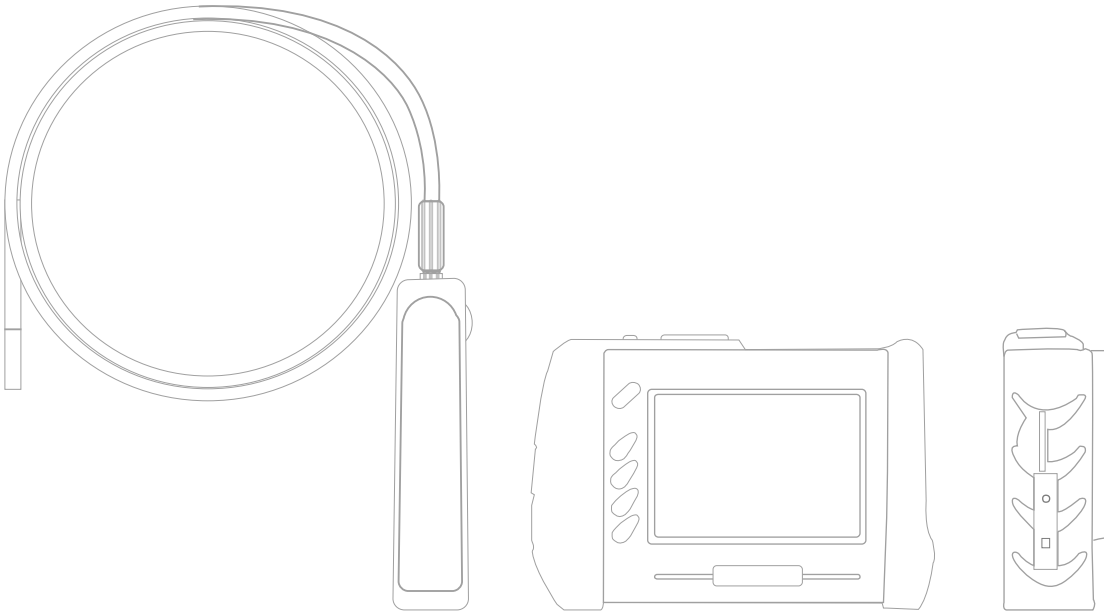


2. FOR THE FIRST TIME USING IT	2
3. ENVIRONMENT EXPLAIN	3
3-1 THE INTERFACE EXPLAINS	3
3-2 BUTTON USAGE.....	3
4. OPERATING DESCRIPTION.....	6
4-1 TURN ON/OFF OPERATING.....	6
4-2 THE HANDLE LIGHT STATUS.....	6
4-3 SNAP	6
4-4 REC (RECORDING).....	7
4-5 VIEW PHOTO AND VIDEO.....	7
4-6 DATE/TIME SETUP.....	7
4-7 DISPLAY OR HIDE DATE/TIME.....	7
1. PRODUCT OVERVIEW	2
4-9 ADJUST VIDEO-OUT FORMAT.....	8
4-10 DELETE SINGLE PICTURE (ONLY IN PREVIEW MODE).....	8
4-11DELETE ALL PICTURES.....	8
4-12 AUTO SHUT OFF SETUP.....	9
4-14 MEMORY CARD INFORMATION.....	9
6. QUESTIONS SOLVING.....	11
7. IMPORTANT SAFETY INSTRUCTION.....	12





1. Product Overview



1 Handgrip

- (1) Power Key / Light adjust
- (2) Lens
- (3) Connected Sensor

2 Main Unit

- (1)  RECORDING
 - (2)  SNAP
 - (3) POWER
 - (4)  LAST
 - (5)  NEXT
 - (6) MENU/OK
 - (7) ESC
 - (8) SD Port
 - (9) AC jack
 - (10) Video output
- (Please read the operation manual before using it)

2. For the first time using it

STEP 1: Make the sensor with arrow printed on point up, connect it with the joint on the handgrip, and

screw the nut on.

STEP 2: Fastening the turn plate on the handgrip along the clock direction, once you hear " pa ", the handgrip power on, and green light appears on record signal.

STEP 3: push the power key for 3 seconds in order to start the main unit, the object you are shooting revealing on the lens.

