



**INSTRUCTION MANUAL  
DATA COLLECTOR**


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**FC-250** for Windows Mobile® 6.5



# FOREWORD

Thank you for selecting the TOPCON instrument.

- Please read this instruction manual carefully before using this instrument.
- Verify that all equipment is included.  
 Separate sheet "STANDARD PACKAGE COMPONENTS"
- The specifications and general appearance of the instrument are subject to change without prior notice and without obligation by Topcon Corporation and may differ from those appearing in this manual.
- The content of this manual may be altered at any time.
- Some of the diagrams shown in this manual may be simplified for easier understanding.

# HOW TO READ THIS MANUAL

## ► Symbols

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The following conventions are used in this manual.



: Indicates precautions and important items which should be read before operations.



: Indicates the chapter title to refer to for additional information.



: Indicates supplementary explanation.

[Start] etc.

: Indicates softkeys on the display and window dialog buttons.

## ► Trademark

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- *Bluetooth*® is a registered trademark of Bluetooth® SIG., Inc., U.S.A.
- Marvell® is a registered trademark of Marvell or its affiliates.
- Microsoft, Window Mobile and ActiveSync are registered trademarks of US Microsoft in the U.S.A and other countries.
- All other company and product names featured in this manual are trademarks or registered trademarks of each respective organization.

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# 1. PRECAUTIONS FOR SAFE OPERATION




For the safe use of the product and prevention of injury to operators and other persons as well as prevention of property damage, items which should be observed are indicated by an exclamation point within a triangle used with WARNING and CAUTION statements in this instruction manual.

The definitions of the indications are listed below. Be sure you understand them before reading the manual's main text.

## Definition of Indication

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 <b>WARNING</b>	Ignoring this indication and making an operation error could possibly result in death or serious injury to the operator.
 <b>CAUTION</b>	Ignoring this indication and making an operation error could possibly result in personal injury or property damage.

-  This symbol indicates items for which caution (hazard warnings inclusive) is urged. Specific details are printed in or near the symbol.
-  This symbol indicates items which are prohibited. Specific details are printed in or near the symbol.
-  This symbol indicates items which must always be performed. Specific details are printed in or near the symbol.

## General

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### **Warning**










-  Do not perform disassembly or rebuilding. Fire, electric shock or burns could result.
-  Do not use the unit in areas exposed to high amounts of dust or ash, in areas where there is inadequate ventilation, or near combustible materials. An explosion could occur.

## Power Supply

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### **Warning**





-  Do not short circuit. Heat or ignition could result.
-  Do not use voltage other than the specified power supply voltage. Fire or electrical shock could result.
-  Do not use damaged power cords, plugs or loose outlets. Fire or electric shock could result.
-  Do not use power cords other than those designated. Fire could result.

-  Do not place articles such as clothing on the battery charger while charging batteries. Sparks could be induced, leading to fire.
-  Use only the specified battery charger to recharge batteries. Other chargers may be of different voltage rating or polarity, causing sparking which could lead to fire or burns.
-  Do not heat or throw batteries into fire. An explosion could occur, resulting in injury.
-  Do not use the battery or charger for any other equipment or purpose. Fire or burns caused by ignition could result.
-  To prevent shorting of the battery in storage, apply insulating tape or equivalent to the terminals. Otherwise shorting could occur, resulting in fire or burns.  
  
To reduce the risk of hazards, use only CSA/UL certified power supply cord set, cord is Type SPT-2 or heavier, minimum No.18 AWG copper, one end is provided with a moulded-on male attachment plug cap (with a specified NEMA configuration), and the other end is provided with a moulded-on female connector body (with a specified IEC non-industrial type configuration).
-  Do not use batteries or the battery charger if wet. Resultant shorting could lead to fire or burns.
-  Do not connect or disconnect power supply plugs with wet hands. Electric shock could result.
-  **Caution**
-  Do not touch liquid leaking from batteries. Harmful chemicals could cause burns or blisters.

### ***Bluetooth wireless technology***

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#### **Warning**

-  Do not use within the vicinity of hospitals. Malfunction of medical equipment could result.
-  Use the instrument at a distance of at least 22 cm from anyone with a cardiac pacemaker. Otherwise, the pacemaker may be adversely affected by the electromagnetic waves produced and cease to operate as normal.
-  Do not use onboard aircraft. The aircraft instrumentation may malfunction as a result.
-  Do not use within the vicinity of automatic doors, fire alarms and other devices with automatic controls as the electromagnetic waves produced may adversely affect operation resulting in an accident.

