GENERAL®

THE SEEKER™400 SERIES
**WIRELESS
VIDEO INSPECTION SYSTEMS**

GENERAL®

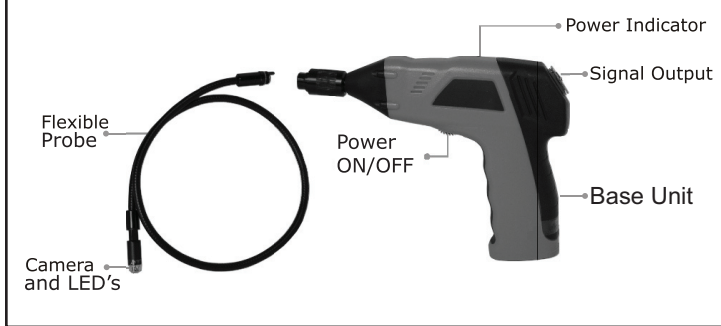**Specialty Tools & Instruments**

DCS400 and DCS495
USER'S MANUAL

Please read this manual carefully and thoroughly before using this product.

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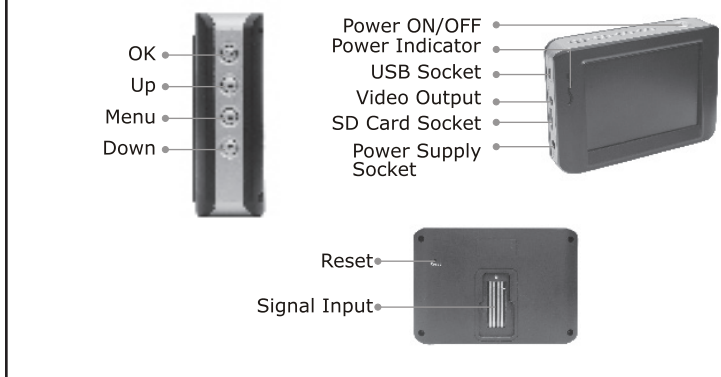
WELCOME

Thank you for purchasing a Seeker™ 400 Series wireless data-logging video inspection camera scope. Please read this User's Manual carefully before using this product.

The product is designed as a remote inspection device. It can be used to look into tight or inaccessible areas and wirelessly transmit real time video or still images for monitoring or recording.

Typical applications may include HVAC inspection, automotive inspection, cable routing, automotive/boat/aircraft inspection, etc.

OVERVIEW

DCS400
- Comes with a 17mm diameter, 3.28 ft. (1m) long camera tipped probe with built-in, adjustable LED lighting suitable for HVAC/R, plumbing and general inspection

DCS495
- **Comes with a** 9.5mm diameter, 3.28 ft. (1m) long camera tipped probe with built-in adjustable LED lighting suitable for automotive, electrical and other inspections that require a thinner probe

FEATURES

- The 3.5 in. (88.9mm) TFT-LCD Wireless Color Monitor, can be detached from the unit for remote viewing up to 32.8ft (10m) away
- The 3.28 ft. (1m) Flexible, Waterproof (IP67) Obedient Probe retains configured shape. Optional probe length: up to 18ft (5.5m)
- Records in Still Photo (JPEG) and Video (AVI), or view it live
- Records up to 3 hours continuously
- NTSC or PAL compatible
- Choices of 10 languages in the menu: English, Spanish, French, German, Chinese, Portuguese, Italian, Japanese, Dutch, and Russian

PACKING LIST

Camera Tipped Probe and Base Unit x 1

LCD monitor x 1

adapter for monitor x 1

video output cable x 1

USB Cable x 1

accessory magnet / hook/mirror x 1

CD ROM x 1

Micro SD Card x 1

Magnetic Base Stand x 1

STRUCTURE

Larger images appear in Appendix A
(page 18)

Camera Tipped Probe and Base Unit

Power Indicator

Signal Output

Flexible Probe

Power ON/OFF

Base Unit

Camera and LED's

Monitor

OK
Up
Menu
Down

Power ON/OFF
Power Indicator
USB Socket
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Power Supply Socket

Reset

Signal Input

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EU Environmental Protection Waste electrical products should not be disposed of with household waste.

Please recycle where facilities exist.

Check with your Local Authority or retailer for recycling advice.

