

*** USER'S MANUAL ***

FCC ID: WXAWM3000NB

The Federal Communication Commission Statement

This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of more of the following measures: -

- **Reorient or relocate the receiving antenna.**
- **Increase the separation between the equipment and receiver.**
- **Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.**
- **Consult the dealer or an experienced Radio/TV technician for help.**

Use only shielded cables to connect I/O devices to this equipment. You are cautioned that change or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

THIS DEVICE COMPLIES WITH PART 15 OF 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.

"The antenna used for this transmitter must not be collocated or operation in conjunction with any other antenna or transmitter."



WatchMan3000NB

Installation and Operations Manual

WatchMan3000NB

Patrol Tour Collection Terminal with Bluetooth

WatchMan3000NB gives accurate and authentic record of patrols carried out by security personnel. Location codes with date/time stamps of selected points on the patrol route are collected by scanning with the handsets the RFID tags fixed there. The handset's tamperproof memory can store about 8192 records and the data is transferrable to PC for viewing and archiving.

This newly developed Patrol Tour Collection Terminal is based on Radio Frequency identification technology (RFID) and it stores records in a Journal memory. It features backlight LCD screen, non-volatile Journal memory and low-power operation. The BC3000N is an interface and download cradle bundled to WM3000NB and works together for Patrol Tour of facilities, assets management or other applications....

Features:

*Simple one-touch operation to scan each station
Comprehensive Journal with 8192 recorders
A4 size battery easy to replace and maintain*

*Application Download Port (ADP) for quick data download
Portable and secure to carry for daily work
Password protected software
Easily produce detailed guard tour reports by downloading data from WM3000NB.*

Applications:

*Portal Time Attendance
Facility/Building assets management
Security check point management*

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This equipment has been tested and found to comply with the limits for a Class B 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 communication.

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.

All Giga-Tms products are with CE compliance

All Giga-Tms products are with RoHS/WEEE compliance.

Giga-Tms is registered to ISO 9001:2000.



ISO 9001:2000

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Part



1 Installation

List of items, connection and initial device setting.

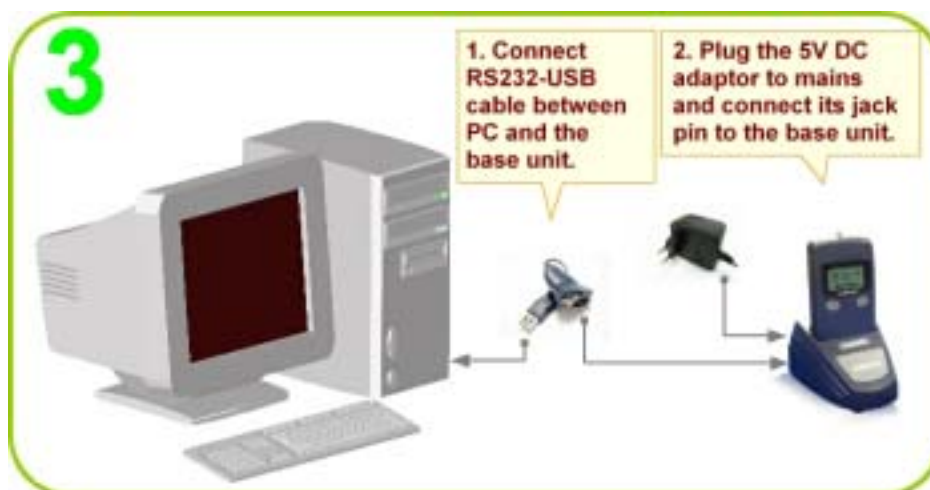
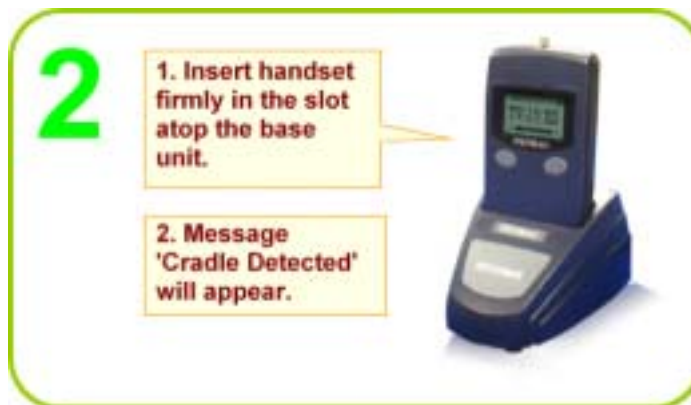
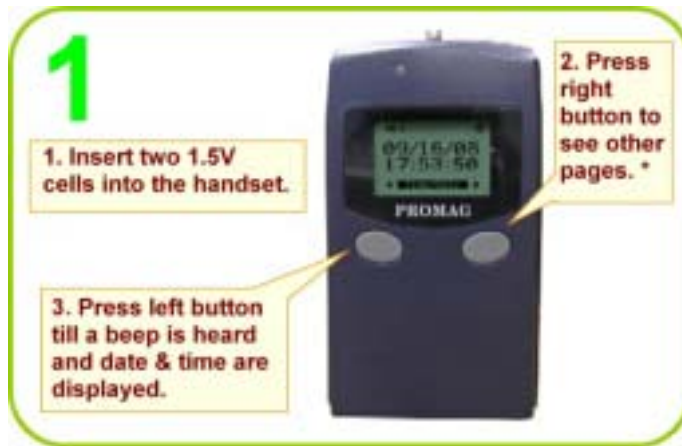
1.1 Gadget List



Sl. No.	Item	Description
1	WM3000NB	Handset
2	BC3000N*	Base unit
3	RS232-USB Cable	To connect with PC
4	5V DC Adaptor	To power handset while uploading records
5	Cells AAA 1.5 Volt (2 no's)	To power handset WM3000NB
6	RFID Tag grey (1 no.)	For reading Test
7	Belt Pouch	For handset WM3000NB

* BC3000N already through the FCC authentication .

1.2 Connect Device



Note:

1. Pages on the Display:
 - a. Time/Date

- b. ID - Last location ID
- c. Record - Memory Level Used
- d. Battery - Remaining Level

2. The handset can function here without DC adaptor also but in that case it will switch off after 30 seconds (default setting time) to conserve battery power.

