PIPE & WALL
VIDEO INSPECTION SYSTEM

USER MANUAL

For

3188 and 4188 Series

ASSEMBLING AND OPERATING INSTRUCTIONS

Read this manual carefully before operating this system

WARNING

1. **NEVER USE THIS DEVICE IN AN ENVIRONMENT WITH EXPLOSIVE MATERIALS SUCH AS GAS, OIL, ETC.**
2. Avoid using the device in extremely cold, hot or humid environment; otherwise it may damage the device. Do not drop or press hard on the device.
3. Avoid using the parts / components from other manufacturers to this system, which may damage the equipment due to the un-compatibility.
4. Warranty invalidation if the device is disassembled by users or if there are any physical damages.
5. Always back up your data before connecting your USB stick / micro SD card to this system. The manufacturer is not responsible for any data damage or loss on your USB stick / micro SD card for any reason.
6. Do not disconnect the unit while recording or playing. It may damage the unit and/or the USB stick / Micro SD card.
7. Don't misuse the battery charger cable and power cord, otherwise the battery pack may be damaged or the system cannot work properly.
8. The system's push cable made of fiberglass is very rigid and not flexible. It can not be bent sharply or pushed too hard; otherwise it will be broken.
9. After use, the cable reel must be put back into the case in the right position; otherwise, LCD monitor may be broken by the bulging part on the reel when you close the case.
10. Waterproof Camera Head should NOT be used under the water of over 15FT.
11. We reserve the right to make any change about our products without any notice in advance.

INSTRUCTION

I. This pipe inpection system manual can be used for the below models:

1) All 3188 series models (7" with / without DVR / SD card recorder, CCD / CMOS color camera.)

2) Model NO.4188 (10" pipe inspection system with DVR/SD card recorder and camera head with 512hz built-in transmitter; yellow case)

II. Difference between old versions and new versions：

*The improvent of the new versions vs old versions

- Added manual buttons to operate DVR recording on the panel;
- Added micro SD recording feature
- Added micro phone button for voice recording

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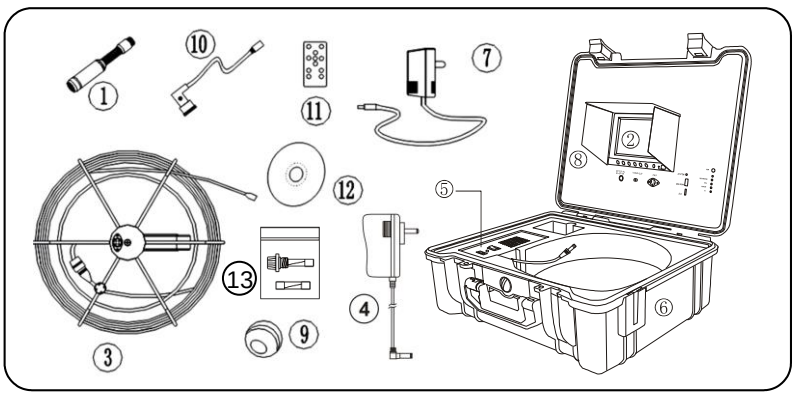
Assembly Drawing and Parts List

Part No.	Description
1	☐23MM CCD camera ☐23MM CMOS camera ☐23MM CMOS Camera with built-in 512hz transmitter ☐12MM CMOS camera *Above cameras may come with plastic or stainless steel housing
2	☐7" Monitor ☐10" Monitor
3	☐20m(65FT)☐30m(100FT) ☐40m(130FT) Cable with reel (long)
4	Charger
5	Battery pack
6	Big case ☐Aluminum case ☐ABS case
7	DC 12V power supply
8	Sun shield
9	Eva ball protection
10	1.5m Video soft cable (short)
11	Remote control
12	Disc
13	Fuse bag



Specifications

ITEM	DESCRIPTION
Power adapter	110VAC~240VAC 12VDC1200mA
Battery Case	LI-ION battery
Length of Cable	□20m(65FT)□30m(100FT) □40m(130FT)
Camera Light Source	□8pcs□12pcs built-in white LED
Camera Angle-of-View	60°or 90° (horizontal), 60°or 90° (vertical)
Camera Depth-of-View	400 mm (approximate)
Camera Image	Color, 0.3Mega pixel
Monitor Image	7"/ 10" TFT LCD color monitor
Monitor Picture Resolution	7"(800*480)pixel;10"(800*600)pixel
Monitor Input Voltage	12 Volts DC
System Operating Temperature	-28°C to 50°C