## 2. PRECAUTIONS

Before starting work or operation, be sure to check that the instrument is functioning correctly with normal performance.

### Direct sunlight

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Do not leave the instrument under strong sunlight for a long time. It may cause the instrument to malfunction.

### Waterproof property

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When waterproofness is necessary, close all the caps securely. However, the serial connector has a waterproof structure, so it will remain waterproof even if its cap is not closed.

### Maintenance

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Always clean the instrument after use.

- If the instrument becomes wet from rain, dry moisture.
- To clean the instrument, dust off well and then wipe clean with a soft cloth.

### User

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- This product is for professional use only!  
The user is required to be a qualified surveyor or have a good knowledge of surveying, in order to understand the user and safety instructions, before operating, inspecting or adjusting.
- Wear the required protectors (safety shoes, helmet, etc.) when operating.

### Exceptions from Responsibility

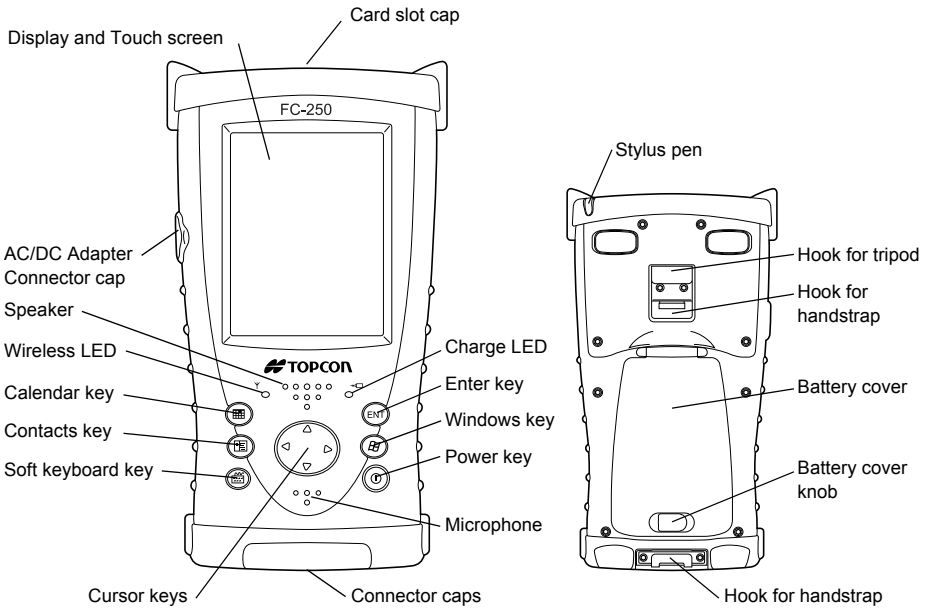
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- The user of this product is expected to follow all operating instructions and make periodic checks of the product's performance.
- The manufacturer, or its representatives, assumes no responsibility for results of a faulty or intentional usage or misuse including any direct, indirect, consequential damage, and loss of profits.
- The manufacturer, or its representatives, assumes no responsibility for consequential damage, and loss of profits by any disaster, (an earthquake, storms, floods etc.). A fire, accident, or an act of a third party and/or a usage any other usual conditions.
- The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits due to a change of data, loss of data, an interruption of business etc., caused by using the product or an unusable product.
- The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits caused by usage except for explained in the user manual.
- The manufacturer, or its representatives, assumes no responsibility for damage caused by wrong movement, or action due to connecting with other products.



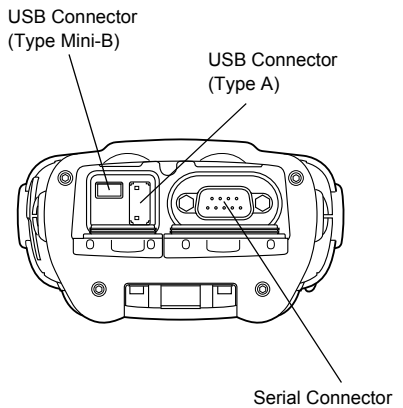
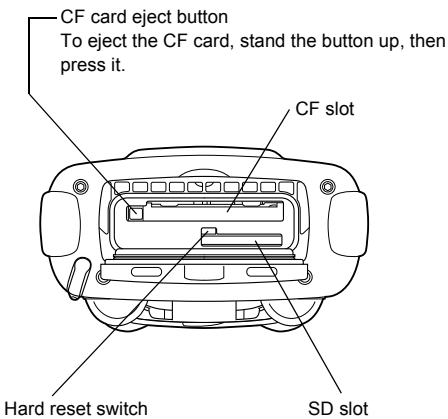
# 3. NOMENCLATURE AND FUNCTIONS

