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High-end professional Image Analyzer

Multi-Function Banknotes Anti-counterfeiting

Banknotes And Document Detector

User Manual

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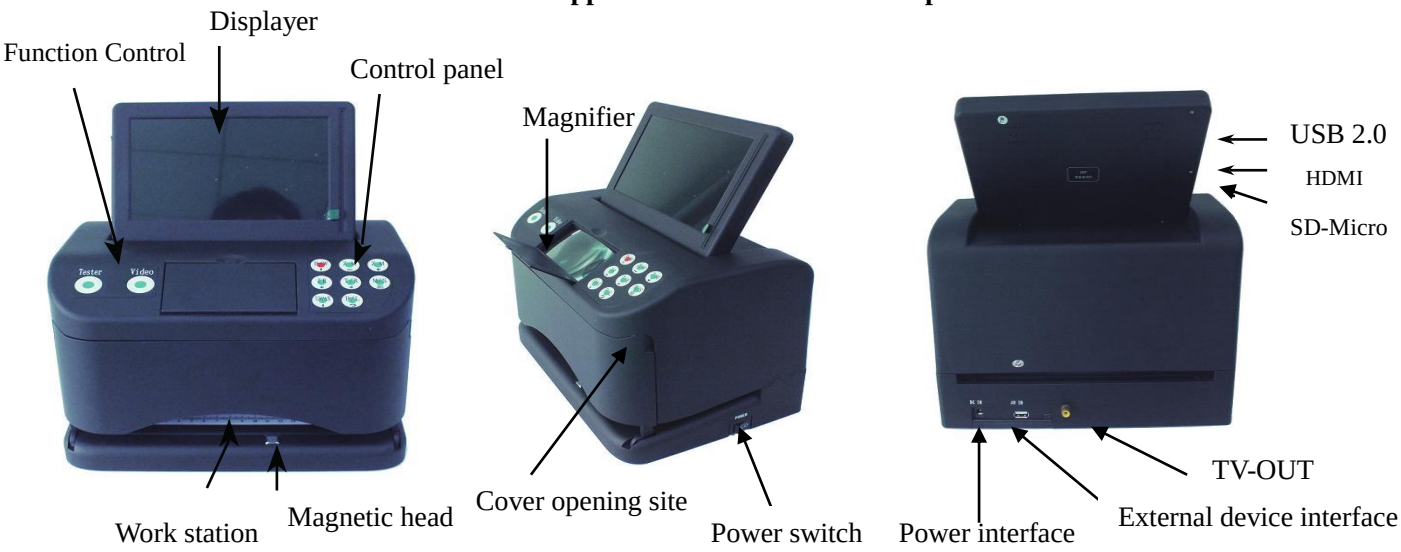
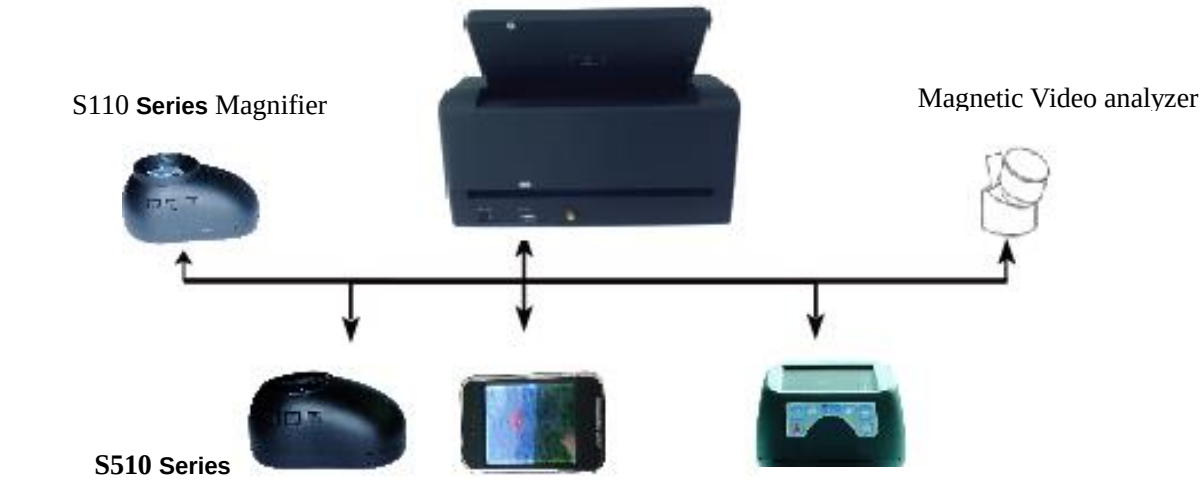
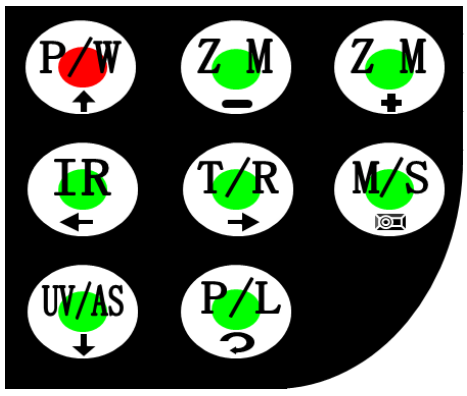
Appearance and Guides to components



