Manual Push Inspection Camera with DVR

ASSEMBLY AND OPERATING INSTRUCTION

Read these instructions completely before operating this system

Specifications

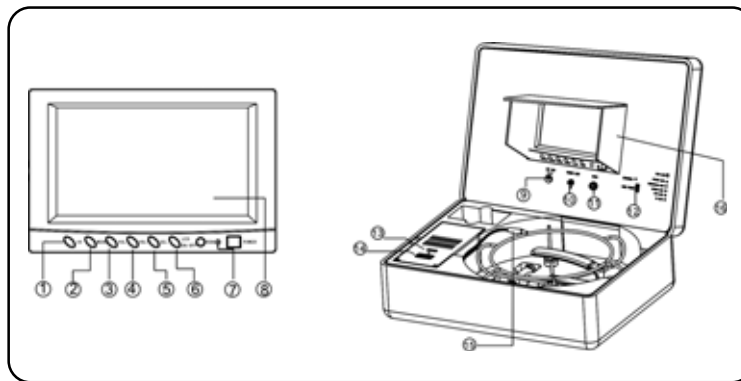| Item	Description
Power adapter	110VAC~240VAC 12VDC1800mA
Battery Case	Sealed, Lead Acid
Maximum Camera Depth	65 Feet (Length of Cable)
Camera Light Source	Built-in White LED
Camera Angle-of-View	60° (horizontal), 60° (vertical)
Camera Depth-of-View	400 mm (approximate)
Camera Image	Color
Monitor Image	Color
Monitor Picture Resolution	320 (TV Lines)
Monitor Input Voltage	12 Volts DC
System Operating Temperature	-20°to 120°F

Save this Manual

Attention

1. Read the user manual carefully before using this system.
2. Avoid using the device in extremely cold, heat, or humidity environment, it may damage the device.
3. Do not drop or press hard on the device.
4. Warranty avoid if the device is opened by users or has physical damage.
5. Always back up your data before connecting your USB device to this system.The manufacturer is not responsible for any data damage on your USB device for any reason.
6. Do not disconnect the unit while recording or playing. It may damage the unit and/or the USB device

Application

WITH MINI-CAMERA FOR PIPE DIAMTER FROM 25MM TO 120MM ID

1. WATER SUPPLY
2. WASTE WATER
3. ELECTRICAL AIRCONDITIONAL
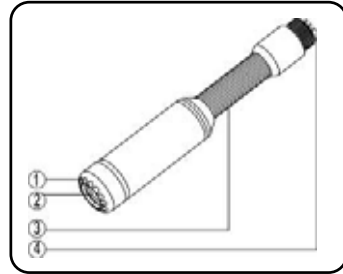4. CABLE DUCTING
5. DUCTED VACCUM SYSTEMS
6. PLUMBIN
7. IN BUILDING

Know Your Tool

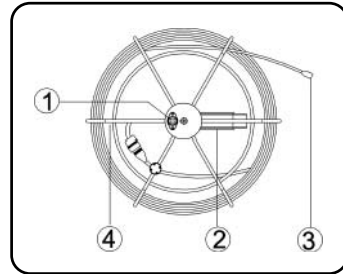|			
1.	AV SELECTOR BOTTON	9.	DC 12V IN
2.	MENU	10.	VIDEO OUT
3.	DOWN SELECTOR	11.	CAMERA PORT
4.	UP SELECTOR	12.	USB PORT
5.	MENU UP/DOWN SELECTOR	13.	POWER & CHARGE SWITCH
6.	LED ON/OFF BOTTON	14.	AC INPUT PORT
7.	POWER SWITCH	15.	DC 12V OUTPUT CORD
8.	FLAT TFT SCREEN	16.	SUN VISOR

Camera

1. WHITE LEDS
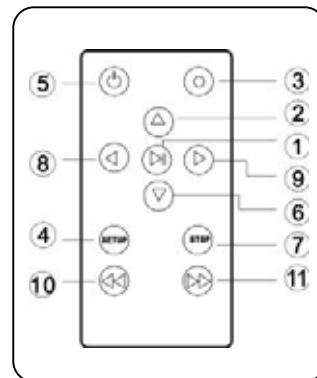2. LENS
3. SPRING
4. GOLD CONNECTER

Cable wheel

1. MALE PLUG (TO MONITOR)
2. HANDLE
3. CABLE CONNECTER (TO CAMERA)
4. CABLE WHEEL

Remote control buttons (DVD use only)

1. Enter: Enter to view and play video or music
2. Up: Go to up/previous item
3. REC: Start the recording
4. Setup: System setup and recording features
5. Enter: System in
6. Down: Select down/next item
7. Exit: Stop or escape from current menu
8. Left: Select Left item
9. Right: Select Right item
10. Rewind: Review video
11. Forward: forward video

System Set-Up

1. **IMPORTANT: When connecting the Camera to the Monitor the power must be off or both units will be damaged.**

2. Screw the Camera to the Wheel Cable (See Figure1- A）& Connect the Wheel to the Monitor (See Figure 1-B).

3. Plug the Power Adapter cord into the wall AC socket and other end into the DC 12V-Input Jack, or plug the cord from the Battery Box into the DC 12V-Input Jack (See Figure1- C). If use the Battery Case Power, plug the Power Cord of Battery Case into the DC 12V-Input Jack.

