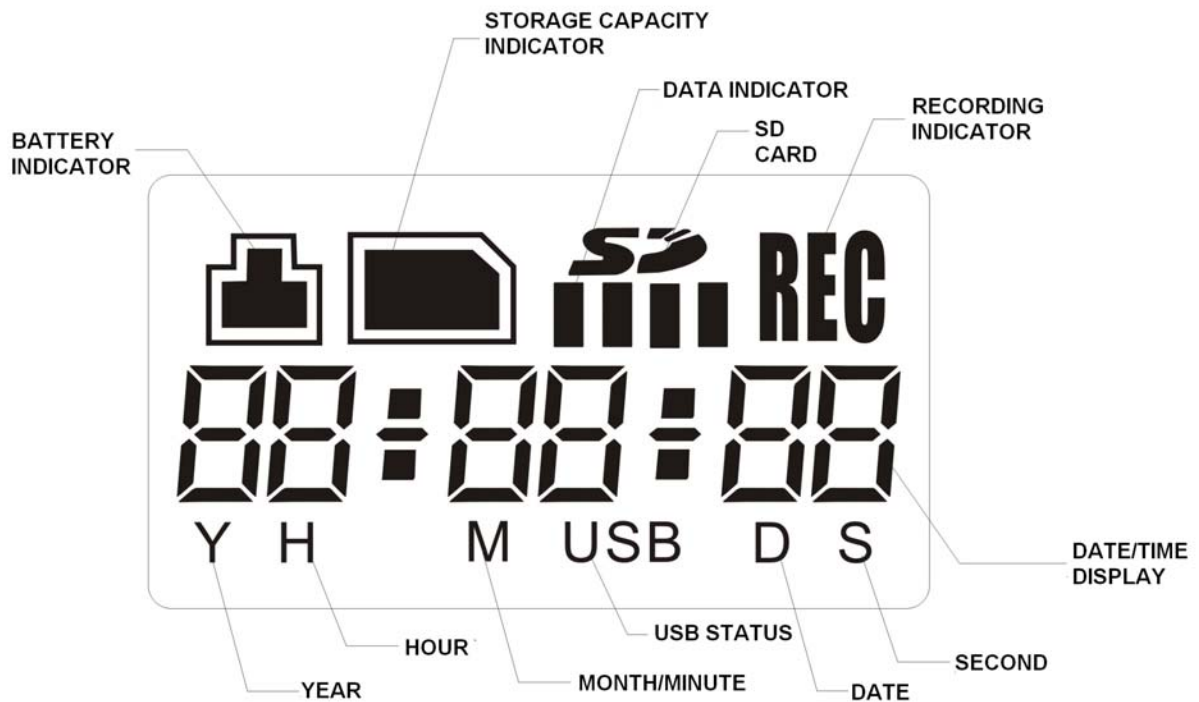
## VI. Operation Buttons

There are 4 buttons on the control panel as below:



1. Flashlight button 
2. Function button 
3. Record button  ▲
4. Snapshot button  ▼

## VII. LCD Display




## Mode of Operation

### A. Time/Date Display

When batteries are installed to the unit, it will enter the Time Display Mode, as stated below:









### A. Date Display


Press Function button  to enter Date Display mode. For example, 2007-January-01 will display as below:




Press Function button again to back to Time Display mode.







### B. Time Adjustment


Under Time Display mode, press Function button  for 2 seconds to enter the Time edit mode. The number indicated Hour will flash and can be edited using  and  buttons. Press  button will increase the number by 1 while press  button will decrease by 1. After that the adjustment, press  button once again to store the Hour value and enter the Minutes editing. The adjustment method is the same as adjusting Hours.


Press  button to save the Minutes adjustment and enter the Seconds editing.

After the adjustments to Seconds, press  button to save all adjustments and quit to Time Display mode by displaying the adjusted Time.

### C. Date Adjustment

Under Date Display mode, press Function button  for 2 seconds to enter the Date edit mode. The number indicated Year will flash and can be edited using  and  buttons. Press  button will increase the number by 1 while press  button will decrease by 1. After that the adjustment, press  button once again to store the Year value and enter the Month editing. The adjustment method is the same as adjusting Year.