## 3.1 FC-250



Card slot side

Connector side



## 3.2 Wireless LED

### Display of Wireless Transmission Status

Flashing Green: Transmitting via *Bluetooth* and RS-1B (optional)

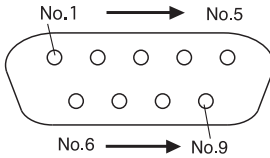
Flashing Orange: Transmitting via RS-1 (optional)

Flashing Red: Transmitting via Wireless LAN

When transmitting via more than one wireless, flashing will occur in sequence.

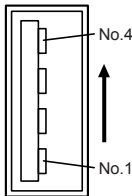
## 3.3 Connectors

Serial connector



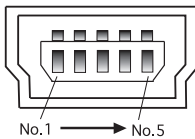
No.1	DCD	(IN)
No.2	RXD	(IN)
No.3	TXD	(OUT)
No.4	DTR	(OUT)
No.5	GND	
No.6	DSR	(IN)
No.7	RTS	(OUT)
No.8	CTS	(IN)
No.9	RI	(IN)

USB Connector  
(Type A)



No.1	VCC
No.2	V-
No.3	V+
No.4	GND

USB Connector  
(Type Mini-B)



No.1	VDD
No.2	V-
No.3	V+
No.4	NC
No.5	GND

## 4. PREPARATION FOR USE

### 4.1 Before using

Make sure to charge the battery before using the FC-250.

Do not connect the instrument to the computer until the Windows Mobile Device Center or ActiveSync installation to the computer is completed.

### 4.2 Installing the software

It is possible to synchronize data from Microsoft Outlook of the computer and Calendar and Contacts on the FC-250 using Windows Mobile Device Center or ActiveSync. Files and folders can also be copied between the computer and the FC-250.

#### ■ Installation procedure

For Windows Vista

Windows Device Center6.1 can be downloaded from the following URL.

<http://www.microsoft.com/windowsmobile/en-us/help/synchronize/device-center-download.aspx>

For Windows XP and Windows 2000 Service Pack 4

ActiveSync4.5 can be downloaded from the following URL.

<http://www.microsoft.com/windowsmobile/en-us/help/synchronize/activesync-download.aspx>

#### Note

- Microsoft ActiveSync4.5 (Windows XP and earlier operating systems up to Windows 98) or Windows Device Center6.1 (Windows Vista) is required.
- Refer to Help on each software for details on set up and use of Device Center and ActiveSync.
- Information concerning Windows Mobile Device Center and ActiveSync can be found in the URL below.  
<http://www.microsoft.com/windowsmobile/>

#### Note

- The Windows Mobile Device Center is supported by Windows Vista operating system.
- The ActiveSync 4.5 is supported by Windows 2000 Service Pack 4 and Windows XP operating system.

## 4.3 Battery

### ■ Battery Installation

- 1 Remove the handstrap.
- 2 Slide the battery cover knob in the direction of arrow.
- 3 Open the battery cover.  
When the battery cover is opened, the instrument will automatically change to suspension mode.



**Suspension mode:**

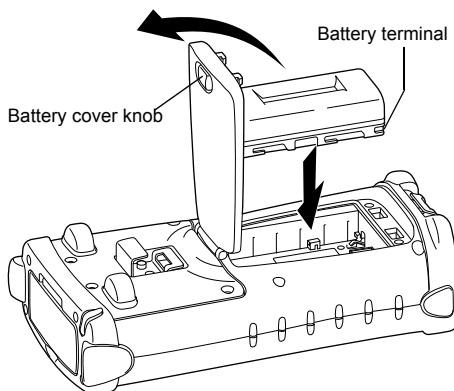
The screen and the power will go off. Your settings, however, will be saved.

If you press the Power key, the instrument will turn off and change to suspension mode.

- 4 Insert batteries in the direction as shown in the figure to the right.

- 5 Close the battery cover.

When the battery cover is opened, it will automatically change to suspension mode (Power OFF).



