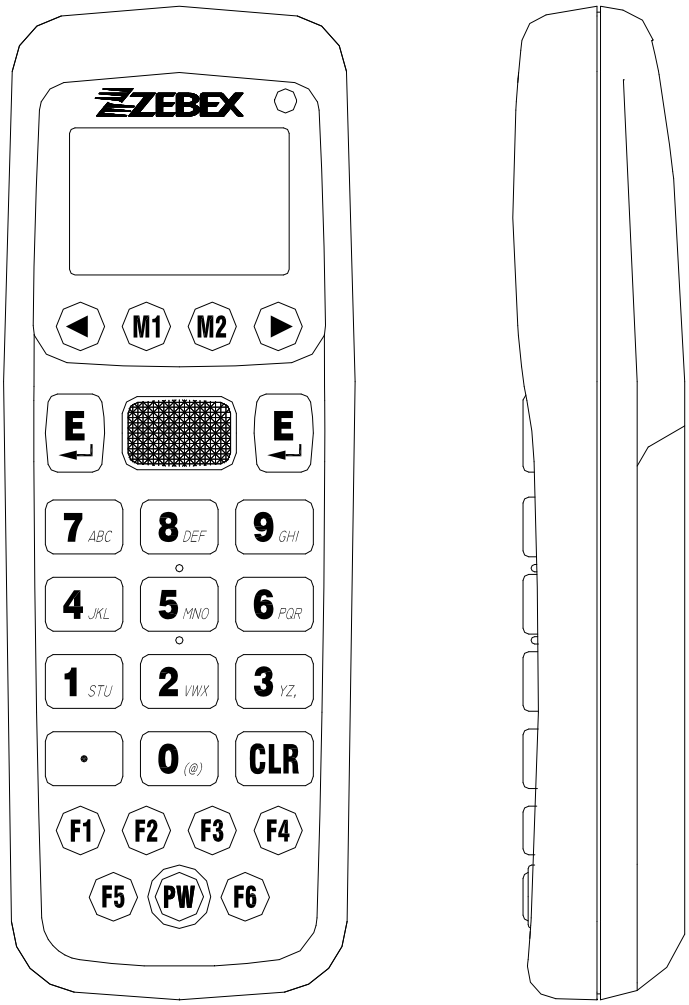
ZEBEX INDUSTRIES INC.

Portable Data Collector

Z-2121 series

(Version 2.00)

User's Manual



Editorial Record

Version	Date of edited	Description of Version
V1.0	Nov. 15, 2010	Initial release
V2.0	April. 12, 2011	Updated Task Utility, System Setup. Added Bluetooth section

Table of Contents

Preface

About This Manual

Thank you for your purchase of the ZEBEX Z-2121 Portable Data Collector. ZEBEX Z-2121 product is at the forefront of data collector technology, and this manual will provide the necessary information on the many and varied options available to you.

The Z-2121 product is a compact, ergonomic, modular and durable data collector. It is designed for easy upgrade with an integrated BT communication, 1D barcode scanner and vibration. The design is ideal for the mobile worker as it simple and easy to use anywhere along a supply chain.

Symbols used in this manual

	A triangular shape indicates you should exercise caution.
	A circle shape indicates something you should not to do.
	A black circle indicates something you must to do.
	A note symbol indicates you the information that is important and you should be observed.

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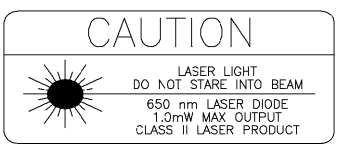
Safety Information

Your safety is of the utmost importance so please observe and follow the following guidelines that allow you to use the scanner in a safe and responsible way.

Laser Safety

The Z-2121 series Portable Data Collector complies with safety standard IEC825-1(1993) for a Class 2 laser product. It also complies with U.S.21CFR1040 as applicable to a Class II laser product. Avoid staring at direct laser light as the laser beam may hurt your eyes.

LASER BEAM



Never look directly into the laser beam.
Doing so can cause serious eye damage.

Safety Operation

WARNING

Disassembly and Modification

Never try to disassemble or modify the device in any way. All servicing should be carried out be qualified Zebex personnel or Zebex- approved engineers.

Interior Parts and Components

Never touch interior high voltage parts or components. Doing so creates the danger of electrical shock.

Drop and Knock the Device

Be careful when using the device; do not drop or knock the device as irreversible damage to the unit may occur.

Extreme temperature

Do not operate the device under extreme temperature.

Battery and Charger

The use of third-party battery or charger may either damage the device or shorten the life of the device.

CAUTION

Dropping and Damage

Should the drop the device and damage it, immediately turn off the power and contact your original dealer or an authorized ZEBEX service provider. Continued use creates the danger of fire and electrical shock.

Abnormal Conditions

Should the device become hot or start to emit smoke or an original dealer or an authorized ZEBEX service provider. Continued use creates the danger of fire and electrical shock.

Foreign Objects

Should any foreign matter ever get into the device, immediately turn off the power and contact your original dealer or an authorized ZEBEX service provider. Continued use creates the danger of fire and electrical shock.

Moisture

Keep the device away from vases, planters, cups, glasses and other containers of liquid. Also keep it away from metal. Water and metal getting into the device creates the danger of fire and electrical shock.

Federal Communication Commission (FCC) Statement

15.21
You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

15.105(b)
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 the accordance with the instructions, may cause harmful interference to radio communications. 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 or 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.

Operation is subject to the following two conditions: This device may not cause interference;
This device must accept any interference, including interference that may cause undesired operation of the device.

