# Signet

## INSPECTION TOOL
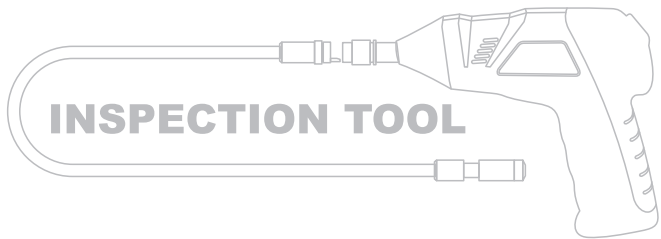
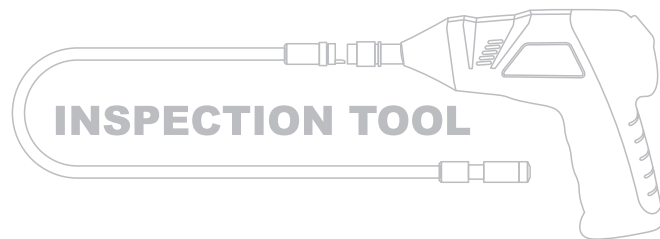Model: QC8712

### 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.

22 PAP

---

# Signet

# USER MANUAL

## Wireless Inspection Camera with Recordable Monitor

## INSPECTION TOOL

Model: QC8712

Version 1.0
Please read this user manual carefully before using this product.
Failure to understand operation procedures may result in injury.

# CONTENTS

# GENERAL SAFETY INFORMATION

WARNING! Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury.

---
### SAVE THESE INSTRUCTIONS!
---

※ Prevent object and liquid entry. Never spill liquid of any kind on the video display unit. Liquid increases the risk of electrical shock and damage to the product.
※ The unit is not shock-resistant. Do not use Explorer Standard as a hammer and avoid high impact resultant from things such as dropping the unit from height
※ Do not immerse camera handle or monitor in water. Avoid moisture, and store product in a dry place. Such measures reduce the risk of electric shock and damage. **The lens and the tube are water resistant when the unit is fully assembled, but the monitor and handle are not.**
※ Do not use the camera if condensation forms inside the lens. Let the water evaporate before using again.
※ Turn off the system if it is not in use.
※ This product can only be completely disconnected for from its power source by unplugging the power adapter.
※ Do not cut the DC power cable of provided with this product to fit with another power source.
※ Attention should be given to the environmental aspects of 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 (4) BATTERIES in this unit with new ones, not one (1) or two (2) batteries at a time.
※ 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 batteries. Exposure to high temperatures can cause batteries to explode, so do not dispose of in a fire. Place tape over the terminals to prevent direct contact with other objects.
※ Some countries have regulations concerning battery disposal. Please follow all applicable regulations.
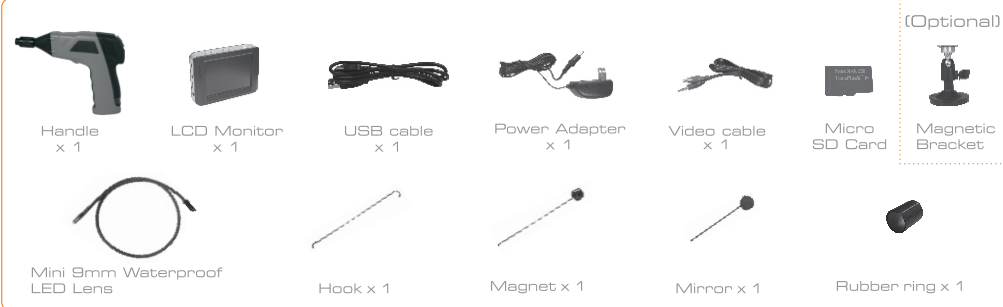
## WELCOME