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PAP

FCC INFORMATION

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference. (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

⚠ 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. Do not expose instrument to moisture.
- Turn off the Camera/Monitor if the system is not in use.
- The adapter is used as the disconnect device from the mains. The adapter shall remain readily operable.
- The Camera/Monitor can only be completely disconnected from the mains by unplugging the adapter.
- Do not cut the DC power cable of the apparatus to fit with another power source.
- Attention should be paid to the disposal of batteries in environmentally-friendly ways.
- Remove the batteries when cleaning the unit.
- Remove the batteries before storing the unit for a long time.
- When necessary, replace all four batteries at the same time 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.

SET-UP and INSTALLATION

Install the batteries, the camera tipped probe and insert the SD card in the monitor before using the scope. *Please follow the installation steps listed below:*

NOTE! Dry your hands before installing or replacing batteries.

Installing the Batteries

1. Using a screwdriver, remove screw and cover from the base.
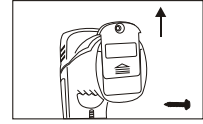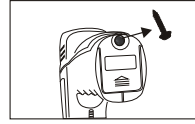
2. Remove the battery holder and insert four new "AA" batteries into the proper slots of the battery holder.
   Proper battery orientation is indicated on the battery holder.
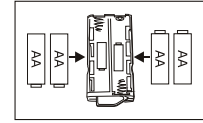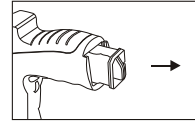
3. Insert the battery holder into the handle and re-attach the battery cover and the screw.

Installing the Camera Tipped Probe

In connecting the probe to the base unit, make sure the keyed ends are properly aligned. Once they are aligned, tighten the knurled knob to hold the connection in place.

Plugged to the socket | Fasten the knurled knob
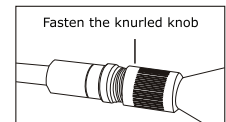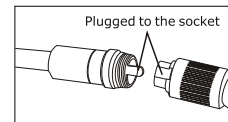
Installing the Accessories

The three accessories include a mirror, a hook and a magnet. All are attached to the probe tip in the same way. Install as follows:
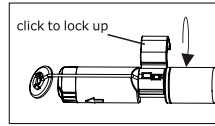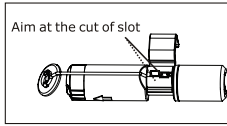
Make sure the stem is placed at the side facing from the arrow mark, and tighten to secure the accessory in place.
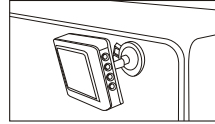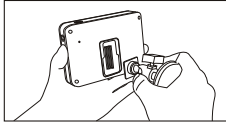
Installing the Monitor for Wired Use

The product also supports wired use by connecting the monitor to the base unit.
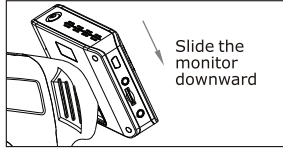
Connecting the Monitor to Magnetic Base Stand

The magnetic base stand allows the user to place the monitor remotely on any metal surface for true hands-free wireless viewing. Connect it to the monitor as shown in the following diagram:

SPECIFICATIONS

Camera

Imaging Sensor	CMOS
Total Pixels	704 x 576 (PAL)/712 x 486 (NTSC)
Horizontal View Angle	50°
Transmission Frequency	2468MHz
Minimum Illumination	0 Lux
Modulation Type	FM
Bandwidth	18MHz
Power Source	4 "AA" batteries
Unobstructed Effective Range	32.8" (10m)
Waterproof Capacity	IP67 (only for probe head)
Dimensions (WxDxH)	7.3" x 5.7" x 1.6" (186 x 145 x 41mm) (Excluding Flexible Tube)
Weight (about)	19oz (530g)

Monitor

LCD Screen Type	3.5" TFT-LCD
Effective Pixels	320 (R.G.B.) x 240
Video System	PAL/NTSC
Transmission Frequency	2414MHz,2432MHz, 2450MHz,2468MHz
Exterior Supply Voltage	5VDC
Consumption Current (Max.)	500mA
Charge Time	3 hours
Work Time	2 hours
Picture/Video Pixels	640 x 480
Video Size	27M bytes/minute
Frame Rate	30 frames/second
Video Output Level	0.9 - 1.3VP-P@75ohm
Receiving Sensitivity	-85dBm
Dimensions (W x D x H)	4" x 2.8" x 1" (100 x 70 x 25mm)
Weight (About)	5oz (140g)
Operating Temperature	14 to 122°F (-10 to 50°C)
Operating Humidity	15%~85%RH

* Actual transmission range may vary according to the weather, location, interference and building construction.

