
Wireless video transmitter/ Wireless video receiver

Model: ESS400T/DCS400R

Operation Manual



Multifunction Video Inspection

Model: ESS400T/DCS400R

Overview

ESS400T/DCS400R Multifunction video inspection has been designed as a user friendly and economical way of solving hidden problems and increasing productivity. (eg. Inspect vent pipe and system of air conditioner, machine equipment, engine and so on).

The product has a high clarity color LCD of 3.5 " size. The camera head is connected to the probe and with adjustable LED lights, which helps you to reach gaps and holes. The camera head has equipped with several accessories, which makes it flexible. The magnetic tip is used to pick up small metal objects. The mirror tip is easy to view the 90 ° angle. The hook is used to grab onto objects.

KC-368B can take a photo wirelessly .It has built-in polymer lithium battery, also could use AC adapter for charging with LED indicator. The screen can detach from grip, [the back inside magnet facilitate hands-free operation](#) ,having functions of Micro SD interface、TV output interface、USB interface, supporting camera、video、image zoom、rotation、computer connection .etc. It has the advantages of small size、clear image、stable performance、easy operation and portability. It is widely used in applications such as the industry, the building, the aviation, the vehicles maintenance.

Safety Instructions

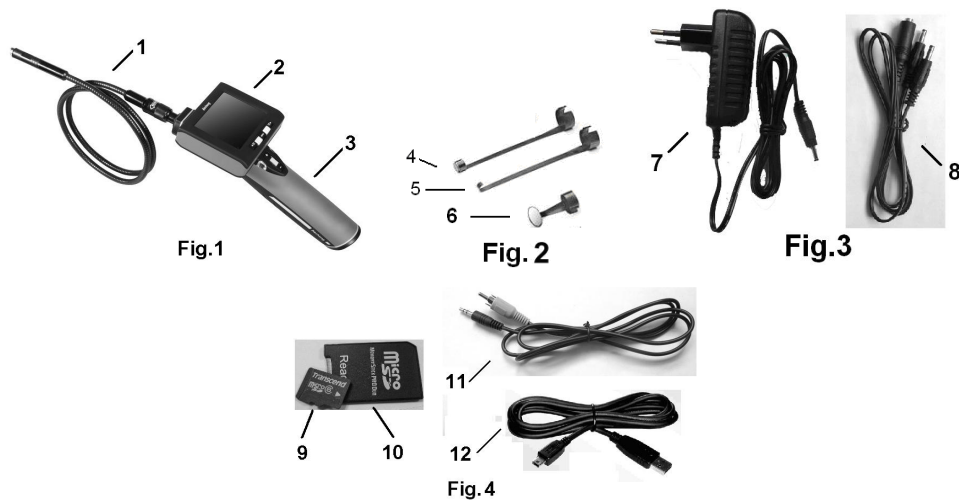
Failure to follow the instructions listed below may result in electric shock or personal injury.

- Read and understand all instructions prior to any operation.
- Do not remove any labels from the tool.
- Keep the work area clean and well lit, cluttered and dark areas may cause accidents.
- Do not operate the tool with the presence of flammable/explosive gases.
- Do not use the product around corrosive chemicals, which can ruin the picture quality.
- Keep bystanders、children and visitors away while operating the tool.
- Stay alert, watch what you are doing and use common sense. A moment of inattention will result in serious personal injury.
- Do not overreach. Keep proper footing and balance all the time.
- Always wear protective eyewear. Dust mask、non-skid safety shoes、hard hat or hearing protection must be used for appropriate conditions.
- Do not place this product on any unstable cart or surface. The product may fall causing serious injury to a person or serious damage to the product.
- For safety please always keep the video inspection away from any kind of liquid. Liquid increases the risk of electrical shock and damage to the product.
- Do not use this device for personal or medical use.
- The unit is not shock-resistant. Do not use it as a hammer or drop it.

