

TOPCON

BT/SD Board

User's Manual

Ver1.0

July 27, 2006



FCC Notices

FCC ID: H5P-FC200BTSD

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.**

CAUTION: Change or modification not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

CAUTION: In order to comply with FCC radio-frequency radiation exposure guidelines for an uncontrolled exposure, this device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

NOTE: 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 or her own expense.

NOTE: The device to which BT/SD Board is installed must display a FCC ID above.

IC Notices

IC : 6050AFC200BT

CAUTION: *Operation is subject to the following two conditions:*

- (1) this device may not cause interference, and*
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.*

CAUTION: The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's website www.hc-sc.gc.ca/rpb

(1) Product Overview

The BT/SD Board is designed to provide wireless communication ability for the TOPCON's "FC" Field Controller families to communicate with other Bluetooth devices via the class 2 of the Bluetooth V1.2 protocol.

This device is equipped with some type of "FC" Field Controllers before shipping.

(2) Features

Bluetooth Features

Compact wireless data communication module designed for Makitra's battery-operated tools

Low power CSR BlueCore2-Ext Chipset (Bluetooth V1.2)

Tx output:	0.5mW
Tx and Rx Operation Frequency:	2402-2480 MHz
Modulation Method:	Frequency Hopping Spectrum Spread (FHSS) / GFSK
Number of Channels:	79 (Normal Mode), 79 - 20 (Adaptive Hopping Mode)
Channel Intervals:	1 MHz
Bit rate:	1 Mbps
Packet type in use:	DH1

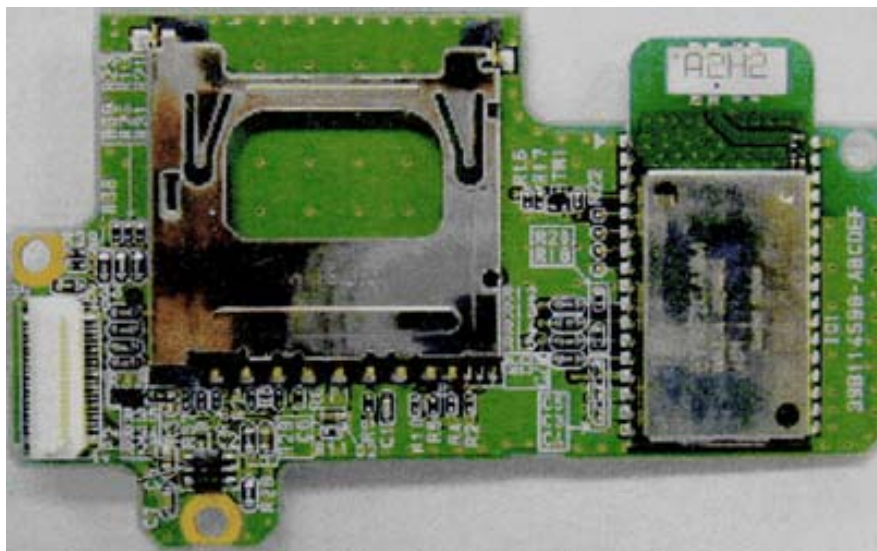
Physical Attributes

Size: 48mm (L) x 76mm (W) x 5.5mm (D)

