Wireless Recordable Borescope
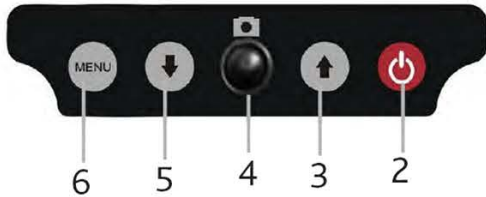
Instruction Manual
RS article no. 913-1560

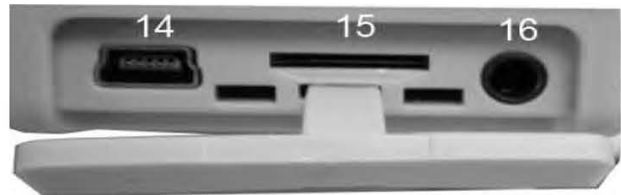# Please read this instruction manual carefully before using the product

MAIN PART LIST

Keypad

1. 3.5" color LCD monitor
2. Power on/off button
3. Brightness up button (rotation)
4. Camera button
5. Brightness down button (rotation)
6. Menu/OK
7. Battery compartment (4 x 1.5V AA)
8. Power indicator LED
9. Battery low indicator LED
10. Triangle hanging ring
11. Flexible tube
12. Camera and LEDS
13. LED power ON/OFF
14. Mini USB port (to PC)
15. SD card slot
16. Video port

Right side Connections

ACCESSORIES PART LIST

17. Mirror
18. Hook
19. Magnet
20. TV Video cable
21. USB cable (to PC)

TABLE OF CONTENT

Safety Instructions

Before first use please familiarize yourself with the proper usage of the device. Keep these operating instructions for future reference. This operating instruction contains important details for handling the device. Please pass it on along with the unit if it is handed over to a third party!

⚠️ **Please read the safety instructions most carefully!**
These instructions will make it easier for you to handle the device appropriately and help prevent misunderstandings and possible damages.

⚠️ **Please note the following safety notes to avoid malfunctions, damage or physical injury:**
- **Prevent object and liquid entry.** Never spill liquid of any kind on the video display and the main body of the unit.
- **The unit is not shock-resistant.** Do not use it as a hammer or drop it.
- **Do not immerse the camera and monitor in water.** Store in a dry place. Such measures reduce the risk of electric shock and damage. The imager head and the cable are water resistant when the unit is fully assembled, but the monitor and camera is not.
- **Do not use the camera if condensation forms inside the lens.** Let the water evaporate before using again.

Cautions
- The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

- Turn off the unit if not in use.
- Attention should be drawn to the environment aspects of the battery disposal.

- Remove the batteries when cleaning the unit.
- Remove the batteries before storing the unit for a long time.
- When necessary, REPLACE ALL FOUR BATTERIES in the unit with new ones.

- Use only the size and type of battery specified.
- Be sure to install the battery with the correct polarity as indicated in the battery compartment.

- Properly dispose of the battery. Exposure to high temperatures can cause the battery to explode, so do not dispose of in a fire. Please tape over the terminals to prevent direct contact with other objects. Some countries have regulations concerning battery disposal. Please follow all applicable regulations.

IN THE PACKAGE

Qty	Description
1	Endoscope Main Unit
1	Instruction Manual
1	Video Cable
1	USB Cables
1	Mirror
1	Hook
1	Magnet
1	Power adapter

Check all parts for transport damage. In case of damage contact your dealer immediately. Check the package for completeness. Inform your dealer about missing parts immediately.

Information About The Product

The product is designed as a remote inspection device. It can be used to look into tight spots and beam back real-time video to monitor. Typical applications might include HVAC inspection, cable routing, automotive/boat/aircraft inspection, etc.

Before First Use

Remove all packaging materials and check the scope of delivery for completeness (IN THE PACKAGE).

Installation

Please install the batteries before using the product, choose the accessory according to the actual situation. Steps of installation as following:

To Install Batteries

1. Using a screwdriver, remove screw and cover
2. Remove battery compartment and insert 4 new AA (1.5V) batteries into the proper slots in the battery compartment. Proper battery orientation is indicated on the battery compartment.
3. Reinstall battery compartment, battery cover and screw.
4. Charging the LCD monitor by connecting USB
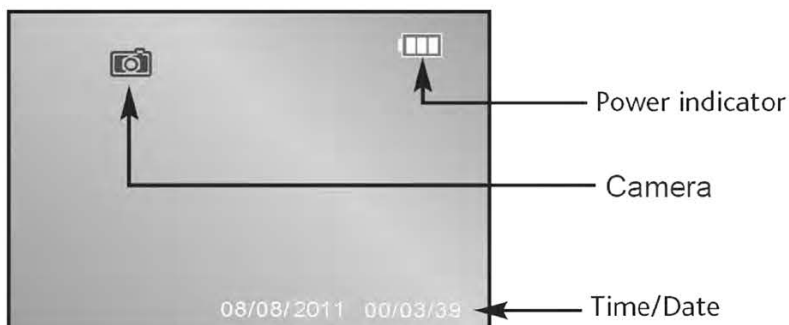
(21)