Press  button to save the Month adjustment and enter the Day editing.

After the adjustments to Day, press  button to save all adjustments and quit to Date Display mode by displaying the adjusted Date.

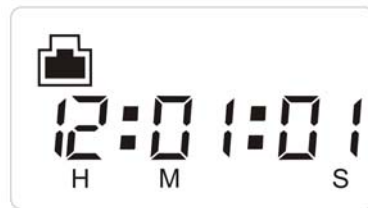
## B. Battery Indicator



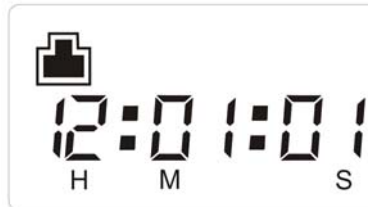
Empty Battery Indicator means the battery is empty and not sufficient for operation. Need immediate charging (for rechargeable battery) or battery replacement (for alkaline battery).



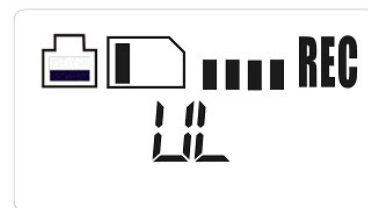
Battery Indicator with one slot lighted up indicates the battery is of low charge. When taking video or snapshot, the system may not be working properly. It recommends immediately charging (for rechargeable battery) or battery replacement (for alkaline battery).



The battery level is normal and will have 2 slot lighted up on Battery Indicator.




A full Battery Indicator indicates the battery is fully charged.

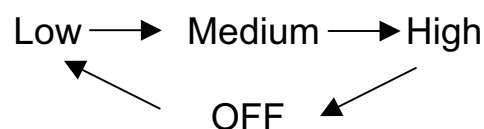


When 'U L' is shown on the screen, it indicates that the battery is running low and the unit may not function properly. Please recharge your batteries (see paragraph X for instruction) or replace with new batteries.

## C. Flashlight

The unit has 3 levels of brightness, that is, Low, Medium and High. When batteries are installed to the unit, the flashlight is under OFF mode.

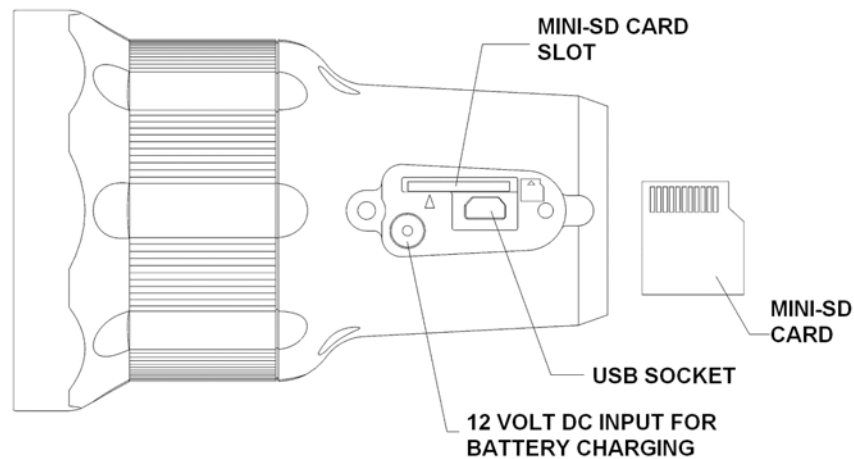
Press Flashlight button  once will change the brightness of the Flashlight and the function will cycle for every press as followings:




## D. Snapshot

AJ-FDV2200 supports 128MB to 2GB Mini-SD Card. When Mini-SD Card has installed, the unit will automatically select the Mini-SD Card as the storage media. If Mini-SD Card is not installed, the unit will use the internal 100MB out of 128MB memory for Video and Snapshot storage.

