# *** USER'S MANUAL ***

# FCC ID: WXAMINI400B

## 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.**

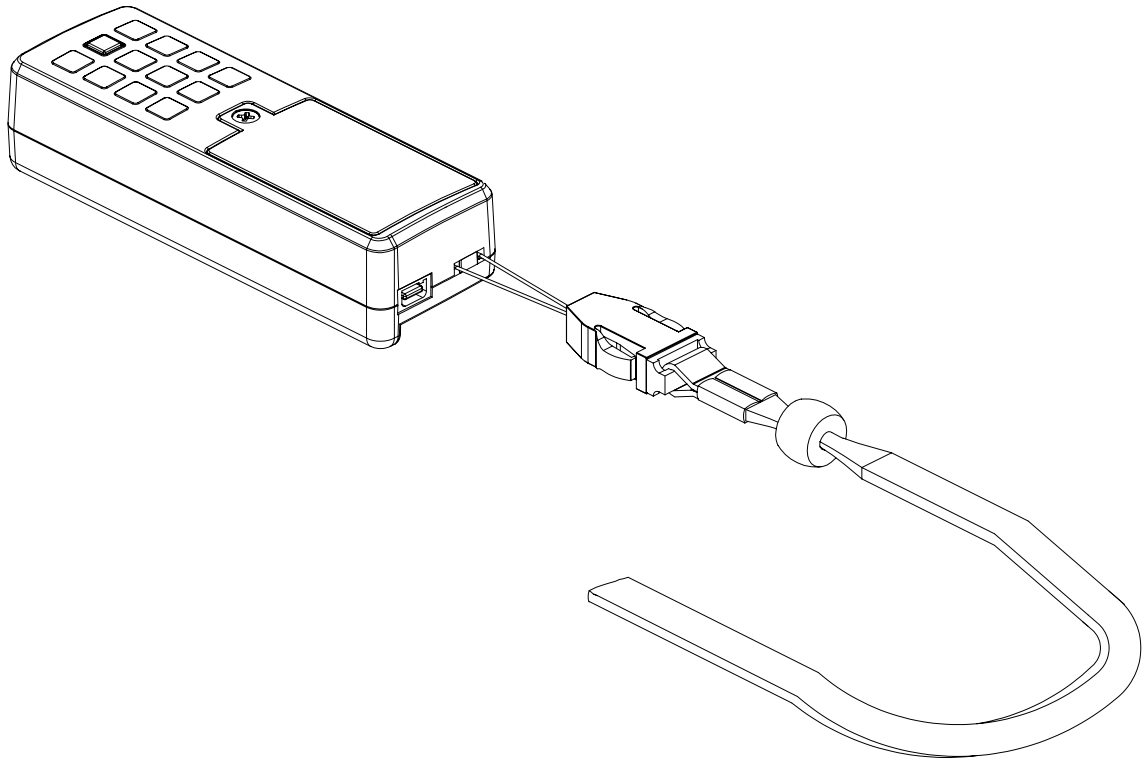
Use only shielded cables to connect I/O devices to this equipment. You are cautioned that change or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

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."**

# *Mini400B Series*



# Portable MSR Reader with Rechargeable Battery with Bluetooth

# User's Manual

# Contents

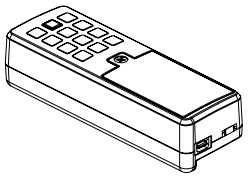
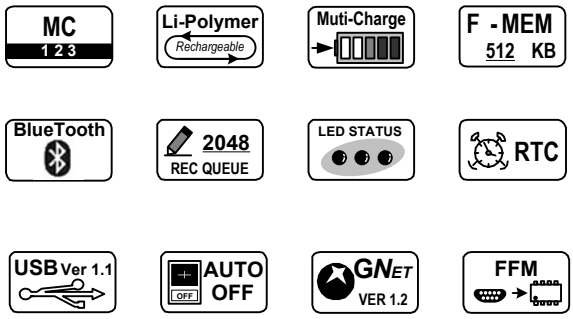


FCC COMPLIANCE STATEMENT

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 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.

# Information

## Mini400B Series Magnetic Swipe Reader

| MACHINE TYPE | FUNCTION |
|---|---|
|  **Mini400B** **Track 1 & 2 & 3** |   |

## Bluetooth adaptor Installation Refer to page10

## Read the instructions on your device before installing batteries

1. Insert batteries into your device properly, with the (+) and (-) terminals aligned correctly.
2. Always fully charge your batteries before use.
3. When you charge the batteries for the first time, or if the batteries have been stored for a long time, it normally takes about 3 charge and discharge cycles for the batteries to regain full capacity.
4. It is normal for batteries to become hot during charging and they will gradually cool down to room temperature after fully charged.
5. Store the batteries in a cool and dry place.
6. Remove batteries from the electrical device if the device is not going to be used for a long time.
7. Keep battery contact surfaces and battery compartment contacts clean by rubbing them with a clean pencil eraser or a rough cloth each time you replace batteries.
8. If the performance of the batteries decrease substantially, it is time to replace the batteries.
9. Keep batteries away from children. If swallowed, contact a physician at once.