Congratulations on your purchase of our inspection video camera with recordable color LCD monitor. Please read the user manual carefully before using this product. This product is designed as a remote inspection device, capable of recording video/taking pictures. Appropriate for use in surveying pipes or other hard-to-reach places, equipment or furnishing installation, car repair, etc. Features include waterproof LED lens, real-time recording, and micro SD card storage.
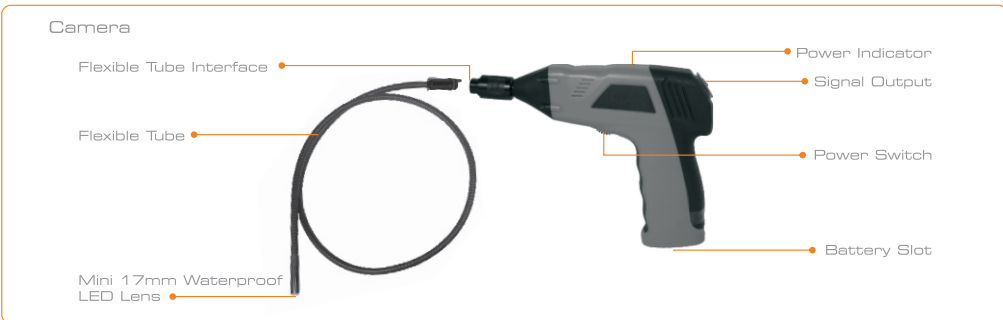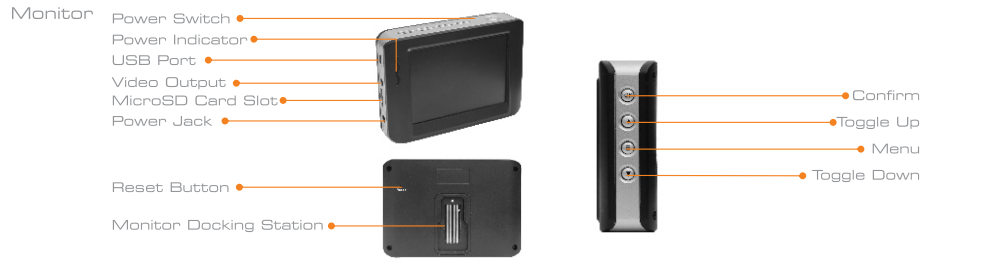
## FEATURES

- Allows for easy surveying of small, hard-to-reach places;
- Mini 9mm waterproof LED lens, 1.0 meter flexible tube;
- Manufactured and tested to IP67 waterproof standard;
- 3.5″TFT-LCD detachable/mountable monitor, built-in rechargeable Li-battery;
- Video recording capability, supports up to 32GB micro SD card;
- Adjustable brightness on lens-mounted LED light;
- 3 useful accessories included: Hook, mirror and magnet;
- Lightweight, handheld design, flexible and convenient to use;
- Multi-language support.

## PACKING LIST

(Optional)

| Handle x 1 | LCD Monitor x 1 | USB cable x 1 | Power Adapter x 1 | Video cable x 1 | Micro SD Card | Magnetic Bracket |

| Mini 9mm Waterproof LED Lens | Hook x 1 | Magnet x 1 | Mirror x 1 | Rubber ring x 1 |

## STRUCTURE

Camera

Flexible Tube Interface

Flexible Tube

Mini 17mm Waterproof LED Lens

Power Indicator

Signal Output

Power Switch

Battery Slot

Monitor
- Power Switch
- Power Indicator
- USB Port
- Video Output
- MicroSD Card Slot
- Power Jack

- Reset Button

- Monitor Docking Station
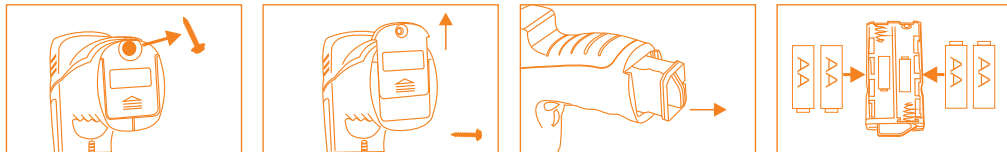
- Confirm
- Toggle Up
- Menu
- Toggle Down

## INSTALLATION

**To Install Batteries** (Dry your hands before installation or replacing batteries.)

1. Using a Philips head screwdriver, remove screw and cover as illustrated below:

2. Remove battery compartment and insert four (4) AA batteries into their appropriate slots, with proper orientation, as indicated on the battery compartment.
3. Reinstall battery compartment and replace battery cover and screw

**To Attach Flexible Tube with Handle**

To connect the flexible tube camera with control handle, first make sure that the keyed end of the tube is aligned with the slot in the handle, then use slight force to push them together. Once properly aligned, twist the treaded knob clockwise until the connection is securely in place.