1.3 Install Software



Note:

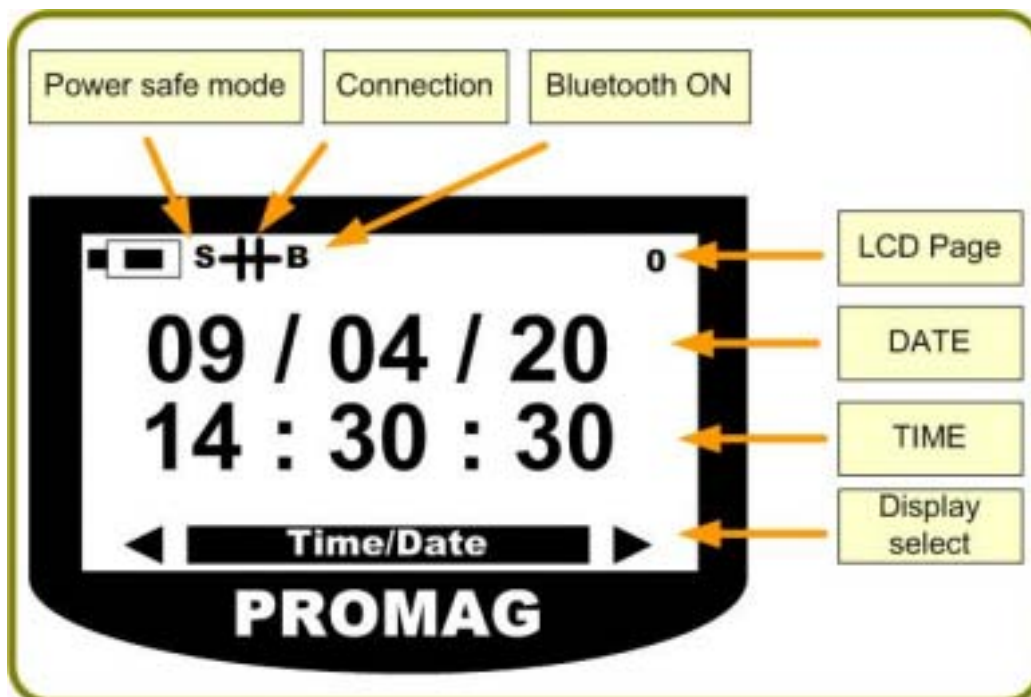
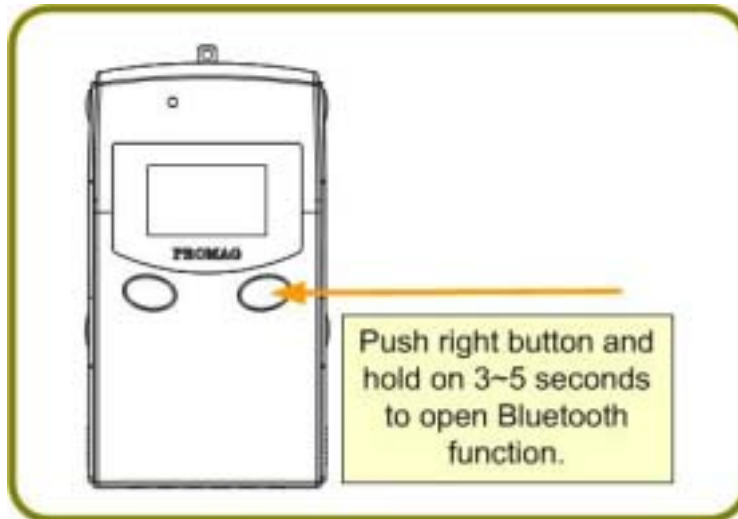
- * If not, click My Computer on desktop and double click the disk icon.
- ** Refer appendix chapter [Software Installation Details](#) for details.





1.4 Install Bluetooth Driver

Opne WM3000NB Bluetooth function.

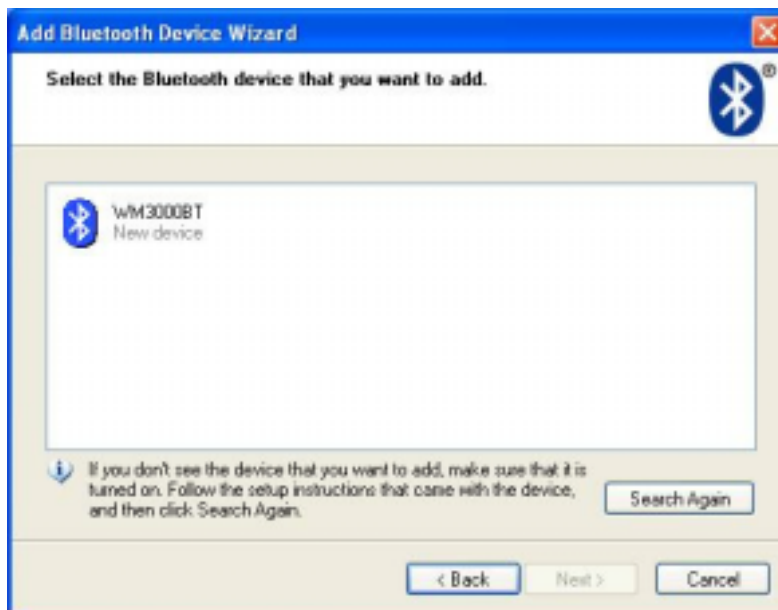
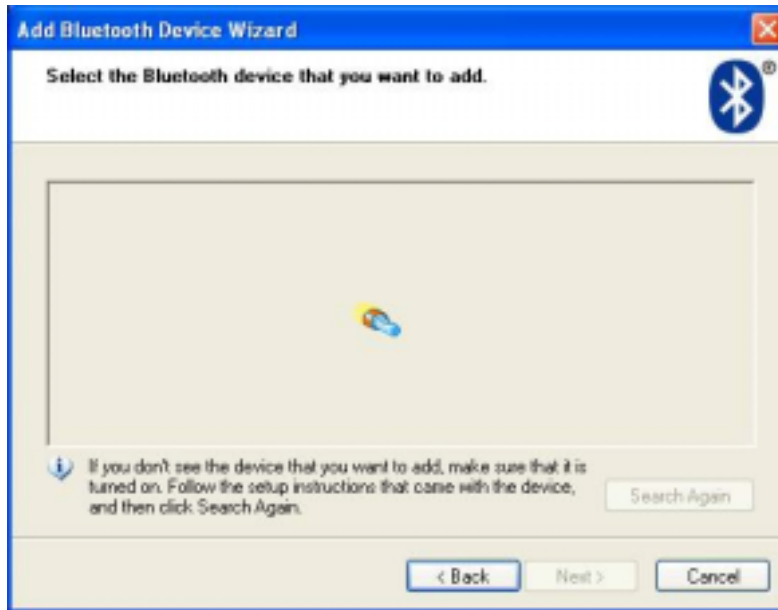