User Manual

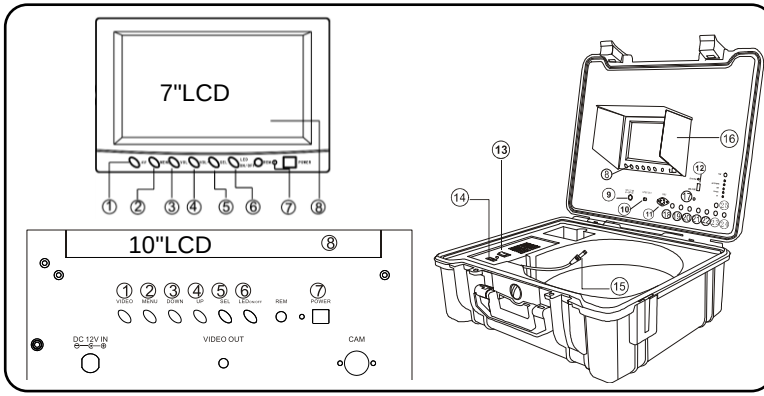
Application

1. WATER SUPPLY SYSTEM
2. WASTE WATER SYSTEM
3. ELECTRICAL AIR CONDITIONER
4. CABLE DUCTING
5. DUCTED VACCUM SYSTEMS
6. PLUMBING
7. BUILDINGS

WARNING:

1. **NEVER USE THIS DEVICE IN AN ENVIRONMENT WITH EXPLOSIVE MATERIALS SUCH AS GAS, OIL, ETC.**
2. **WATERPROOF CAMERA HEAD SHOULD NOT BE USED UNDER THE WATER OF OVER 15FT.**

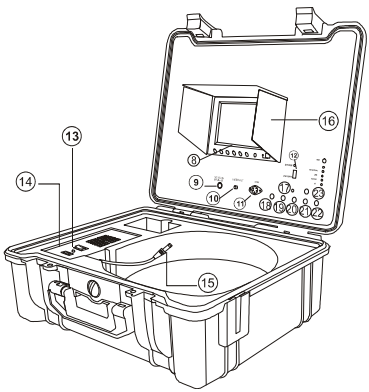
Know Your Device



RECORDING WITH DVR VIA USB PORT: (New versions equipped with items from 17 to 25.)

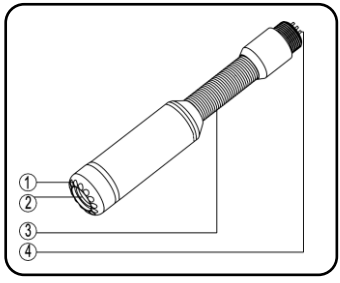
1. VIDEO SELECTOR BUTTON
2. MENU
3. DOWN SELECTOR
4. UP SELECTOR
5. MENU UP/DOWN SELECTOR
6. LED ON/OFF
7. POWER BUTTON
8. FLAT SCREEN
9. DC 12V IN
10. VIDEO OUT
11. CAMERA PORT
12. USB
13. POWER & CHARGE BUTTON
14. CHARGE PORT
15. DC 12V OUTPUT CORD
16. SUNSHADE
17. MIC
18. DVR ON/OFF
19. RECORD
20. STOP/EXIT
21. SETUP
22. UP
23. DOWN
24. PLAY/ENT
25. MIC ON/OFF

RECORDING VIA MICRO SD PORT: (New versions equipped with items from 17 to 23.)



8. FLAT SCREEN
9. DC 12V IN
10. VIDEO OUT
11. CAMERA PORT
12. MICRO SD PORT (ONLY FOR NEW VERSIONS)
13. POWER & CHARGE BUTTON
14. CHARGE PORT
15. DC 12V OUTPUT CORD
16. SUNSHADE
17. MIC
18. RECORDING/SHOOTING
19. ENTER
20. MENU/EXIT
21. LEFT
22. RIGHT
23. MIC ON/OFF