FCC RF Radiation Exposure Statement

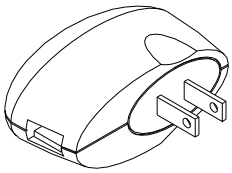
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Unpacking

Package Contents

Z-2121 series

Portable Data Terminal



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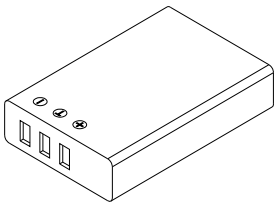
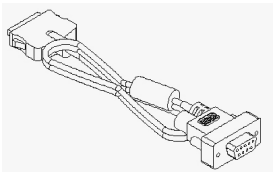
Travel charger

selection Type: North America/Japan/ Taiwan/Europe

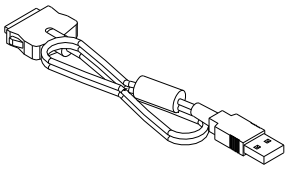


Battery Pack

OR

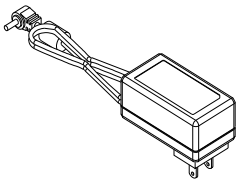


RS-232 DB9 (F) Cable



USB cable

(Terminal connect to PC USB port)



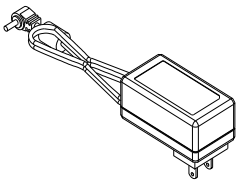
AC Adapter

Optional Parts

Cradle package

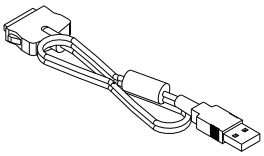
RS-232 Docking Cradle

USB Docking Cradle

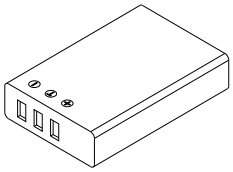


AC Adapter

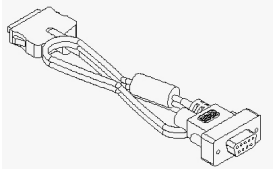
Purchaseable accessories



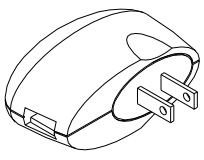
USB Cable



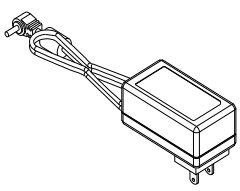
Main Battery



RS-232 DB9 (F) Cable

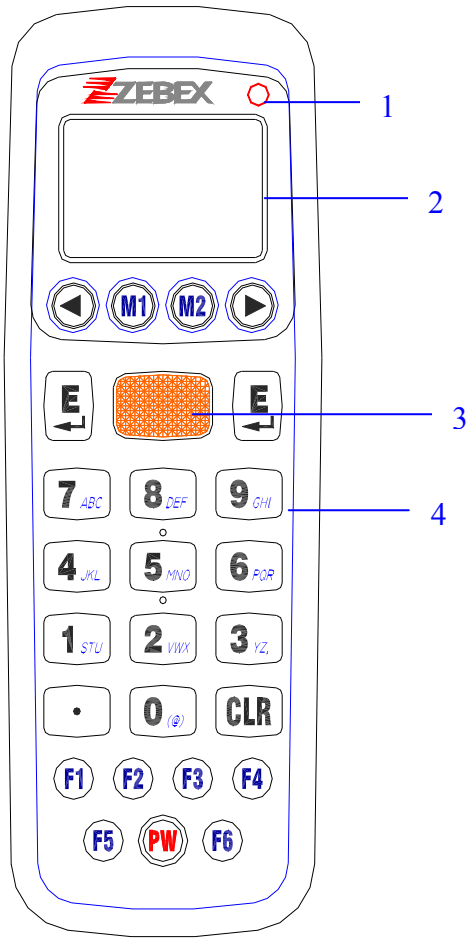


USB AC Adapter



AC Adapter

General Guide



1	LED indicator (Right)	Indicates the status of battery charge : Red for battery just on charging and Green for full.
2	LCD screen	Display various data when a program is being run.
3	Scan button	The trigger of Barcode reading.
4	Keypad	A total of 26 keys are provided to the power and other function keys.
5	Scan windows	Emits a laser for bar code reading.
6	Battery	Main battery
7	Communication port	Communication with PC or charge by USB port

Getting Started

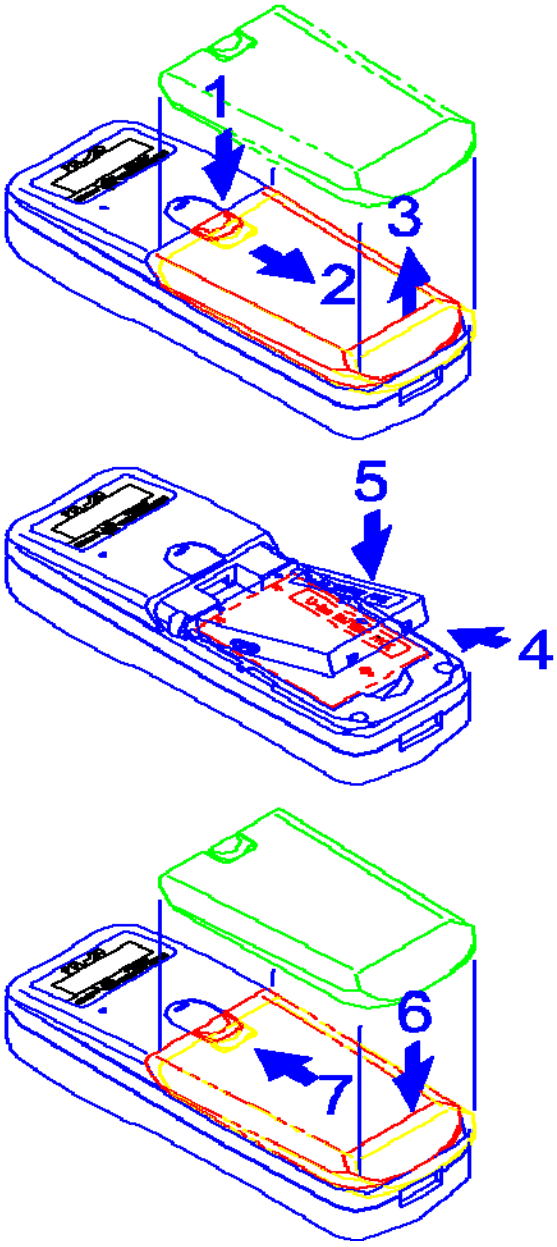
Inserting the Battery

When inserting the battery for the first time, follow these directions:

1-3. Push the top lock to pick up the battery pack.

5-4. Insert the battery as shown.

6-7. Put the battery cover back.