OPERATION
Switching On/Off

BEFORE USING THE UNIT FOR THE FIRST TIME:
• Ensure the time and date have been set
• Ensure the SD card is inserted

Press the ON/OFF button (2) to switch the device on.
The camera image will appear on the screen and the Power indicator (8) will illuminate green

Power indicator

Camera

To switch the device off press the ON/OFF button

08/08/2011 00/03/39 — Time/Date

4

Rolling the LED rotator (13)

Camera Illumination

The inspection camera is equipped with a dimmable LED light in the camera head, which can be adjusted using the (13) LED ON/OFF rotaror

Press ↻ clockwise to increase brightness

Press ↺ counter clockwise to reduce brightness

Rotating the display

Press the ⌂ button for 1.5 seconds to rotate the display by 180°

Menu Options

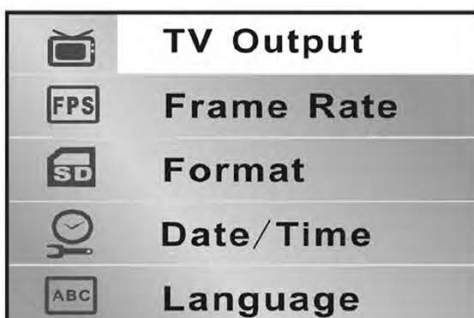The menu options are accessed by pressing the MENU/OK button (6)

To move up/down the menu press ⌂⌂ keys

To select a menu item press the camera button (4)

Select EXIT to return to the previous menu or exit the menu options

Settings

TV Output

Allows selection of the appropriate video standard when connecting to a TV/Display or Recording device using the Video connection (16)

Select NTSC or PAL. The normal setting for most European countries is PAL.

Language Selection

Allows the language to be set for the menu functions.

Use the navigation keys ⌃⌄ to select from the languages available

Date / Time

Set Date/Time

Use the navigation keys ⌃⌄ to edit the time and date

Camera & Video Operation
Inserting SD card

Before using the camera or video function an SD card must be inserted into the card slot

Note:- Card must be inserted with contacts facing upwards

Then screen will then show the SD card icon

Camera

Press the camera button (4) to take a picture
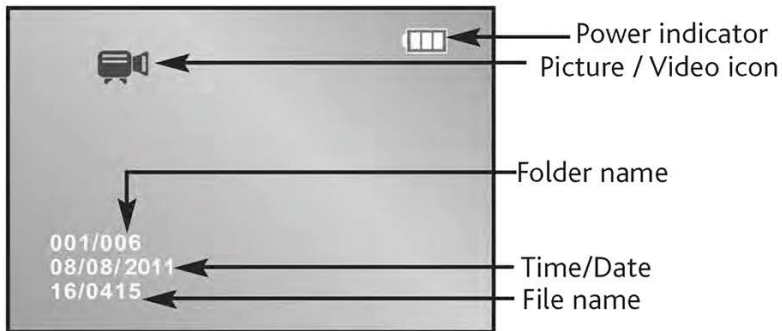

DVR

7

Image Management

Press the Power button briefly to enter file management mode, the latest stored picture or video will be displayed. Press power button again to exit file management mode.
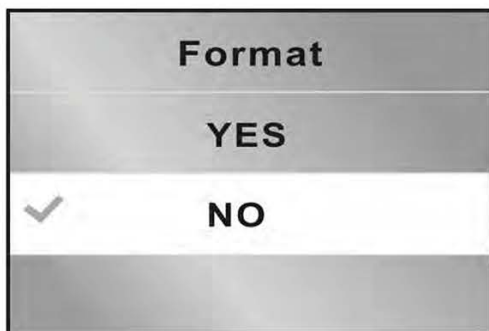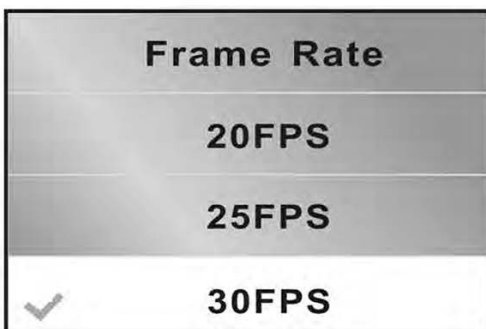