## ■ Battery Charging

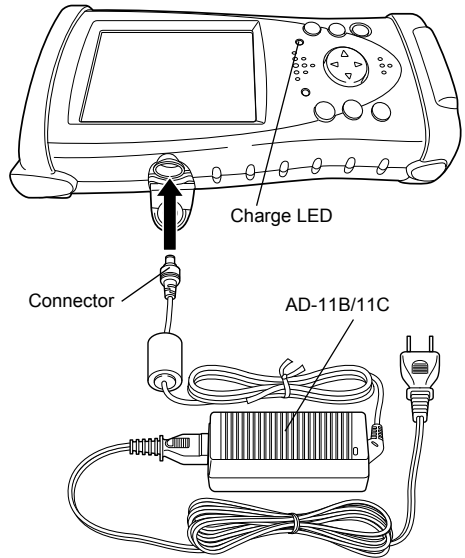
- 1 After installing the battery, plug the connector of AD-11B/11C in the FC-250.
- 2 Plug the AD-11B/11C in an outlet. Then the charge LED will light. Charging is completed after approximately 5.5 hours.

### The charge LED of FC-250 will indicate charging status;

Red ON: Charging.

Green ON: Charging completed.

LED OFF: Battery Charging Error  
(The battery is not installed, or the room temperature is out of the charging temperature range.)



- Recharge batteries at the room temperature between +10°C - +40°C (+50°F - +104°F).
- The instrument may develop heat while charging, there is no problem of it.
- The battery source may develop heat while charging, there is no problem of it.
- The battery source will discharge when not being used. Always charge before use.
- Holding time under suspension mode is approximately 8 days (when fully charged batteries are used).  
In order to maintain suspension mode, full recharge is required once in every 8 days.
- If the instrument is not used over an extended period of time, be sure to charge battery source every 15 days and store in a place at 30°C or below. If you allow the battery to be completely discharged, it will have an effect on the proper charging in the future.
- Attempting to charge batteries immediately after charging may cause a degradation of the batteries.
- Do not charge successively. It may cause degradation of batteries and/or the battery charger. If more charging needs to be done, wait approximately 30 minutes before charging.



### How to save battery power:

- **Backlight**

The initial setting for backlight brightness when shipped from the factory is 4 (fourth from the darkest setting). If the backlight is not needed, lower the brightness or set so that the light will turn off after a short time. Brightness can be adjusted by the following procedure:

- 1 Tap the [Start]→[Settings]→[System]→[Backlight]→ and [Brightness] tab.
- 2 Adjust by sliding the [Brightness on Battery Power] slider bar sideways.

- **Wireless**

Turn off *Bluetooth*, RS-1/RS-1B and Wireless LAN when not in use.

- **Low temperature use**

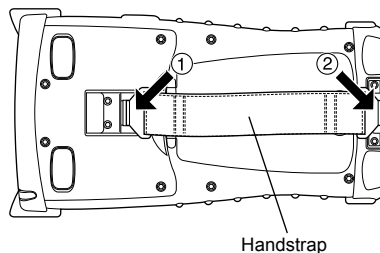
Battery capacity is reduced at low temperatures. When using under low temperature conditions, keep the equipment as warm as possible.

- **CF cards, SD cards, USB port**

Disconnect cards and cables when not in use.

## 4.4 Setting Handstrap

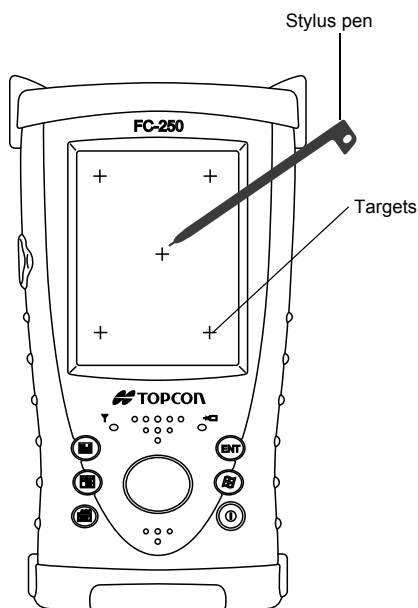
- 1 Set the handstrap on the handstrap hook ①.
- 2 Set the handstrap on the handstrap hook ②.



## 4.5 Touch Screen

### ■ Align the Screen

- 1 Tap [Start] → [Settings] → [System] → [Screen] → [Align Screen] button.  
or  
After Format Reset, turn the power key ON.
- 2 Using a stylus pen, touch the center of the target.
- 3 After touching all targets (5 points), tap the [OK] button.  
(Use an accessory stylus pen to touch a screen. Do not use neither a ball-point pen nor pencil.)