STEP 4: Aim at the object, and press shooting key or video key in order to go on relevant functions operating.

There are two modes for using this machine, "Direct Transmission" and " Wireless Transmission" .

As following:

- Direct Transmission --Only insert the handgrip at the rear slot of the main unit, the machine will auto change to direct transmission mode. At that time, the image signal will be free from interruption by radio wave, so especially suitable for making and used in high (electric wave) conditions.
- Wireless Transmission –Build-in wireless transmission function, if separating the handgrip and the main unit while using, the machine will auto change to wireless transmission mode.

3. Environment explain

3-1 The interface explains

This instrument is designed for the real condition and professionals. The device contains three modes, including preview mode, review mode and menu mode, as following:

Preview mode	In preview mode, the screen will display the real-time image. You may start the video recording or snap photos under this mode.
Review mode	To review recorded files, and manage file.
Menu mode	For file maintaining, setting up etc.

Note: When the main unit is in the function mode, it will automatically go back to preview mode if there is no action taken in 10seconds.

3-2 BUTTON USAGE

The instrument is with the most convenient and ergonomics operating under every mode.

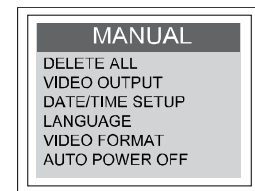
FUNTION KEY	Preview mode	Review mode	Menu mode
▲	To review saved files(Enter	Get to last photo or video	Move cursor up to

	Review mode)	file.	select a function.
▼	To review saved files(Enter Review mode)	Get to last photo or video file.	Move cursor up to select a function.
OK	Enter menu mode	Delete photo or video files.	Enter the selected function.
ESC	Go back to preview mode.	Go back to preview mode.	Go back to preview mode.
📷	Take photos.	While reviewing photos, it functions as “Next”. While playing video, it functions as” Stop/Start”playing	Show software information(for maintenance use)
📹	Start and stop video recording.	Go back to preview mode.	Go back to preview mode.

3-3 Function selection

Main Menu

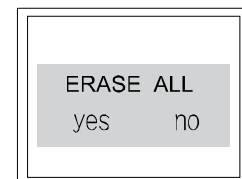
In preview mode, press MENU to enter function selection, as figure



(圖一) 1.

There are six functions under menu; a brief introduction for each

function is as follow



(圖二)

- DELETE ALL**
- VIDEO OUTPUT**
- DATE/TIME SETUP**
- LANGUAGE**
- VIDEO FORMAT**
- AUTO POWER OFF**


DELETE ALL

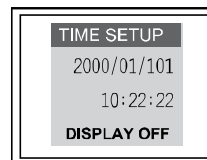
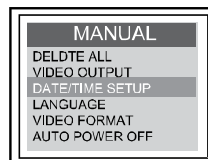
When enter the delete function, the screen will show up a “yes””no”box, press UP or DOWN to make yes or no selection, press OK to delete file or quit.

VIDEO OUTPUT

When the main unit connected with TV with AV cable, the video image can be switched to TV screen; there is no image on the display at that time. If you want to switch it back, please carry out the order.

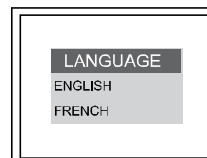
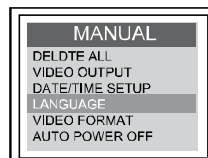
DATE/TIME SETUP

To setup date and time, please press UP or DOWN to move between year/mon/date, and hour/min/sec. Press  to adjust the number. Select the Display ON/OFF for time to or not to show on the snapped pictures.



LANGUAGE

Select language for language selections.

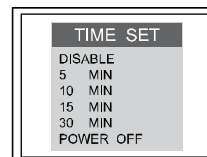
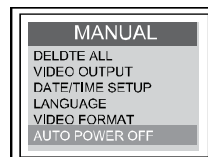


VIDEO FORMAT

For TV output format setting.