Weight: 0.03 Kg

Operating Temperature: -20 deg. C to +50 deg. C

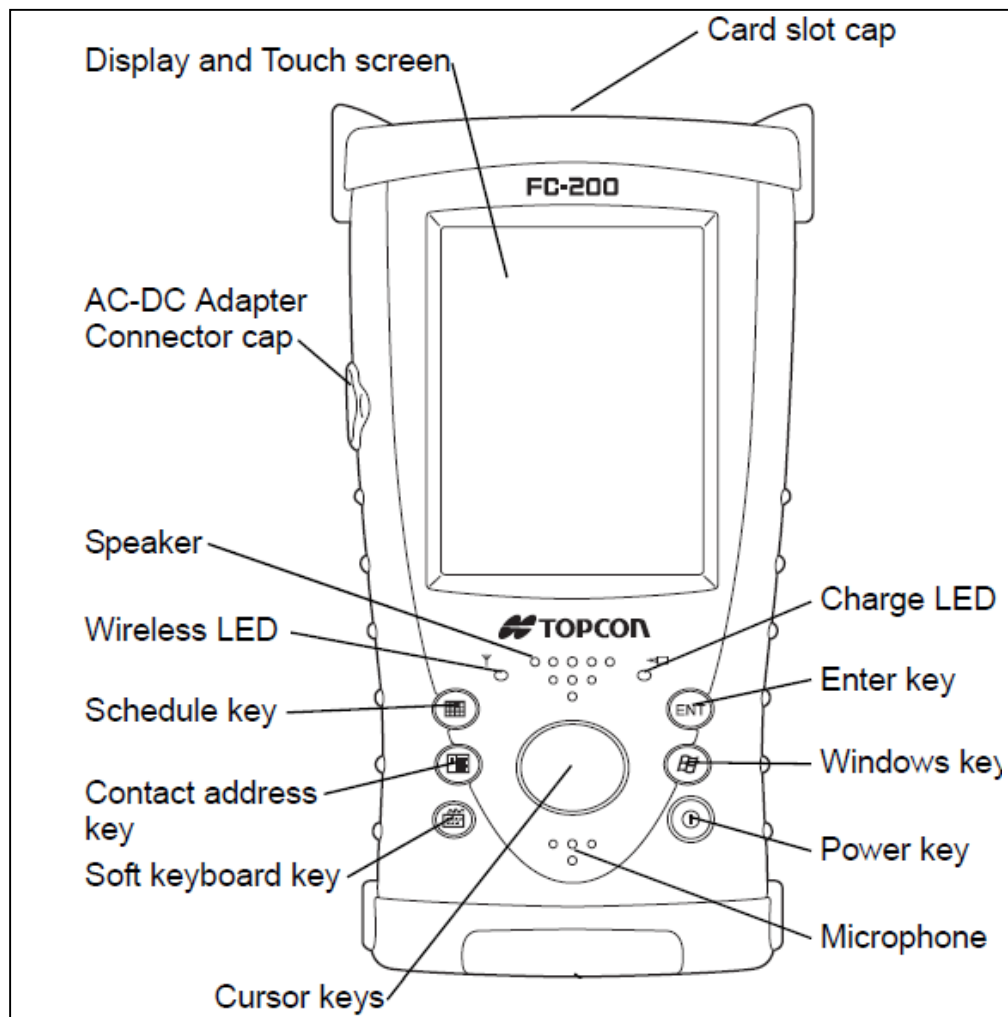
Power Requirements: 0.3 W @ +3.3 VDC from "FC" Field Controller.



(3) Operation

To Equip the BT/SD Board with “FC” Field Controller

This device is already equipped by TOPCON before shipping. The example of an equipped Field Controller “FC-200” is shown below.



Setting up BT/SD Board

The FC-200 has Bluetooth transmission function using a built-in BT/SD Board. Information can be exchanged between instruments equipped with the same function using Bluetooth wireless technology. The BT/SD Board is running on the operation system of FC-200, Windows Mobile 5.0 Pocket PC by Microsoft

Bluetooth ON/OFF

Follow the procedure below to turn on the Bluetooth function.

- (1) Tap **Start > Settings > Connections** tab.
- (2) On the [Wireless Manager] display, tap on the **[Bluetooth]** icon.
- (3) Select or clear the **Turn on and off Bluetooth** check box
- (4) When the Bluetooth function is turned ON, the wireless LED will flash in green color.

Create a Bluetooth partnership

Ensure that the two devices are turned on, discoverable, and within close range.

- (1) Tap **Start > Settings > Connections** tab.
- (2) Tap **Bluetooth > Devices** tab > **New Partnership**. Your device searches for other devices with Bluetooth capabilities, and displays them in the list.
- (3) Tap the name of the other device, and tap **Next**.
- (4) In Passkey, if you want to use a passkey (recommended for enhanced security), enter a alphanumeric passkey between 1 and 16 characters, and tap Next. Otherwise, leave the passkey blank, and tap **Next**
- (5) Enter the same passkey on the other device.
- (6) Tap **Finish**

Make a device discoverable

Other devices with Bluetooth capabilities can detect your device and attempt to beam information to it, establish a partnership, or use a Bluetooth service.

- (1) Tap **Start > Settings > Connections** tab.
- (2) Tap **Bluetooth**.
- (3) Select the **Turn on Bluetooth** check box, and then select the **Make this device discoverable to other devices** check box

Other Bluetooth-enabled devices can now detect your phone and attempt to beam information to it, establish a Bluetooth partnership, or use a Bluetooth service.

Enable a Bluetooth beam

- (1) Tap **Start > Settings > Connections** tab.
- (2) Select the Receive **all incoming beams** check box.
- (3) When prompted to receive an incoming beam, tap **Yes** to receive the beamed information.

For more "How to and/or Help" on Bluetooth, visit Microsoft! Web site;

<http://www.microsoft.com/windowsmobile/help/pocketpc/bluetooth.mspx>

(4) Hints & Tips

- (1) The BT/SD Board may not work well where Microwave ovens and /or other 2.4GHz ISM devices like wireless LAN are working. Keep RF unit and wireless data receiver away from these devices.
- (2) If you no longer want your device to be discoverable, clear the Make this device discoverable to other devices check box.
- (3) For your safety operation, read carefully the tool's User's manual before equipping the BT/SD Board to the tool together with this manual and that of the wireless data receiver.
- (4) The RF unit complies with Part 15 of the FCC Rules and RS-210. Read carefully the FCC notice and/or IC notice at beginning page of this manual for legal and secure operation.