Battery precautions

- Please use the standard factory power adapter, otherwise will destroy the inside battery.
- Please completely exhaust the power for the first time. And we recommend full charging and full discharging for the first three times. And the charging time should not less than 12 hours. Fully activate the battery could play maximum capacity of the built-in battery.
- The charging and discharging time differs because the different power from the factory.
- Please always keep the charging connector away from the metal and oily objects.
- Please fully charging the battery before it is not for use, to make sure the high performance while using.
- Don't compress and puncture the inside battery.
- Please stop operating if the inside battery is broken.
- Don't throw the product into fire, which will cause explosion.
- Please dispose the battery properly. High temperature will cause the battery to explode. Please follow the local regulations for disposing the old battery.

Product Configures



1. Camera head and Probe
2. LCD screen
3. Grip
4. Magnetic tip
5. Hook tip
6. Mirror tip
7. DC adapter
8. One into two cable
9. Micro SD memory card
10. Micro SD to SD transition pocket
11. TV cable
12. USB cable

Tool components

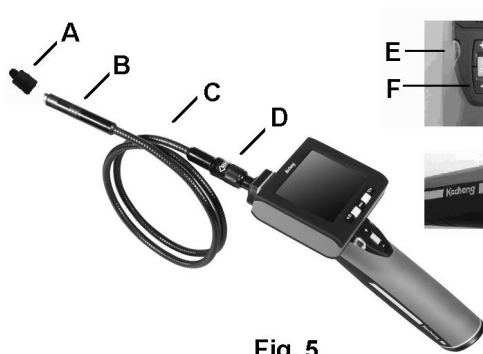


Fig. 5

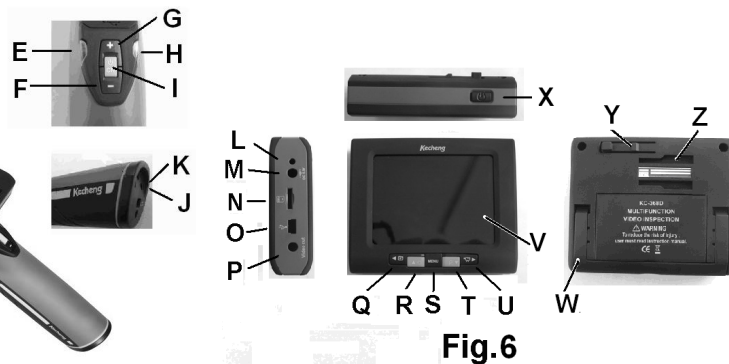








Fig.6

- A. Camera protection
- B. Camera head
- C. Probe
- D. Probe connector
- E. Channel indication (green) ——the flash times corresponding CH1~CH4
- F. ——LED brightness decrease key
- G. ——LED brightness increase key
- H. Low battery indication (red)
- I. ——Switch/ exchange the wireless transmission channel
- J. Charging interface
- K. Charging light indicator
- L. Charging light indicator
- M. Charging interface
- N. Micro SD interface
- O. USB interface
- P. Video Out
- Q.
- R.
- S.
- T.
- U.
- V. LCD Screen
- W. Base stand --Facilitate hands-free operation
- X.
- Y. Lock buckle
- Z. Signal connection slot

Description for keys

| Keys | View mode | Playback mode | Menu set |
|---|--|---|---|
|  | Switch into playback mode; Hold for 3s to turn off the unit. | Switch into view mode; Hold for 3s to turn off the unit. | Hold for 3s to turn off the unit. |
|  | Switch into menu set. | Switch into current file operation, delete single, all, format the memory card .etc | Set functions, set date and time |
|  | Take a photo yourself | Show the last photo or video; | Moving to left; |
|  | Take a video | Show the next photo or video; | Moving to right |
|  | Image rotation | Play, pause the video file; | Moving up / progressive increase data and time; |
|  | Image magnify | Stop video files; View six files or six folders. | Moving down / progressive decrease data and time; |

Operation Instructions

●Battery Charging

- 1、Connect the DC cable to the grip or screen.
- 2、Plug the AC plugs to household power outlet.
- 3、The LED L turns red ,means charging.
- 4、The LED L turns green, means fully charging
- 5、Pull out the AC plug of adapter.

Notes: If you want to charge both the grip and screen, please use one to two cable. One end to the adapter, and the other end to screen and grip.