# ■ Lithium Ion Polymer Battery Handling Guideline

## Danger !

It may cause the battery swelling, leaking, explosion or ignition, if you do not reading following:

1. Do not store battery in a manner that allows terminals to short.
2. The cell batteries are requested to be stored within a proper temperature range specified in this specifications.
3. Use only approved charger (Mini123EX).Improperly charging a cell or battery may cause the cell or battery to flame or damage.
4. Prohibit reversing cell polarity within a battery assembly. The battery must be connected correctly.
5. Do not heat or dispose the battery into fire, water or other liquids.
6. Do not short-circuit a battery. Extended short-circuiting creates high temperature in the cell and at the terminals. Physical contact to high temperature can cause skin burns. In addition, extended short-circuit may cause the cell or battery to flame.
7. Do not bend, fold or fall the battery or part of the battery. It may cause the battery be damaged and result in the battery swelling, leaking, explosion or ignition.
8. Do not open or manipulate the folded cell edge.
9. Do not bend or fold the sealing edge. And do not tear off the sealing film.
10. Do not drop or cause unnecessary shocks to the battery.
11. No sharp edge components shall be inside the battery housing. The sharp edge may destroy the cell packaging.
12. Do not carry loose batteries in a pocket or purse with metal objects like coins, paper clips and hair pins, etc. This will short circuit the battery, generating high heat.
13. Do not directly heat cell body. It may cause the battery be damaged by heat above 90℃.
14. Never disassemble a battery.
15. Never solder a battery.

## Warning !

It may cause the battery swelling, leaking, explosion or ignition, if you do not reading following:

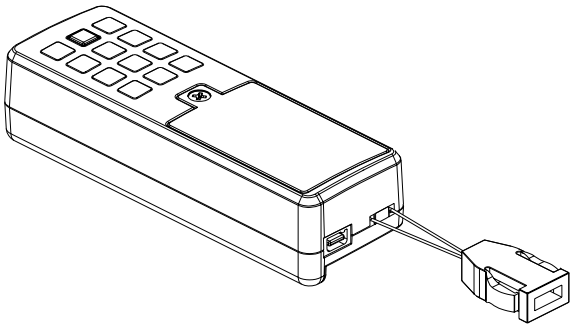
1. Do not put the battery into microware, washing machine or drying machine.
2. Do not put the battery onto oven.
3. Do not mixed batteries and types. Avoid to use old and new cells or cells of different sizes,different chemistry or types in the same battery assembly.
4. Do not use a damaged battery.
5. Keep away batteries from children.
6. In case of contacting the materials from a damaged or ruptured cell or battery:
   Eye contact: Washing immediately with plenty of water and soap or for at least 15 minutes. Get medical attention.
   Skin contact: Washing immediately with water and soap.
   Inhalation of Vented Gas: Remove to fresh air. Get medical attention.
   Ingestion : Get medical attention immediately.

## Caution !

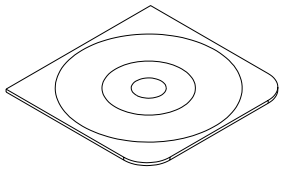
1. Do not place batteries near heating sources, nor exposed to direct sunlight for long periods. Elevated temperature can result in reduced battery service life.
2. The battery shall be operated (stored, charged and discharged ) in the temperature specified in this specifications.
   Operating Temperature:
   Charging : 0℃~45℃
   Discharge : -20℃~60℃
   Storage ： -20℃~45℃
3. Do not overcharge or overdischarge batteries. It will decrease the batteries' service life.

* Manufactory has no liability for problems that occur when the above specifications are not followed.

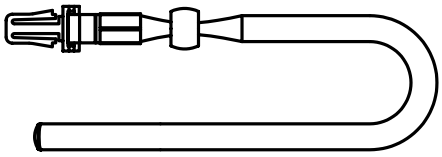
## ■ Standard Package



**Main unit**
**( Mini400B )**

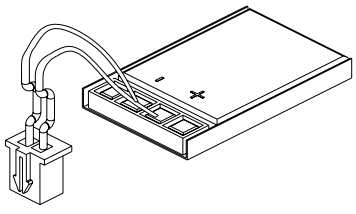


**CD-ROM**
**( DISK5269 )**

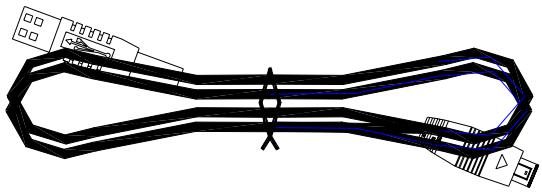


**Chain Sling**
**( TM09F1001 )**

## ■ Option



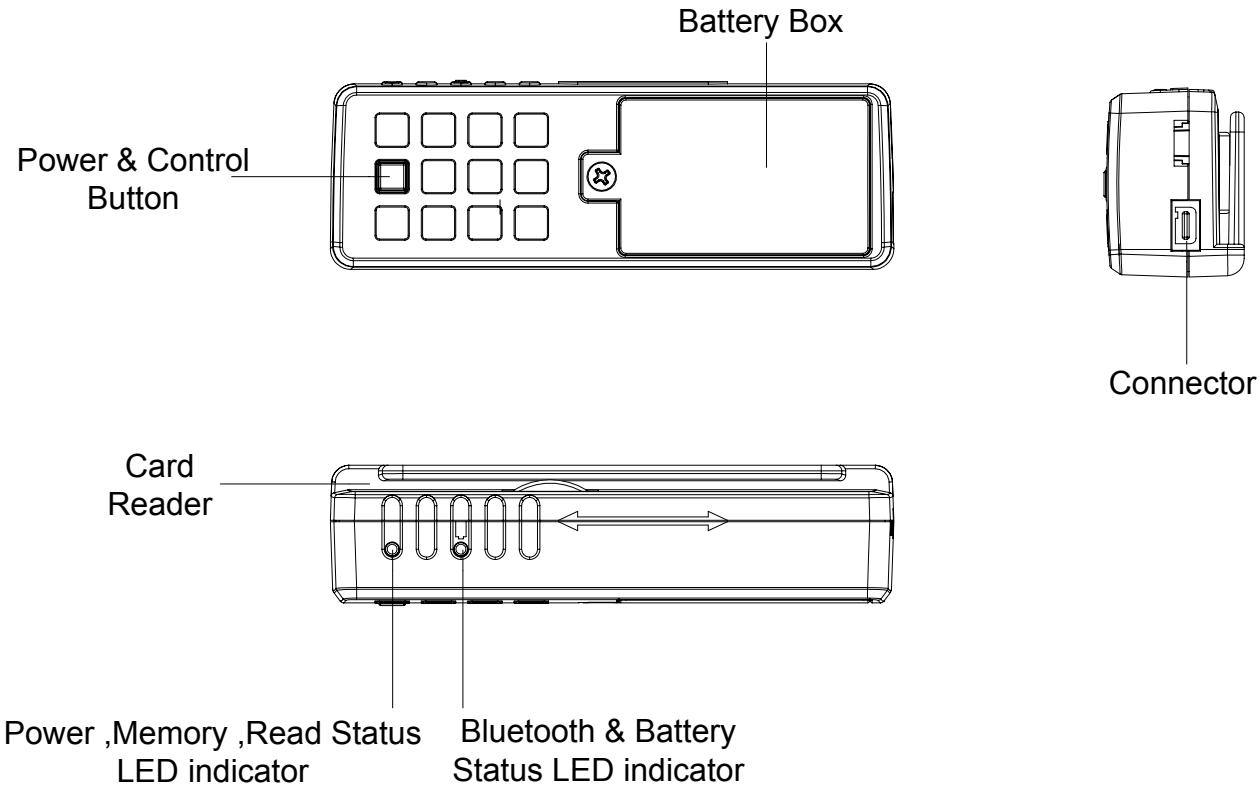
**Li-Polymer Rechargeable Battery**
**3.7V 250mAH**
**( BAT-T0011 )**