* All the specifications are subject to minor change without prior notice.
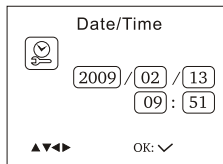
Selecting the Recording Type

1. In the setting mode, press the ⊕ or ⊖ button to select "RECORDER SETTING" then press the "OK" button to enter.

2. Press the ⊕ or ⊖ button to select "Recording Type" then press the "OK" button to enter into the following interface:

```
          Recording Type
            ▣

              ▣      ▣
  OK: ✓          VIDEO
```
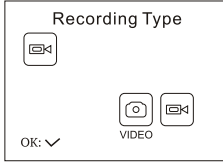
3. Press the ⊕ or ⊖ button to select "STILL VIDEO" then press the "OK" button to confirm and exit.

Setting the Date and Time

1. In the setting mode, press ⊕ or ⊖ button to select "Date/Time" then press the "OK" button to enter into the Date/Time interface.

2. Press the "OK" button sequentially to select Date or Time; press ⊕ or ⊖ button to modify; press ≡ button to confirm and exit.

```
          Date/Time
            ▣

           2009 / 02 / 13
                09 : 51

   ▲▼◀▶        OK: ✓
```

Event Playback

1. In the setting mode, press the ⊕ or ⊖ button to select "EVENT PLAYBACK" then press the "OK" button to enter.

2. Other operations see: "Play Video/Picture", "Delete Video/Picture", and "Delete Folder" sections.

Inserting the SD Card

After the SD card was inserted successfully into SD card socket, "▯" icon will appear on the screen; otherwise, "▨" icon will appear.
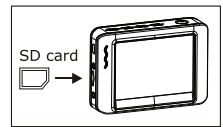
SD card

Connecting the USB Cable

Use the USB cable to connect the monitor to a PC. The USB online icon appears on the PC. Open **My Computer**, and find the **Mobile Disk**, the video/picture files in SD card could be copied/cut/played back.

NOTE! If the video files do not play on the PC normally, please install the plug-in the enclosed CD-ROM.

Connecting Monitor Power

Connect the adapter to the monitor, the red power indicator will light or the battery capacity icon on LCD of the monitor will flicker which indicates charging, and will turn off after a full charge.


adapter
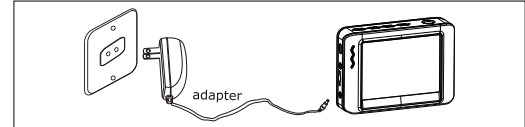
Video Output

Insert the video cable into the VIDEO OUT socket of monitor. Insert the other end of the cable into the VIDEO IN jack of a TV or another monitor. The LCD Monitor will output a high quality video.

OPERATION

Basic Operation

1. Roll the ON/OFF switch to turn ON the camera; the power indicator will light up. The switch then acts as a dimmer for the twin LED's that surround the camera on the probe's tip.


Twin LEDs provide lighting
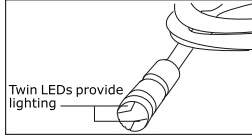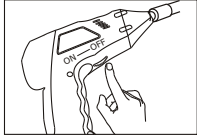
2. Press and hold on the Power ON/OFF button on top of the monitor for 2 seconds; the power indicator will light-up green, then press the ▼ button to select "CH4" (channel 4) and the picture will display on the LCD of the monitor. Press the ▲ button to select "record video" or "take pictures" status.

Select to record video or take pictures
Select CH4
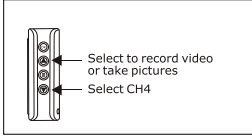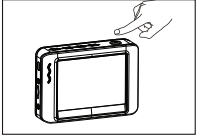
3. Roll the ON/OFF light switch for a better image effect.

The switch acts as a dimmer
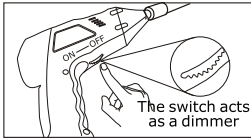
4. When in use, maneuver the probe into position.

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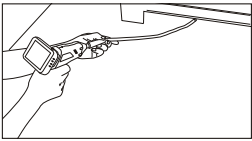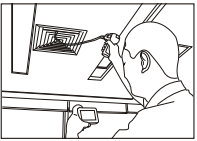
Default Setup

1. In the setting mode, press the ▲ or ▼ button to select "SYSTEM SETTING" press the "OK" button to enter.
2. Press the ▲ or ▼ button to select "Default Setup" press the "OK" button to enter into the following interface:
3. Press the ▲ or ▼ button to select "YES", pressing the "OK" button will restore defaults; NO will be to exit.