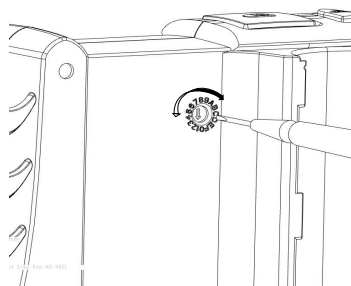
AUTO POWER OFF

To setup a time for auto shut down for power saving



3-4 Channel switch and selecting

While ICPW-55 operation wireless transmission, the handgrip must be at the same channel as the main unit, or you cannot see the image display. To adjust the channel you can use a line shape screwdriver to screw the channel switch (see the following picture), please follow the direction to make adjustment.



You can follow the following form to select suitable a channel

Channel	Direction	Frequency
1	9,1	2414MHz
2	A,2	2432MHz
3	C,4	2450MHz
4	8,0	2468MHz

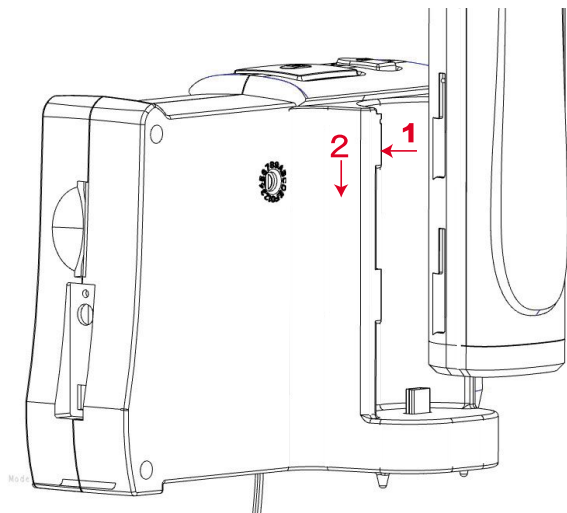
4. Operating description

4-1 Turn on/off operating

STEP1. Connect the handgrip to the main unit, as the picture shows you.

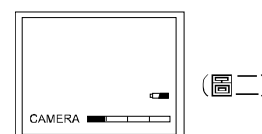
STEP2. While the signal is switching to entity circuit, there might be some parallel direction noise appear on the screen, and it is normal.

As the following picture:



STEP1. Press “POWER” button for 3~5 seconds to turn on the video borescope. The SD and power volume will show on the screen.

( SD  power volume)



STEP2. After operating, press POWER button to turn of the video borescope.

4-2 The handle light status

cresset	description	note
Green light	Occupied	Use under the full electric state
Dark red	Suggest to charge	Dark red light shows while occupied
Tangerine red	Charging while using	charged under using
Bright red	charging	charged under not using
There is no light number	full electricity (vacancy)	When the handle is full of electricity, the light disappeared.

4-3 Snap


Under the preview mode, press  and hold , the screen will



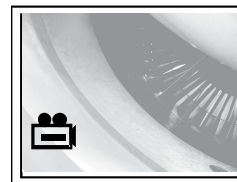
continually display the photo


Status: After finishing snapping, the screen will go back to preview mode automatically.

4-4 REC (RECORDING)


1. Under the preview mode, press  to start recording.


Status: The recording sign displayed at the left bottom corner shows it is recording.



2. Press  again to stop the recording.

Status: The recording sign will disappear at the left bottom corner while recording ends.

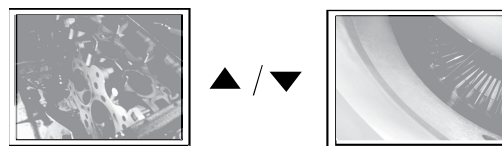
Attention : Press  during the recording, the recording will be stopped and the file will be saved immediately, then a snap shot will be taken.

Reminder: No matter it's under the displaying mode or function mode, simply just press  to go back to preview mode to take a snap shot or record the video.

4-5 View photo and video

1. Under the preview mode, press ▲ or ▼

Status : It will display the previous photo or Video.





2. Then, press ▲ or ▼ to view the previous or next photo or video


Status: The files are arranged in the sequence of video/photo taken time.


Addition : When switch to the Video File, the Instrument will automatically play the Video file till the end, and then go back to next photo or Video.