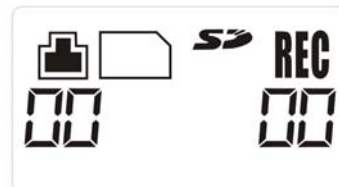
Insert the Mini-SD card into the Mini-SD card slot as stated below. Please make sure the orientation of Mini-SD card is correct.




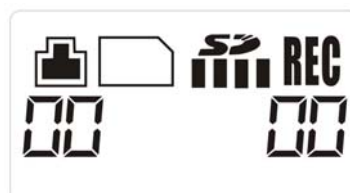
To enter the snapshot mode, press  for 2 seconds, the LCD will display the SD Card data indicator will flash as below for around 10 seconds:



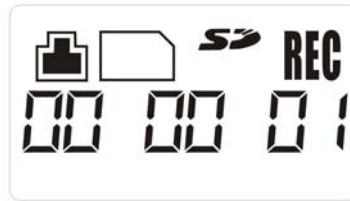
After the data indicator disappeared, the unit has entered the snapshot mode, with LCD displaying 0 as below:




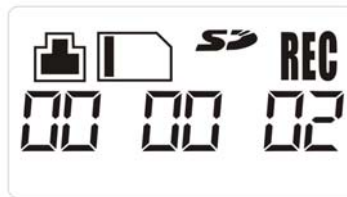
Point the camera to the object and then press  to take the photo. The data indicator will flashing under the SD logo:



Please be patient while the unit is storing the picture. Once the data indicator disappeared, the picture storage is ended. The left most display indicated 1, that means there is one picture being stored:




Press  once to take the second picture. The data indicator will flash. After that the display will show as follow:



If you want to quit the snapshot mode, Press  for 2 seconds and it will come back to the Time display.

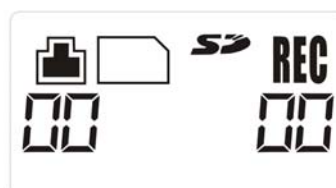



## E. Video/Audio Recording

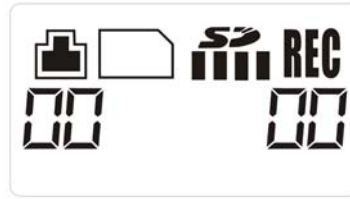
To enter the video/audio recording mode, press  for 2 seconds, the LCD will display the SD Card data indicator will flash as below for around 10 seconds:



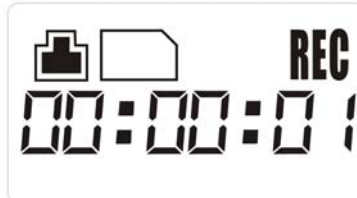
After the data indicator disappeared, the unit has entered the video/audio recording mode, with LCD displaying 0 as below:




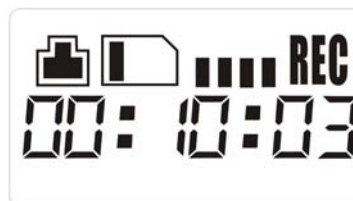
Point the camera to the object and then press  to start the video/audio recording. The data indicator will flashing under the SD logo:





Once the data indicator disappeared, the video/audio is started to record and the timer is counting up:



Press  once to end the video/audio recording and the data indicator will flash while the data is writing to the SD Card. The time display indicates the duration of the video/audio recorded. For example, below figure means there is 10 minutes 3 seconds of video/audio being recorded.



You can press  once to start another video/audio recording or you can press  for 2 seconds to quit to the time display mode.