Camera Head



1.12 WHITE LEDS (8 for old versions)

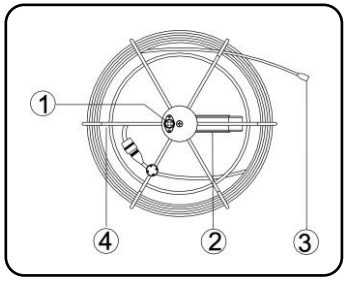
2. LENS

3. SPRING

4. GOLD PINS

5. Built-in Transmitter: 512HZ (for 4188 or upgraded camera head for 3188 series)

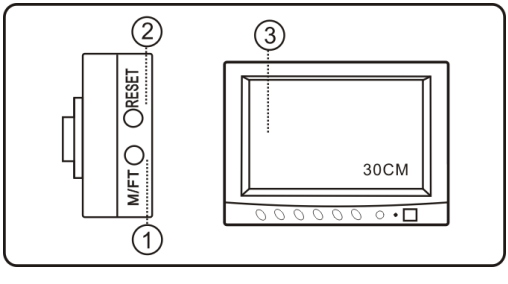
Cable Reel



1. MALE PLUG (To monitor)
2. HANDLE
3. CABLE CONNECTER (To camera)
4. CABLE REEL

Counter:

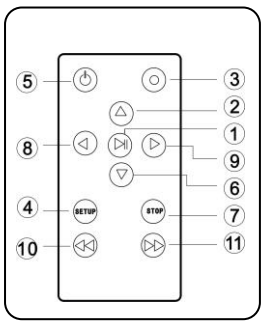
Cable with optoelectronic meter counter (For 4188H)



1. Metric & Imperial conversion
2. Reset
3. Display of Metric or Imperial

Remote Control(Only for 3188D/3188DN/4188 to operate DVR /Micro SD card recording)

1) Enter: Enter to view and play video
2) Up: Go to up/previous item
3) REC: Start recording / snap shooting (only available for new versions)
4) Setup: System setup and recording features
5) Enter: System in
6) Down: Select down/next item
7) Exit: Stop or exit 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 you connect the Camera to the Monitor, the power must be off otherwise both units may be damaged.**
2. Screw the Camera to the Reel Cable (See Figure1- A) and connect the Reel to the Monitor (See Figure 1-B).
3. Put the Fuse into the jack located at the side of the Battery Box.
4. Plug the Power Adapter Cord into the wall AC socket and the other end into the DC 12V-Input Jack on the Monitor (if a Wall Adapter comes with your device and see Figure 1-C); if you choose to use the charged battery, plug the power output cord of the battery to the DC 12V-Input Jack of the Monitor, then press the button on the Battery. The user can also charge the battery while using the device in the following way: plug the Charger to the wall AC socket and the other end to the jack on the Battery, and connect the power output cord of the battery to the DC 12V-Input Jack of the monitor, then press the battery's button.
   Note : Don't misuse the power cord and battery charger cable , otherwise the system can not work properly, or the battery pack may be damaged.
5. Press the **POWER** button on the front of the monitor.
6. Gently lower the Camera into a pipe duct, etc and reel out the cable until it is at the desired depth.
7. Press the **LED** button on/off and adjust LED brightness from the MENU.
8. Record the pictures if you need for the models featured with DVR (see **recording operation**).
9. By using a video cable you can transfer the picture to other larger Screen.
10. When you finish the job, carefully remove the Camera from the pipe duct, etc. Screw out the camera head and clean it with a clean, soft and dry cloth and then put the camera into the previous position.