●Connect the display unit to camera head and probe

The inspecting grip must be connected to the camera head and probe. To connect the probe to the grip, make sure the keyed ends are properly aligned. (Fig7). Once they are aligned, finger tighten the nut.



Fig.7

●Accessories installation

If you need to use the three accessories as FIG2 (magnetic tip, hook tip, mirror tip), please accord the steps followed to connect.

As showed in Fig 8, hold the camera head .Slip the semicircle end of the accessory over the flats of camera head . Then rotate the accessory 90°to fix ,as shown in Fig9.



Fig.8



Fig.9

- **Connect the grip to screen**

The product can work both the grip detach from screen and the grip attach with screen; Slide the slot at the back screen into the slot of grip in the left direction until you hear the locking sound, which means connection is finished. Press the lock buckler and slide to the right direction to detach the screen (FIG.10).

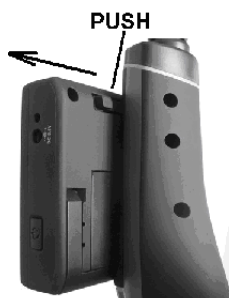


Fig.10

Note: The wireless function is off while the product works with screen on the grip, which ensures the image quality not interfered by outside.

- **Install Micro SD card**

When the SD card inserted correctly, display  on the screen; Otherwise display .

- **U-disk function to computer**



The USB interface on the screen could connect to computer for use. When insert the memory card, it can be considered as a U-disk; When connect the USB2.0 cable to computer and power on, the LCD displays "MSDC", now the screen can be used as U-disk.

- **Video output**

If you want to view image from television, please connect the VIDEO OUT of screen to VIDEO IN of television by video out cable, now the screen is off.

- **How to work**

- 1、**How to operate the grip:**

- a、 Press  key, the grip power to on, the times the green LED flashes means the corresponding channel (The default channel is CH1).
- b、 Press  to increase the two LED brightness. (Fig.11)

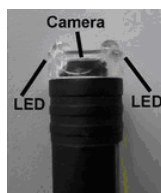











Fig.11

- c、 Press  decrease the two LED brightness.
- d 、 Press  to choose wireless transmission frequency, every press to choose CH2——CH3——CH4——CH1 repeatly. (The green LED accordingly flashes twice——three

times——four times——once) .

2、How to view the screen

- a、Insert the Micro SD to slot of memory card correctly.
- b、Press  to enter view mode, the screen automatically find the image signal. When the same receiving and transmission frequency occurs, it is time to view image.
- c、Press  to take a photo (but no function key if no card), the files will be stored in memory card itself .
- d、Press  to start record image (but no function key if no card), with red icon on the up screen, the files will be stored in memory card itself .
- e、Press  for image rotation, every press to rotate 180°.
- f、Press  ▼ for zoom from 1 to 3.2 times with corresponding number indicator.
- g、Press MENU to enter menu set.
- h、Press  to enter playback mode (with indicators if no card or no files).
- i、Hold  for 3s to turn off the product.




Note: The screen turn off itself if no signals in 3 minutes.

Tips: When the system is on work (especially in video status), Hot—Swappable of SD card will damage the stored files or damage SD card, please carefully operate.







3、How to set screen Menu

- a、In view status, press MENU to set menu.
- b、Select the menus by pressing the four direction keys.
- c、Press MENU to confirm the selection.
- d、Press EXIT back to the last menu until enter view mode.

e、As showed in the followed table for set (The color selection is factory set).

| Function Menu | Menu Selection | Selection Parameter |
|--|------------------------|---|
|  Advanced Setting | Tuner Channel | CH1; CH2; CH3; CH4; EXIT |
| | Photo Quality | High Quality; Standard Quality; Low Quality; EXIT |
| | Movie Quality | QVGA; D1; EXIT |
| | TV Output Standard | NTSC; PAL; EXIT |
| | EXIT | |
|  Auto Capture | Auto Capture | ON; OFF; EXIT |
| | Master Capture | Photo 1; Photo 3; Movie 5s; Movie 10s; EXIT |
| | File OverWrite Setting | ON; OFF; EXIT |
| | Language | English; French; Spanish |
| | EXIT | |
|  Set Time/Date | Set Time/Date | YY/MM/DD |
| | Photo TimeStamp | On; Off; EXIT |
| | Moive TimeStamp | On; Off; EXIT |
| | Resume to factory set | Yes; No |
| | EXIT | |

4、How to operate Playback mode (No selection if no memory card) .