- Power indicator
- Picture / Video icon
- Folder name
- Time/Date
- File name

001/006
08/08/2011
16/0415

Playback

Use the navigation keys ⌒⌄ to select playback

Press button (4) to start video playback

Format

Format

YES

✓ NO

Select 'Yes' to format all data on the SD card

Select 'No' to exit without formatting

Frame rate

Frame Rate

20FPS

25FPS

✓ 30FPS

Video Output

The inspection camera is equipped with a video output, so the image may be viewed on a larger display and recorded if required
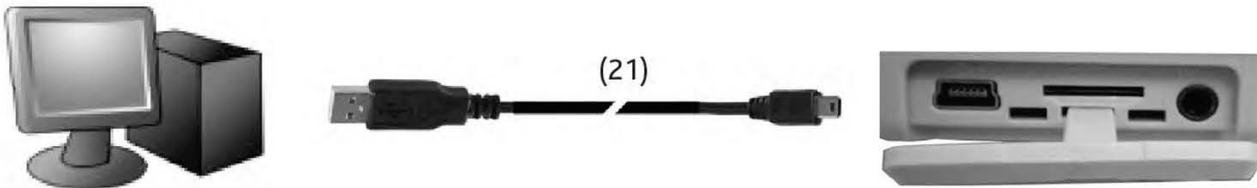

Connect video cable (21) between video output (16) and AV input on display

Switch on camera and select video input channel on the display

Camera picture will then be displayed

Transferring files to a computer

Connect 1st USB cable (22) between mini USB port (14) and computer

Switch on camera, computer will then detect unit as a removable disk
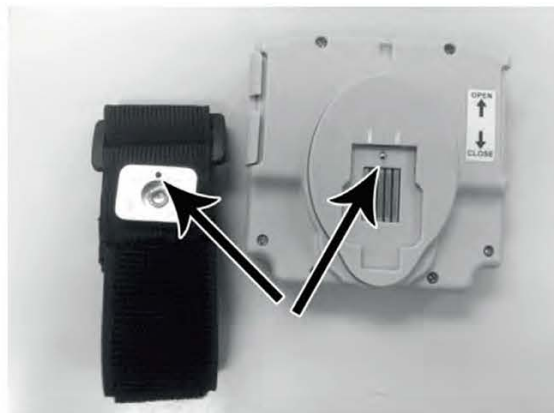
Files can now be copied over to computer as required

Monitor arm band

Unpack the arm band and attach it to the arm.

Attach the removable monitor to the metal plate. Please note the correct direction . The metal point on the monitor should fit into the hole on the plate. Push the monitor downwards to fix it onto the arm band.

ACCESSORIES

Clip-on tools

The inspection camera is supplied with a hook, mirror and magnet tool to aid inspection and component retrieval

Ensure the tool is securely clipped onto the camera head before using
WARNING: Do not use excessive force to insert or retrieve probe when using clip-on tools, no responsibility will be accepted for tools disconnecting during use.

Connecting/Disconnecting camera

To replace or upgrade the camera probe, it can be easily be removed

First loosen the locking screw, then remove the flexible probe

Push the new camera into position and re-tighten locking screw

Battery Low Indicator
When the batteries is getting flat, the **Battery low indicator LED (9)** will lights. Please replace batteries in the battery compartment as show under **Installation** instruction in this manual.

Disposal

Packaging

The packaging can be recycled. Put the packaging materials to appropriate collection containers only.

Device

After the device has reached the end of its service life, follow the legal regulations concerning the disposal of electrical devices. Take the device to your retailer or to an appropriate public collection point, where it will be recycled

Do not put your used batteries, nickel cadmium, rechargeable, round cell or starter batteries in with your household rubbish. Take them to an appropriate disposal/collection site.

CE Declaration Of Conformity

This product complies with the EU CE guidelines and directives. Electromagnetic Compatibility Directives 2014/30/EU & the RoHS Directive 2011/65/EU and its amendment (EU) No. 2015/863.

Product Specifications

8.9cm TFT resolution	320 x 240 Pixels
Lens sensor resolution	640 x 480 Pixels
Sensitivity	1.8V(Lux.sec)
Color Mosaic	RGB Bayer pattern
White comparison	Automatic
Exposure to light	Automatic
Video format	NTSC & PAL composite video
Camera illumination	4 LEDs, white
Handler end AVI port	NTSC & PAL signal out
Power by	4 X 1.5V $\overline{---}$ AA batteries
Power Consumption	Max 450 mA
Ambient/operation temperature	0 to 45 ℃
TV Cable length	Approx 1.5 M
Total length of device	111.0 + - 2.0 cm
Metal tube length	88.0 + - 2.0 cm
Minimum bending radius	4.5 cm
Diameter of camera head	10.0 mm
Lens coverage	54°
Short distance focus	3 ~ 6 cm
Weight without accessories	Approx. 500 gm

Note：
Shelf life：3 years warranty