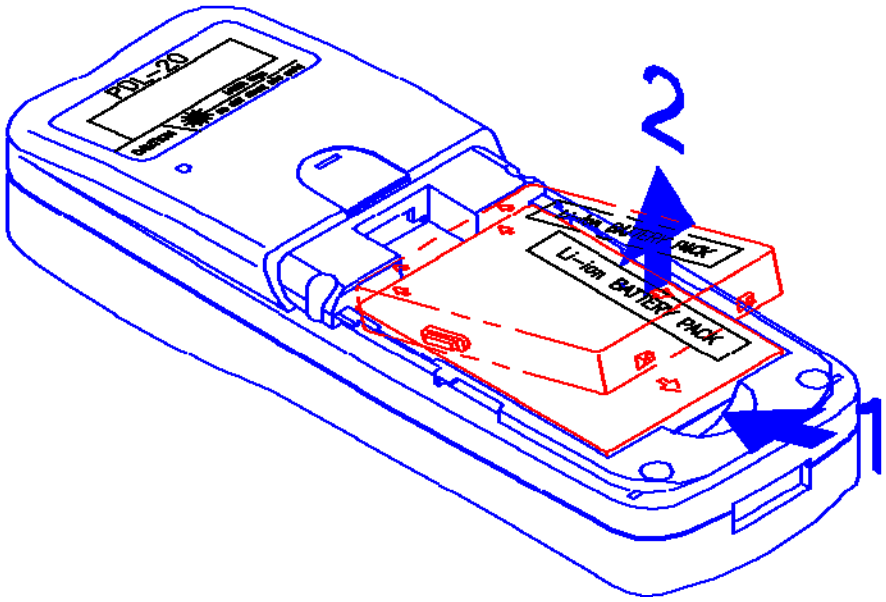
Remove the Battery

1. Turn the power off.

2. Remove the back cover.

3. Press the battery against the **Z-2121** terminal, and lift it up and away from the compartment.

4. Put the cover back.

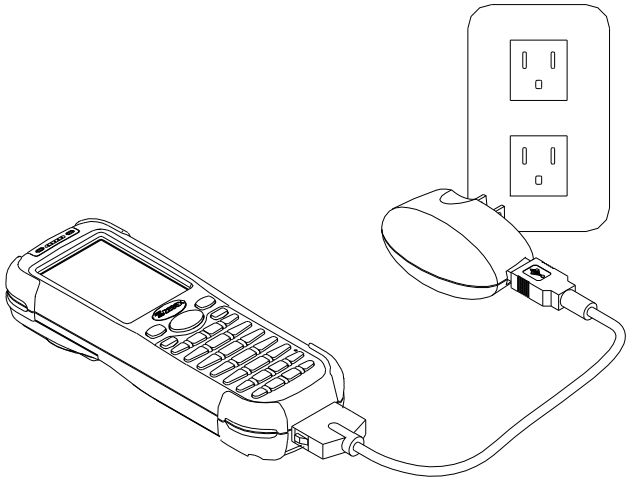


Charging the Battery

The Li-ion rechargeable battery can be charged while inserted in the device itself or independently via the recharging slot at the back of the cradle.

Charging by cable

Connect the charging cable and USB AC adaptor as shown.



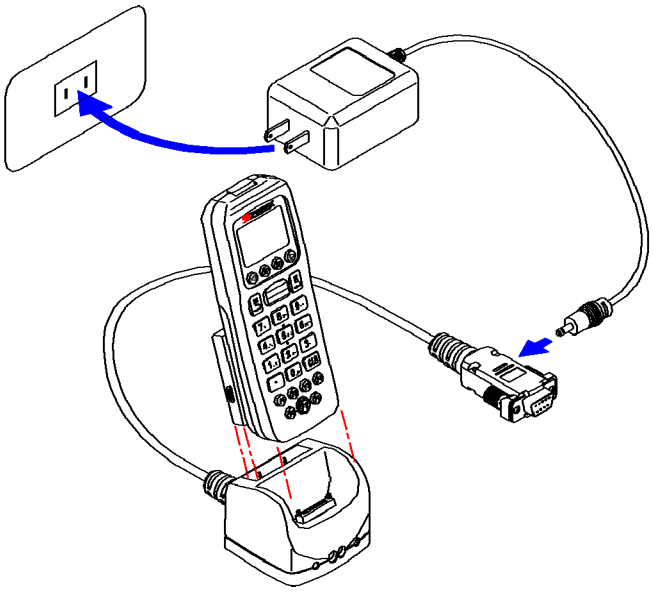
Charging by cradle

1. Put the **Z-2121** on the cradle as shown in figure 2.
2. Connect the power adapter to the DB-9 (female) connector
3. Insert the power adapter to the wall socket.

Note 1:

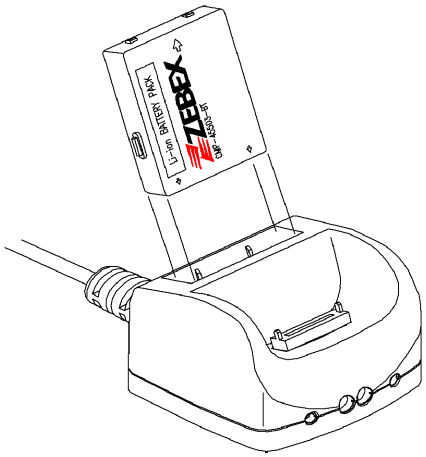
1. The cradle can be connected both to the power adaptor for battery charging and to the host computer for data uploading as well as downloading at the same time.
2. To charge the battery, connect the power plug of the power supply into the power jack on the **DB-9** female connector.
3. The **DB-9** (female) connector is used for battery charging and/or communication with the PC.

4. Battery charging and data exchange can be done at the same time or respectively. The **Z-2121** Data Collector, however, is unable to communicate with the host computer when placed on the cradle without the battery attached to it.
5. The battery is always charged via the cradle. There are two ways to charge the battery. First, take the battery out from the **Z-2121**, and insert it in the back slot of the cradle for fast charging, as shown in Fig 3, which takes about 3 hours before it is fully charged; second, put the battery in the **Z-2121**, and place it on the cradle, with the **Z-2121** either on or off, for slow charging, as shown in Fig 2. This will need approximately 6 hours. To maximize the battery's life span, it is recommended that slow charging be adopted unless there is a need for fast charging.
6. While the battery is being charged within the **Z-2121** on the cradle, data can still be exchanged between the PC and the **Z-2121** via the DB-9 connector and the RS-232 port.
7. The battery should stay on the cradle (either with the terminal or independently) for at least 12 hours before being used the first time or after months of idleness.



Charging the Battery separately in the cradle

Insert the battery into the compartment at the rear of the cradle.



Cradle-front view

Connect the power jack to the cradle and plug AC adapter into the socket.

NOTES

When charging the battery for the first time, charge for at least 12 hours prior to use.