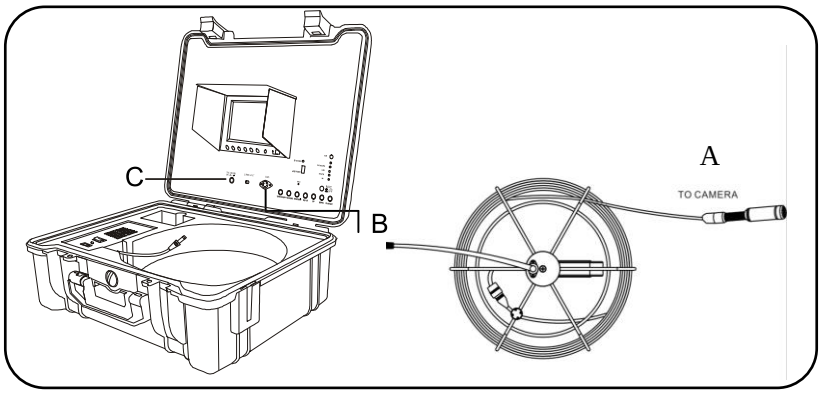


Figure 1

System Menu Setting

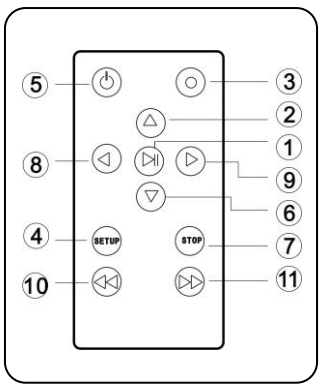
Clock setting: set date and time	
Time Format	Select: 24Hour - 12Hour
Year	Set year
Month	Set month
Day	Set day
Hour	Set hour
Minute	Set minutes
Second	Set seconds
Language Setting	Select: English - Chinese
System: showing software version, product version, free space and used space (when USB/micro SD is connected)	
Record setup: Storage device selection---USB stick or micro SD	
Play mode: No circle, one circle, list circle	
Master reset: press OK again to perform a master reset	
Firmware update: locate the directory where new firmware is stored	
Browse File: Showing all files on the current USB/ Micro SD medium.	
Remove USB/micro SD device(only when USB/Micro SD device is connected) Always use this option before safely removing the USB /micro SD device from the USB/micro SD port	

Recording Operation

1. Set the video button below the LCD screen 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 / micro SD card recorder **PLAY VIDEO** menu on the screen.
4. Insert your USB stick/removable hard disc into the **USB** Port, or micro SD card into micro SD card slot, you can see **USB stick /** micro **SD card connected** on the screen and the corresponding USB LED light indicator is on.

Remark: When you plug in the USB stick/micro SD card before starting the device, maybe the device can't find the USB stick/micro SD card. In this case, please remove them and try again.

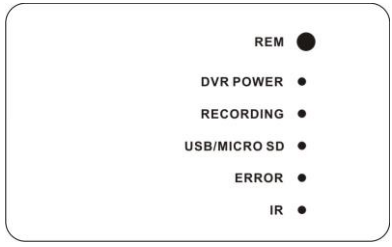
5. Press remote control button 3 (●) to start the recording and the RECORDING LED light is on. In recording, press the RECORDING button again, the DVR will take a photo and it is saved in the USB stick or micro SD card (The snap shooting function is only available for new versions).
6. Press remote control Button 7 (stop) to stop recording.
7. Press remote control Button 1 (▷||) to review recording.
8. If you need to manage your recording pictures, press remote control button 4 (SETUP). You can also manage video files by selecting the **SETTING** on **PLAY VIDEO** menu on the screen.



NOTE:

1. DVR system sometimes needs 10 - 20 seconds for reposition before it can work properly, please let it run about 20 seconds each time when you try to record.
2. Please hold the remote control close to the LED indicators on the front panel when using the remote control to record videos or snapshot.
3. USB flash disk and micro SD's max memory is 8G bit.

LED indicators



1） REM : Remote receiving window

2） Power: It indicates that the system is on

3） Recording: It will blink during recording

4） USB/Micro SD: It indicates that USB/micro SD device is connected

5） Error: It indicates that the system or USB/micro SD device has error

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

The recorded video files will be found in a directory of USB/Micro SD devices. You can use the on-screen menu or press (REC) button to start recording. Press (■/EXIT) button to stop recording. During the recording, the screen will display recording time and time limit (up to 60 minutes).

Recording time limit

Sometimes you may forget to stop the recording after it is initiated. This unit is featured with a recording time limit. The default time limit is 60 minutes. If recording time is over 1 hour, the system will record with a new file.

Schedule recording

You can schedule a recording in advance. Simply enable the schedule recording in the SETUP and then the unit will ask user to setup timing. Recording schedule can be used once. You have to set up schedule again for next recording.

Recording via USB Stick/ Micro SD Card

The unit can be used to record video and voice via USB stick / micro SD Card .The recorded video will be stored in the USB stick / micro SD card and can be played back on the screen.

VIDEO Recording format

The default video recording resolution is 640*480. One-hour recording will take up storage of 1000MB.

VOICE Recording

A microphone button on the front panel allows the user to press the button on to record a voice while the video is recording (This function is only available for new versions).

Video playing

You can use on-screen menu to enter “play video” mode. The unit will display the recorded video and other compatible videos stored in USB stick / Micro SD card.

It will not list the non-compatible videos.

Select the video file.

When you enter “play video” mode, the set will display all of the available video files on the screen.

You can 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 a few seconds before playing videos.

Fast forwarding and rewinding

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

Compatible video format:

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

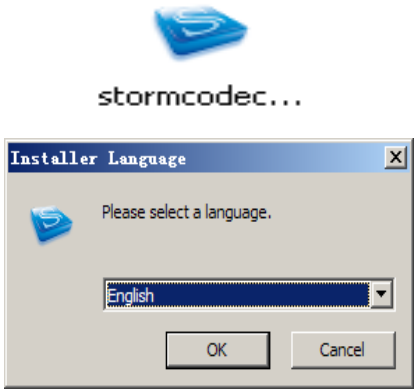
Note: The video player of the device may not support some downloaded videos.