### ■ Protective Film for Touch Panel

The enclosed protective film is provided to protect the touch panel layer of LCD panel from degradation by ultraviolet light and possible scratches caused by stylus pen. Ensure to put the protective film to the surface of LCD panel before start using the instrument. Replace the protect film with a new one when the film itself is damaged.

### 4.6 Setting up Auto Start

By default, Auto Start with schedule setup, etc. is invalid for the FC-250.

To validate the Auto Start, change the setting according to the procedure below.

- Check the box beside “RTC WakeUp Enable” after selecting [Start]→[Settings]→[Power]→[RTC] tab, and then press OK button.

### 4.7 Setting up Power Management

Battery depletion can be avoided by automatically turning off the power, when the equipment is left ON.

Validating the Auto Start setup with the above procedure may automatically start up the equipment depending on the specifications of OS. Therefore, it is recommended to use the Power Management settings.

- Check the box beside [On battery power: Turn off device if not used for] after selecting [Start]→[Settings]→[Power]→[Advanced] tab, and then select [5 minutes] and press OK button.



# 5. TRANSMISSION DATA TO THE PC

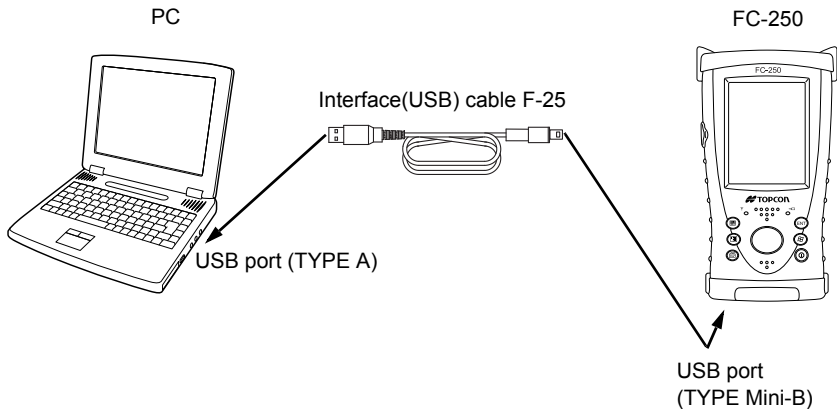
## 5.1 Using Interface Cable

### ■ Connection with the computer



Do not connect the FC-250 to the computer until the Windows Mobile Device Center or ActiveSync installation to the computer is completed.

- 1 Connect the FC-250 to the computer with Interface Cable F-25 as shown in the diagram below.
- 2 The synchronization setup wizard screen will appear on the computer screen. Follow the instructions provided.
- 3 When connection is completed, the Device Center and ActiveSync window will be displayed on the computer and synchronization will commence. If you click the [Explorer] icon, file data in the instrument can be viewed.



### Reference software for Connectivity

See the WEB page as follows.

<http://www.microsoft.com/windowsmobile/>

### 5.2 Using *Bluetooth*

The FC-250 has *Bluetooth* transmission function built-in. Information can be exchanged between instruments equipped with the same function using wireless. \*1)

#### ■ *Bluetooth* ON/OFF

Follow the procedure below to turn on the *Bluetooth* function.

- 1 Turn on the FC-250.
- 2 Press the *Bluetooth* icon in the system tray, and select ***Bluetooth* Manager** from the pop-up menu.  
When the *Bluetooth* function is turned ON, the wireless LED will flash in green color. If the *Bluetooth* transmitter is switched off (The *Bluetooth* icon is gray.), select **Turn Transmitter On** to turn on *Bluetooth*.



Turn on *Bluetooth* only when being used. If *Bluetooth* is left ON, operation time will be shortened.

#### ■ Setting *Bluetooth*

Refer to the *Bluetooth* Manager operation manual for details on *Bluetooth* settings.

\*1) Supported Profile: SPP, DUN

### 5.3 Using Radio System RS-1/RS-1B (Option)

Installing the Radio System RS-1/RS-1B, an optional system, enables transmission with Total Station and other instrument with wireless.

Refer to the application help for details on setting RS-1/RS-1B.



Turn on RS-1/RS-1B only when being used. If RS-1/RS-1B is left ON, operation time will be shortened.

## 5.4 Using Wireless LAN

It is possible to connect to a network via wireless if Wireless LAN function is used.

### ■ Wireless LAN ON/OFF

Follow the procedure below to turn on the Wireless LAN function.

- 1 Tap on [Start]→[Settings]→[System]→[WLAN Power].
- 2 On the [Wireless LAN Power] screen, tap on the [POWER ON] button.  
When the Wireless LAN function is turned ON, the wireless LED will flash in red color.