PC System Requirements

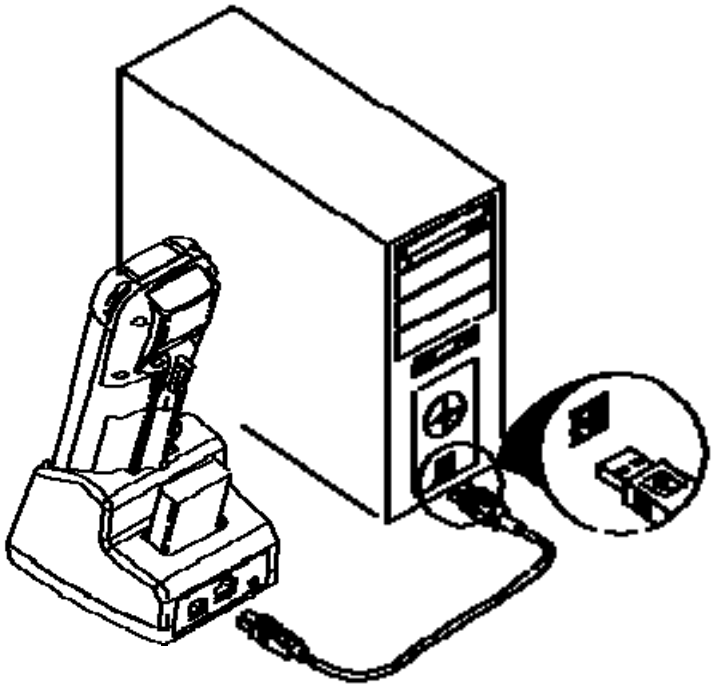
Windows XP Operating System
64 MB RAM
50 MB free HDD space
USB ports communication Interface
WLAN transmitter (optional)
Bluetooth transmitter/receiver (optional)

Connecting To PC

In order to use the software supplied with the Terminal, the mobile data terminal must be connected to a PC.

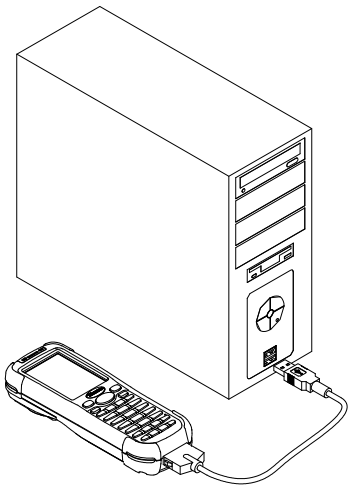
Connecting via USB Cradle

The cradle must also be connected via one of your PC's USB ports. Attach one end of the cable to the USB interface on the cradle and the other to your PC.



Connecting the Z-2121 directly via USB cable

You can connect the Z-2121 directly to your PC, without the need for the cradle, using the Mini USB cable, attaching it to the port on the left hand side of the device.



About The Product

The Z-2121 is a compact, ergonomic and durable portable data collector. It is designed with an integrated Bluetooth communication and 1D laser barcode scanner and 26-keys keypad. The design is ideal for the mobile worker as it simple and easy to use anywhere along a supply chain.

The Z-2121 features a 32-bit C-MOS Microprocessor. This combination delivers high performance, low power consumption and the diversity of a Bluetooth communication. Compared with other systems currently available on the market, Z-2121 is the most cost-effective to offering optimum performance.

Features

Hardware features

a. Compact size, lightweight, elegant, and easy to carry on the waist strap by means of a tab mounted on the back of the unit and a clip attached to the user's waist strap.

b. Ergonomic design, operated with one hand, easy to capture data.

c. Low power consumption. Good for 48-hour operation after a full charge.

d. Auto shut-off function reduces power consumption and extends battery life.

e. Built-in FREETASK allows the Z-2121 to be used for data collecting without outside supports.

f. Programmable functions support WinTask Gen. for special data collection.

g. Built-in Laser scanner as input device.

h. Built-in Real Time Clock for time-stamp.

i. Tone controllable buzzer.

j. A lithium back-up battery for memory protection.

k. Low-battery detecting circuit and low-power warning device.

l. RS-232C communication port.

m. BT connection.

Note:

a. The **FREETASK** is a built-in simple Data Base system with which you can define your own storage structure for data collection operation.
b. Win Task Gen. is a Windows based utility program with which you can design the procedure for specified tasks and execute designed tasks on the data terminal.

Firmware features

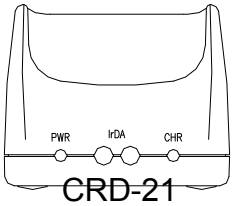
a. Supports most of the popular barcode symbols.
b. Ability to discriminate among barcodes
c. Programmable auto-power-off time
d. The uploading or downloading can be fully controlled by the computer.
e. Easy user-defined FREETASK, able to assign as many as 16 fields
f. Ability to execute as many as 8 TASK

Development Software features

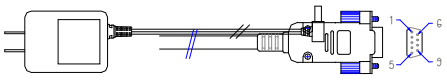
a. Windows 95/98/NT based WinTask Gen.
b. Able to remotely program all functions as long as the terminal (including the decoder) is connected to PC via the cradle.
c. Ability to upload data to PC
d. The FREETASK may be downloaded (from PC) to the terminal
e. In addition to the FREETASK, as many as 8 TASKs may be downloaded to the terminal
f. Ability to edit TASK to execute specified data collecting tasks.

Cradle features

a. A special recharging circuit ensures recharging effects and security of the lithium Ion battery during recharging.
b. Able to communicate with PC using a widely used RS-232 or USB interface as shown in Fig 6.



CRD-21



DB-9 connector & power jack

Fig 6

Note:

There are 2 LEDs and 2 holes at the front bottom of the **CRD-21** as shown in Fig 6. The 2 LEDs are located on the left and right, whereas the two holes in the middle. The LED on the left is illuminated when power is on, and will not be illuminated if the power adaptor is not connected to the AC output, or the 9VDC jack is not inserted into the RS-232 connector. The LED on the right is illuminated when a battery is put in the back slot of the cradle for recharge. It will remain illuminated as long as recharging is going on until a full charge is achieved. It flashes intermittently, however, when the battery slot is empty, indicating that the cradle is detecting the presence of the battery. The LED at the upper-right corner of the terminal is illuminated when the terminal is placed on the cradle for a recharge, and will be off when a full recharge is achieved.

Prerequisites

Skills Required

The following skills are required by developers aiming to develop application software for the ZEBEX Z-2121 series.