Video Player Software Installation

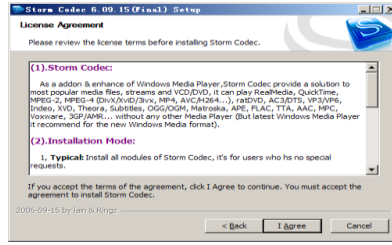
Generally, the recorded videos can be played on the computer purchased after the year 2006. If you can not open the recorded document on computer, there are two options:

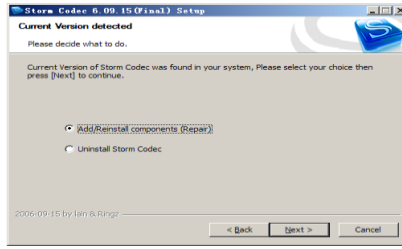
Option 1: Go to the website www.kmplayer.en.softonic.com/download and download the KMPlayer software for free.

Option 2: Install the video player software on the DISC enclosed with the manual by putting it into CD-ROM of your computer according to the icon as follows:



Storm Codec 6.09.15(Final) Setup
Welcome to the Storm Codec Installation Wizard
Storm Codec is a popular Codec Pack with useful tools, this installation wizard will guide your installation of it. We strongly recommended that you exit all Windows programs before running this setup program.
Click Cancel to quit the setup program, then close any programs you have running.
Click Next to continue.
Stormcodec
Next >
Cancel


Storm Codec 6.09.15(Final) Setup
License Agreement
Please review the license terms before installing Storm Codec.
(1).Storm Codec:
As a addon & enhance of Windows Media Player,Storm Codec provide a solution to most popular media files, streams and VCD/DVD, it can play RealMedia, QuickTime, MPEG-2, MPEG-4 (DivX/XviD/3ivx, MP4, AVC/H264...), ratDVD, AC3/DTS, VP3/VP6, Indeo, XVD, Theora, Subtitles, OGG/OGM, Matroska, APE, FLAC, TTA, AAC, MPC, Voxware, 3GP/AMR... without any other Media Player (But latest Windows Media Player it recommend for the new Windows Media format).
(2).Installation Mode:
1, Typical: Install all modules of Storm Codec, it's for users who hs no special requests.
If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install Storm Codec.
2006-09-15 by Ian & Ringz
< Back
I Agree
Cancel


Storm Codec 6.09.15(Final) Setup
Current Version detected
Please decide what to do.
Current Version of Storm Codec was found in your system, Please select your choice then press [Next] to continue.
Add/Reinstall components (Repair)
Uninstall Storm Codec
2006-09-15 by Ian & Ringz
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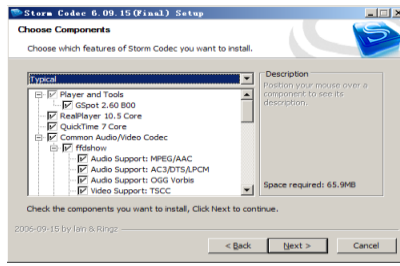
Next >
Cancel


Storm Codec 6.09.15(Final) Setup
Choose Components
Choose which features of Storm Codec you want to install.
Typical
Player and Tools
GSpot 2.60 B00
RealPlayer 10.5 Core
QuickTime 7 Core
Common Audio/Video Codec
ffdshow
Audio Support: MPEG/AAC
Audio Support: AC3/DTS/LPCM
Audio Support: OGG Vorbis
Video Support: TSCC
Description
Position your mouse over a component to see its description.
Space required: 65.9MB
Check the components you want to install, Click Next to continue.
2006-09-15 by Ian & Ringz
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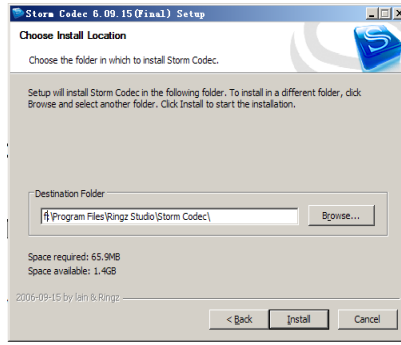
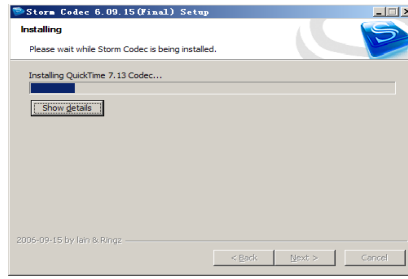
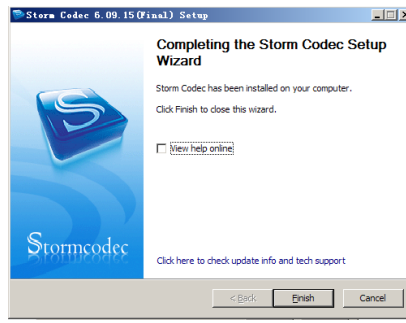
Next >
Cancel