Keyed end plugs into socket

Fasten the treaded knob
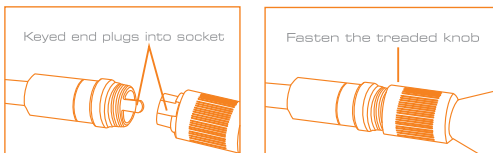
**To Install Accessories**

The three (3) included accessories (mirror, hook and magnet) are all attached to the camera in the same way as illustrated below:

Hook the hole

Wear the rubber ring
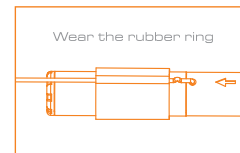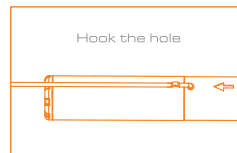
**To Install Monitor for Wired Use**

This item supports wired use by connecting the monitor to the camera handle.

Slide the monitor downward

Installed successfully
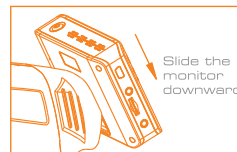
**To Install Extension Tube**

To connect the extension tube, first align the keyed end with the slot in the handle. Use slight force to push them together. Once properly aligned, twist the treaded knob clockwise until the connection is securely in place. Repeat this process to connect the other end of extension tube to flexible camera tube.
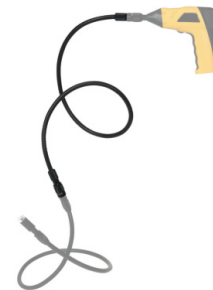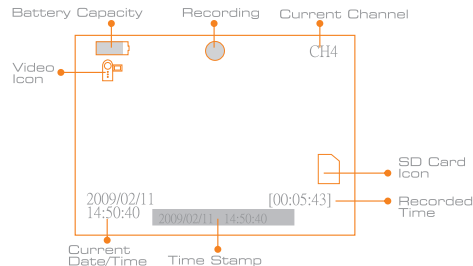
### Recording Video

1. In real-time monitoring mode, press the ⊙ button to toggle to video recording mode.
2. Press the 'OK' button to begin recording:
3. Press again to stop recording.

Notice!

* The video will be automatically saved as an individual file every 30 minutes.
* The ⌷F icon indicates that the SD card memory is full.

Battery Capacity    Recording    Current Channel

Video Icon

CH4

SD Card Icon

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

Current Date/Time    Time Stamp

### Taking photos

1. In real-time monitoring mode, press the ⊙ button to toggle to photo capturing mode.
2. Press the 'OK' button to take a photo.

Notice!

The ⌷F icon indicates that the SD card memory is full.

Photo Icon

### Playback Video/Picture

1. In real-time monitoring mode, press the ≡ button to toggle to the video/picture folder.
2. Press the ⊙ and ⊙ buttons to select your desired folder, and then the press 'OK' to toggle to the right interface:

Notice! A double quotation marks [ " ] next to a file name indicates that the file is a video. No double quotation marks next to a file indicates that the file is a picture.

| 2009-01-10 | | 0002/0005 |
| --- | --- | --- |
| 05:53:00 | CH4 | Indicates video file |
| 05:53:00 | CH4″ | Indicates picture file |
| 05:53:03 | CH4 | |
| 05:56:40 | VID | |
| 05:59:03 | CH4″ | |
| 06:05:17 | VID″ | |
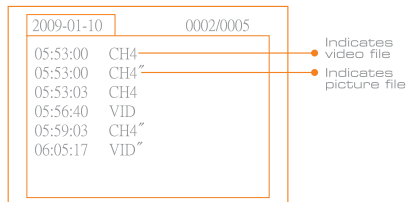
3. for playback video:
   Press the ⊙ or ⊙ button to select your desired video, and then press 'OK' to playback.
   Pause: press the 'OK' button once to pause, press again to resume play;
   Fast Forward: press the ⊙ button;
   Rewind: press the ⊙ button;
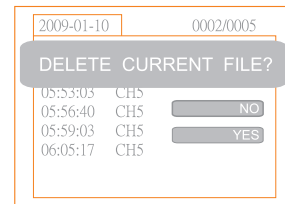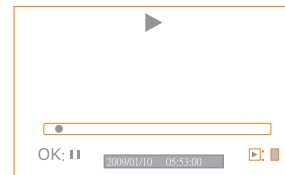   Stop/Exit: press the ≡ button.

