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## Manual Borescope

### PCE-VE 350N

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## 1. Parts function

- A. Power button
- B. PHOTO button
- C. REC button
- D. PREV button
- E. NEXT button
- F. Multi-selector
- G. Escape
- H. Light switch
- I. SD jack
- J. AV jack
- K. USB jack
- L. DC IN jack
- M. Main unit
- N. Probe / cable

## 2. Interface Overview

This handy, easy-to-use device is designed with simple operational functions and commonly used by both amateurs and professionals. There are 3 basic modes for easier operations as follows:  
PREVIEW Mode

Displays summarized optional functions such as ; picture taking, video taking etc.

SURFING Mode

Allows user to survey photos and videos in the memory card and maintain files.

MENU Mode

Includes file maintenance, settings etc.

PS: If the menu mode is not operated for 10 seconds, the system will automatically switch back to the preview mode.

## 3. Operation function

All the buttons of this scope have different functions under each mode as cross referenced below:

Button

Preview Mode

Acts as "Backward / Reverse" function

Acts as "Forward" function

To enter into the Menu mode

To take photograph

To start / stop video recording

Surfing Mode

Back to previous photo or video

Switch to next photo or video

To delete photos or videos

To return to the Preview mode

"NEXT"(under the Preview mode)

"Start / Stop"(under the REC mode)

To return to the Preview mode

Menu Mode

Selecting the previous function or option.

Selection the next function or option

Confirms selected function or option

To return to the Preview mode

Displays information on the software version for technical repairs and maintenance

To return to the Preview mode

## 4. Menu

### Main Menu

Under the preview mode: Press MENU button to display the various optional functions as follows:

#### DELETE ALL

#### VIDEO OUTPUT

#### DATE / TIME SETUP

#### LANGUAGE

#### VIDEO FORMAT

#### AUTO POWER OFF

#### DELETE ALL set up

Displays a frame which includes two options as in picture 2.

Use "PREV" and "NEXT" to select "Yes" or "No" and press OK to confirm.

#### VIDEO OUTPUT order

Once you insert the video cable, select this function to transfer the viewing screen from the main unit to television screen, the main unit screen will turn black. You can transfer the screen back to the main unit by selecting the same function.

### Menu

#### DATE/TIME SETUP

Press PREV button & NEXT button to select year/month/day or hour/minute/second, and press SEC button for increasing numbers and press PHOTO button for reducing number.

If the "Date/Time" set up indicates "ON" status, the photo taken will include the Time/Date of occurrence.

#### LANGUAGE SETUP

To select language. (2 optional language)

#### VIDEO FORMAT SETUP

To setup the TV output format

#### AUTO POWER OFF SETUP

To setup time for auto power off

## 5. Operation

### Installing (Getting started)

#### Step 1

Connect the probe with the main unit. Place the main unit facing inward and

Connect the probe (marked with an arrow) by inserting it to the main unit and screwed on (refer to picture 1)

#### Step 2

Press POWER button for 3-5 seconds to turn it on, then displays the sign as the one in pic 2 that will disappear in 5 seconds and then you can start the use.

(Capacity of SD card

Capacity of battery)

#### Step 3

Press POWER button for 3-5 seconds to turn it off.

### Operation

#### PHOTO

Touch or press to display the picture continually.

Status: After taking picture, the system automatically switch back to preview mode.

#### REC

1. Press for video recording.

Status: Displays the sign in the lower-left corner to indicate recording status.

2. Press to stop recording.

Status: The sign in the lower-left corner disappears to indicate end of recording.

P.S.: The video is saved automatically when you press to stop recording and proceed with next action (picture taking of video recording.)

To view photos and videos

1. In the preview mode press or

Status: Will displays the latest picture.

2. And press or to survey the first photo / video taken and the second photo / video taken.

Status; Files are organized by date sequence.

P.S.: Shows the previous or next actions (either taking photograph or video recording).



## Operation

### DATE / TIME SETUP

1. Press OK to select
2. Press or to set Date (YY/MM/DD), Time (HR/MIN/SEC).
3. Press for adding or for decreasing the numbers (date / time) and further pressing will go to "DISPLAY" option and press or for "ON" / "OFF" DISPLAY option.