## VIII. USB connection to PC

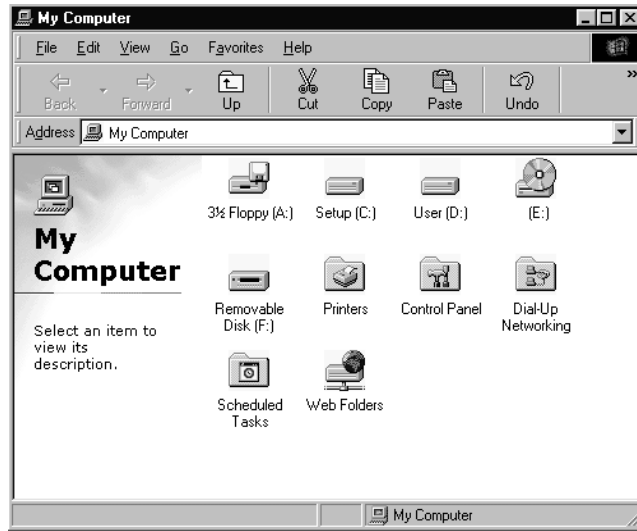
### Connection to PC

Connect the USB cable to your PC USB port.  
Connect the other end of the cable to AJ-FDV2200 mini-US port as shown right.

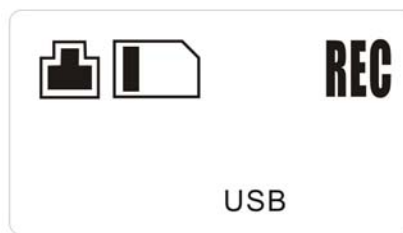
After that, there will be a popup window with the message of "Find new hardware" and the system will automatically install the corresponding driver.

Once the installation finished, there exists a "Removable Disk" under the "My Computer" folder.





AJ-FDV2200 LCD will display as follow:



**Upload/Download Files**

The mini-SD is a removable disk and the data on it can be copy, move, delete as on the hard disk. However, while under these operation, other functions will stop working.

**Disconnect from PC**

Do not disconnect the USB cable before you perform the following steps.

Left-click on the Remove Hardware icon located in the System Tray. A window containing a list of the USB devices will appear. Left-click on the Safely Remove Mass Storage Device line that matches your flash drive.



When you see the following message appear in the bottom left toolbar, it is, as it says, safe to remove the flash drive from the USB port; you may close the message or ignore it, as it will close itself automatically:



You can now disconnect the USB cable between AJ-FDV2200 and PC.

**Note:** If you have problem running the record files in your PC, please either download the Quicktime program from the link <http://www.apple.com/quicktime/download/>, or you may install the same program from the CD provided with this product. For instruction of installing Quicktime, please refer to the APPENDIX of this manual.

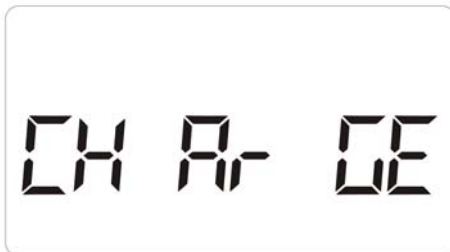
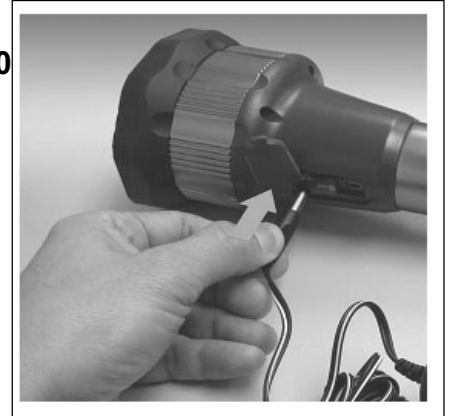
## IX. Battery Charging

The 12Volt DC input is for battery charging only and cannot use for the power supply of AJ-FDV2200. When charging, AJ-FDV2200 can only have time/date setup. The snapshot and video/audio recording functions are not functional.