Optional external device:



Instructions of control panel



Connect the main unit well with the external device and the power supply, turn on the power switch at right side, the equipment will enter power saving mode with flashing indicator for <<P/W>> button. Short Press the <<P/W>> button, the top white light button will light up, and the equipment is ready for operation. The specific function with respective button which are shown on the control panel, select the desirable function by pressing the button once with prompt tone click will be heard ,then the pressed button will light up the selected light source or function are ready.

The detailed operation procedure for each individual button is introduced as below:

Function key operation instruction

Note：Short press below button for relevant function selection or the function selection loop

→ 1. Short press to switch on
2. Long press to enter power saving mode or operation mode change

Browse Mode → 1. Top white light
2. Side white light
3. Transmission white light
(Loop)

Replay mode → Turn upwards for one picture

Jog mode → Move upwards for picture position

Browse Mode → 1. Top Infrared light
2. Sidewall Infrared light
3. Bottom Infrared light
4. Top Infrared light alternation mode
(Loop)

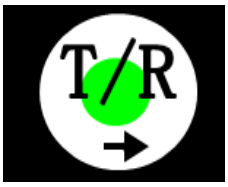
Replay mode → Turn left for one picture

Jog mode → Move left for picture position

Browse Mode → 1. Dual UV tube
2. Front UV tube
3. Backside UV tube
4. Flashing Laser
5. Laser is always on
(Loop)

Replay mode → Turn down for one picture

Jog mode → Move down for picture position



Browse Mode → 1. Full screen window
2. Partial screen window (Optional).
3. Differential window (External Input interface)
4. Full screen window with magnetic identification
(Loop)

Replay mode → Turn right for one picture

Jog mode → Move right for picture position

Browse Mode → 1. Zoom out window (After zoom in)
2. Long press 3 Sec for Record mode
3. Long press 3 Sec exit from Record
(Loop)

Replay mode → 1. Zoom out window (After zoom in)
2. Long press 3 Sec for auto-play
3. Press any button to stop play
(Loop)

Jog mode → Zoom out window

Browse Mode → Zoom in window

Replay mode →
1. Zoom in window
2. Long press 3 Sec for picture auto play
3. Press any button to stop auot play

Loop

Jog mode → Zoom in window

Browse Mode → Replay mode

Replay mode →
1. Long press 3 Sec for TV-out mode
2. Press to stop and exit TV-out mode

Loop

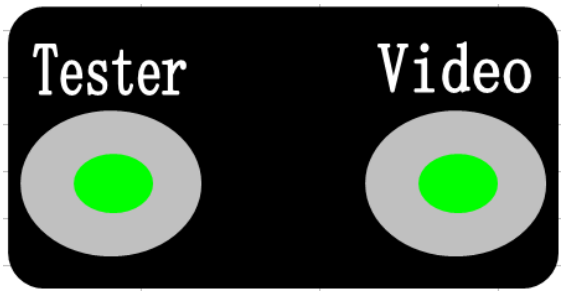
Jog mode → Return Browse mode

Browse Mode →
1. Take photo and save spectrum picture
2. Long press 3Sec for multi-light source mode

Loop

Replay mode →
1. Delete current picture
2. Long press 3Sec deletes all pictures' prompt
3. Press to confirm deletes all pictures

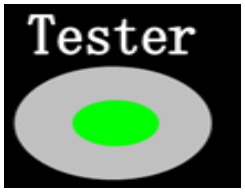
Loop



Control panel at the left side

Browse Mode → Press to enter multi-light source scan mode, it will automatically take photo and save current spectrum pictures. Return to initial status after completion