- Good knowledge of one or more of the following:
  * C language

Specifications

SYSTEM	
Processor	***ST*** 32-bit processor with Flash Area 256/512KB
Memory	SRAM - 2MB
LCD Display	FSTN 96x49 dot (6Lx16C) , with Backlight LCD
Keypad	26 Keys without backlight
Audio	1 X Mono Buzzer
POWER	
Main battery	830mAh (Lithium-ion)
Backup battery	(3.0V, 25mAH Li-ion rechargeable battery) 2 weeks – data and RTC define by remove main battery keep time
Input Device	
Barcode scanner	SE-955 1D barcode Laser scanne engine
Indicator	
Power & Charging	1 X LED Two color , Red for charging Green Good Read
Bluetooth	None Indicator
Vibration	Yes
Interface	
Cradle - RS-232	With RS-232 cable (Full Function)
Terminal – USB Cable	Detect – USB cable function (Power by PC USB power detect or Travel Charge)
Radio	
Bluetooth	Bluetooth 2.0 compliance , CLASS I , DISTANCE=10~100M
Physical	
Dimensions	134.9(L) x 23.6(W) x 48(H) mm
Weight	125g
Color	Dark Gray
Environmental	
Rugged	(Resistance to fall impact : 1.0M in height)
Operating temperature	0℃~ 50℃
Storage temperature	-10℃~ 60℃
Humidity	95% non-condensing
Regulatory	
Safety regulation	FCC, CE, CE RF , RoHS, FCC RF , LVD

Start to operate the Z-2121

Take out the terminal, install in a set of fully charged battery.

1. Press the "**Power"** key. After the display appears, press "**M2**" key to enter the System Menu.
2. Then Press "**1**" to enter the "**Run Task**" menu. Then press "**1**" again to execute the "**FREETASK**".
3. Press "**SCAN**" to do barcode scanning and data collecting.

Firmware Operation Quick Start Guide

Insert battery into the Z-2121, and the display will be shown in Fig 1.

Fig 1

After display is shown in Fig 1, the vibration will shake and then show to press any key to Fig 3 or can press ◀ ▶ key into Fig 2.

Fig 2

In Fig 2 is asked for clean the data or not, press **M2** to select Y or N, after confirmed to press E into Fig 4

Fig 3

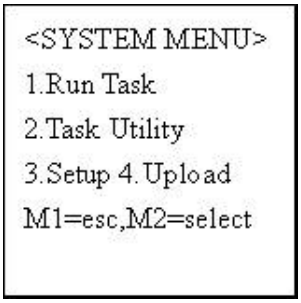


Fig 4

In Fig 3 is shown of Z-2121 standard Firmware, press **M2** can enter into System Menu as Fig 4, and also can press **M1** back to Fig 3

The following is the description of each function:

1. Press 1 enter into Run Task function.
2. Press 2 enter into Task Utility function.
3. Press 3 enter into Setup function.
4. Press 4 enter into Upload function.

Run Task

Fig 5

In Fig 5 is shown in barcode scan, press **SCAN** to read barcode data, and the vibration will shake once when press **SCAN** key.

If want to revise the barcode data, please press **F6** to show on the data and key in the number, or can press **F4** to delete the data or number. And then press **F1** back Fig 5.

Task Utility

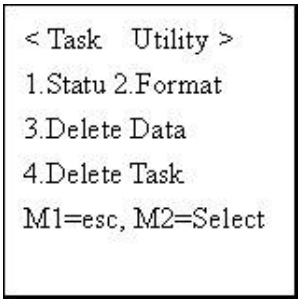


Fig 6

In Fig 6 is shown for Task Utility function, the following is the description of each function:

2-1.Press 1 enter into File Status function.
2-2.Press 2 enter into Format function.
2-3.Press 3 enter into Delete Data function.
2-4.Press 4 enter into Delete Task function.

File Status Function

Fig 7

In Fig 7 is shown in the data amount, press **M1** can leave the screen.

Format Function

Fig 8

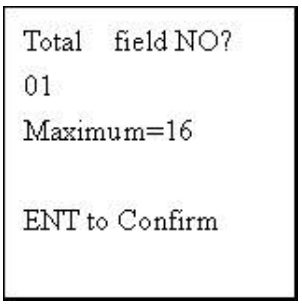


Fig 9

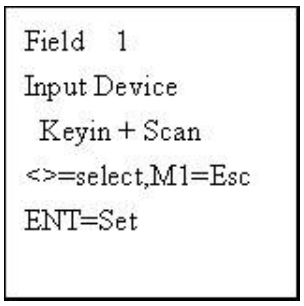


Fig 10

Fig 11

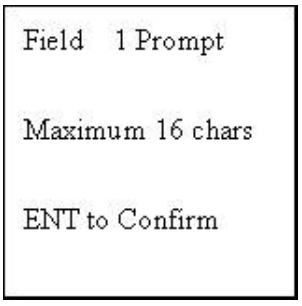


Fig 12

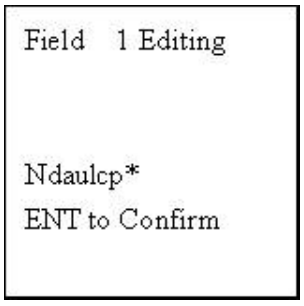


Fig 13

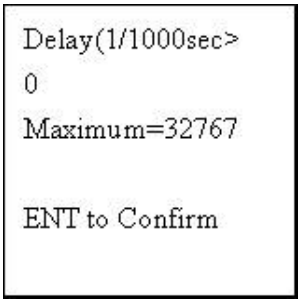


Fig 14

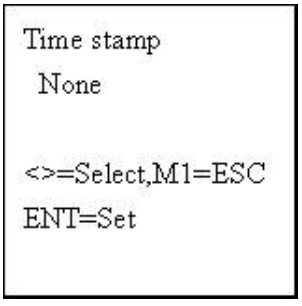


Fig 15

In Fig 8 press any key to go to the next screen.

In Fig 9 total field is shown, enter the number from 1 to 16, after confirmed press E to enter into Fig 10.

In Fig 10 input device setting is shown, press ◀ or ▶ to adjust Scan only, Keyin + Scan, Keyin Only. After confirmed press E to enter into Fig 11.

In Fig 11 field length is shown. Enter the field length from 1 to 32. After confirmed press E to enter into Fig 12.

In Fig 12 prompt is shown. Enter the message for the prompt. After confirmed press E to enter into Fig 13.