   for view pictures:
   Press the ⊙ or ⊙ button to select your desired video, press 'OK' button to view and press again to exit.

OK: ❚❚    2009/01/10    05:53:00    ▶:❚

### Deleting Video/Picture

1. In real-time monitoring mode, press the ≡ button to toggle to the video/picture folder.
2. Press the ⊙ or ⊙ button to select your desired folder, and then press 'OK' button.
3. Press the ⊙ or ⊙ button to select your desired file, and then press and hold the ≡ button for 2 seconds, or until the right interface appears:
4. Press the ⊙ or ⊙ button to toggle between YES and NO, that is, to delete or cancel. Once you have highlighted your desired selection, press the 'OK' button.

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

### Deleting Folder

Deleting a folder is done in the same way as deleting a single file, however, make sure that the folder is empty first, otherwise the following error message 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 | |
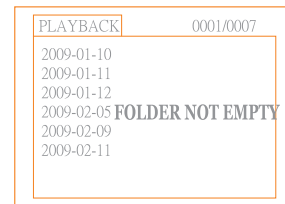
**To Install Monitor Mounting Bracket**

Attach the magnetic mounting bracket to the monitor using the same method used to attach the monitor to the camera handle.
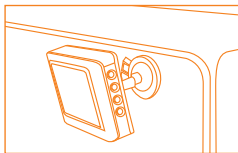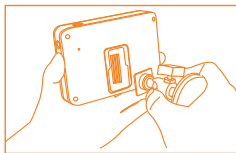
**To Insert SD Card**

After SD card is inserted into SD card slot successfully, an SD card ▯ icon will appear on the monitor screen; otherwise, the 'no SD card' ⃠ icon will show.

SD card
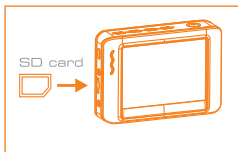
**To Connect USB Cable**

Use the provided USB cable to connect the monitor to any PC with a USB slot. Your computer should automatically recognize the new hardware, which you may browse by double-clicking on the My Computer icon on your desktop, and then navigating into the Mobile Disk directory.

3.5 Floppy Disk( A )   CD driver( G )   Mobile Disk( H )
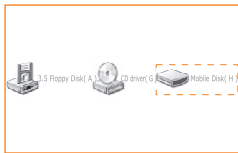
**To Connect Monitor Power**

Connect the monitor to an appropriate (100-240V ~ 50/60Hz) power source with the provided adapter. The power indicator LED will illuminate red and the battery capacity icon on the LCD will flicker, indicating that the battery is charging. When the red indicator light disappears, the battery has been fully charged.

monitor

adapter

power source
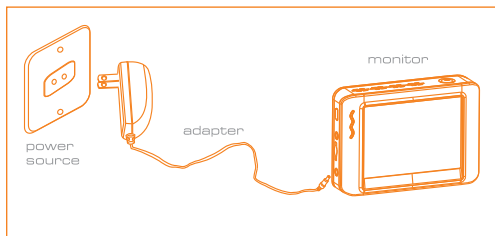
**Video Output**

Insert video cable into the video out socket of the monitor, insert the other end of the cable into the video in jack of any compatible TV or display device. The LCD monitor is now capable of outputting high quality video to another display.

▬▬▬ **OPERATION**

**Basic Operation**

1. As you roll the power switch to turn on the camera,  the power indicator on the camera handle will light. The rolling switch then acts as a dimmer for the twin LEDs that surround the camera on the end of the flexible tube.
2. Press and hold the power switch for 2 seconds on the monitor until the power indicator illuminates green. Then press the ▼ button to select CH4 (channel 4), or until the picture from the lens is displayed on the monitor. To toggle between video recording and picture taking functions, press the ▲ button on the side of the monitor.