**USB Cable**
**( WAS-T0233 )**

# Technical And Operational Description

## ■ Front Panel Display and Operations




- **Card Reader**
  Swipe the card through the entire length of the slot to read.

- **Power,Memory,Read Status LED Indicator**
  When encountering erroneous input, defective card, misread,bad memory or incorrectly encoded data and so on, the device will turn on the ERROR indicator .

- **Bluetooth & Battery Status LED Indicator**
  Indicating the bluetooth is standby, the bluetooth connection is ON or OFF, the battery is ready ,charging progress , charge done, charge suspend in charge mode or low battery in operational mode.

- **Connector**
  For connection to host computer and external Power for charge Battery .

- **Battery Box**
  Put the battery in box and hold battery .

- **Power & Control Button**
  Turn the Mini400B on/off power.

  **Note : Hold the power button for 3 sec for power off.**

# ■ Display Information

## Power,Memory,Read Status LED Indicator

| Status | Green LED | Red LED | Buzzer *1 | Read Card |
|---|---|---|---|---|
| Power On | Take turns blink 2 times | | Beep. Beep. | X |
| Auto Power Off | Take turns blink 2 times | | Beep. Beep. | X |
| Ready | On | Off | X | O |
| Read OK | Blink 1 times | Off | Beep. | X |
| Read Error | Off | Blink 1 times | Beep. Beep. Beep. | X |
| Inactive Battery | Off | Blink 3 times | Beep. Beep. Beep. | X |
| RTC No Setting | Take turns blink | | X | X |
| Memory will be Full | Slow Blink | Off | X | O |
| Memory Full | Fast Blink | Off | X | X |
| Memory bad | Off | Blink | X | X |
| Firmware Management mode | Off | On | X | X |

## Bluetooth & Battery Status LED Indicator

| Status | Blue LED | Red LED |
|---|---|---|
| Bluetooth standby | On | X |
| Bluetooth connected | Blink | X |
| Precharge in progress | X | Slow Blink |
| Fast charge in progress | X | On |
| Charge done | X | Off |
| Charge suspend (temperature ,Timer Fault) | X | Fast Blink |
| Low Battery | X | Off |

# ■ Operational Description

## 1. Powered by Battery

For normal use, the unit is powered by battery. Push the Power Switch Button for about 1.5 seconds to turn on the unit. Also push the Power Switch Button for about 1.5 seconds to turn off the unit. After the unit is turned on, the power would be turned off automatically if there is no swiping a card on the unit in 30 seconds. This means the unit would be turned off if no swiping a card again in every 30 seconds after every card swiping. It would have Low Battery Detect/Warning indication when the unit is powered by battery.

## 2. Powered by Cable

When the unit is connected with the PC through the communication Cable (WAS-T0233) and the PC is running Mini400B software and open the COM PORT for the unit, then the unit will be turned on in about 0.5 second by the PC through the USB PORT. Then you can do the unit Setting, Configuration or data downloading. When the software closes the COM PORT or exits, the power turn off from the PC immediately. When powered by cable from PC, the Power Switch would have no function and the unit would have no Low Battery Detect/Warning function.

## 3. Real Time Clock Setting

Before start using the unit, you must set the Real Time Clock (RTC) inside the unit to your local time. If there is no battery for quite a while or it is powered by cable for quite a while this would cause Real Time clock (RTC) malfunctioned due to no power supply. When put on the battery to turn on the unit and the Red/Green LED take turns blinking, this means the RTC is malfunctioning and you must do the RTC time setting before you use the unit.

## 4. Low Battery Detect

When powered by battery, it would have Low Battery Detect function. When the battery goes low, the Bluetooth & Battery Status LED would flash red once every 2 second and you must charge battery immediately, otherwise, the unit would shut down any time without pre-warning.

## 5. Charge Mode

There are three different charge modes for Mini400B: low battery mode ;real time mode and manual charge mode. Low battery charge mode is used when the battery hits low voltage, it starts to be charged automatically. Real time charge mode is whenever the Mini400B cable is connected to USB, it would be charged immediately. Manual charge mode is the charge is controlled by Demo software . User can use the software to start or stop charging. The default set mode is on low battery charge mode.