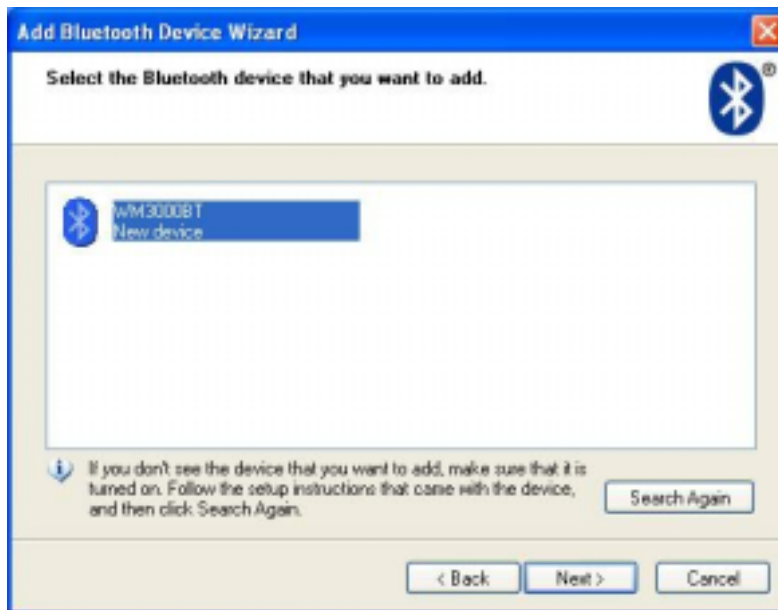
Install your Bluetooth USB Adapter to PC .



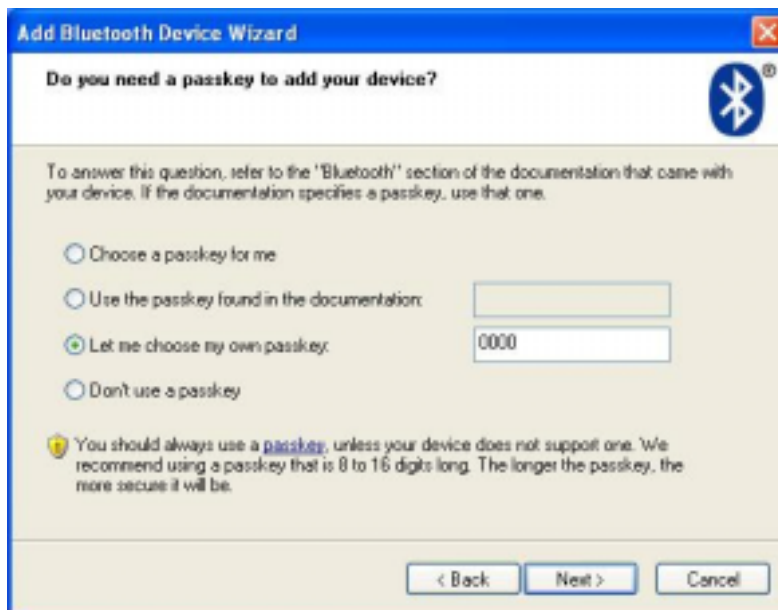
Add Bluetooth Device

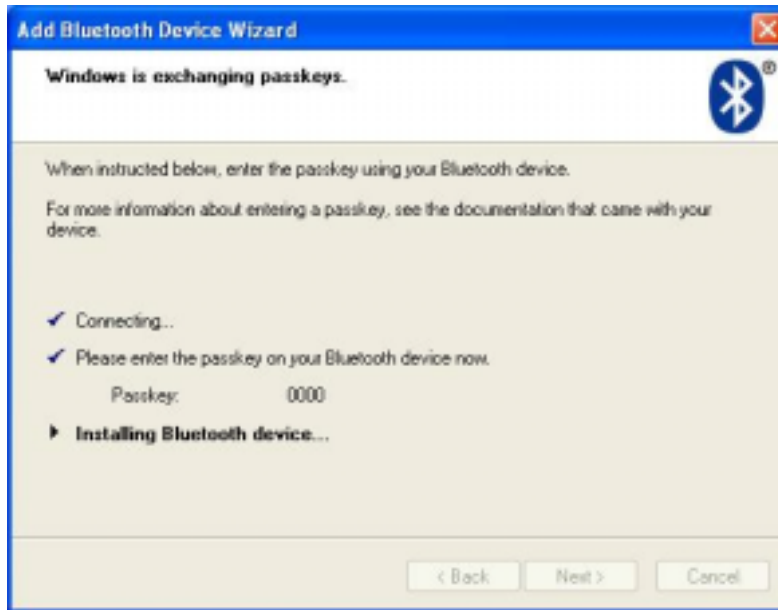




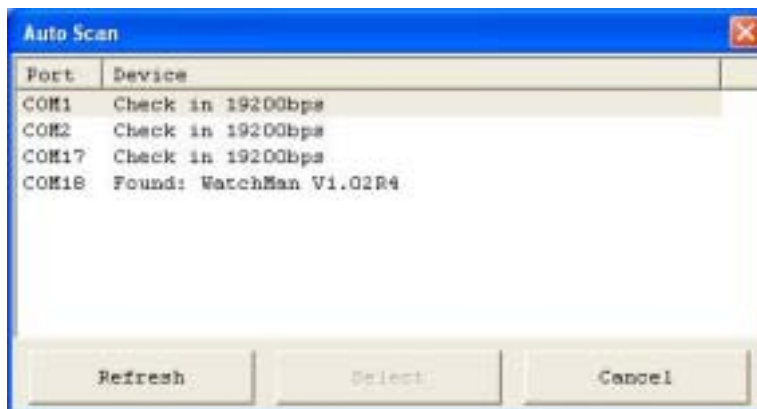


Input passkey ' 0000 '





Open Demo software ' **Watchman Monitor** ' and choose **COM port** or ' **AUTO** ' scan the WM3000NB.



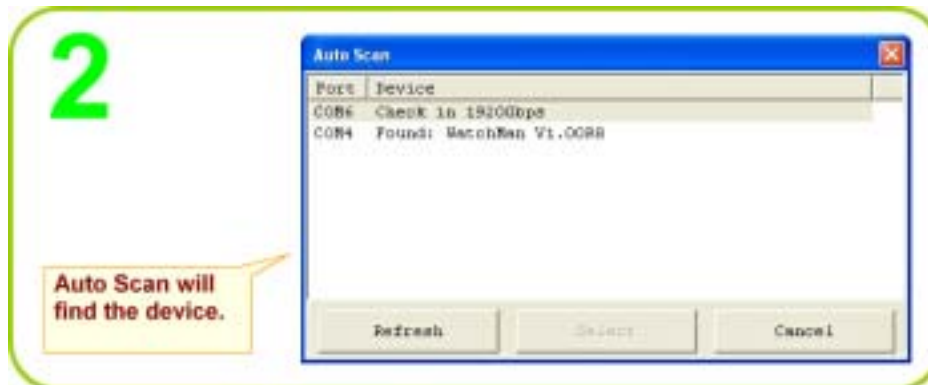
Finish WM3000NB Bluetooth connect , you can start login WM3000NB use the WatchMan Monitor functions.