4-6 Date/Time setup

1. Press **OK**
2. Press ▲ or ▼ to switch to Date/Time.
3. Press **OK**
4. Press  (increase) or  (decrease) to adjust the year.
5. Press ▼ to move the blinking square to the next to-be-adjusted item.
6. Repeat Step 4 and 5 until the DATE/TIME are correct.
7. After finishing the setting, push “OK” to quit.

4-7 Display or Hide DATE/TIME

1. Press **OK**
2. Press ▲ or ▼ to switch to “Date/Time”
3. Press **OK**
4. Press ▲ or ▼ to switch to Display Option
5. Press  to switch between this function.

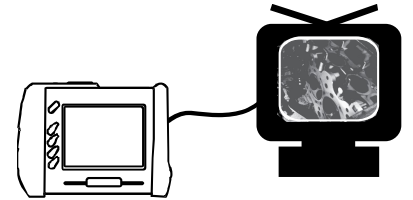
Status: Push  once to switch to “on” and push again to “off”

6. After finishing setting, push **OK** to end setting.
7. Press **ESC** to go back to preview mode.

4-8 Video out/in to a External monitor

1. Plug AV cable into the AV port on the right side of the main unit.

Note : Please correctly plug another end of connector into an external monitor.



2. Press **OK**
3. Press **▲** or **▼** to switch to Video Output function.
4. Press **OK**

Status : the images will be sent to the external monitor.

Note : This function will automatically detect whether the AV cable has been plugged, if the AV cable is not plugged and implement this function, the images will be automatically switched back to the screen of the main unit.

4-9 Adjust Video-Out Format

1. Press **OK**
2. Press **▲** or **▼** to switch to Video Format
3. Press **OK**
4. Press **▲** or **▼** to select NTSC or PAL.
5. Press **OK**

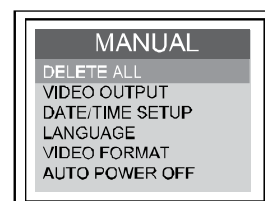
4-10 Delete single picture (Only in Preview Mode)

1. Enter preview mode , press **▲** or **▼** to select picture or video which you want to delete
2. Press **OK**(“ YES””NO” box will show up)
3. Press “UP” or “DOWN” to delete the pictures (“YES” is flashing at this moment)
4. Press **OK** again and the picture will be deleted.
5. 2 Ways to cancel deletion:
 - a. Press “ESC”
 - b. Press “UP” OR”DOWN” once again and then press “OK”



4-11 Delete All Pictures

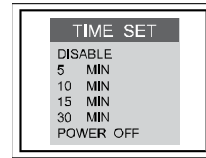
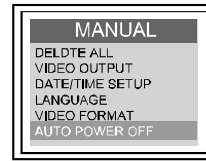
1. In preview mode, press **OK** (MENU shows up)
2. Press “UP” or” DOWN” to select “Delete All” function.
3. Press **OK** again to enter this function



4. Press ▲ or ▼ to switch to “YES”
5. Press **OK** again

4-12 Auto Shut Off Setup

1. Press **OK**
2. Press ▲ or ▼ to switch to Auto Power Off Function
3. Press **OK**
4. Press ▲ or ▼ to select the time you wish
(Or choose Disable means not to auto shut off)
5. Press **OK**



Therefore till the time you set not operating this instrument, it will auto shut off to protect its system.

4-13 Charging the product

4-13-1 charge the main unit only

Plug the charger’s connector to the jack of the main unit, and then plug the power adapter to a wall outlet.

4-13-2 charge both handgrip and the main unit

Suggest insert the handle in the main unit, and then you can charge both of them.

4-13-3 charge the handgrip only

USB cable charging – Use standard Computer Mini USB cable, plug it with the USB jack at the button of the handgrip, the other side to the computer to start charging.

(Attention : Suggest you power off both main unit and handgrip while charging.)

(Attention : Turn on the computer while using the USB cable charging.)

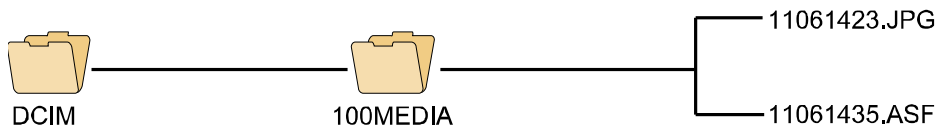
(Attention : The operating system will notify the new hardware found while using USB cable charging, leave it.)