- Press  to display the inside six images, press again to display different folders.
- Press **MENU** to scan files or folders.
- Press  or  to view the last or next image.
- If it is video file, press  to play video, press again to pause. Press  to stop.
- Press **MENU** to play files, press direction keys to select delete single、all or format the momery card.
- Select EXIT to return to last menu until to playback mode.
- Press  to return to view mode.

Notes: While play video, press  to play and pause video; Press once again to resume to play; Press  to stop and exit for other operations.

5、This product is designed for hard-to reach distance inspection. Typical applications include HVAC inspection、car inspection、circuitry、vessel and aircraft. While in operation, the product is easy to extend ahead. If there is distance limitation, the accessories could be used to pick up the ring or screws on the floor.

●Operation Pecautions:

- Please read the safety instructions carefully, choose desirable work area for fear causing danger.
- The probe is flexible to help you operate in hard-to-reach areas. Please don't insert or bend by force.. Please do not overbend any part of the probe. Normally, the bending radius should more than 5cm to prevent from causing permanent damage to the probe.


- c、 Don't use the probe or camera head to modify surroundings, clear pathways or clogged areas. It couldn't be used as a fishing rod or tape.
- d、 The hand-held display unit is not waterproof .The camera head and its cover are waterproof, but not acid-proof or fireproof. Don't touch with these materials or they will ruin the camera head's protective plastic. Avoid submersing the camera head into corrosive, oily places or high-temperature objects.
- e、 Don't place the inspection into anything or anywhere that may contain a live electrical charge. Please check following methods to avoid injury.

For walls:For inspecting the inside walls, be sure to shut off the circuit breaker to the whole house before using the tool.

For pipes:If you suspect a metal pipe could contain an electrical charge, have a qualified electrician to check the pipe before using. A ground circuit, in some cases, can be returned to the cast aluminium pipes and cause them to be charged.

For automobiles: Be sure the automobile is not running during inspection. Metal and liquid under the hood may be hot. Don't get oil or gas on the imager head.

Operation Notes

- Please don't operate this product unless the manual has been read and proper training has been completely.
- The red LED will on when low battery of the inside battery of grip; The “”displays if low battery of screen.
- Don't immerse the grip inspection into water, which will result in electric shock and damage.
- Only while the product is assembled well, the camera head is water-proof, but the grip and the screen isn't water-proof.
- Don't use the product if white dew forms inside the camera head.
- If the tool couldn't work well after turning it on. Please stop use and have the unit checked by a qualified technician.
- Store idle product out of reach of children and other untrained persons. The tool is dangerous in the hands of untrained users.
- Maintain the inspection tool with care. If the tool is dropped, check for the breakage ,which may affect the tools's operation. If it is damaged, have the tools serviced before using. Many accidents are caused by poorly maintained products.
- Use only accessories that are recommended by the manufacturer for your product. Accessories are suitable for the tool, but may become hazardous when used on another product.
- Dry your hands before turning the tool ON or OFF.

- Protect against excessive heat. The product should be kept away from heat sources, such as radiators, heat registers, stoves or other products (including amplifiers) that produce heat. Don't use the tool near moving machinery or areas where the temperature is exceed 45°C.
- Please cover the camera protection while not in use.
- Store the product in ventilated and dry places.