Replay mode → Auto play the stored pictures in the memory card



Browse Mode →
1. Auto play banknotes authorization introduction
2. Video or play the device operating instruction

Loop

Replay mode →
1. Pause to play
2. Browse 2010 banknotes authorization manual (New simplified version) (optional)

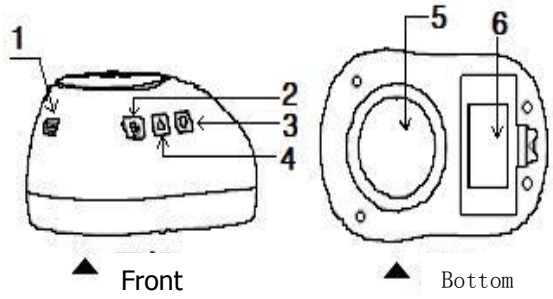
Loop

Note: Short press above buttons to select different light source or function mode .

S-Micro microscope spectrum analyzer instructions

(Optional)

Device appearance description



1. TV/AV interface
2-4. Function button
5. Sensor light source hole
6. Embedded backup power supply

Operation procedure

Connect the microscope spectrum analyzer to Main unit with USB, press the "T/R' button on the control panel two times and, select the option to connect external micro spectrum analyzer, the external device power indicator will light up. Place the device on top of the specimen, align the detector with the check point, and select the function button to start checking.

Function2 "⏻" power switch button:

I、 Power switch (To switch on/off device with 3 second long press).

II、Short press to switch the function (auto-alternation) between top white light, side white light and white cross-light.

Function3 "▲" Infrared button:

Short press to switch the function (auto-alternation) between top Infrared light 850, side infrared light 850, Blue light(Optional),crossed-infrared light 850/940 and transmission light.

Function4: "▼" UV light button:

Short press to switch the function (auto-alternation) between long UV light, short UV light, UV cross-light, Infrared light (Optional).

Safety cautions: Please do not watch from bottom when the Fluorescent tubes are lighting since Long UV LED (UVA365nm) and Fluorescent tubes (UAC254nm) is harmful to eyes, and do not t ouch the device. The short UV light will automatically turn off after power on 2 minutes, and the device will automatically switch off if no operation in 5 minutes.

Mag-Video magnetic analyzer (Optional)

Cautions of operating Mag-Video magnetic analyzer

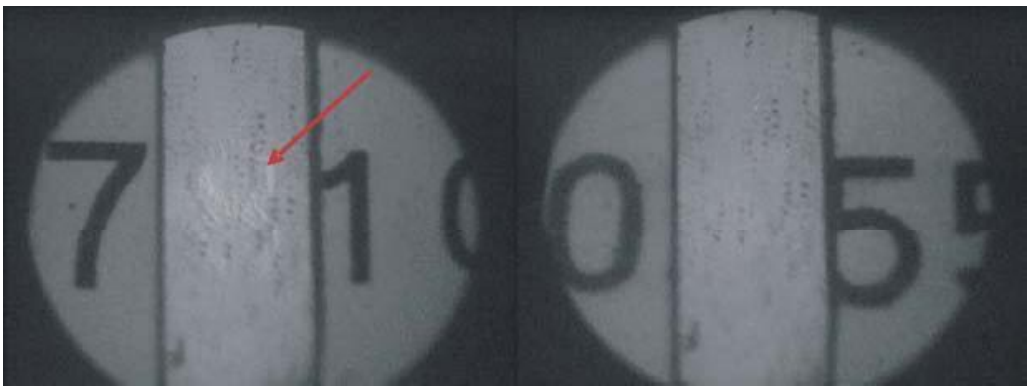
The Mag-Video magnetic analyzer sensor (at the bottom of device) is crystal and it can be easily damaged. Do not place it on top of metal object and touch it. Please do not disassembly by yourself or clean the sensor.

Mag-Video magnetic analyzer is very sensitive to magnetic field, to avoid any unnecessary disturbance, please place the specimen on the cushion provided during inspection.

Please keep the Mag-Video magnetic analyzer inside the box after usage to avoid the air dust attach to the sensor which might affect the inspection result.