Display date

Conceals date

## Operation

### Input / Output pictures into external viewing screen

1. Connect the black AV cable with the main unit to the AV jack on the right side of the main unit. (P.S.: make sure the other side of the AV cable is well connected with the external viewing screen.)
2. Press OK to select
3. Press or to transfer to "Video Output" option.
4. Press OK again

Status: Picture will output to external viewing screen

PS. The function will detect automatically if AV cable already inserted in the AV jack. If not but inserted, the image of screen will be switched back the main unit.

### To regulate output viewing

1. Press OK
2. Press or to select video format option.
3. Press OK
4. Press or to select NTSC or PAL
5. Press OK

## Operation

### DELETE SINGLE FILE(LIMITED TO VIEWING MODE )

1. Press or to go to the required file
2. Press OK to go to the delete option
3. Press or for "Yes" or "No" option
4. Press OK to confirm

### DELETE ALL FILES

1. Press OK to go to "DELETE ALL" in the Main Menu
2. Press or for "Yes" or "No" option
3. Press or to confirm

## Operation

### Auto Power On/Off Setting

1. Press Ok
2. Press or to go to the Auto Power Off option
3. Press OK
4. Press or to set up the time options (5min/10min/15min/30min) or DISABLE option (if you choose not to have this function)
5. Press OK
6. PS. The system will still automatically switch off without prior setting.

## ACCESSORIES

USB Cable – enables connection to PC for convenient file transfer and maintenance.

Video Cable – connects screening to television when required.

Adaptor – enables power charging when low power is indicated.

SD card – Please refer to the picture for direction when inserting to the unit.

Beware of the direction that SD card should be.



## 6. SD Card Routes

When you get the product, recommend you set up the time and date for the future management of the files. The product press time is YEAR 2007, January 1<sup>st</sup>. If file name shows first two codes are 11, it indicates the time is preset time.

The file name is defined not by sequence ID, but by photoing time.

Picture file and video file are defined by the same way, but extension is different. Picture file is .ASF.

## 7. Troubleshooting

No image on the LCD monitor after turn power on:

If battery is exhausted, turn power on and then on action, please charge battery or use AC adapter.

No image but words on the LCD monitor after turn power on :

Please check connector if connected well.

Cannot take picture and video

No SD card inserted, no photo taking and videoing.

If SD card is out of order, data cannot be saved to the card.

Shut down;

When all the function freeze or fail, please insert an insulated needle to the hole on the back of the main unit.

The system will restart automatically.

Back

RESET

## 8. Caution

Do not remove the SD Memory Card while data is being saved to the card while photographing or videoing, as this may cause the data to be lost or the card to be damaged. While videoing it need storage mass data, we recommend using more than 80X SD card to catch batter quality.

Important:

Use cotton buds soaked in alcohol to clean the lens.

Don't use the product in dangerous environment such as oil tank.

Don't use chemical liquid to clean off the surface of the product.

Don't open the product unit, the action might damage the product.

When storing the product, be careful when bending the probe. Don't bend the probe 180 degree.

Please use original spare parts, if not, it might damage the product.

Don't use the product in an aircraft and medical field.

Don't use the product under the direct sunshine.

Please keep the product in dry and adequately ventilated environment.

## 9. Specification

Specification

Handle Working Temperature -20 – 60°C

Probe Working Temperature -20 - 70°C

Total Storage Temperature -20 - 60°C

While Battery in charge 0 - 40°C

## 10. Specification

### Insertion Tube & light Source SPEC.

Image Sensor	MOS Image Sensor
Resolution (Dynamic / Static)	320(H)*240(V)640(H)*480(V) ~30M
Size	
Tip (Insertion Tube ) Diameter	5.5mm
Frame rate	~30 fps
S/N Ratio	42dB
Exposure	Automatic
White balance	Fix
Field of View (FOV)	67°
Depth of Field (DOF)	1.5cm~10cm
Light Source	4 White LED



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**System SPEC.**

Power	DC5V
Display	3.5" TFT LCD Monitor 320*240 Pixels
Interface	Mini usb 1.1/ AV out / AV in/
Battery	Rechargeable Li-Polymer Battery (3.7V)
Video Out Format	NTSC & PAL
Recording medium	SD card (the capacity can be used up 2G)
Compression Format	MPEG4
Still Image Storage Format	JPEG (640*480)
Video Recording Format	ASF (320*240)
Language	English + option (one language)

**Function**

Quick Snap  
Quick Video Recording  
Quick Review  
AV Out  
Video\Picture Viewer

**NOTE:** "This instrument doesn't have ATEX protection, so it should not be used in potentially explosive atmospheres (powder, flammable gases)."