1.5 Settings

Before operating WatchMan3000N the following settings can be made:

1. ID for handset WM3000NB
2. Date & Time
3. Password

1.5.1 Login

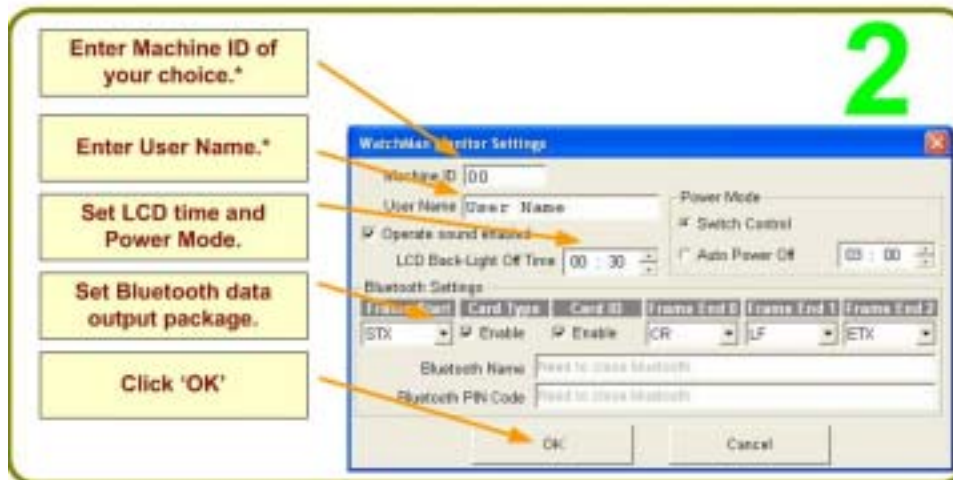


**Note:**

You will be logged out automatically when you

1. remove the handset from the base unit.
2. close the WatchMan Monitor.
3. click 'LOGOUT'.

1.5.2 ID



* When more than one handset WM3000NB are used, Machine ID's and User Names can be assigned to each.





1.5.3 Date & Time



Note: The host PC's time setting will be followed by handset WM3000NB. If the display time is not right, correct the PC's time.

1.5.4 Password



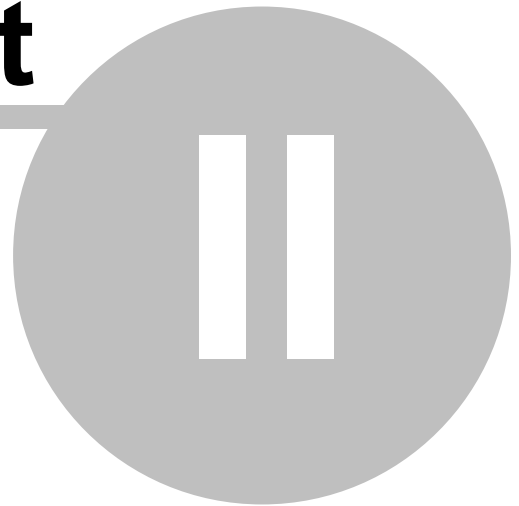


Note: If you don't want to enter any password, just click 'OK'. From the next login you can enter by just clicking 'OK'.



Note: If you lose your password, after 16 unsuccessful attempts you will receive a code. Send the code with a request to your distributors to recover your password; they will recover it for you. Refer [Loss of Password](#)

Part



2 Operation

Patrol recording, transferring records to PC and erasing.

2.1 Record Patrol

Fix the RFID tags supplied with WatchMan3000NB one each at selected locations on the route to be covered during patrol. Instruct the personnel to scan the tags during patrol as follows:

1. Switch on handset WM3000NB.
2. Press the scan button on the side.
3. Bring it near the tag (6 to 7 cm's) till a beep is heard.

The beep sound indicates successful recording of the location/tag code. The handset display will show the code of the last tag scanned.

WatchMan3000NB can store about 8192 records after which the old records have to be deleted to make space for new. Before deletion, all records can be transferred and saved to a PC.

2.2 Transfer Records to PC

Connect base unit BC3000N to PC's USB port using the RS232-USB cable . Plug the jack of 5 V dc adaptor supplied with the product into pin socket of BC3000N.

Next, insert the handset WM3000NB firmly into the slot on top of base unit BC3000N. The message 'Cradle Detected' will appear on the display.

If the PC is already installed with WatchMan Monitor software, connect handset WM3000NB and base unit BC3000N to PC as described in [Connect Device](#)

(If the PC is not already installed with the WatchMan Monitor software, install it by following procedure in Chapter 1.3 [Install Software](#) and then connect device.)

Next go to **Start** menu and click open **WatchMan Monitor**.



2
Data uploaded - in ascending order.

For descending order click 'DESC'.

CODE	DATE	TIME
D4LS0P840B	2008/09/09	09:14:40
D4LS0P840C	2008/09/09	09:24:06
D4LS0P843C	2008/09/09	09:38:08
D4LS0P84AB	2008/09/09	09:43:40
D4LS0P855F	2008/09/09	09:41:36
D4LS0P848D	2008/09/09	09:03:21
D4LS0P848D	2008/09/09	09:11:21
D4LS0P851B	2008/09/09	09:19:49
ABC	DESC	11/09/2008 19:30:39

3

To save records to PC click 'Save Record to File'.

CODE	DATE	TIME
D4LS0P840B	2008/09/09	09:14:40
D4LS0P840C	2008/09/09	09:24:06
D4LS0P843C	2008/09/09	09:38:08
D4LS0P84AB	2008/09/09	09:43:40
D4LS0P855F	2008/09/09	09:41:36
D4LS0P848D	2008/09/09	09:03:21
D4LS0P848D	2008/09/09	09:11:21
D4LS0P851B	2008/09/09	09:19:49
ABC	DESC	11/09/2008 19:16:17

4

Save to a file and folder of your choice.