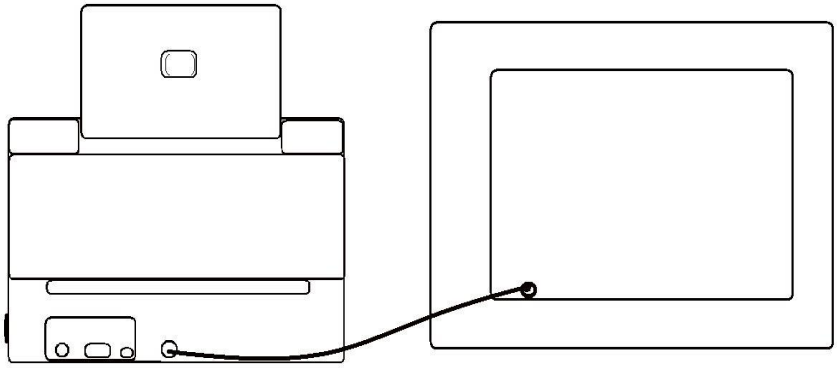
Operation procedure:

1) Switch from the Main unit to Mag-Video magnetic analyzer
2) Place the Specimen on the specific cushion provided
3) Place the Mag-Video magnetic analyzer slightly on the top of the Magnetic area of the Specimen, make sure the specimen is tightly pressed, then observe the image change in the white belt area on the screen, the magnetic image will be shown in high brightness mode in the belt area(as shown below).

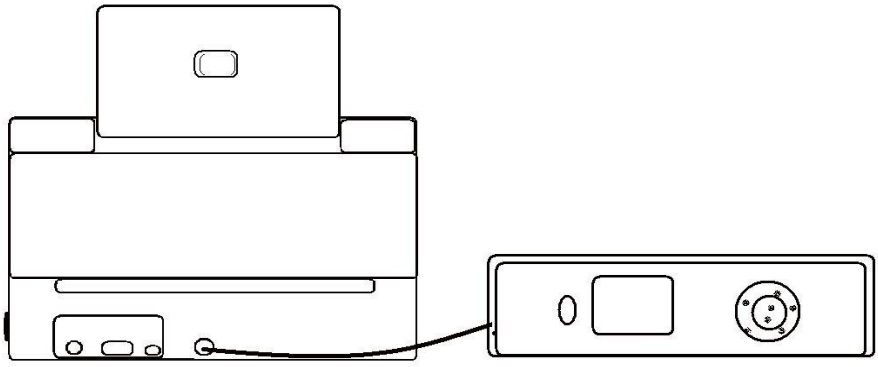


Analog Video Signal Output (Optional)

- **Connect the video cable to the backside of Video Interface.**
- **Connect analog video to external equipment (e.g. TV, projector etc).**
- **Adjust Video output equipments' color and brightness.**
- **Ensure the external equipments are well connected, long press <Replay>, the equipment will automatically enter TV output mode, the current identification picture shows on the external equipment, long press the <Replay> again to exit TV output mod**



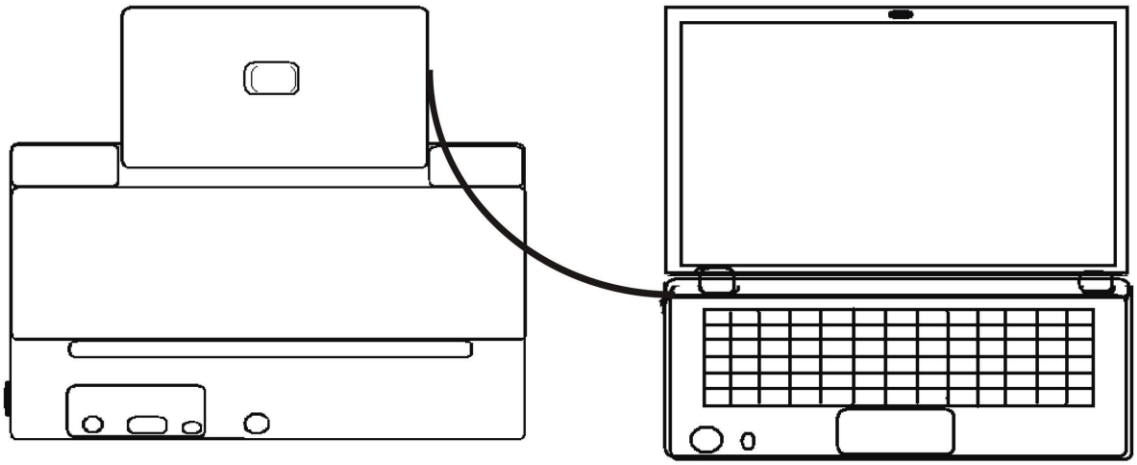
TV connection schematic diagram



Projector connection schematic diagram

Digital Video Signal Output

- Hardware driver installation is required for first use of the device.
- Connect the device to USB interface of computer (Note: please check the USB interface model).
- Image collection and analysis can be done with the software of video collection and review function.