In Fig 13 field editing s shown. See the chart below to enter ndaulcp to set the format. After confirmed press E to enter into Fig 14.

In Fig 14 delay is shown. Enter the number to set the delay. After confirmed press E to enter into Fig 15.

In Fig 15 time stamp s shown. press ◀ or ▶ to adjust None, Short, Long. After confirmed press E to exit.

Delete Data Function

Fig 16

In Fig 16 is asked for deleting the data download from the PC or not, press **M2** is YES, press again is NO, after confirmed press E to leave the screen.

Delete Task Function

Fig 17

In Fig 17 is asked for deleting the task download from the PC or not, press **M2** is YES, press again is NO, after confirmed press E to leave the screen.

Setup Menu

Fig 18

In Fig 18 is shown for Parameter function, the following is the description of each function:

3-1.Press 1 enter into Basic Setup function.
3-2.Press 2 enter into System Setup function.
3-3.Press 3 enter into Barcode Setup function.

Basic Setup Function

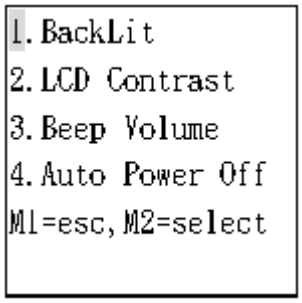


Fig 19

In Fig 19 is shown for Backup function, the following is the description of each function:

3-1-1.Press 1 enter into Back Light function test.
3-1-2.Press 2 enter into LCD Contrast function test.
3-1-3.Press 3 enter into Beep Volume function test.
3-1-4.Press 4 enter into Auto Power Off function test.

Back Light Function

Fig 20

In Fig 20 is shown to select LCD back light, press ◀ or ▶ to switch ON or OFF, after confirmed press E to leave the screen.

LCD Contrast Function

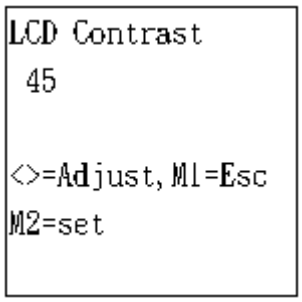


Fig 21

In Fig 21 is shown to select LCD contrast, the default is 45, press ◀ or ▶ to adjust the contrast, after confirmed press E to leave the screen.

Beep Volume Function

Fig 22

In Fig 22 is shown to select Beep Volume, the default is Lound, press ◀ or ▶ to adjust Quite, Low or Medium, after confirmed press E to leave the screen.

Auto Power Off Function

Fig 23

In Fig 23 is shown to set Auto Power Off, the default is 10mins, press ◀ or ▶ to adjust 15mins, 20mins, 30mins or Disable, after confirmed press E to leave the screen.

System Setup Function

Fig 24

In Fig 24 is shown for System Setup function, the following is the description of each function:

3-2-1.Press 1 enter into Communication function test.
3-2-2.Press 2 enter into System Timer function test.
3-2-3.Press 3 enter into ID/PW/Data Mode function test.

Communication Function

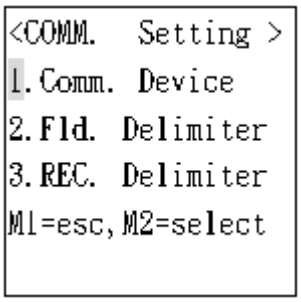


Fig 25

In Fig 23 is shown for System Setup function, the following is the description of each function:

3-2-1-1.Press 1 enter into Comm. Device function test.
3-2-1-2.Press 2 enter into Field. Delimiter function test.
3-2-1-3.Press 3 enter into REC. Delimiter function test.

Comm. Device Function

Fig 26

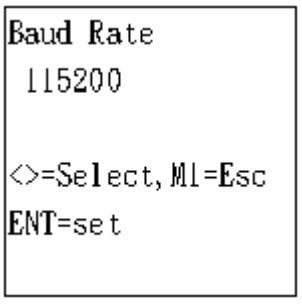


Fig 27

Fig 28

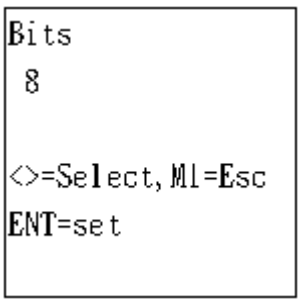


Fig 29

Fig 30

In Fig 26 is shown to set up the interface, the default is RS-232, press , ◀ or ▶ to adjust BT or USB, after confirmed press E to enter into Fig 27.

In Fig 27 is shown to set up the speed, press , ◀ or ▶ to adjust 576000, 38400, 19200, 9600, 4800, 2400 or 8, after confirmed press E to enter into Fig 28.

In Fig 28 is shown to set up the parity, press , ◀ or ▶ to adjust even, odd, mark or space, after confirmed press E to enter into Fig 29.

In Fig 29 is shown to set up the data bit, after confirmed press E to enter into Fig 30.

In Fig 30 you can setup stop data bit, after confirmed press E to exit.

Field Delimiter Function

Fig 31

In Fig 31 is shown to set up Field Delimiter, the default is (,), press , ◀ or ▶ to adjust ;, Space or None, after confirmed press E to leave the screen.

REC. Delimiter Function

Fig 32

In Fig 32 is shown to set up the interface, the default CRLF, press , ◀ or ▶ to adjust CR, LF or None, after confirmed press E to exit.

System Timer Function

Fig 33

Fig 34

In Fig 33 is shown to set up the date, press number t key to adjust the number, after confirmed press E to enter into Fig 34.

In Fig 34 is shown to set up the time, press number t key to adjust the number, after confirmed press E to leave the screen.

ID/PW/Date Mode Function

Fig 35

In Fig 35 is shown for System Setup function, the following is the description of each function:

3-2-3-1.Press 1 enter into Device ID function test.
3-2-3-2.Press 2 enter into Password function test.
3-2-3-3.Press 3 enter into Date Mode function test.

Device ID Function

Fig 36 Fig 37

In Fig 36 is shown to set up the Device ID, after confirmed press E to enter into Fig 37, and press the number, after confirmed press E to leave the screen.

Password Function

Fig 38 Fig 39

In Fig 38 is shown to set up password, after setup press E to leave the screen, If there is no setting will enter into Fig 39 automatically, please press E to leave the screen.

Data Mode Function

Fig 40

In Fig 40 is shown to set up Month, Date and Year, after setup press E to leave the screen.