Turn on Wireless LAN only when being used. If Wireless LAN is left ON, operation time will be shortened.

Information concerning Wireless LAN settings can be found in the URL below.

<http://www.microsoft.com/windowsmobile/en-us/help/synchronize/make-connections.mspx>

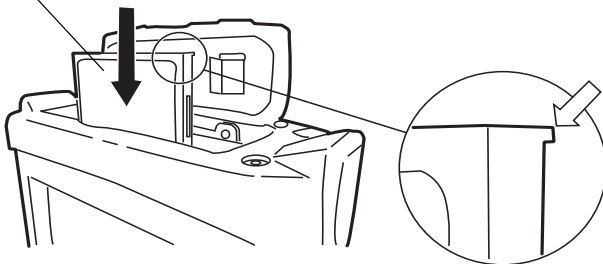
## 5.5 Using CF Card

### ■ How to Insert CF Card

Please make sure you have the front and back of the CF cards facing correctly when inserting into the card slot.

If you forcibly insert the card incorrectly, the pin at the card slot may be damaged and cause a breakdown.

Front of the card



Please insert straight down into the card slot.

If you forcibly insert the card at an angle, the pin at the card slot may be damaged and cause a breakdown.

## 6. RESETTING FC-250

If there is no response to the pressing of a key or tapping of the display, you need to reset the FC-250. There are 3 methods to reset the FC-250.

It takes more than one minute to restart the OS after resetting the FC-250.

### 6.1 Soft Reset

With the soft reset, all running applications will be shutdown, and data you are editing will be lost; however, installed programs and stored data are protected.

#### ■ How to soft reset

- 1 Remove all cables or cards (CFs, SDs) that are currently mounted.
- 2 While pressing the Contacts key, press the curser key to right and up direction for at least 2 seconds.

### 6.2 Hard Reset

If the instrument does not function properly after soft reset has been done, perform a hard reset. With the hard reset, all running applications will be shutdown, and data you are editing will be lost; however, installed programs and stored data are protected. Hardware information (device name, etc.) will return to default.

#### ■ How to hard reset

- 1 Remove all cables or cards (CFs, SDs) that are currently mounted.
- 2 Lightly press the Hard reset switch in the middle of the card slot with stylus pen for at least 2 seconds.
- 3 Turn on the Power key.

## 6.3 Format Reset

If the instrument does not operate properly after hard reset, perform the format reset.

When the format reset is performed, FC-250 is reset to factory defaults.

User data and the installed program are deleted. The time setting and shortcut information created on the desktop and for program folders will be initialized.

In such case, it will be necessary to reset the time and then reinstall applications.

Please make back up copies of user data.

### ■ How to format reset

- 1 Remove all cables or cards (CFs, SDs) that are currently mounted.
- 2 Lightly press the Hard reset switch in the middle of the card slot with stylus pen.
- 3 Pressing the Calendar, Enter and Power keys until the FC-250 is restarted.



If the equipment does not work normally after the format reset, it needs repair.


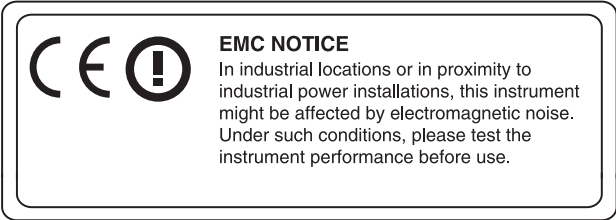
Please contact your local Topcon dealer or Topcon.

# 7. REGULATIONS



Region/ Country	Directives/ Regulations	Labels/Declarations
U.S.A.	FCC	<p><b>FCC Compliance</b>            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.</p> <p><b>NOTE:</b>            This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.            This equipment should be installed and operated with at least 20cm and more between the radiator and person's body (excluding extremities: hands, wrists, feet and ankles).</p> <p><b>WARNING:</b>            Change or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.            Specified cables must be used for connection to computer and/or peripherals in order to meet FCC emission limits.</p> <p><b>Declaration of Conformity</b>            Model Number: FC-250            Trade Name: TOPCON CORPORATION</p> <p><b>Manufacture</b>            Name: TOPCON CORPORATION            Address: 75-1, Hasunuma-cho, Itabashi-ku, Tokyo, 174-8580 JAPAN            Country: JAPAN</p> <p><b>U.S.A. Representative</b>            Responsible party: TOPCON POSITIONING SYSTEMS,INC.            Address: 7400 National Drive Livermore, CA94551, U.S.A            Telephone number: 925-245-8300</p> <p><b>Means of conformity</b>            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.</p>