Computer connection schematic diagram

Hardware requirements:
CPU: Intel Celeron-II and above
Memory: > 128M
Hard disk: >800M
Graphics: 32M
Interface: USB2.0
Display: 1024x768

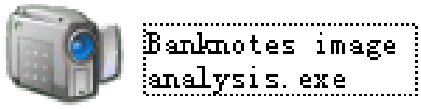
Software requirements:
Pre-installed system with Microsoft Windows 98 above

- **The equipment has HD video (HDMI） preview and output function, the image authorization and checking can be done with the connection of HDMI interface to HD TV, the output standard is 720P(1080*720).**

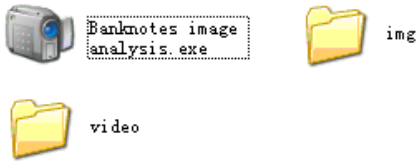
Driver installation procedure

一、 Driver program package installation

1) Copy “Banknotes image analysis.EXE” from CD to computer’s hard disc, click the icon of “Banknotes image analysis.EXE” to start installation (shown as Graph-1. Two image store folders will automatically created for first use (as Graph 2).



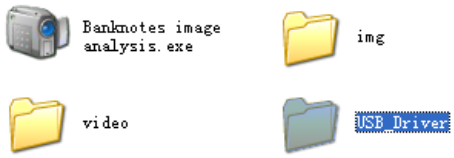
Graph 1



Graph 2

2) Copy and save the video driver inside the <USB_Driver> folder to the computer hard disc folder as shown in Graph 3.

3) After switch on the device, connect to computer with USB, and open the “Banknotes image analysis.EXE” software. The computer will automatically remind to load driver program for the first use of connection to the device. Follow the computer software installation instructions to load program and install it in the computer hard disc, at last, finish the hardware driver program load task.



Graph 3

Notes:

Manually load driver program is available by selecting the device hardware in the device manager and update its driver program. it is also available by deleting the current device hardware and refresh the device manager, the computer will automatically find new hardware, and remind to load driver program, follow the instruction to complete loading driver program.

4) The driver program will automatically load once the device connected to computer; follow the automatic load instruction to operate as Graph 4.

图（4）

5) Select automatic installation software, and click next button, the software will be installed automatically as shown Graph 5.

图（5）

6) And the message will remind you the completion of installation as shown Graph 6.

图（6）

二、 Inf file installation

1) Connect the Banknotes video analyzer to computer with USB, the message will show as Graph 1 with new hardware detected, click next button.

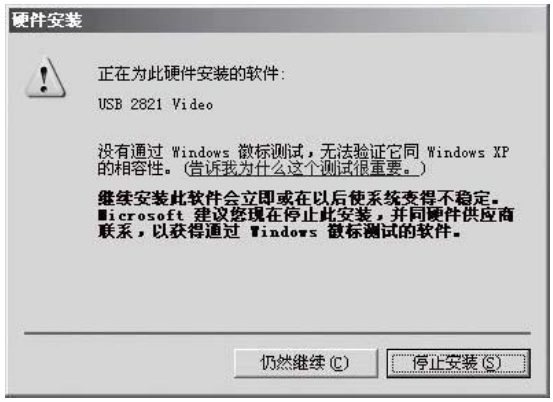
图（1）

2) New hardware detected window will show on the screen, follow the instruction to inset the Driver CD, Select the button of “Browse” and go to CD path or assigned hard disc path as shown in Graph 2.

图（2）

3) Select the button of “Browse”, the browse window will show in the screen and go to CD path or hard disc path folder: USB_Driver folder, then click the Next to continue the installation as Graph 3.

4) The system will detect the driver, and show the message to decide whether continue, click the “Still continue”, the system will start to copy the files and complete the installation.