## 6. Charge Status Indication

When Mini400B is in charge, Bluetooth & Battery Status LED Indicator light show slow blink red that means the battery is in the pre-charge. When Bluetooth & Battery Status LED Indicator light turns to red, it means the battery is in charge status. When Bluetooth & Battery Status Indicator light turn off, it means the charge is finished. If the charge process has unusual situation, Bluetooth & Battery Status Indicator light will show red fast blink. If Mini400B cable is connected, and battery is not in charge, Bluetooth & Battery Status Indicator light will turn off.

## 7. Memory Low Warning

Log database memory is almost full (>90%). Adding new records is still possible but you are advised to free up the log database memory by uploading the data to the PC as soon as possible.

## 8. Memory Full Warning

Log database memory is full. You not be able to add any new records. Free the log database memory by uploading the data to the PC.

## 9. Firmware Management mode (FMM)

FMM allows you to quickly upgrade your Mini123EX's internal firmware via com port and also check validity of currently loaded firmware. Contact your dealer for most recent firmware upgrade files.

## 10. Bluetooth Mode

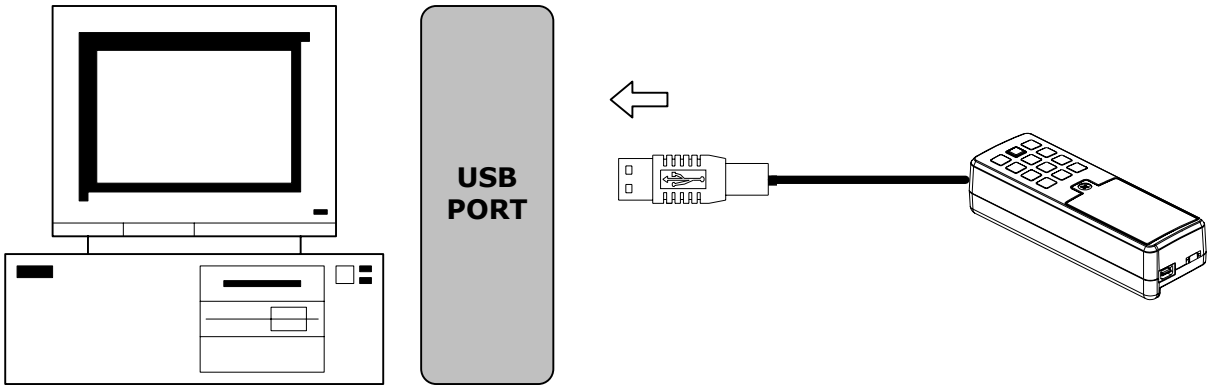
For normal use, the unit is powered by battery. Push the Power Switch Button for about 2.5 seconds to turn on the unit. the bluetooth will standby and Bluetooth & Battery Status LED Indicator light show blue, when the unit will be turned on in by the PC through the Bluetooth Adapter and the PC is running Mini400B software,the bluetooth will standby and Bluetooth & Battery Status LED Indicator light show blink blue.

## WAS-T0233


| USB 4P FEMALE PIN | FUNCTION |
|---|---|
| 1 | VCC |
| 3 | D - |
| 2 | D + |
| 4 | GND |

| MINI USB 4P | FUNCTION |
|---|---|
| 1 | VCC |
| 2 | RXD |
| 3 | TXD |
| 4 | GND |

## Connect to PC




**Personal Computer**

**Mini400B**

**Note:**

1. When Mini400B is connected/disconnected to USB port, it would be turned On/Off automatically.
2. Normally the charging time is about 1.5 ~ 2.5 hours (Default setting is low battery charge mode, it is detected when the battery is low, it would be charge until Full automatically). The working hours would be more than 48 hours (Stand alone and Always On). When Mini400B is connected with USB.
3. The battery life is more than 300 times. If user uses improperly charge mode, it may affect the battery life.

# Card Data Format

## CARD DATA STRING

| TRACK 1 | TRACK 2 | TRACK 3 | DATE & TIME |
|---|---|---|---|

| SS | *TRACK1 DATA* | ES | SS | *TRACK2 DATA* | ES | SS | *TRACK3 DATA* | ES | SP | DATE | SP | TIME | SP | WEEK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| % | *TRACK1 DATA* | ? | ; | *TRACK2 DATA* | ? | + | *TRACK3 DATA* | ? | | DATE | | TIME | | WEEK |

## TRACK 1

| % | CARD ID | ? |
|---|---|---|

1. SS is the start sentinel ( % ).
2. ES is the end sentinel ( ? ).
3. Card Id up to 76 alphanumeric data characters.

| Track 1 IATA | |
|---|---|
| Bits Per Inch | 210 |
| Bits Per Character | 7 |
| Alphanumeric Characters | 79 |

## TRACK 2

| ; | CARD ID | ? |
|---|---|---|

1. SS is the start sentinel ( ; ).
2. ES is the end sentinel ( ? ).
3. Card Id up to 37 numeric data characters.

| Track 2 ABA | |
|---|---|
| Bits Per Inch | 75 |
| Bits Per Character | 5 |
| Numeric Characters | 40 |

## TRACK 3

| + | CARD ID | ? |
|---|---|---|

1. SS is the start sentinel ( + ).
2. ES is the end sentinel ( ? ).
3. Card Id up to 104 numeric data characters.

| Track 3 Thrift | |
|---|---|
| Bits Per Inch | 210 |
| Bits Per Character | 5 |
| Numeric Characters | 107 |

## DATE&TIME&WEEK

| SP | DATE | SP | TIME | SP | WEEK |
|---|---|---|---|---|---|
| | YYYY/MM/DD | SP | HH:MM:SS | SP | W |

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

| WEEK | |
|---|---|
| SUN | 1 |
| MON | 2 |
| TUE | 3 |
| WED | 4 |
| THU | 5 |
| FRI | 6 |
| SAT | 7 |

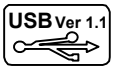
# Specifications


**Magnetic Stripe Card :**

TRACK 1 / IATA / 210 bpi / 79 Alphanumeric Characters
TRACK 2 / ABA / 75 bpi / 40 Numeric Characters
TRACK 3 / Thrift / 210 bpi / 107 Numeric Characters


**Bluetooth Interface :**

SPP Profile ,Class 2 ,Compatible Bluetooth V2.0+EDR,V1.2,V1.1




**USB Interface**

Full compliance with the USB Specification V 1.1
The device uses a Virtual Serial Port Driver, making it appear to have the software like a standard RS232 Serial Port.