Barcode Setup Function

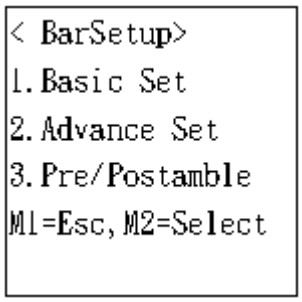


Fig 41

In Fig 41 is shown for BarSetup function, the following is the description of each function:

3-3-1.Press 1 enter into Basic Set function test.
3-3-1.Press 2 enter into Advance Set function test.
3-3-1.Press 3 enter into Pre/Postamble function test.

Basic Set Function

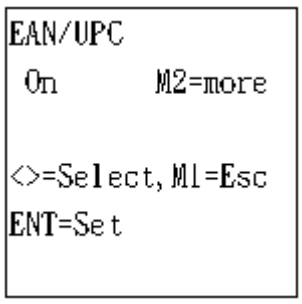


Fig 42

In Fig 42 is shown for Basic Set function, can adjust the barcode type like Code 39, F ASCII 39, Codabar, ITF25, Code 128 and Code 93, after confirmed press E to leave the screen.

Advance Set Function

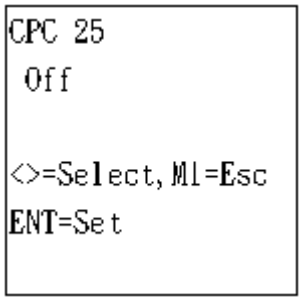


Fig 43

In Fig 43 is shown for Advance Set function, can adjust EAN to ISBN/ISSN, EAN-13 digits, EAN-8 digits, IATA code or Codabare ST/SP, after confirmed press E to leave the screen.

Pre/Postamble Function

Fig 44 Fig 45

In Fig 44 is shown for Pre/Postamble function, after setup please enter into Fig 45 to make sure the password has been setup, after confirmed press E to leave the screen.

Upload Menu

Fig 46

4-1.Press 1 enter into Upload Data function.
4-2.Press 2 enter into Delimiter Set function.
4-3.Press 3 enter into Upload Device function.

Upload Data Function

Fig 47

Fig 48

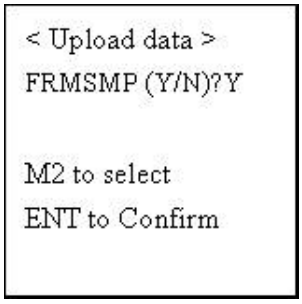


Fig 49

In Fig 47 RF Connect screen is shown. This screen only appears for Bluetooth connection. Please wait for connection to be made or press CLR to exit.

In Fig 48 upload Free Task is shown. press ◀ or ▶ to adjust Y or N to upload Free Task. After confirmed press E to go to Fig 47.

In Fig 49 upload FRMSMP is shown. press ◀ or ▶ to adjust Y or N to upload FRMSMP. After confirmed press E to leave the screen.

Delimiter Set Function

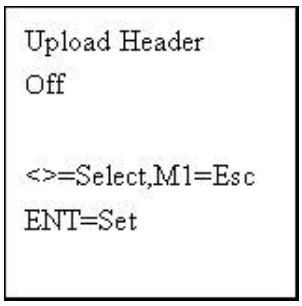


Fig 50 Fig 51 Fig 52

In Fig 50 is shown to set up Field Delimiter, the default is (,), press ◀ or ▶ to adjust ; , Space or None, after confirmed press E to go to Fig 51.

In Fig 51 is shown to set up Record Delimiter, the default is (,), press ◀ or ▶ to adjust CR, LF, or None. After confirmed press E to go to Fig 52.

In Fig 52 is shown to set up Upload Header. Press ◀ or ▶ to adjust Off or On. After confirmed press E to leave the screen.

Upload Device

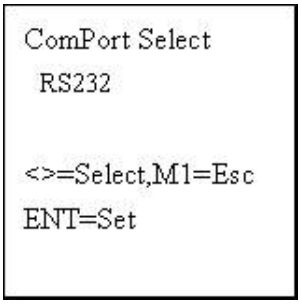
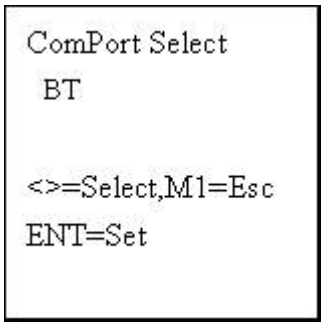


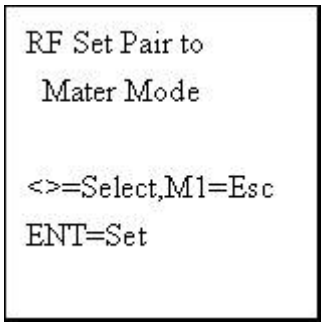
Fig 53

In Fig 53 is shown to set up Com Port. Press ◀ or ▶ to adjust RS232, BT, or USB. After confirmed press E to leave the screen.

Bluetooth Function

Check this section if BT is your choice of the upload device.





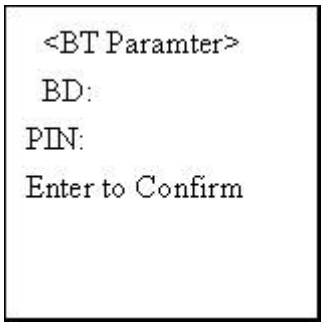


Fig 54 Fig 55 Fig 56

In Fig 54 is shown to set up Com Port. Press ◀ or ▶ to select BT and after confirmed press E to go to Fig 55.

In Fig 55 is shown to set up Bluetooth pairing mode. Press ◀ or ▶ to adjust Master Mode or Slave Mode. After confirmed press E to go to Fig 56.

In Fig 56 is shown to set up Bluetooth Parameter. Enter the MAC address and the Pin code. After confirmed press E to leave the screen.

Auto Scan Operation Process

Fig 1

Fig 2

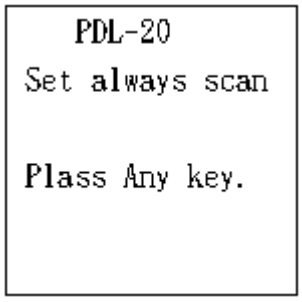


Fig 3

Fig 4

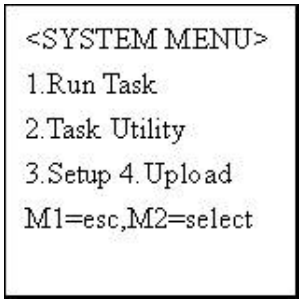


Fig 5

Fig 6

In Fig 1 is shown on the screen of first time turn on the Z-2121 and then enter into Fig 2, or also can press ◀ ▶ key into Fig 2 and then press E after 2 seconds and press F5+F6 at the same time, the display will show as Fig 4 and enter into Fig 4. Press M2 key to enter Fig 5 and press 1 entering into Auto Scan mode.