4. Turn on the **POWER** Switch on the front of the Monitor.

5. Gently lower the Camera into a pipe duct, etc and reel out the Cable until it is at the desired depth.

6. Turn on the **LED** Button & adjust the Brightness from the MENU.

7. Record the pictures if you need (see DVR Operating).

8. BY a video cable you can transfer the picture to other larger Screen.

9. When finish, carefully remove the Camera from the pipe duct, etc. Screw out the Camera and clean it with a clean, soft and dry cloth then put the Camera into the previous position.
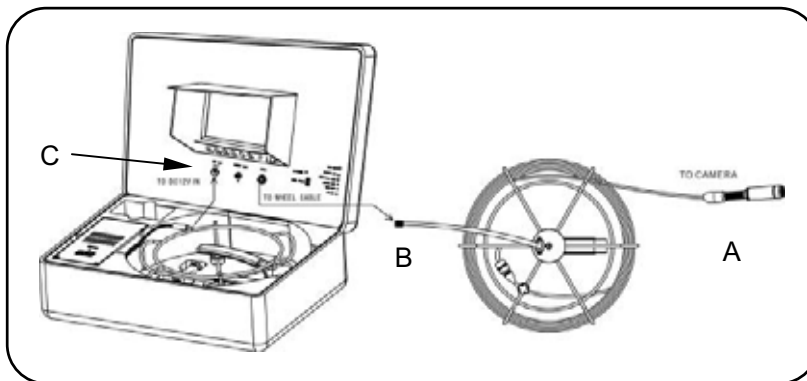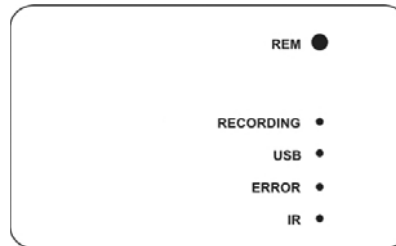

Figure 1

DVR operation

1. Set the Screen **AV** Button on Video 2.
2. Take off the isolation sheet from the Remote Control Battery.
3. Press the Remote Control Button 5 ⟨⏻⟩ to Enter the Recording system, you can see DVR system **PLAY VIDEO** manual on the screen.
4. Insert your USB recorder (USB flash or removable hard disc etc) to the **USB** Port, you can see **USB CONNECTED** on the screen & the USB LED light turn on.
5. Press Remote Control Button 3 ⟨●⟩ to start the recording & the RECORDING LED light turn on.
6. Press Remote Control Button 7 ⟨STOP⟩ to stop the recording.
7. Press Remote Control Button 1 ⟨▷❙⟩ to review the recording.
8. If you need to manage your recording pictures, press Remote Control Button 4 ⟨SETUP⟩ ,also you can do this files management by electing the **SETTING** on **PLAY VIDEO** manual on the screen.

LED indicators

REM ●

RECORDING ●
USB ●
ERROR ●
IR ●

1） REM : Remote receiving window

2） Power: It indicates system is on

3） Recording: It will blink during recording

4） USB: It indicates USB device is connected

5） Error: It indicates the system or USB device has error

6） IR: It blinks when remote control is in use **Recording Video**

The recorded video files will be found in a directory of USB devices.

User can use the on-screen menu or press (REC) button to start recording. Press (■/EXIT) button to stop recording. During the recording, TV screen will display recording time and time limit (up to 3 hours).

User can press [setup] button to change recording time limit from 1 to 180 minutes. The recorded content can be viewed from computer. See chap 9 for more detail.

Recording time limit

Some users may forget to stop the recording after it is initiated. So the unit has a recording time limit feature, The default time limit is 2 hours. User can go to SETUP mode to increase or decrease the limit from1 to 180 minutes.

Schedule recording

User can schedule a recording in advance. Simply enable the schedule recording in the SETUP. Then the unit will ask user to setup timing. See chapter 6 for more details.

Recording schedule can be used once. User has to set up schedule again for next recording.

Recording to USB device

The unit is able to record video into USB devices such as USB hard disk .The recorded video will be stored in the USB devices and played back on the TV screen.