Region/ Country	Directives/ Regulations	Labels/Declarations
California, U.S.A.	Proposition65	<p><b>WARNING</b> : Handling the cord on this product or cords associated with accessories sold with this product, will expose you to lead, a chemical known to the State of California to cause birth defects or other reproductive harm. <b><i>Wash hands after handling.</i></b></p>
California, U.S.A.	Perchlorate Material (CR Lithium Battery)	<p>This product contains a CR Lithium Battery which contains Perchlorate Material-special handling may apply. See <a href="http://www.dtsc.ca.gov/hazardouswaste/perchlorate/">http://www.dtsc.ca.gov/hazardouswaste/perchlorate/</a> Note ; This is applicable to California, U.S.A. only</p>
California and NY, U.S.A.	Recycling Batteries	<p style="text-align: center;"><u><b>DON'T THROW AWAY RECHARGEABLE BATTERIES, RECYCLE THEM.</b></u></p> <p style="text-align: center;"><b><u>Topcon Positioning Systems Inc., United States Return Process for Used Rechargeable Nickel Metal Hydride, Nickel Cadmium, Small Sealed Lead Acid, and Lithium Ion, Batteries</u></b></p> <p>In the United States Topcon Positioning Systems Inc., has established a process by which Topcon customers may return used rechargeable Nickel Metal Hydride(Ni-MH), Nickel Cadmium(Ni-Cd), Small Sealed Lead Acid(Pb), and Lithium Ion(Li-ion) batteries to Topcon for proper recycling and disposal. Only Topcon batteries will be accepted in this process.</p> <p>Proper shipping requires that batteries or battery packs must be intact and show no signs of leaking. The metal terminals on the individual batteries must be covered with tape to prevent short circuiting and heat buildup or batteries can be placed in individual plastic bag. Battery packs should not be disassembled prior to return.</p> <p>Topcon customers are responsible for complying with all federal, state, and local regulations pertaining to packing, labeling, and shipping of batteries. Packages must include a completed return address, be prepaid by the shipper, and travel by surface mode. <b><u>Under no circumstance should used/recyclable batteries be shipped by air.</u></b></p> <p>Failure to comply with the above requirements will result in the rejection of the package at the shipper's expense.</p> <p>Please remit packages to: Topcon Positioning Systems, Inc. C/O Battery Return Dept. 150 7400 National Dr. Livermore, CA 94551</p> <p style="text-align: center;"><b><u>DON'T THROW AWAY RECHARGEABLE BATTERIES, RECYCLE THEM.</u></b></p>
Canada	ICES	<p><b>For Canada</b> This Class A digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada. This equipment should be installed and operated with at least 20cm and more between the radiator and person's body (excluding extremities: hands, wrists, feet and ankles).</p>

7. REGULATIONS

Region/ Country	Directives/ Regulations	Labels/Declarations
Australia	C-Tick	 <p>The compliance label indicates that the product complies with the applicable standard and establishes a traceable link between the equipment and the manufacturer, importer or their agent responsible for compliance and for placing it on the Australian market.</p>
EU	R&TTE-Class 2 EMC-Class B	 <p><b>EMC NOTICE</b> In industrial locations or in proximity to industrial power installations, this instrument might be affected by electromagnetic noise. Under such conditions, please test the instrument performance before use.</p>
EU	R&TTE	<p><b>R&amp;TTE Directive</b> DATA COLLECTOR FC-250 Hereby, TOPCON CORP., declares that the above-mentioned equipment is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. This equipment may be operated in CS, DA, DE, ET, EN, ES, EL, FR, IT, LV, LT, NL, MT, HU, PL, PT, SL, SK, FI, SV, IS, NO.</p> <p>Please inquire below if you wish to receive a copy of Topcon's Declaration of Conformity.</p> <p>Topcon Europe Positioning B.V. Essebaan 11, 2908 LJ Capelle a/d IJssel, The Netherlands Tel:+31-10-4585077 Fax:+31-10-2844949 <a href="http://www.topcon-positioning.eu/index.asp">http://www.topcon-positioning.eu/index.asp</a></p>