2.3 Print

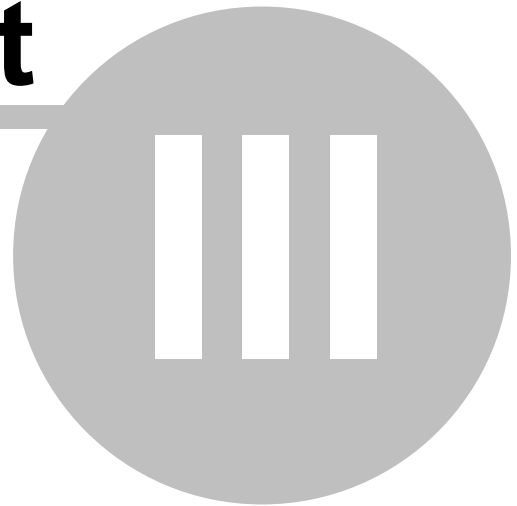


2.4 Erase Records



Note: handset WM3000NB can store about 8192 records.

Part



3 Appendix

3.1 Specifications

Storage Records	8192
RFID Tag	125KHz, ASK, 64 Bits, Manchester Coding
RFID read distance	App. 8192 records
Interface	ISO card 125 KHz at 60~70mm
Battery Life Cycle	up to 25000 above s (applying brand new DURACELL MN1500,LR6, DC 1.5V battery. Connection in one second. Disconnection in one second including timing of Data uploading to PC.
Battery	DC 1.5 Voltage, No. 4 (brand new DURACELL MN1500, LR6, DC 1.5V)
Communication Interface	RS232 or USB or Bluetooth
Baud rate	19200 bps, 8N1
Dimensions	L 110 MM W 60mm H 23mm
Weight	90 gms without battery
Safety	CE, FCC
	ETSI 300 328
	ETSI 301 489-17
	IEC 60950-1
	EN 60950-1
Working Temperature	-10~50 degree C
Storage Temperature	-20~+60 degree C
Humidity	5~95 %

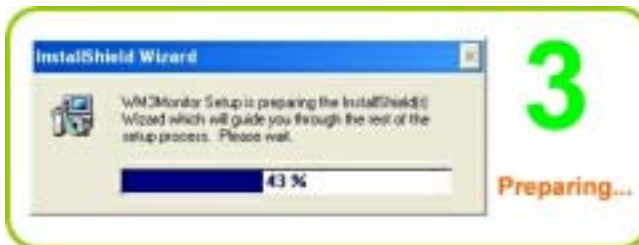
3.2 Order Information

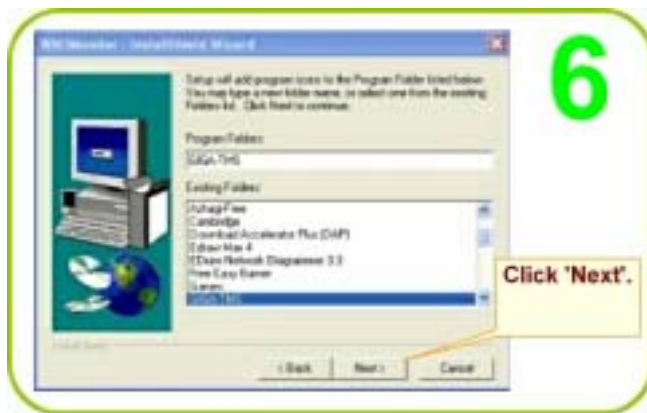
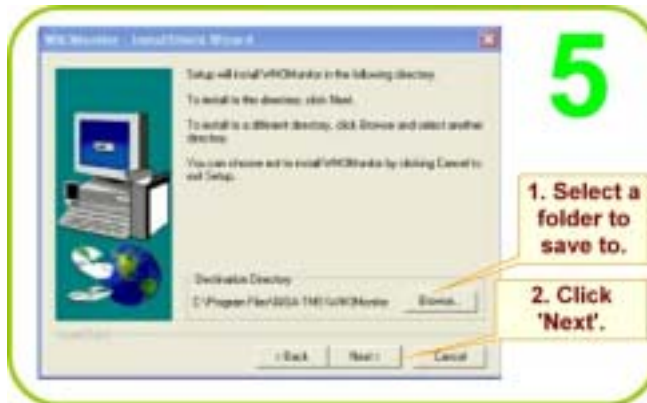
- WM3000NB-00 – with RS232 interface
- BC3000N

Specifications are subject to change without notice.

3.3 Software Installation Details

Run the CD DISK5347 supplied with WatchMan3000NB and the CD's explorer will open automatically. If not, click My Computer on desktop and double click the disk icon. Next, on the CD Explorer click **WatchMan Monitor** and follow onscreen instructions to install the WatchMan Monitor.