Recording format

The default recording resolution is 640*480, which takes about 500MB/hour. User may select 320*240 to save storage space.

Video play

User can use on-screen menu to enter "play video" mode. The unit will display the recorded video and other compatible videos inside USB device.

It will not list the non-compatible videos.

Select the video file.

When user enters "play video" node, the set will display all of the available video files on TV screen.

User will use [▲] or [▼] button to select desired video and press [►/ENT] button to play.

Press and hold [▲] or [▼] button to go to previous or next video.

Use [►/ENT] button to start or pause the playing .Use [■/exit] button to stop or go back to previous menu.

The screen will display "loading, please wait ..." for few seconds before playing video.

Fast forward and rewind

User can use [►] or [◄] button on the remote control to fast forwarding or rewinding (1x,2 x,4x, or 8x, speed).Always press[►/ENT] button to go back normal playing.

Compatible video format:

Divx3.11/Divx4/Divx5/MPEG1/MPEG2/MPEG4 (MPEG4 video file format: .avi, .m4v, .MPG, MPEG, .VOB)

Note: video does not support many downloaded video.

System setup

User can select different standard, recording and other features during the setup.

Also user can upgrade the unit firmware or restore to factory setting.

Recording setup

Recording time limit: 00:00-03:00(default is 2 hours)

Video standard: PAL or NTSC (default NTSC)

Resolution: 640*480,480*360,720*480 and 320*240(default 640*480)

Compression rate: 1000, 1200, 1500, 1800, 2100, 2500KB/S (default 1000kb/s)

Sample frequency: 24.32khz(default 32khz

Schedule recording: on/off (default off)

Recharge

1) Plug the AC cord into wall AC socket & insert the other end into the Battery Box AC jack（See Figure2- A）

2) Press down the charge switch（See Figure2-B）

3) Charge LED will be Red during charging & turn to be Green when finish charging(normally charging time 8- 10 hours).
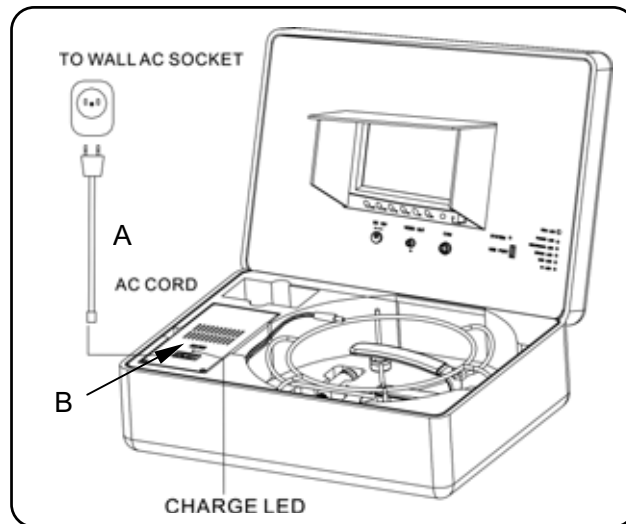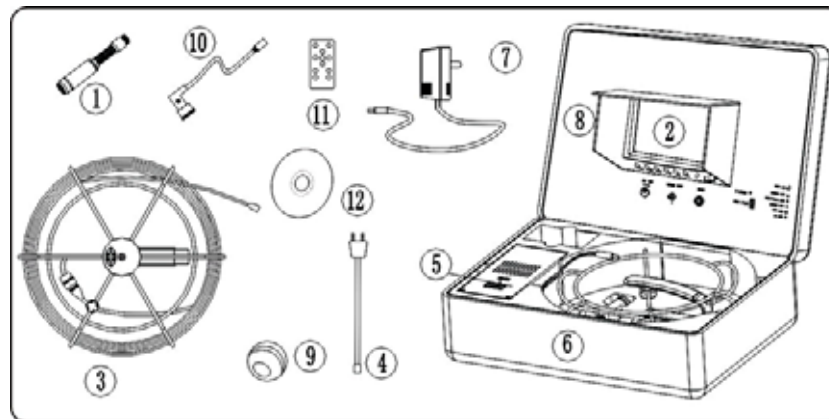

Figure 2

Do not overcharge the battery; overcharging can result in damage to or acid leaking from the battery.

Assembly drawing and parts list

Part No.	Description
1	CAMERA
2	MONITOR
3	60 FEET CABLE WITH WHEEL (LONG)
4	AC CORD
5	BATTERY CASE
6	BIG CASE
7	DC 12V POWER SUPPLY
8	SUNSHADE
9	BALL PROTECTION
10	SOFT CABLE (SHORT)
11	REMOTE CONTROL
12	DISC

Note: If you can not read the recording pictures on your computer, please down load the Codec software from the disc.