**Communication Protocol :**

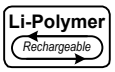
Version 1.2 (GNET V1.2)


**CLOCK :**

Real Time Clock (RTC) module and back-up capacitor


**Memory Size for Storing Data :**

CMOS Serial Flash Memory 512K bytes
Up to 2048 records ( 256 Bytes / Record )

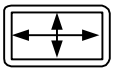



**Battery Power :**

Rechargeable Lithium-ion Polymer Battery
Nominal Capacity: 250 mAH ( Typical )
Nominal Voltage: 3.7 V
Cycle Life: 300 cycles ( at least )
Low Battery Detect and Built-in Quick Charge Circuit

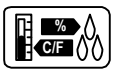

**Power Supply for Charge :**

DC 5V , 200mA ( for RS-232 ) or USB Powered
Charging duration time : 1.5 ~ 2.5 hr
Working duration time after charge : 48 hr ( always power on )



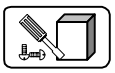
**Dimensions :**

L 82 x W 27.5 x H 21 mm




**Environment :**

Operating Temp : -0℃ ~ +60℃ ( Discharge )
-0℃ ~ +45℃ ( Charging )
Storage Temp : -10 ~ +65℃
Humidity : 10 ~ 90 % relative



**Mounting :**

Portable or Any surface

# Communication Protocol

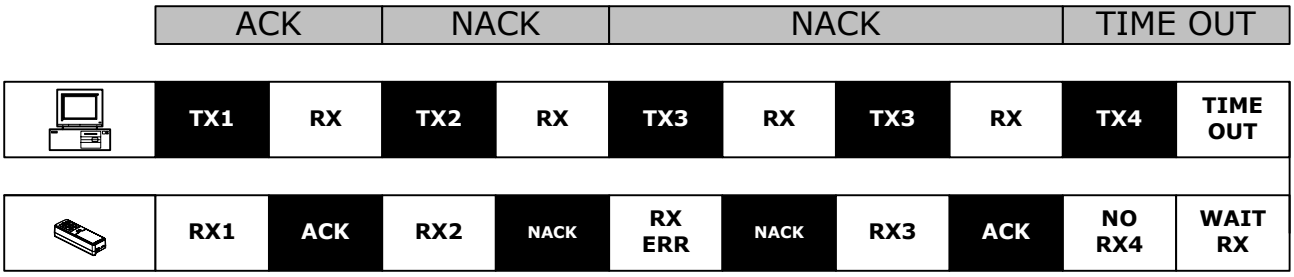
## GNET FEATURES

- Support TTY (TELE TYPE) OPERATION -
  Use TTY to send commands and messages.
- Simple handshaking -
  One enquiry one answer back.
- Multi-link capability


- Expandability -
  GNET provides 4 major functions:
  1. POLLING
  2. LOGIN / LOGOUT
  3. DATABASE
  4. INFORMATION

  Also can be expandable.
- Simple format
  Use ASCII value for each field and use Separator "," between two Fields.

## GNET Handshaking




## GNET PACKET



| 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 |

## Command Index Table

| Topic | Command | Contents | Description |
|---|---|---|---|
| SETTING | L | 4 Characters for Login(0000) | Login |
| | O | - | Logout |
| | P | New four digit password | Set Password |
| | B | - | Get Register |
| | C | - | Set register |
| | F | - | Get Product Version |
| | S | Date,Time,Week | Set Date,Time and Week |
| | T | - | Get Date and Time |
| DATABASE | N | - | Get Number of Record |
| | G | Number | Read Record by Number |
| | E | - | Erase All Record |

## Reply Index Table

| Topic | Reply | Contents | Description |
|---|---|---|---|
| ACK | A | Reply Information | ACK+Information |
| NAK | N | See Error Index Table | NAK+Information |

## Error Index Table ( For Reply NAK )

| Topic | Error Index | Description |
|---|---|---|
| ACCESS LEVEL | 00 | Access Denied or Password Error |
| COMMAND CODE | 01 | Command packet is too long |
| | 02 | Command packet is empty |
| | 03 | Command code is out of range |
| | 04 | Illegal Command or Data |
| DATABASE | 05 | Database and Register is Empty |
| | 06 | Record number is out of range |
| | 07 | Check Sum Error |
| | 08 | Memory Not Enough |
| | 09 | Action Failure |
| FILE | 0A | File Not Exist |

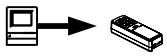
## 1. GET NUMBER OF RECORD :

| STX | N | CR |
|---|---|---|

| STX | A | NUMBER | CHKSUM | CR |
|---|---|---|---|---|

| NUMBER | Record Count . 4 Bytes Width ( 0000h ~ 0080h ) |
|---|---|

**EXAMPLE**

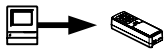


| 02 | N | 0d |
|---|---|---|

| 02 | A | 000C | 14 | 0d |
|---|---|---|---|---|

**The Total of Record Count : 12**

## 2. READ RECORD BY NUMBER :



| STX | G | NUMBER | CR |
|---|---|---|---|

| STX | A | NUMBER | , | DATA | CHKSUM | CR |
|---|---|---|---|---|---|---|

| NUMBER | Record Count . 4 Bytes Width ( 0000h ~ 007Fh ) |
|---|---|
| DATA | Record Data ( TRACK1 , TRACK2 , TRACK3 ) |