Storm Codec 6.09.15(Final) Setup
Choose Install Location
Choose the folder in which to install Storm Codec.
Setup will install Storm Codec in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.
Destination Folder
C:\Program Files\Ringz Studio\Storm Codec\
Browse...
Space required: 65.9MB
Space available: 1.4GB
2006-09-15 by Iain & Ringz
< Back
Install
Cancel


Storm Codec 6.09.15(Final) Setup
Installing
Please wait while Storm Codec is being installed.
Installing QuickTime 7.13 Codec...
Show details
2006-09-15 by Iain & Ringz
< Back
Next >
Cancel


Storm Codec 6.09.15(Final) Setup
Completing the Storm Codec Setup Wizard
Storm Codec has been installed on your computer.
Click Finish to close this wizard.
View help online
Stormcodec
Click here to check update info and tech support
< Back
Finish
Cancel

Locating the Camera Head with Built-in Transmitter

The camera head of Model# 4188 which has a 512HZ built in sonde transmitter can be located by a 512HZ locator / receiver. The locatable distance is about 15 FT in nonmetallic pipelines and 10FT IN CAST IRON PIPELINES.

Note: All 3188 series models' camera head can be upgraded to the one with 512 HZ built-in sonde transmitter.

Recharging the Battery

1) Plug the charger into the AC socket on the wall and insert the other end into the DC Jack on the battery box (See Figure2- A)
2) Press the button (See Figure2-B) while the battery box is turned off. The battery can be charged while the battery box is on and the device is being used. However, once the power in the battery runs completely out, it can only be charged when the battery box is turned off.
3) The charging LED light will be red during the process of charging and will turn green when charging is completed (normal charging time: 5 – 6 hours).

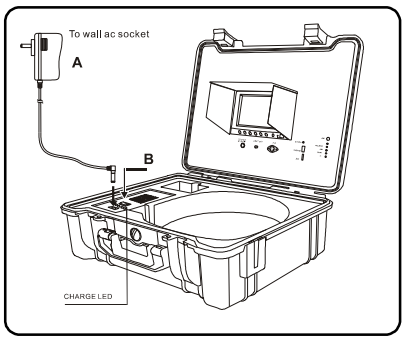


Figure 2

IMPORTANT MESSAGE: Do not overcharge the battery! Overcharging can result in acid leaking from or damage to the battery.

Battery specifications:

1. TOTAL POWER 12W
2. LI-ION BATTERY 12VDC MAX.≦ 40Wh
3. CHARGER 13.5V 800mA
4. CHARGING TIME 6 HOURS
5. WORKING TIME ≧200 MINUTES
6. PROTECTIVE VOLTAGE 8.1 V
7. THE VOLTAGE BEFOR DISCHARGING 12.6V
8. LOAD CURRENT 1100mA(INPUT 12.2V HOUR)

TROUBLE SHOOTING

Trouble	Reason / Solution
Blank Screen	1. Change the fuse
	2. Recharge the battery or try the wall adapter
	3. Check power line and connect it again.
No signal	1. Read the manual again and reconnect it.
	2. Check the camera head and screw down
	3. Clean the camera pins and the connection area on PCB Board into the hole
	4. Check the pins and find if they are on the same level
The camera has weak or no light	Press LED button on/off or adjust the LED brightness setting from “MENU” button .
No recording	1. Press the “Video” button and set to Video2
	2. Press POWER button and the monitor indicator light is green.
	3. Use another USB disk /micro SD and try again
Record abnormity	Shut off the unit and restart the unit in right steps
Flashing pictures	1. Deficiency of the battery power. Please recharge the battery
	2. Misuse of the charger cable and power cord: switch the cables
Battery Recharging Not Working	Misuse of the charger cable and power cord: to use the right charger cable. Turn off the battery pack if there is completely no power