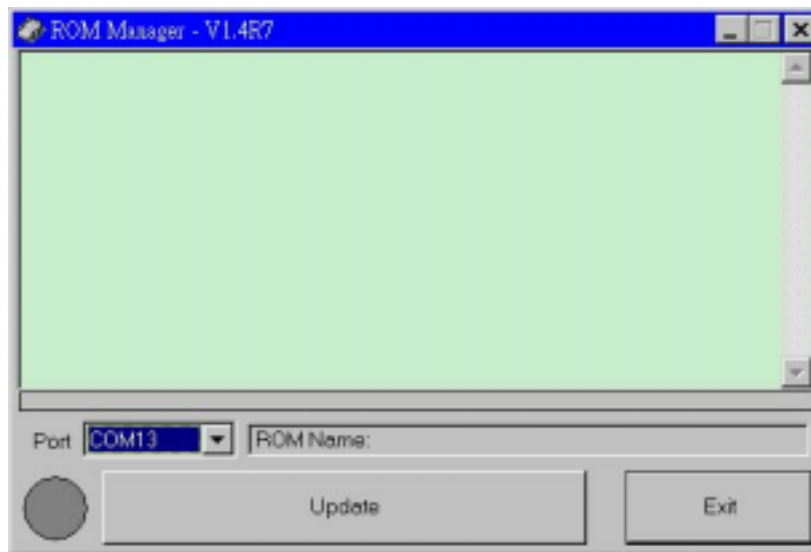




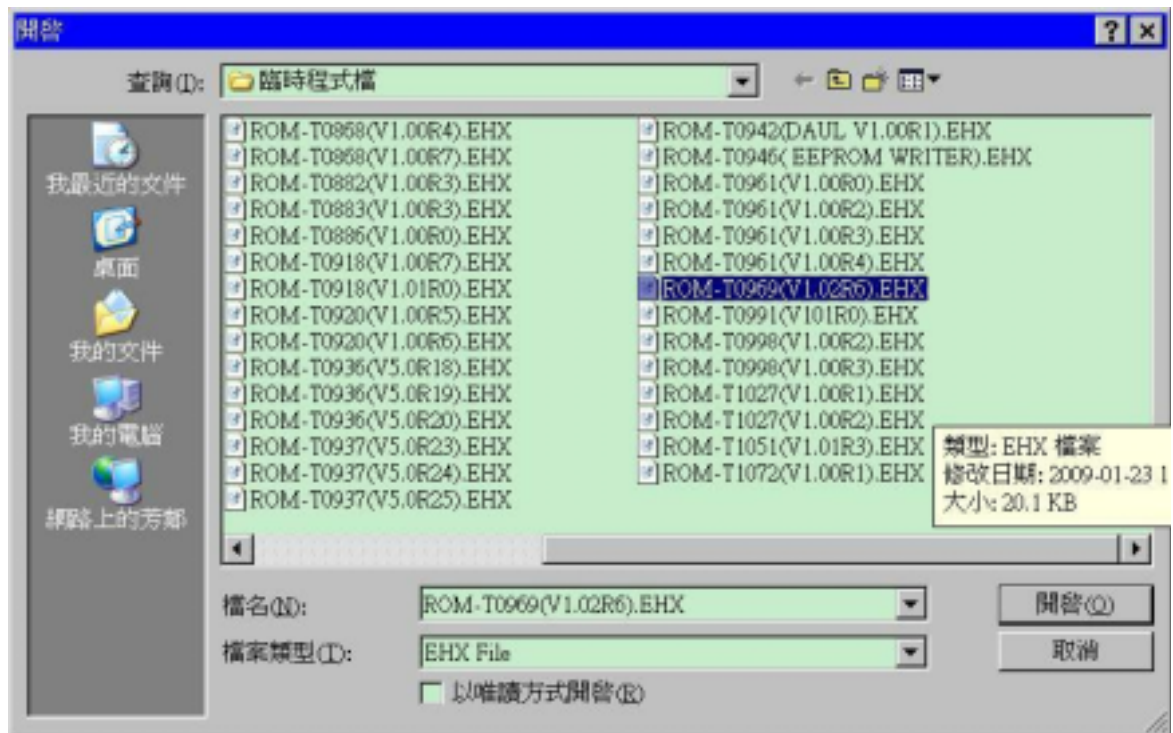
Remove CD.

3.4 FirmWare Upgrade

- Step 1** Please check with the local distributor to obtain the latest firmware version by ROM-T0969.EHX
Step 2 Connect WM3000NB to PC and enter into communication mode.
Step 3 Run GIGA-TMS ROM Manager program. click on a correct PC comm. port.



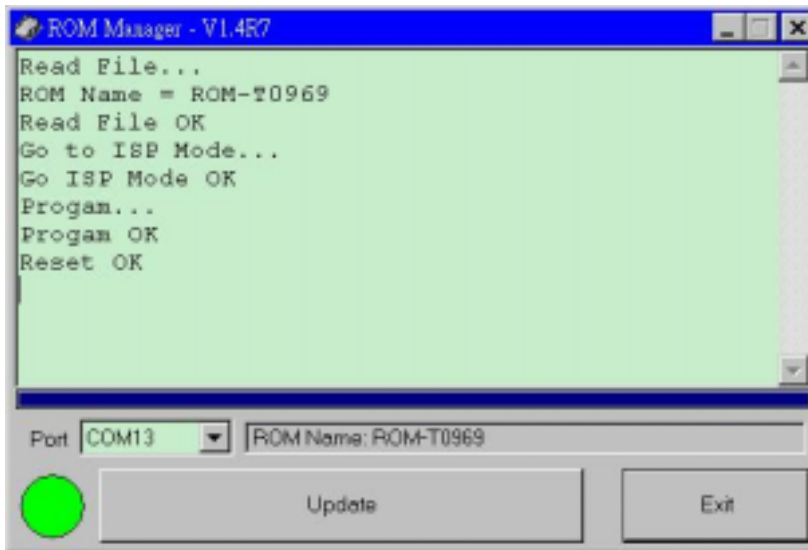
Step 4 Click on " **Update** " function button and click on latest ROM-T0969 path.



Click on " **confirm** " button and the update will proceed.



6. Firmware update will be completed.

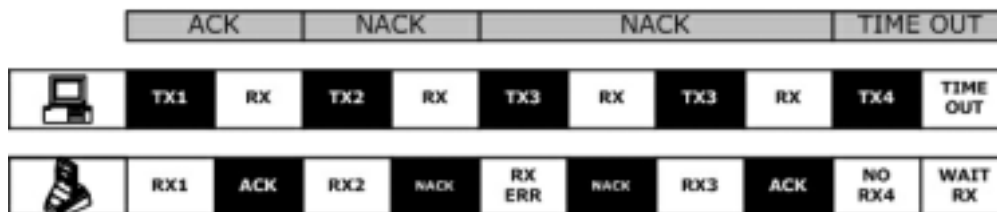


Note: If the update fails before completion you need to redo from step 3.

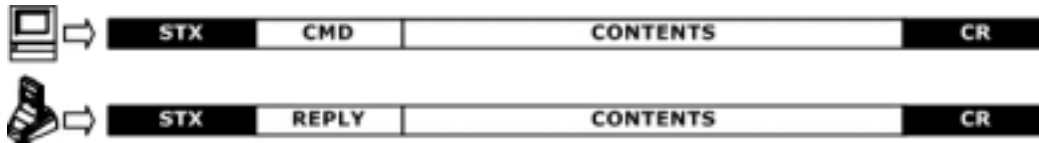
3.5 Communication Protocol

Baud rate 19200 bps, None parity, 8 data bits, 1 stop bit

Handshaking



Protocol



Control character table

ITEM	Dec	Hex	Control Key	Function
STX	2	02	^B	Start of Text
CMD	ASCII	ASCII	ASCII	Command Code
CONTENTS	ASCII	ASCII	ASCII	Contents Data
CHKSUM	ASCII	ASCII	ASCII	Check Sum
CR	13	0d	^M	Carriage Return
REPLY	(78) 65	(4e) 41	(N) A	(Negative) Acknowledge

Card data string

STX	DATE & TIME	10 CARD ID	CR		
STX	A	DATE	TIME	CARD ID	CR

Date & Time

DATE	TIME	SP
YYYY/MM/DD	HH:MM:SS	SP

1. SP is the SPACE characters (20h).
2. TIME is 24hrs.

WM3000N Terminal has an extensive list of Commands that allow manipulating its internal database, setting functional parameters and getting data on its current status.