Maintenance Instructions

- Product service must be performed only by qualified personnel. Performed by untrained personnel could result in injury.
- When servicing the product, only use identical replacement parts. Use of authorized parts or failure to follow maintenance instructions may create a risk of electrical shock or injury.
- Don't attempt to disassemble the product other than the needs specified on this manual.
- Provide proper cleaning: don't use acetone to clean the product. Gently clean the LCD with a soft dry cloth.
- Upon completion of any service or repair, please ask the service technician to check if the tool is in proper condition.
- Stop using the unit if it starts smoking or emitting noxious fumes.
- Please ask qualified person under the following conditions:
 - a、 If liquid has been spilled or objects have fallen into product.
 - b、 If product doesn't operate normally even if you have followed the operation instructions.
 - c、 If the product has been dropped or damaged in any way.
 - d、 When the product exhibits a distinct change in performance.

Trouble Shootings

| Problems | Causes | Solutions |
|---|--|---|
| Can't charge. | Adapter didn't connect well with the product. | Please check and try again. |
| | The connect or or cable is broken. | Replace and try again. |
| | Dead battery | Ask a technician to replace the battery. |
| The screen is on but without image or shows "No Signal" | 1、Different channel set between the grip and screen. | Set the same channel. |
| | 2、The probe is loosed. | Check and connect again. |
| | 3、Stains on the camera head. | Check if exists stains |
| LED lighting appears to be dimmer at maximum; Display changes from black to white, after one moment the color screen shut off itself. | Low battery | Use adapter for charging |
| The product couldn't power on. | The circuit is in protection status. | Use adapter for charging to release. |
| | Low energy of inside battery | Use adapter for charging |
| | Dead battery | Ask a technician to replace the battery. |
| Unusual display or invalid keys | Interference to the screen or voltage fluctuation. | Please use the reposition key inside the hole below the stand base. |

C a u t i o n s

- Don't drop the product or use by force.
 - Don't disassemble the product to avoid failure.
 - Don't place the product with corrosive gas or objects.
 - Don't expose the product in vibrative、high or low temperature.
 - Store the product in a safe area.
 - Don't immerse the product into water, which will result in damage to product. •
- Please charge the inside battery every three month ifno use for long time.

Technical Specifications

| | | |
|----------------------------------|--------|--|
| Name | | Wireless video transmitter/ Wireless video receiver |
| Model | | ESS400T/DCS400R |
| Recommended use | | Indoor |
| Viewable angle | | 60° |
| Focal length | | 50mm |
| Diameter of camera head | | 12mm (or other size) |
| Image display | | 3.5" TFT/LCD |
| Image storage media | | 2G Micro SD card (Support up to 16G) |
| LCD Resolution | | 320×240 pixels |
| Wireless transmission frequency | | 2414MHz、2432MHz、2450MHz、2468MHz |
| Wireless transmission distance | | Up to 10M; If no obstacles, will more than 10M |
| Accessories | | Magnet tip、hook tip、mirror tip、Micro SD card、one to two cable、Micro SD memory card、Micro SD to SD transition pocket、TV cable、USB cable |
| Probe length | | 100cm or your requirements |
| Probe and camera head protection | | IP67 |
| Light source | | High lighting LED |
| Adapter | INPUT | AC 100~240V (50~60Hz) |
| | OUTPUT | DC 5.5V 1.5A |
| Inside battery | | Polymer Lithium battery |
| Battery capacity | Grip | 1200mAh |
| | Screen | 1350mAh |
| Charging time of inside battery | | About 3.5 hours |
| Battery life | | About 2 hours |
| Operating temperature | | 0℃~45℃ |
| Operating humidity | | RH 5%~95% non-condensing |
| Storage temperature | | -20℃~+60℃, ≤85% (w/o battery) |
| Dimension | Grip | 266mm×73mm×80mm |
| | Screen | 100mm×82mm×26mm |
| Weight | Grip | About 155 g (w/o probe) |
| | Screen | About 175 g |

Warranty

The product is warranted to be free from defects in materials and workmanship for a period of one year from the date of purchase.

Notice: The warranty does not apply to the following conditions:

- Disassembling the laser tool will void the warranty.
- We are not responsible for any damage resulting from abrasion, water, dropping or disassembling.

Tips: Most parts of the product could be recycled, please refer to your local regulations for disposing of them instead of throwing into the dustbin.

Warning

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 and
 - (2) This device must accept any interference received, including interference that may cause undesired operation
- Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.