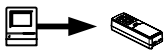
**EXAMPLE**

| 02 | G | 000B | 0d |
|---|---|---|---|

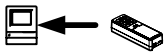
| 02 | A | 000B | , | % | ABCD | ? | ; | 2222 | ? | + | 3333 | ? | C7 | 0d |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

**Read Record Number : 11**
**TRACK1 ID : ABCD , TRACK2 ID : 2222 , TRACK3 ID : 3333**

## 3. ERASE ALL RECORD :

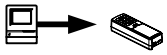


| STX | E | CR |
|---|---|---|



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

**EXAMPLE**

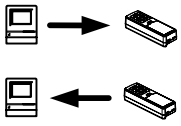


| 02 | E | 0d |
|---|---|---|

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

**ERASE ALL RECORD**

## 4. SET DATE AND TIME :



| STX | S | YYYYMMDDhhmmssw | CR |
|---|---|---|---|



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

| YYYY | Year (1980 - 20xx ) |
|---|---|
| MM | Month (01 - 12 ) |
| DD | Date ( 01 - 31 ) |
| hh | Hour ( 00 - 23 ) |
| mm | Mintue ( 00 - 59 ) |
| ss | Second ( 00 - 59 ) |
| W | Week ( 1 - 7 ) |

| Week | |
|---|---|
| SUN | 1 |
| MON | 2 |
| TUE | 3 |
| WED | 4 |
| THU | 5 |
| FRI | 6 |
| SAT | 7 |

**EXAMPLE**

| 02 | S | 200005051230006 | 0d |
|---|---|---|---|

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

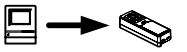
**Set Date = 2000 / 5 / 5**
**Set Time = 12 : 30 : 00 , Friday**

## 5. GET DATE AND TIME:

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

| STX | A | YYYYMMDDhhmmssw | CR |
|---|---|---|---|

**EXAMPLE**

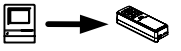


| 02 | T | 0d |
|---|---|---|

| 02 | A | 200011081420314 | 0d |
|---|---|---|---|

**Get Date : 2000 / 11 / 8**
**Get Time : 14 : 20 : 31 , Wednesday**

## 6. GET PRODUCT VERSION :



| STX | F | CR |
|---|---|---|

| STX | A | VERSION | CR |
|---|---|---|---|

| VERSION | VxxRmm , Vxx : Firmware Version x.x , Rmm : Modify mm Times |
|---|---|

**EXAMPLE**

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

| 02 | A | V1.0R00 | 0d |
|---|---|---|---|

**Firmware Version = 1.0**
**Modify times = 0**

## 7. SET REGISTER :

| STX | C | REGISTER | , | PARAM | CHKSUM | CR |
|---|---|---|---|---|---|---|

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

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

## 7-1. SET POWER MODE :

| STX | C | 12 | , | MODE | CHKSUM | CR |
|---|---|---|---|---|---|---|

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

| MODE | |
|---|---|
| "00" | Real Control |
| "01~FE" | Auto Power OFF |
| "FF" | Always Power ON |

**EXAMPLE**

| 02 | C | 12 | , | 00 | 32 | 0d |
|---|---|---|---|---|---|---|

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

**Write to Parameter Table Address : 12 h**
**Set Power Mode : Real Control**
**CHKSUM= 43h(C) + 31h(1)+ 32h(2) + 2Ch(,) +30h(0) + 30h(0) = 132h**
**= 33h(3) + 32h(2)**

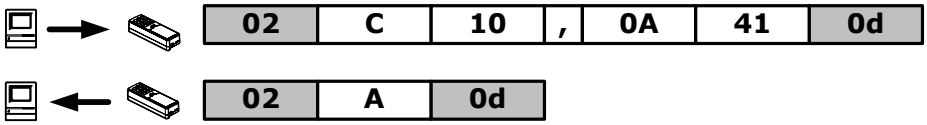
## 7-2. SET AUTO POWER OFF TIME (LOW BYTE) :

| STX | C | 10 | , | SECL | CHKSUM | CR |
|---|---|---|---|---|---|---|

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

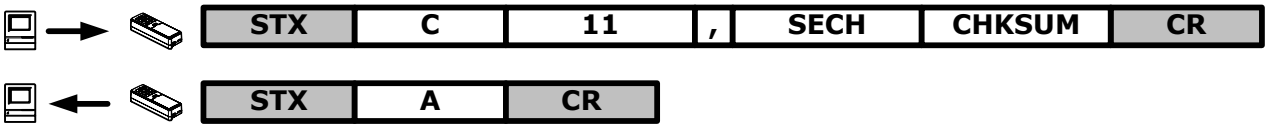
| SECL | |
|---|---|
| "00-FF" | 00h-FFh (0-255)/2 Second |