Twin LEDs provide lighting

Select to record video or take pictures

Select CH4
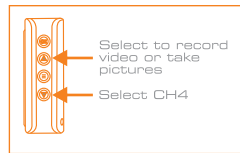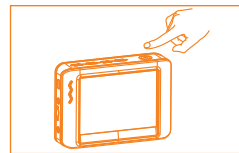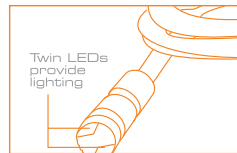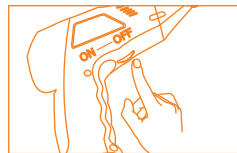
3. When in use, the tube should easily maneuver itself into position. Do not apply excessive force.

| TIP! |

A: The flexible tube can be bent into numerous shapes that may help you explore areas you otherwise thought were impossible to see.

wireless

wired
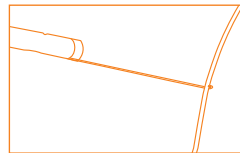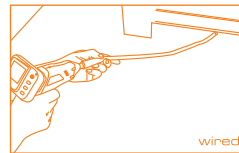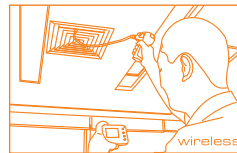
B: The accessories included can be used to retrieve small items like dropped rings or screws.

**How to enter the Setting Mode**

In real-time monitoring mode, press and hold the ⊜ button for 1~2 seconds, or until the right interface appears:

**SYSTEM SETTING**

**Language Setting**

1. In the setting mode, press the ⊕ or ⊛ button to select 'SYSTEM SETTING', and then press 'OK' button.
2. Press the ⊕ or ⊛ button to select 'Language', and then press 'OK' button, the following interface will appear:
3. Press the ⊕ or ⊛ button to select your desired language.
4. Press 'OK' button to confirm and exit.

**Language**

OK: ✔        English

**Video System Setting**

1. In the setting mode, press the ⊕ or ⊛ button to select 'SYSTEM SETTING', and then press 'OK' button.
2. Press the ⊕ or ⊛ button to select 'Video System' and then press 'OK' button.
3. Press the ⊕ or ⊛ button to toggle between NTSC and PAL. Once your desired system is selected, press 'OK' button to confirm and exit.
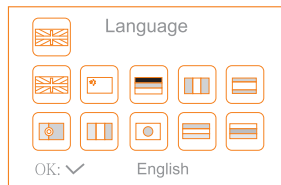
**Formating**

1. In the setting mode, press the ⊕ or ⊛ button to select 'SYSTEM SETTING', and then press 'OK' button.
2. Press the ⊕ or ⊛ button to select 'Format', and then press 'OK' button.
3. Press the ⊕ or ⊛ button to toggle between YES and NO, that is, to format or cancel. Once you have highlighted your desired selection, press the 'OK' button.

**Default Setup**

1. In the setting mode, press the ⊕ or ⊛ button to select 'SYSTEM SETTING', and then press 'OK' button.
2. Press the ⊕ or ⊛ button to select 'Default Setup' and then press 'OK' button.
3. Press the ⊕ or ⊛ button to toggle between YES and NO, that is to restore default or cancel. Once you have highlighted your desired selection, press the 'OK' button.

**View Version Information**

1. In the setting mode, press the ⊕ or ⊛ button to select 'SYSTEM SETTING', and then press 'OK' button.
2. Press the ⊕ or ⊛ button to select 'Version' and then press 'OK' button. You will now be able to view the version details of your product.

**Frame Rate Setting**

1. In the setting mode, press the ⊕ or ⊛ button to select 'RECORDER SETTING', and then press 'OK' button.
2. Press the ⊕ or ⊛ button to select 'Frame Rate' and then press 'OK' button.
3. Press the ⊕ or ⊛ button to toggle between different frame rates. Once your desired rate is selected, press 'OK' button to confirm and exit.