(5) Specification

Operation Voltage	2.79V to 3.63VDC	
Power Consumption	Tx Operation: 210mW, Stand by Operation: 9mW	
Operation Temperature	-20 deg. C to +50 deg. C	
Size / weight	48mm (L) x 76mm (W) x 5.5mm (H) / 0.003 Kg	
Bluetooth	Version	V1.2
	Output Class	Class 2 (0.5mW)
	Supported Profile	Serial Port Profile, Dial-up Profile
	Coverage	10m
	Type approval	FCC IC CE TELEC

TOPCON POSITIONING SYSTEMS, INC.

7400 National Drive, Livermore, CA 94551, U.S.A.
Phone: 925-245-8300 Fax: 925-245-8599 www.topcon.com

TOPCON CALIFORNIA

3380 Industrial Blvd, Suite 105, West Sacramento, CA 95691, U.S.A.
Phone: 916-374-8575 Fax: 916-374-8329

TOPCON EUROPE POSITIONING B.V.

Essebaan 11, 2908 LJ Capelle a/d IJssel, The Netherlands.
Phone: 010-458-5077 Fax: 010-284-4949 www.topconeurope.com

IRELAND OFFICE

Unit 69 Western Parkway Business Center
Lower Ballymount Road, Dublin 12, Ireland
Phone: 01460-0021 Fax: 01460-0129

TOPCON DEUTSCHLAND G.m.b.H.

Giesslerallee 31, 47877 Willich, GERMANY
Phone: 02154-885-100 Fax: 02154-885-111 info@topcon.de
www.topcon.de

TOPCON S.A.R.L.

89, Rue de Paris, 92585 Clichy, Cedex, France.
Phone: 33-1-41069490 Fax: 33-1-47390251 topcon@topcon.fr

TOPCON ESPAÑA S.A.

Frederic Mompou 5, ED. Euro 3, 08960, Sant Just Desvern, Barcelona, Spain.
Phone: 93-473-4057 Fax: 93-473-3932 www.topconesp.com

TOPCON SCANDINAVIA A. B.

Neogatan 2 S-43151 Mölndal, SWEDEN
Phone: 031-7109200 Fax: 031-7109249

TOPCON (GREAT BRITAIN) LTD.

Topcon House Kennet Side, Bone Lane, Newbury, Berkshire RG14 5PX U.K.
Phone: 44-1635-551120 Fax: 44-1635-551170
survey.sales@topcon.co.uk laser.sales@topcon.co.uk

TOPCON SOUTH ASIA PTE. LTD.

Blk 192 Pandan Loop, #07-01 Pantech Industrial Complex, Singapore 128381
Phone: 62780222 Fax: 62733540 www.topcon.com.sg

TOPCON AUSTRALIA PTY. LTD.

Unit 18, 4 Avenue of Americas Newington NSW 2127, Australia
Phone: 02-8748-8777 Fax: 02-9647-2926 www.topcon.com.au

TOPCON INSTRUMENTS (THAILAND) CO., LTD.

77/162 Sinn Sathorn Tower, 37th Fl.,
Krungthongburi Rd., Klongtongsa, Klongsarn, Bangkok 10600 Thailand.
Phone: 02-440-1152~7 Fax: 02-440-1158

TOPCON INSTRUMENTS (MALAYSIA) SDN. BHD.

Excella Business Park Block C, Ground & 1st Floor, Jalan Ampang Putra,
Taman Ampang Hilir, 55100 Kuala Lumpur, MALAYSIA
Phone: 03-42701068 Fax: 03-42704508

TOPCON KOREA CORPORATION

2F Yooseoung Bldg., 1595-3, Seocho-Dong, Seocho-gu, Seoul, 137-876, Korea.
Phone: 82-2-2055-0321 Fax: 82-2-2055-0319 www.topcon.co.kr

TOPCON OPTICAL (H.K.) LIMITED

2-4/F Meeco Industrial Bldg., No. 53-55 Au Pui Wan Street, Fo Tan Road,
Shatin, N.T., Hong Kong
Phone: 2690-1328 Fax: 2690-2221 www.topcon.com.hk

TOPCON CORPORATION BEIJING OFFICE

Building A No.9, Kangding Street
Beijing Economic Technological Development Area, Beijing, China 100176
Phone: 10-6780-2799 Fax: 10-6780-2790

TOPCON CORPORATION BEIRUT OFFICE

P. O. BOX 70-1002 Antelias, BEIRUT-LEBANON.
Phone: 961-4-523525/961-4-523526 Fax: 961-4-521119

TOPCON CORPORATION DUBAI OFFICE

C/O Atlas Medical FZCO., P. O. Box 54304, C-25, Dubai Airport Free Zone, UAE
Phone: 971-4-2995900 Fax: 971-4-2995901

TOPCON CORPORATION

75-1 Hasunuma-Cho, Itabashi-Ku, Tokyo 174-8580 Japan

Phone: 3-3558-2577, FAX: 3-3966-0038, URL: www.topcon.co.jp