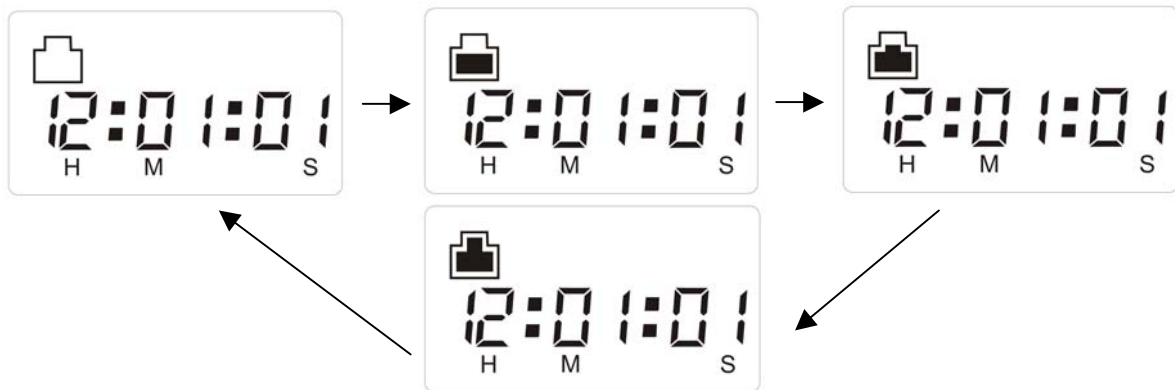
**When there are no batteries inside the housing, DO NOT connect the 12 Volt AC-DC adaptor to AJ-FDV2200 .**

Unscrew the end cap and insert 3 pieces of C-Size Rechargeable battery. Then tighten the end cap to the housing.

Connect the 12 Volt AC-DC adaptor as shown right. The LCD display will appear "Charge" Character:



When the character disappeared, the battery indicator will roll up and cycle.



The charging time will be 6 hours and it will automatically cutoff after 6 hours of charging or the housing temperature reaches 39 °C .

When the battery is full, the battery indicator will stop rolling and will appear as full as below indication.



**IMPORTANT:** If the battery indicator has only one slot left, please recharge immediately. If the battery indicator shows “0”, DO NOT operate the unit. Immediately recharge the unit or replace the batteries.

## **X. Cautions for Use:**

- Only use the included 12Volt AD-DC adaptor when using with Ni-MH batteries.
- DO NOT charge the unit when using alkaline batteries.
- DO NOT bend or impact the unit.
- DO NOT short circuited, bend, deform the batteries or disposal to fire, it might cause the damage to the batteries.
- Do not use the cell with other batteries together. It might damage the cell or other batteries due to the excessive discharge or the unbalanced discharge.
- DO NOT disassemble the unit.
- DO NOT charge the unit under high temperature.
- Please consult technician when the unit is malfunction.

### **Special Attention**

- Do not let any metal or combustible substances fall inside the equipment through the SD card slot or battery compartment. This may cause fire or electric shock!
  
- Do not cover the equipment while in use or charging. This may cause the machine to heat up and distort the unit or catch fire. Please use the equipment in area with normal ventilation.
  
- Any battery leakage, overheating or damage to the equipment may cause fire or personal injury. Please follow this manual for correct operation, and prevent any possible short-circuit to the battery, overheating, or disposal into fire. Please insert a battery in its correct direction to avoid reverse polarity.
  
- It may cause a normal or rechargeable battery to self-discharge excessively if it stays in the equipment for a long time. This will result in the equipment not being able to charge up the rechargeable batteries. If this happens, please use an external battery charger for charging the rechargeable batteries before use!
  
- If the equipment is likely to be left unused for a long period of time, please remove the batteries from the equipment. Otherwise, the batteries may leak out corrosive electrolyte causing permanent damage to the equipment!
  
- Using unfitted adaptor may cause malfunction to the equipment. It is highly suggested that the adaptor provided with this equipment together with reputable rechargeable batteries are to be used.