There are 2 levels of access to the WM3000N : User and Supervisor. Supervisor level is protected by a Password. Sensitive data can be downloaded or altered only on the Supervisor level. General Terminal data is available on the User level as well.

Command Index Table

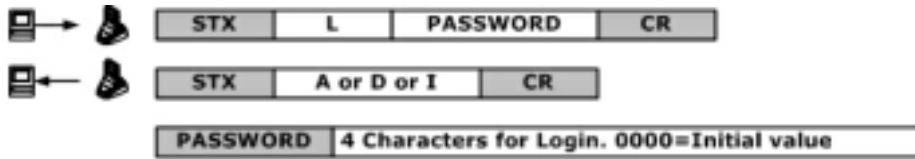
Topic	Command		Contents	Description
Access Security Commands				
ACCESS	U	L	4 Characters for Login(0000)	Login
	---	O	-	Logout
	S	P	New four characters password	Set Password
	S	D	-	Get machine name
Database Commands				
DATABASE	U	N	-	Get Number of Record
	S	G	Number	Read Record by Number
	S	E	-	Erase All Record
	S	R	-	Rollback Record
	S	M	-	Recovery All Record
	S	Q	-	Recovery All Record
General Commands				
SETTING	U	F	-	Get Product Version
	S	S	Date,Time,Week	Set Date,Time and Week
	U	T	-	Get Date and Time
	S	J	-	Set Machine ID
	U	I	-	Get Machine ID
	U	X	-	Enter Firmware Management Mode
	S	B	-	Get Register
	S	C	-	Set register



Reply Index Table

Reply	Contents
A	Reply Information
C	Checksum Error
D	Access Denied
I	Invalid Command or Data
F	Command Execution Failed
E	Database is Empty

Access Security Commands :

Login :

**EXAMPLE**



 → 

02	L	0000	0d
----	---	------	----

 ← 


02	A	0d
----	---	----

Login password : 0000

 ← 

02	D	0d
----	---	----

Login password command is not executed.

 ← 

02	I	0d
----	---	----

Invalid password.

Logout :

 → 

STX	O	CR
-----	---	----



 ← 

STX	A	CR
-----	---	----

EXAMPLE

 → 

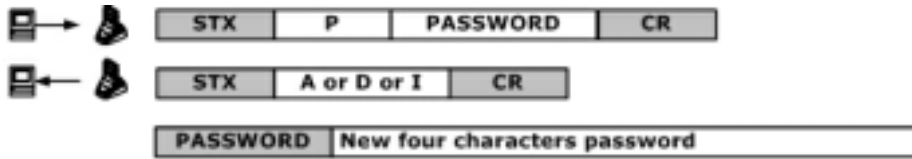
02	O	0d
----	---	----

 ← 

02	A	0d
----	---	----

Logout

Set password :



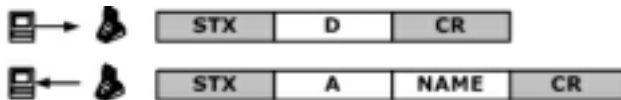
EXAMPLE

Set new password : 1234

Set new password is not executed.

Invalid password

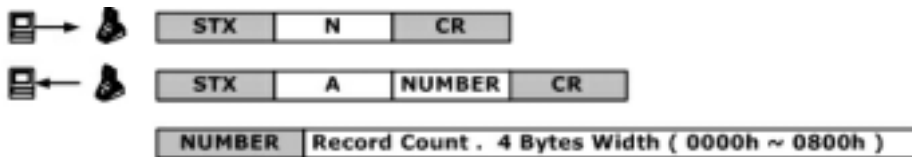
Get machine name :



EXAMPLE

Get machine name : WM300N

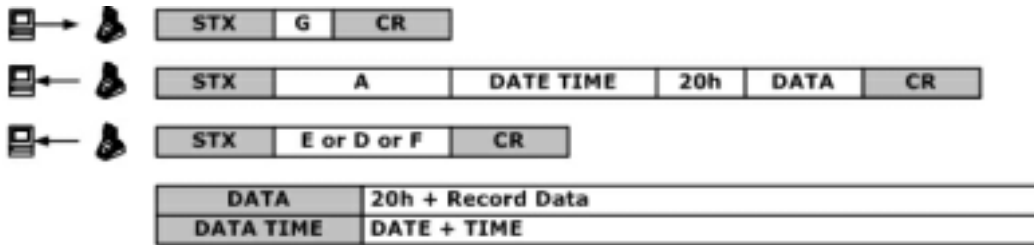
Get number of record :



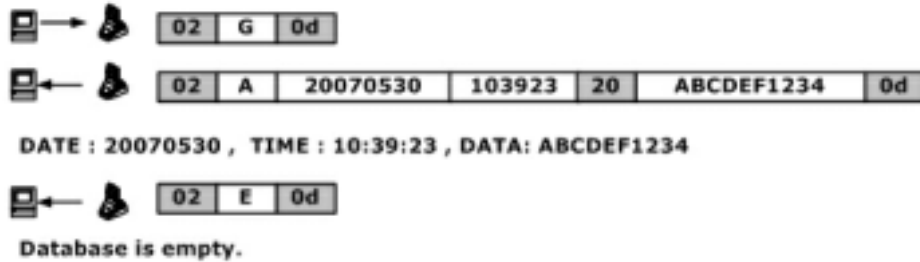
EXAMPLE

The total of record count : 12

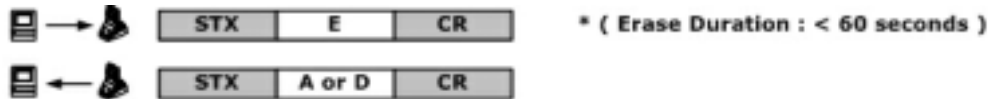
Read record by number :



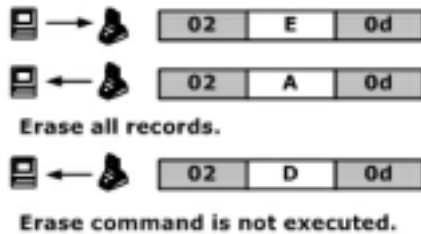
EXAMPLE



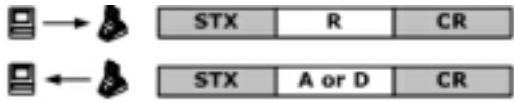
Erase all record :



EXAMPLE



Rollback database readout transaction :

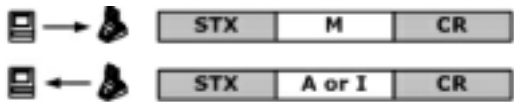


EXAMPLE

Database is rollback.