RESTORE DEFAULT
ARE YOU SURE?

NO
YES
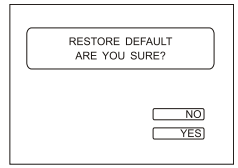
View Version Information

1. In the setting mode, press the ▲ or ▼ button to select "SYSTEM SETTING", then press the "OK" button to enter.
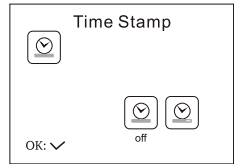2. Press the ▲ or ▼ button to select "Version" then press the "OK" button to enter and view the version of the product.

Frame Rate Setting

1. In the setting mode, press ▲ or ▼ button to select "RECORDER SETTING" then press the "OK" button to enter.
2. Press the ▲ or ▼ button to select "Frame Rate" then press the "OK" button to enter into interface:
3. Press the ▲ or ▼ button to select a suitable frame rate.
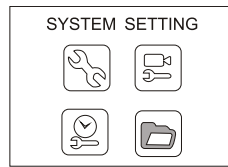4. Press the "OK" button to confirm and exit.

Frame Rate
Fps
30 FPS
▲▼   OK: ✓
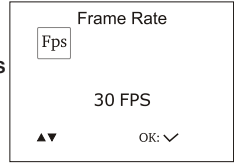
Time Stamp Setting

1. In the setting mode, press the ▲ or ▼ button to select "RECORDER SETTING" press the "OK" button to enter.
2. Pressthe ▲ or ▼ button to select "Time Stamp" then press the "OK" button to enter into the following interface:
3. Press the ▲ or ▼ button to select "Off" or "On" then press the "OK" button to confirm and exit.


Time Stamp
OK: ✓   off

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How to enter the Setting Mode
In the real time monitoring status, press and hold the ☰ button for about 1 to 2 seconds to enter into the "SYSTEM SETTING" interface as indicated:

SYSTEM SETTING

Language Setting

1. In the setting mode, press the ▲ or ▼ button to select "SYSTEM SETTING" then press the "OK" button to enter.
2. Press ▲ or ▼ button to select "Language" then press the "OK" button to enter into the "Languages" interface.
3. Press the ▲ or ▼ button to select a suitable language.
4. Press the "OK" button to confirm and exit.
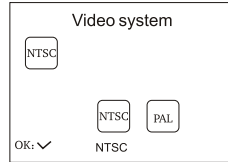
Language

OK: ✓   English
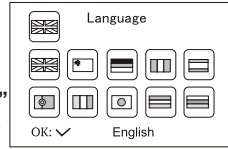
Video System Setting

1. In the setting mode, press ▲ or ▼ button to select "SYSTEM SETTING" then press the "OK" button to enter
2. Press the ▲ or ▼ button to select "Video System", then press the "OK" button to enter into the "Video system" interface.
3. Press the ▲ or ▼ button to select type, press the "OK" button to confirm and exit.

Video system

NTSC

NTSC   PAL

OK: ✓   NTSC

Format

1. In the setting mode, press the ▲ or ▼ button to select "SYSTEM SETTING" then press the "OK" button to enter.
2. Press the ▲ or ▼ button to select "Format" then press the "OK" button to enter into the "Format" interface.
3. Press the ▲ or ▼ button to select "YES". Pressing the "OK" button will erase all data; pressing the "NO" button will exit.

Probe: The flexible probe can be bent into a certain shape. This may help you insert the probe into narrow areas.

5. The accessories can be used to retrieve small items such as dropped rings or screws.
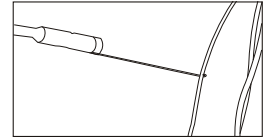
Other Operations and Settings for the Monitor

Recording Video

1. In the real time monitoring status, press the ▲ button to enter VIDEO status as follows:

Capacity Of Battery   Current Channel

VIDEO icon

CH4

Current Date   2009/02/11   [00:45:43]
14:50:40

SD Card Icon
Left Time
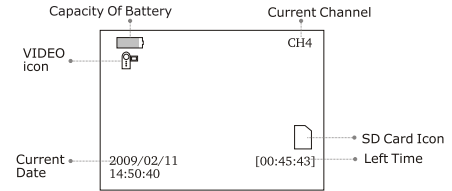
2. Press the "OK" button to record as follows:

Recording

CH4

2009/02/11   [00:05:43]   Recorded Time
14:50:40   2009/02/11 14:50:40

Time Stamp
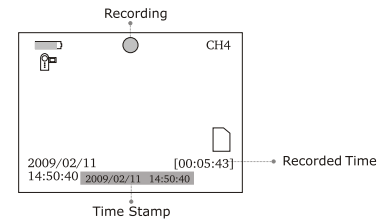
3. Press the "OK" button again to stop recording.