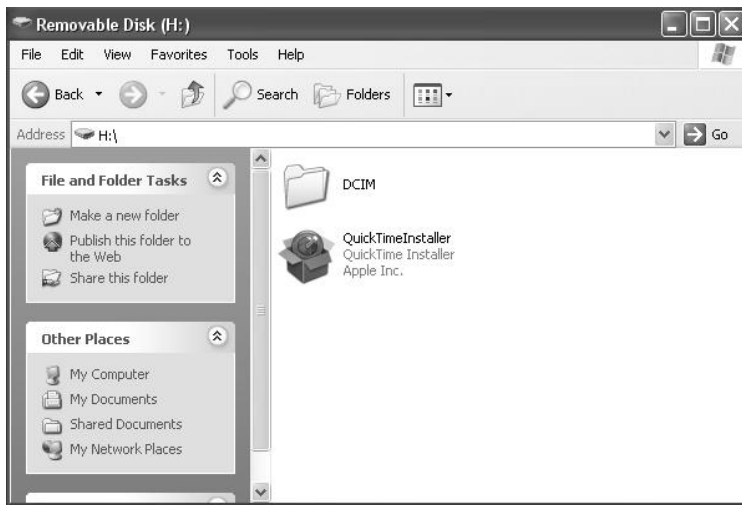
## APPENDIX:

### Product Specification

<b>Model:</b>		<b>AJ-FDV2200 Flashlight Camera</b>
<b>Torch</b>	Flashlight	Build-in Cool-White 3Watt LED
	Brightness	3-Level Brightness
	Over Heat Protection	Shut Down at 80 Degree C
<b>Camera</b>	Imaging Sensor	Color CMOS Sensor
	Active Pixel Array	300K pixels
	Sensor Resolution	VGA 640 x 480
	Horizontal View Angle	66°
	Gain Control	Automatic
	White Balance	Automatic
<b>IR LED</b>	Number of IR LED	17pcs
	Wavelength of IR LED	850nm
	IR Effective Distance	At 0Lux,IR Effective Distance: Maximum 4 Meter
<b>DVR</b>	Video Compression system	MPEG-4
	Record File Format	MP4
	Built-In Memory	128MB
	Storage Media	Mini SD Card, Support Up to 2GB
	User Interface	TN-LCD display
	Recording Time	Maximum 18 minute /128MB @VGA Maximum 1.5 Hours for 1G SD Card
	Backup Method	Compliant with USB1.1 Interface
	Recording Rate	Maximum Image Transfer Rate <30 fps
<b>Audio</b>	Audio Input	Build-In Microphone
	Audio Engine	Single Channel 16-bit ADC,Gain:35.25dB
<b>Battery Charger</b>	Charging Input Voltage	Adaptor 12VDC 800mA
	Charging Current	Ni-MH 3A/h 3 x C size rechargeable battery at 600mA
	Full Charge Protection	Yes
	Over Charge protection	Time Out Timer
<b>General</b>	Power Source	3 x C size battery, Alkaline or Ni-MH rechargeable
	Power consumption	Below 7Watt
	Operating Temperature	-5 - 45 Degree C
	Operating Humidity	20-95% (Non-Condensation)
	Weight	450 grams Without Battery
	Dimensions	79(W) x 97(H) x 323(L)mm
	USB cable	Yes
	12 Volt Battery Charger	Optional
	Weather Proof	Yes
Approval	FCC, CE, RoHS	

# Quick Time Instruction for install

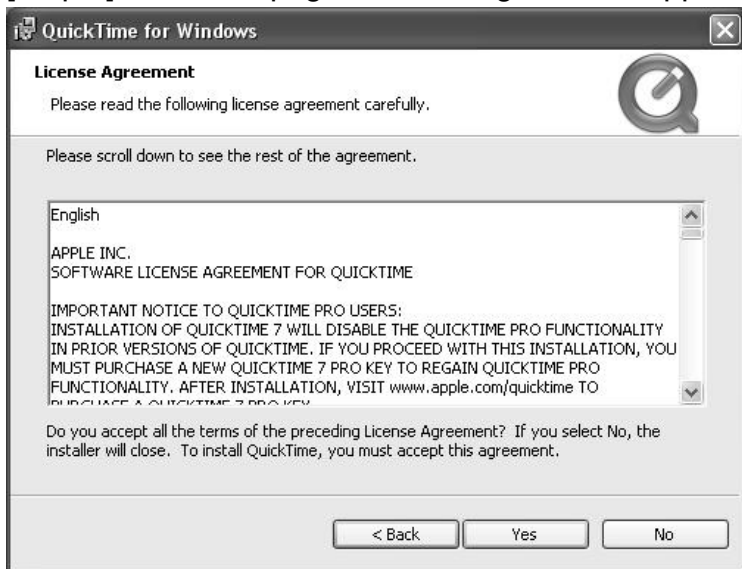
[Step 1] Place the CD into the CD reader and double-click the file name 'Quick Time Installer'