Command is not executed.

Recovery all database readout transaction :

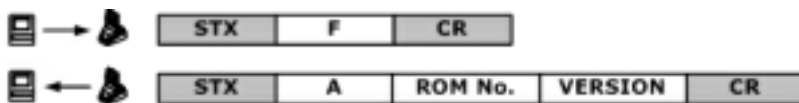


EXAMPLE

Database is recovery.

Invalid command .

Get product version :





ROM No.	ROM-Txxxx , xxxx : Rom serial number
VERSION	Vx.xxRm , Vx.xx : Firmware version x.xx , Rm : Modify m times



EXAMPLE

ROM serial number = ROM-T0918
 Firmware version = 1.01
 Modify times = 0

Set date and time :

 → 

STX	S	YYYYMMDDhhmmss	CR
-----	---	----------------	----

 ← 

STX	A or I or D	CR
-----	-------------	----

YYYY	Year (2000 - 20xx)
MM	Month (01 - 12)
DD	Date (01 - 31)
hh	Hour (00 - 23)
mm	Minute (00 - 59)
ss	Second (00 - 59)

EXAMPLE



 → 

02	S	20000506123000	0d
----	---	----------------	----

 ← 



02	A	0d
----	---	----

Set Date = 2000 / 5 / 6
Set Time = 12 : 30 : 00

 ← 

02	I	0d
----	---	----

Invalid Date/Time

 ← 

02	D	0d
----	---	----

Set Date/Time is not executed.

Get date and time :

 → 

STX	T	CR
-----	---	----

 ← 

STX	A	YYYYMMDDhhmmss	CR
-----	---	----------------	----

EXAMPLE

 → 

02	T	0d
----	---	----

 ← 

02	A	20000506123000	0d
----	---	----------------	----

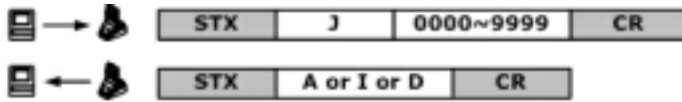
Get Date = 2000 / 5 / 6
Get Time = 12 : 30 : 00

 ← 

02	F	0d
----	---	----

Get Date/Time is not set or invalid.

Set machine ID :



EXAMPLE

02 J 0000 0d

02 A 0d

Set Machine ID : 0000

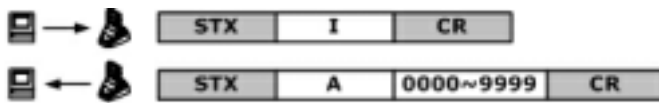
02 I 0d

Invalid command or data.

02 D 0d

Set Machine ID is not executed.

Get machine ID :



EXAMPLE

02 I 0d

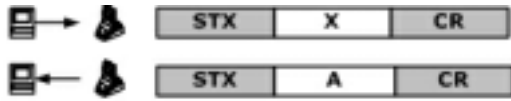
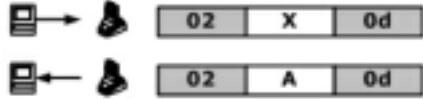
02 A 0000 0d

Get Machine ID : 00

02 F 0d

Get Identification is not set or otherwise invalid.

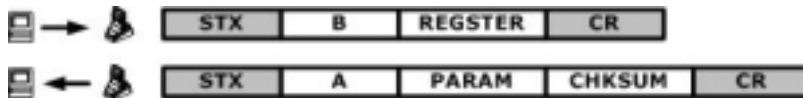
Enter firmware management mode :

**EXAMPLE**

Enter firmware management mode

Set register :

REGISTER	Register Address . 2 Bytes Width (00h ~ FFh)
PARAM	Set Parameters of Register
CHKSUM	C + REGISTER + , + PARAM

Get register :

REGISTER	Register Address . 2 Bytes Width (00h ~ FFh)
PARAM	Set Parameters of Register

Register table :

Register	Function	Description
10h	Auto Off Duration(Low byte)	00~FFh (0~ 255 second)
11h	Auto Off Duration(High byte)	-
12h	Power Mode	00h: Auto Power Off FFh: Switch
13~14h	*	*
15h	RTC cal. value	00 ~ FFh
16h	*	*
17h	*	
18h	Back Light Duration	00~FFh (0~ 255 second)
19h	Buzzer	00h: Off FFh: On
1A~1Fh	*	*
20~2Fh	User Name	16 Characters
30~1FBh	*	*
52h	Frame Start	00~FEh: ASCII FFh: Not Send
53h	Card Type	00~FEh: ASCII FFh: Not Send
54h	Card ID	00~FEh: ASCII FFh: Not Send
55h	Frame End 0	00~FEh: ASCII FFh: Not Send
56h	Frame End 1	00~FEh: ASCII FFh: Not Send
57h	Frame End 2	00~FEh: ASCII FFh: Not Send
1FC~1FFh	Password	4 Characters

Bluetooth Module Config Command

Product name :

Write :

STX → K 1 S NAME(MAX=31 CHAR) CR

← STX A CR

Read :

STX → K 1 G CR

← STX A NAME(MAX=31 CHAR) CR

EXAMPLE

02 → K 1 S WM3000NB 0d

← 02 A 0d

Set Bluetooth module name = WM3000NB

02 → K 1 G 0d

← 02 A WM3000NB 0d

Get Bluetooth module name = WM3000NB

Pin code :**Write :**

STX → K 2 S PIN CODE(MAX=12 CHAR) CR

← STX A CR

Read :

STX → K 2 G CR

← STX A FLAG LEN PIN CODE(MAX=12 CHAR) CR

EXAMPLE

02 → K 2 S 0000 0d

← 02 A 0d

Set Bluetooth pin code = 0000

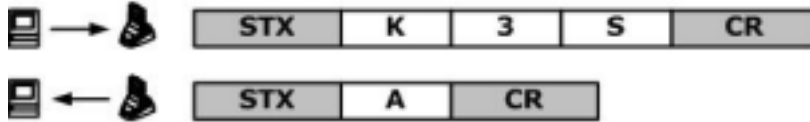
02 → K 2 G 0d

← 02 A FLAG LEN PIN CODE(MAX=12 CHAR) 0d

Get Bluetooth pin code = 0000

Pair clear :

Write :



3.6 Loss of Password

1

If you enter a wrong password Invalid Password message will appear.

2

Go on reentering any password or click OK 16 times.

3

On the 16th time of wrong entry a code will be generated.

STEP 4 Copy the code and mail it to support@gigatms.com.tw and your password will be recovered and sent to you.

3.7 Revision History

Rev Number	Date	Note
01	MAY 2009	Initial Release

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