**EXAMPLE**



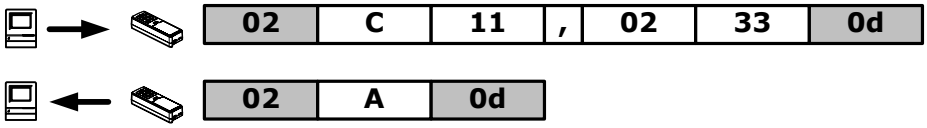

**Write to Parameter Table Address : 10 h**
**Auto Power Off Time (Low Byte) : 5 Seconds**

## 7-3. SET AUTO POWER OFF TIME (HIGH BYTE) :



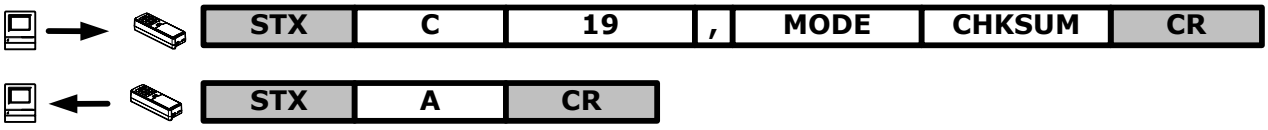

| SECH | |
|---|---|
| "00-FF" | (00-FF)/2 *256 Seconds |

**EXAMPLE**



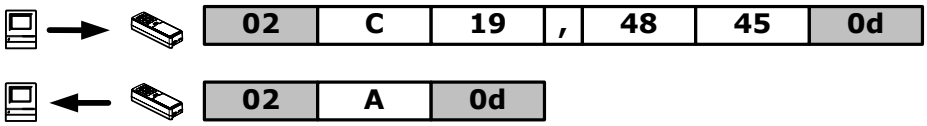

**Write to Parameter Table Address : 11 h**
**Auto Power Off Time (High Byte) : 2/2*256 Seconds**

## 7-4. SET BUZZER ON/OFF :



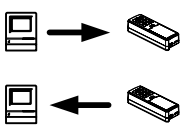

| MODE | |
|---|---|
| "FF" | BUZZER OFF |
| "xx" | BUZZER ON |

**EXAMPLE**




**Write to Parameter Table Address : 19 h**
**xx : any value**

## 7-5. SET TRACK ACTIVE MODE :



| STX | C | TRACK | , | MODE | CHKSUM | CR |
|---|---|---|---|---|---|---|

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

| TRACK | |
|---|---|
| "30" | TRACK 1 |
| "31" | TRACK2 |
| "32" | TRACK3 |

| MODE | |
|---|---|
| "FF" | ENABLE |
| "00" | DISABLE |
| "01" | REQUIRED |

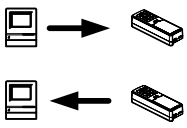
**EXAMPLE**

| 02 | C | 30 | , | FF | 5E | 0d |
|---|---|---|---|---|---|---|

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

**Write to Parameter Table Address : 30 h**
**TRACK ACTIVE MODE : TRACK 1 ENABLE .**

## 7-6. SET POWER SAVE MODE :



| STX | C | POWER SAVE | , | MODE | CHKSUM | CR |
|---|---|---|---|---|---|---|

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

| MODE | |
|---|---|
| "FF" | DISABLE |
| "00~FE" | ENABLE |

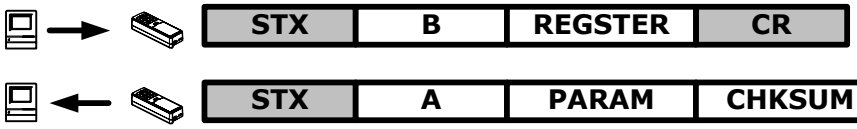
**EXAMPLE**

| 02 | C | 1E | , | FF | 71 | 0d |
|---|---|---|---|---|---|---|

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

**Write to Parameter Table Address : 1E h**
**Power Save Mode : Power Save Mode Disable .**

## 8. GET REGISTER :

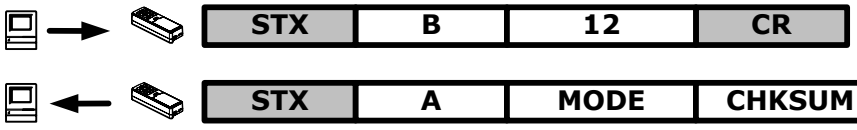


| STX | B | REGSTER | CR |
|---|---|---|---|

| STX | A | PARAM | CHKSUM | CR |
|---|---|---|---|---|

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

## 8-1. GET POWER MODE :

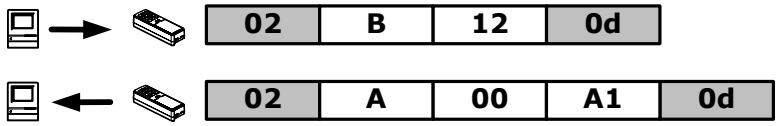


| STX | B | 12 | CR |
|---|---|---|---|

| STX | A | MODE | CHKSUM | CR |
|---|---|---|---|---|

**Same 7-1. SET POWER MODE**

**EXAMPLE**



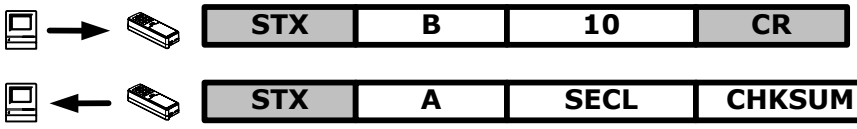
| 02 | B | 12 | 0d |
|---|---|---|---|



| 02 | A | 00 | A1 | 0d |
|---|---|---|---|---|

**Write to Parameter Table Address : 12 h**
**Get Power Mode : Real Control**

## 8-2. GET AUTO POWER OFF TIME (LOW BYTE) :

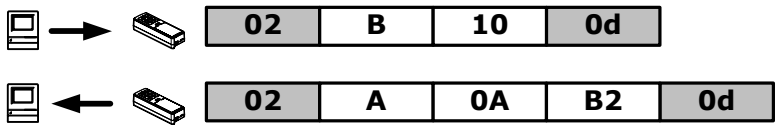


| STX | B | 10 | CR |
|---|---|---|---|

| STX | A | SECL | CHKSUM | CR |
|---|---|---|---|---|

**Same 7-2. SET AUTO POWER OFF TIME (LOW BYTE )**

**EXAMPLE**



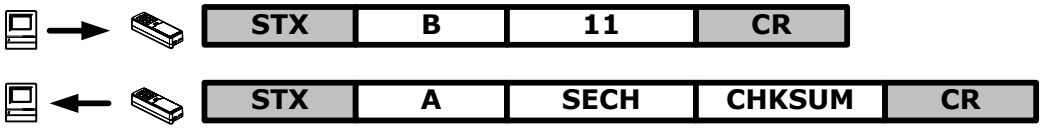
| 02 | B | 10 | 0d |
|---|---|---|---|



| 02 | A | 0A | B2 | 0d |
|---|---|---|---|---|

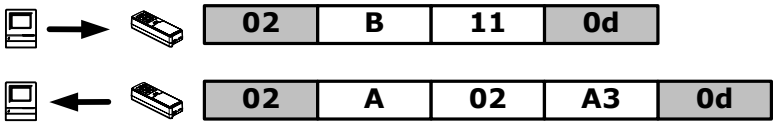
**Get Parameter From Parameter Table Address : 10 h**
**Auto Power Off Time Period (Low Byte) : 5 Seconds**