Notice!

* The Video will be automatically saved as a file every 30 minutes.
* SD card is full when the SD card icon changes to "F"

Taking a Photo

1. In the real time monitoring status, press the ⒶE button to switch to photo taking status as follows:

Capacity Of Battery   Current Channel

CH4

Photo
Icon

Current Date   2009/02/11
14:50:40

SD Card Icon

2. Press the "OK" button to take a photo.

Play Video/View a Picture

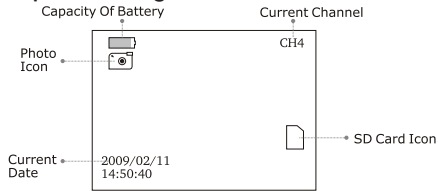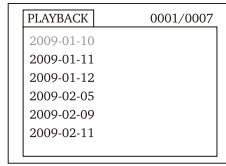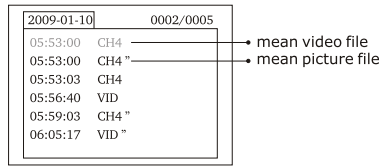1. In the real time monitoring status, press the ≡ button to enter into the playback interface.
2. Press Ⓐ or Ⓥ button to select folder, then press the "OK" button to enter into it.

PLAYBACK	0001/0007
2009-01-10	
2009-01-11	
2009-01-12	
2009-02-05	
2009-02-09	
2009-02-11	

Viewing a Video:

To Play: Press the Ⓐ or Ⓥ buttons to select video", then press the "OK" button to play.

To Pause: In play mode, press the "OK" button to pause; press again to resume play.

Fast Forward: In play mode, press the Ⓐ button.

Fast Backward: In play mode, press the Ⓥ button.

Stop/Exit: press the ≡ button.

2009-01-10	0002/0005
05:53:00	CH4
05:53:00	CH4 "
05:53:03	CH4
05:56:40	VID
05:59:03	CH4 "
06:05:17	VID "

mean video file
mean picture file

Viewing a Picture:
Press the Ⓐ or Ⓥ button to select a picture, then press the "OK" button to display.
Press the "OK" button again to exit.

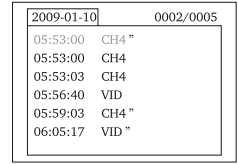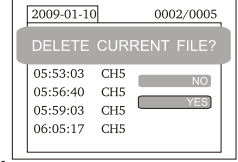OK: ‖   2009/01/10   05:53:00

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Deleting a Video or Picture

1. In the real time monitoring status, press the ≡ button once to enter into the following interface:

PLAYBACK	0001/0007
2009-01-10	
2009-01-11	
2009-01-12	
2009-02-05	
2009-02-09	
2009-02-11	
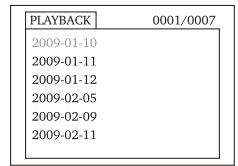
2. Press Ⓐ or Ⓥ button to select a folder, then press the "OK" button to enter into the following interface:

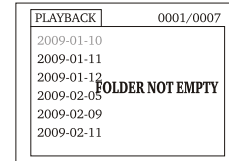| 2009-01-10	0002/0005
05:53:00	CH4 "
05:53:00	CH4
05:53:03	CH4
05:56:40	VID
05:59:03	CH4 "
06:05:17	VID "

3. Press the Ⓐ or Ⓥ button to select a file, then press and hold the ≡ button for 2 seconds to enter the following interface:

2009-01-10	0002/0005
DELETE CURRENT FILE?	
05:53:03	CH5	NO
05:56:40	CH5	YES
05:59:03	CH5	
06:05:17	CH5	

4. Press the Ⓐ or Ⓥ button to select "YES". By pressing the "OK" button the file/image will be deleted. By selecting the "NO" button you will exit the menu.

Deleting a Folder

Deleting a folder is the same as deleting a file, but make sure the folder is empty, otherwise it will not delete and a warning interface will appear:

PLAYBACK	0001/0007
2009-01-10	
2009-01-11	
2009-01-12	
2009-02-05	FOLDER NOT EMPTY
2009-02-09	
2009-02-11	

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