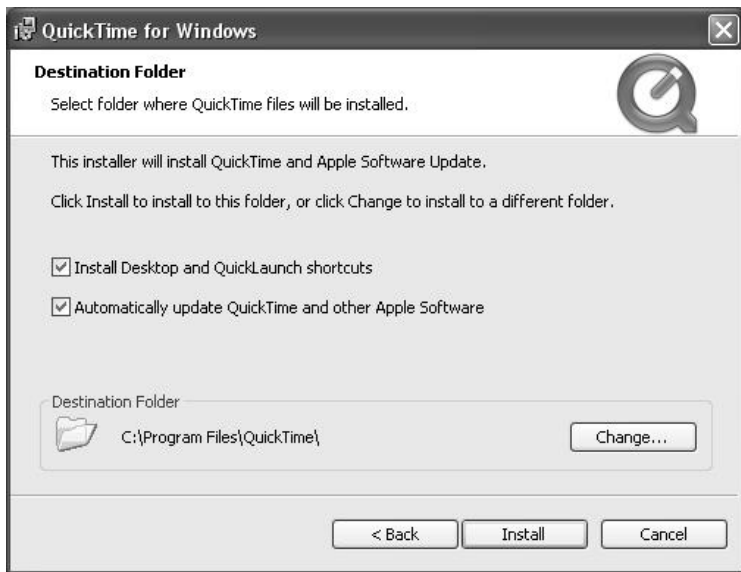
[Step 2] When the page 'Welcome to the Quick Time 7 Installer' appears, click [NEXT] to continue.



[Step 3] When the page 'License Agreement' appears, click [YES] to continue.



[Step 4] Select the folder, then click [Install] to start the installation.



[Step 5] When the installation is completed, the page 'Quick Time Installer Completed' will appear, then click [FINISH] to end the installation.



Congratulation! You have installed Quick Time successfully.

## Attachment: Troubleshooting

**Warning! Unqualified personnel shall not take apart this equipment!**

If the system has any failure, please try to use the solutions provided in the following table before you contact the professional technicians.

Item No.	Failures	Details	Causes	Solutions
1	Displayed content: Error1	DVR start-up failure	Insufficient power supply for video recorder	Replace or re-charge the battery timely
2	Displayed content: Error2	Failure of video-recording stopping	1. Weak battery; 2. Improper operation.	1. Re-charge or replace the battery timely; 2. Long press Video and Capture to exit; 3. Take out the battery and then electrify the system again.
3	Displayed content: Error3	Failure of entering video-recording mode	1. Weak battery; 2. Improper operation.	1. Re-charge or replace the battery timely; 2. Take out the battery and then electrify the system again.
4	Displayed content: Error4	Failure of performing video-receord function	1. Weak battery; 2. Improper operation.	1. Re-charge or replace the battery timely ; 2. Long press Video to exit; 3. Take out the battery and then electrify the system again.
5	Displayed content: Error5	Failure of video saving	1. Weak battery; 2. Improper operation.	1. Re-charge or replace the battery timely ; 2. Long press Video to exit; 3. Take out the battery and then electrify the system again.
6	Displayed content: Error6	Failure of entering capiture mode	1. Weak battery; 2. Improper operation.	1. Re-charge or replace the battery timely ; 2. Take out the battery and then electrify the system again.
7	Displayed content: Error7	Failure of picture saving	1. Weak battery; 2. Improper operation.	1. Re-charge or replace the battery timely; 2. Long press Capture to exit; 3. Take out the battery and then electrify the system again.
8	Displayed content: 2008-01-01	Auto resetting for time	Flat battery for saving	1. Re-charge or replace the battery timely; 2. Set the time and date again.