## 8-3. GET AUTO POWER OFF TIME (HIGH BYTE) :



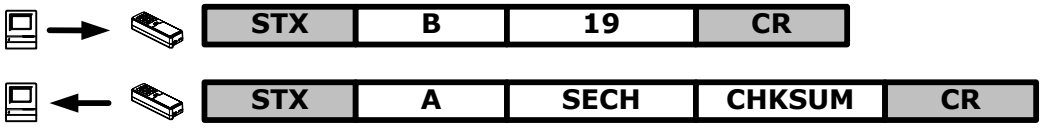

**Same 7-3. SET AUTO POWER OFF (HIGH BYTE)**

**EXAMPLE**

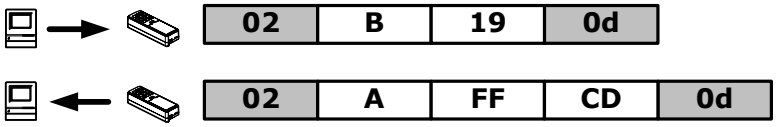



**Get Parameter From Parameter Table Address : 11 h**
**Auto Power Off Time Period (High Byte) : 2*256/2 Seconds**

## 8-4. GET SOUND MODE :

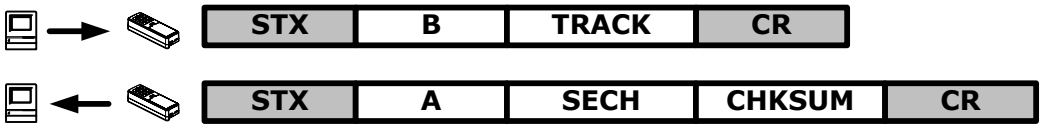



**EXAMPLE**



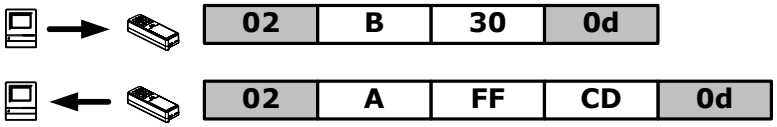

**Get Parameter From Parameter Table Address : 19 h**
**SOUND MODE : ENABLE**

## 8-5. GET TRACK ACTIVE MODE :



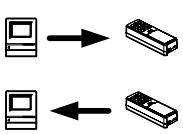

| TRACK | |
|---|---|
| "30" | TRACK 1 |
| "31" | TRACK2 |
| "32" | TRACK3 |

**EXAMPLE**




**Get Parameter From Parameter Table Address : 30 h**
**TRACK 1 ACTIVE MODE : ENABLE**

## 9. LOGIN :

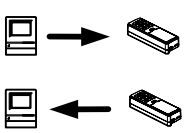


| STX | L | PASSWORD | CR |
|---|---|---|---|

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

| PASSWORD | 4 Characters for Login. 0000=Initial value |
|---|---|

**EXAMPLE**

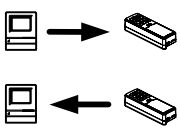


| 02 | L | 0000 | 0d |
|---|---|---|---|

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

**Login password : 0000**

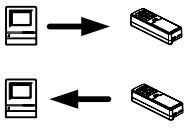
## 10. LOGOUT :



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

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

**EXAMPLE**

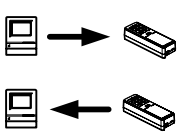


| 02 | O | 0d |
|---|---|---|

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

**Logout**

## 11. SET PASSWORD :

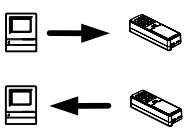


| STX | P | PASSWORD | CHKSUM | CR |
|---|---|---|---|---|

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

| PASSWORD | New four digit password |
|---|---|

**EXAMPLE**



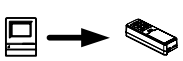
| 02 | P | 1234 | 1A | 0d |
|---|---|---|---|---|

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

**Set new password : 1234**

## 12. GET/SET BLUETOOTH NAME(only workable with cable WAS-T0233)

:



| STX | K | 1 | G/S | NAME | CR |
|---|---|---|---|---|---|

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

| NAME | default setting=MINI400 |
|---|---|

**EXAMPLE**

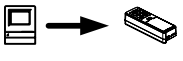
| 02 | K | 1 | G | MINI400B | 0d |
|---|---|---|---|---|---|

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

G=GET S=SET

## 12-1. GET/SET BLUETOOTH PIN CODE(only workable with cable WAS-T0233)

:



| STX | K | 2 | G/S | PIN CODE | CR |
|---|---|---|---|---|---|

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

| NAME | default setting=MINI400 |
|---|---|

**EXAMPLE**

| 02 | K | 2 | G | 1234 | 0d |
|---|---|---|---|---|---|

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

G=GET S=SET Set new PIN CODE : 1234

## 12. SET BLUETOOTH PAIR CLEAR(only workable with cable WAS-T0233)

:

| STX | K | 3 | S | CR |
|---|---|---|---|---|

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

| NAME | default setting=MINI400 |
|---|---|

**EXAMPLE**

| 02 | K | 3 | S | 0d |
|---|---|---|---|---|

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

S=SET