图（3）

Imaging processing software instructions

Banknotes image processing installation instruction:

1. Copy the “Banknotes image analysis.EXE” from CD to Hard disk, connect the device to computer with USB and double click it, the install interface will show on screen and follow the installation instruction for next operation until the installation complete.
2. For manual installation, select the new device hardware in “ My computer\ properties\ hardware\Device Manager ” to complete.
3. Please refer to the “Banknotes image processing software user manual.pdf” inside CD if any problem may encounter during installation.

Image Processing:

1. Run the banknotes image analysis software. The image processing software will automatically detect the device and the present video image will be shown on the screen if it is well connected to the computer. Please select “ select device” in the menu if the present video image is not displayed and start one set of hardware device. click the shortcut icon < > to save the JPEG format or AVI format file into the folder which the software running in.
2. It is able to capture the AVI format video or JPG format picture and save it in the menu, the captured file will be stored in the assigned folder as per user.
3. Once the video/image shown on present screen synchronized with that displayed on the video device display, click the icon < > in the menu to do real time comparison, a new set of forms will show out at the right side of video window, save and show one captured picture, save it inside the folder of “img”. Double click the icon < > to save it again.
4. Click the tool bar icon < > to switch to Excel file display window, with this function, the genuine notes and counterfeit notes’ spectrum can be stored. The icon of “genuine notes and counterfeit notes” must be selected. Together with the operation of device, then click the relevant light source control button on the software window, the respective spectrum picture will be saved accordingly and the small icon will also shown at the right side of << genuine notes and counterfeit notes option 1,2,3……12>>, please click the “Export excel” once all tasks completed, the excel will be exported to desktop and it is easy to modify and save. The “Export Excel” function requires <<Excel 2003>> version is pre-installed
5. For more details of function of <<Banknotes image analysis software>>, please refer to <<Banknotes image analysis software user manual. PDF-Free version>> inside CD.

Specifications

Banknotes detector host

- **Dimension：**280X165X260mm **Net Weight：**1.45Kg
- **Power supply:** 220V/50Hz, 110V/60Hz **Power dissipation:** 25W(Max)
- **Light source:** Top White light, Side white light, Transmission white light, Top infrared light, Side infrared light, transmission infrared light, Infrared cross-light (850nm/940nm), Dual tube UV light and Infrared laser light(Optional) etc.
- **Imager sensor:** Full screen 5M pixel image sensor, regional 520 linear HD image sensors, equipped with no distortion HD Infrared lens and optical filter auto switching system
- **Display panel:** 7 inch LCD display
- **Detection range：** whole screen:170x100mm, partial screen: 23x16mm
- **Others:** Magnetic distinguish
- **Magnification:** Whole screen 1:1 with digital magnification 1: (8-100) , Partial screen (1:35) (Optional)
- **Magnification lens:** 100mmx50mm UV light filter glass dual light magnification lens, 3.5x for main lens and 5x for doubling lens
- **Other Function：** Magnetic authorization
- **Power saving mode:** Without any operation, system will enter power saving mode in 10 minutes and it will automatically switch off in 30 minutes.

S-Micro microscope spectrum analyzer

- **Dimension：**95X65X45mm **Net Weight：**75g
- **Power supply:** 5 DCV **Power dissipation:** 1W(Max)
- **Light source:** Top White light, Side white light, White cross-light, Top infrared light, Side infrared light, transmission infrared light, Infrared cross-light (850nm/940nm), Long and short UV light , Blue light(Optional), Infrared laser light(Optional) etc.
- **Detection range：**12x9mm or 7x5.25mm
- **Magnification**: 60x or 80x.
- **Power saving mode:** Without any operation, system will enter power saving mode in 5 minutes.

◆ Cautions

- Do not operate the detector in uncontrolled environment such as rapid temperature changes, >40℃ or < 0℃, high voltage, electromagnetic interference, radiation and high humidity etc.
- Keep the appliance away from wetting and never immerse it in water.
- To avoid the appliance drop or severe shock or vibration
- Turn off the device when unattended or not in use for a period of time.
- Only standard optional device is compatible to the external device interface of the device
- Notes: If problems should arise with your detector, you are recommended to contact the dealer to get the suggestion of troubleshooting, please do not disassembly by yourself

Package list					
Standard device list					
Main unit	1		Power adapter	1	
USB cable	1		Power cable	1	
AV data cable	1		Manual	1	
Warranty card	1		Driver CD	1	
Optional device list					
S11 series	1		S12	1	
S3 series	1		S51	1	
Mag-Video	1		HDMI cable	1	
USB cable	1				