4-14 Memory card information

For the accessory SD card of this product, all images and video are saved in [100MEDIA] of [DCIM]. The file was mainly named by month/day/ time as following:

presupposition time of the main unit Jan 1st 6:14:23 File name 11061423.JPG

1 1 0 6 1 4 2 3 .JPG month day hour min second Secondary file name



- We suggest once you receive this product, first, set the date and time in order to manager your file.
 - This product sets presupposition time as 01012007, if the file name show 1111, then it is presupposition time.
 - The file name is not named after serial number, but named after moon /day/ hour/ second while shooting it.
 - Picture, and film have the same naming way, but they have different secondary file name, pictures are JPG; films are ASF.
5. Specifications

Camera system & Insert tube	
5.5 mm Diameter Probes	325(H)*250(V)
Housing :	Steel
Light Source :	White LED
Length	1m 2m 3m (Longest 30m)
Field of View	Horizontal field angle 46° Vertical field angle 34° Diagonal field angle 56°
Depth of Field (DOF)	1cm~6cm
Water Resistant	insert tube water resistant
Working Temperature	0°C~55°C
Console	
Dimension	139.3 * 34.9 * 31.8cm
Weight	0.220kg
Wireless Transceiver Frequency	2.4GHz 、 4channels (2414MHz 2432 MHz 2450MHz 2468MHz)
Battery	Rechargeable Li-Polymer battery 3.7V
Brightness Control	Variable
Audio	integrated microphone

System	
System Dimension	146.9 * 105.4 * 71cm
System Weight	0.335kg
Power	Battery rechargeable Li-Polymer battery 3.7V power supply AC 100-240V 50-60Hz

	power consumption DC5.5 1.8A
Display	3.5 TFT LCD QVGA
Recording Medium	1G SD CARD (up to 2G)
Video Out Format	NTSC & PAL
Interface	AV out
Wireless Receiver Frequency	2.4GHz 、 4channels (2414MHz 、 2432 MHz、 2450MHz、 2468MHz)
Compression Format	Compliant with MPEG4
Still Image Storage Format	jpeg (640*480)
Frame Rate	~30 fps
Exposure	Automatic
White Balance	Fix
S/N Ratio	42dB or more
Language	English、 Japanese、 German、 Spain、 French、 Chinese
Recharge Temperature	0°C~40 °C
Working Temperature	0°C~60 °C
Storage Temperature	-20°C~60 °C

6. Questions solving



NO signal on the screen

If the battery is running out, once you turn on, it will shut down right away. Please plug the charger and use it until it finishing charging.

There is subtitle but no image on the LCD after power on the borescope

Please reinstall the joint to check whether the joint inset in position or not to eliminate this status.

Unable to Photo and video

Without inserting SD card, SD card "write protect", SD card breakdown, or SD card full, all above cause the product unable to take a picture and make video recording, please put SD card of normal operation .

Crash

The situation (picture is frozen, all buttons lose efficiency) that crash may happen under the situation

unexpected , please insert nonferrous needle to the RESET hole of rear part of the main unit, the machine will auto shut down, and then Depress the power key to for more then about 3 seconds to manual power on the borescope.

Clean the lens

Utilize cotton to be stained with a little alcohol to clean the lens

7. Important safety instruction



Do not take out the SD card while taking a picture and making video recording, this action might cause the documents in the SD card easy to lose, and even causes the SD card break down.

Use above 80X SD card to receive better quality while making video recording, the quality of the image can't be guarantee with SD card lower than 80X.



This instrument can only be used in industry field; can not be used on human body, animals, or any other organism.

Please do not insert the probe into any inflammable oil gas oil or liquid in order danger happens.

Please do not use the product under inflammable or dangerous environment. (ex: gas、 ethanol,...etc)

Do not use any corrosive liquid to clean the exterior covering.

Do not replace or dismantle the product, it cause of hazard

Do not bend or twist the cable over 180degree.

Use provided accessories and power source. Do not use other power sources it causes damage.

Do not use the product on a plane and medical place.

Do not broil the product

Please put a product under dry and ventilatory environment.