Region/ Country	Directives/ Regulations	Labels/Declarations
EU	WEEE Directive	<div style="border: 1px solid black; padding: 10px;">  <p><b>WEEE Directive</b>  This symbol is applicable to EU members states only.</p> <p>Following information is only for EU-member states:  The use of the symbol indicates that this product may not be treated as household waste. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about the take-back and recycling of this product, please contact your supplier where you purchased the product or consult.</p> <p style="text-align: right;"><b>TOPCON CORPORATION</b></p> </div>
EU	EU Battery Directive	<div style="border: 1px solid black; padding: 10px;">  <p><b>EU Battery Directive</b>  This symbol is applicable to EU members states only.</p> <p>Battery users must not dispose of batteries as unsorted general waste, but treat properly.</p> </div>


## 8. SPECIFICATIONS

### Controller

Microprocessor	: Marvell® PXA320
Processor speed	: 806MHz
Operating system	: Microsoft® Windows Mobile® 6.5
Memory	: RAM 256MB SDRAM : ROM 1GB NAND Flash
Display	: Display resolution 480×640 VGA : Type 3.7 inch TFT Color LCD : Number of colors displayed 262,144 colors : Light LED back light
Touch panel	: Analog resistive film
Keyboard	: 7 keys (Power key included)
LED	: 2 LEDs (charge, wireless)
Interface	: Conforming to RS-232C (D-sub 9) : USB (rev 1.1) (Type Mini-B) : USB (rev 1.1) (Type A) *1) : Compact Flash (conforming to Type I/II) : SDIO/SD/SDHC/MMC card slot *2) : RS-1/RS-1B (Optional wireless system) connection port (special 30 pins)
Audio	: Sealed speaker (mono), sealed microphone

\*1) Connector size is within 9.0×16.5 mm.

\*2) Some cards may not be used with the FC-250.

 "List of Operation-Confirmed Memory Device for FC-250"

Maximum capacity of SD card is 2GB or less, and maximum capacity of SDHC card is 32GB or less.

### Power

Power consumption	: 1.85W (normal use)
Operating time*3)	: Approx. 10 hours (normal use) : Approx. 8 hours (with Bluetooth) : Approx. 6 hours (with Wireless LAN)
Suspend (Power OFF) holding time	: Approx. 8 days (when fully charged batteries are used)
Input voltage	: 10 - 15V DC (Max 3A)
Charging time	: Approx. 5.5 hours (when AC/DC converter AD-11B/C)

\*3) Battery capacity will differ depending on whether Bluetooth/Wireless LAN is used or not, brightness of the backlight, room temperature and application software used.

### Bluetooth® Functions

#### Transmission specifications

	: Bluetooth® version 1.2
Class	: class 2 (2.5mW)
Transmission method	: Frequency hopping spread spectrum (FH-SS) communication
Modulation method	: GFSK
Data transmission speed:	1Mbps (Max.)
Antenna	: Chip Antenna (built-in)
Frequency range	: 2.4GHz (2,402-2,480MHz) (0-78ch)
Transmission distance	: 10m (In good visibility) *4)

Supported profile	: SPP, DUN
Wireless LAN Function	
Transmission specifications	
	: IEEE802.11g/b
Transmission method	: Direct sequence spread spectrum (DS-SS) communication
Access method	: Infrastructure mode , Ad hoc mode
Antenna	: PCB type (built-in)
Security	: WEP (128/64bit), TKIP
Frequency range	: 2.4GHz (2,412-2,462MHz) (1-11ch)
Transmission output	: 30mW
Transmission distance	: 10m (In good visibility) *4)
*4) Transmission distance is influenced by the environment. The distance of radio wave transmission may be reduced in reinforced concrete buildings or near large-sized metal furniture.	

#### Environment

Water resistance and dust resistance	: IP66 *5)
Operating temperature	: -20°C - +50°C
Storage temperature	: -30°C - +60°C
Shock resistance	: Dropping this instrument from a height of 1 meter does not affect its functions *6)
*5) When caps are installed.	
*6) Each of the instrument's 6 sides was dropped onto a concrete surface, and the instrument's operation was then confirmed. Only the exterior of the instrument was damaged.	

#### Physical

Dimensions	: 196×107×61 (mm)
Weight	: 0.7kg (with battery)

#### Battery (BT-66Q)

Type	: Lithium-ion battery
Regular voltage	: 7.4V
Nominal capacity	: 2,500mAh
Exterior dimensions	: 72×39×22 (mm)
Weight	: 110g

#### AC/DC Converter (AD-11B/11C)

Input	: 100-240V 50-60Hz, 1.4A
Output	: 12V 3A Max. 36W
Charging temperature	: 0°C - +40°C
Exterior dimensions	: 88×41×27 (mm) (Not including cable)
Weight	: 200 g

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