**Time Stamp Setting**

1. In the setting mode, press the ⊕ or ⊛ button to select 'RECORDER SETTING', and then press 'OK button'.
2. Press the ⊕ or ⊛ button to select 'Time Stamp' and then press 'OK' button.
3. Press the ⊕ and ⊛ buttons to toggle between on and off. Once your desired selection is made, press 'OK' button to confirm and exit.

**Recording Type**

1. In the setting mode, press the ⊕ or ⊛ button to select 'RECORDER SETTING', and then press 'OK' button.
2. Press the ⊕ or ⊛ button to select 'Recording Type' and then press 'OK' button.
3. Press the ⊕ or ⊛ button to toggle between 'still' and 'video'. Once your desired selection is made, press 'OK' button to confirm and exit.

**Date/Time Setting**

1. In the setting mode, press the ⊕ or ⊛ button to select 'Date/Time' and then press 'OK', The right interface will appear:
2. Press 'OK' button to select Date or Time;
   Press the ⊕ or ⊛ button to adjust selection;
   Press the ⊜ button to confirm and exit.

**Date/Time**

2009 / 02 / 13
09 : 51

▲▼◄►        OK: ✔
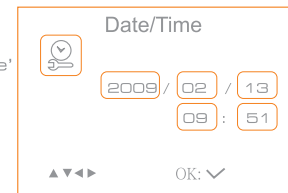
**Event Playback**

1. In the setting mode, press the ⊕ or ⊛ button to select 'EVENT PLAYBACK', and then press 'OK' button.
2. Refer to user manual instructions on Playback of Video/Picture, Deleting Video/Picture, and Deleting Folder for guidance.

| | Model No. | QC8712 |
|---|---|---|
| camera | Imaging Sensor | CMOS |
| | Total Pixels | 640 x 480 (PAL)<br>640 x 480 (NTSC) |
| | Horizontal Viewing Angle | 45° |
| | Transmission Frequency | 2468MHz |
| | Minimum Illumination | 0 Lux |
| | Modulation Type | FM |
| | Bandwidth | 18MHz |
| | Power Supply | 4 x AA batteries |
| | Unobstructed Effective Range | 10m |
| | Waterproof Capacity | IP67 (for lens/tube only) |
| | Tube Diameter | 9mm |
| | Dimensions (W x D x H) | 186 x 145 x 41(mm) (Excluding Flexible Tube) |
| | Approx. Weight | 450g |
| monitor | LCD Screen Type | 3.5″ TFT-LCD |
| | Effective Pixels | 960 x 240 |
| | Video System | PAL/NTSC |
| | Transmission Frequency | 2414MHz,2432MHz,2450MHz,2468MHz |
| | Exterior Supply Voltage | 5VDC |
| | Consumption Current (Max.) | 500mA |
| | Charging Time | 3 hours |
| | Working Time | 2 hours |
| | Picture/Video Pixels | 640 x 480 |
| | Video Size | 27M byte/minute |
| | Frame Rate | 30 frame/second |
| | Video Output Level | 0.9-1.3VP-P@75ohm |
| | Receiving Sensitivity | ≤-85dBm |
| | Dimensions (W x D x H) | 100 x 70 x 25 (mm) |
| | Approx. Weight | 140g |
| | Operating Temperature | -10°C~50°C/14°F~122°F |
| | Operating Humidity (Max.) | 15~85%RH |

*  Actual transmission range of wireless monitoring may vary according to the weather, location, interference or building construction.
*  All specifications are subject to minor change without prior notice.

| Problem | Possible Causes | Likely Solutions |
|---|---|---|
| Tool will not start | 1. monitor not charged.<br>2. batteries need charging. | 1. charge monitor<br>2. replace batteries in control handle |
| Monitor will not charge | 1. adapter cable not attached properly<br>2. adapter not connected to power | 1. make sure adapter cable is connected between monitor and adapter.<br>2. make sure adapter is securely plugged into wall socket. |
| Image too dark or light | 1. LEDs near camera need adjustment<br>2. monitor display needs adjustment | 1. use dial on control handle to adjust brightness of LEDs.<br>2. use contrast and brightness buttons on monitor to adjust image. |

⚠  Follow all safety precautions whenever diagnosing or servicing the tool. Disconnect power supply before service.

## 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.

The graphics included in this user manual are subject to minor change without notice.