Bootload Function Quick Start Guide

Insert battery into the Z-2121, and the display will be shown in Fig 1.

Fig 1

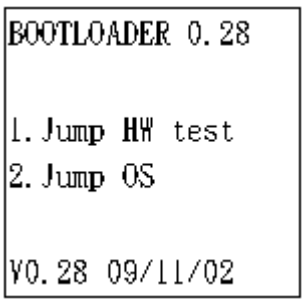


Fig 2

In Fig 1 is shown on the display after Z-2121 power on, press F 5 + F 6 will show in Fig 2 for the Bootload function.

The following is the description of each function:

1. Press 1 enter into Jump HW function test.
2. Press 2 enter into Jump OS function test.

Jump HW Function Test

LCD display and Backlight Function Test

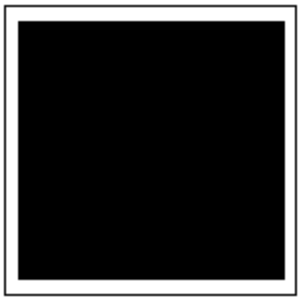


Fig 3

In Fig 3 is shown for LCD display and Backlight function test. To test the LCD is turned on completely and the backlight is turned on or not, after confirmed press E to leave the screen.

Buzzer and Vibrator Function Test

Fig 4

In Fig 4 is shown for Buzzer and Vibrator function test. To test the sound of buzzer is normal and the vibrator is shake or not, after confirmed press E to leave the screen.

Keypad Function Test

Fig 5

In Fig 5 is shown for Keypad function test. To test all the keys are working normal. If one of keys can't be worked or miss one of the keys , the display can't enter to the next screen, after confirmed press E to leave the screen.

USB Function Test

Fig 6

In Fig 6 is shown for USB function test. Please install USB driver named vcpdriver_v1.1_setup first, plug USB cable with PC; open Device Manager in the PC and click Com and LPT will be shown on STM Viratual COM Port （COM3）, and then set the COM PORT in COM 3 for the Hyper Terminal.

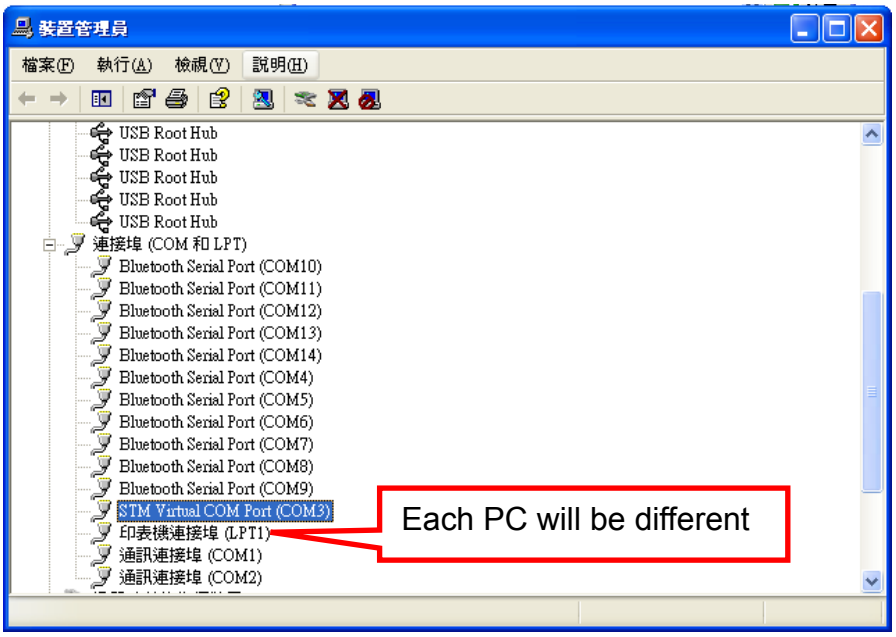


Fig 7

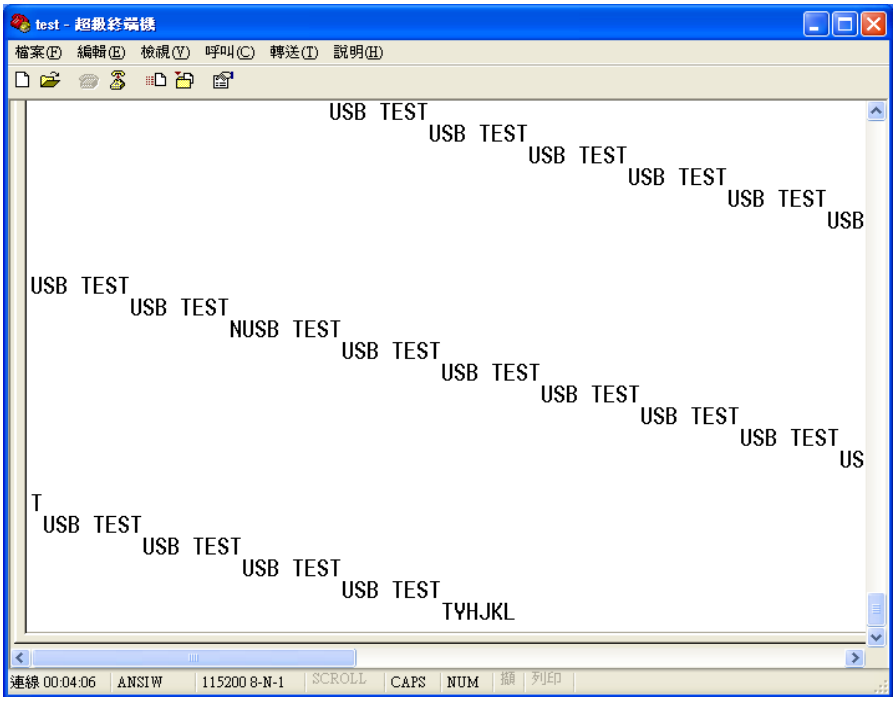


Fig 8

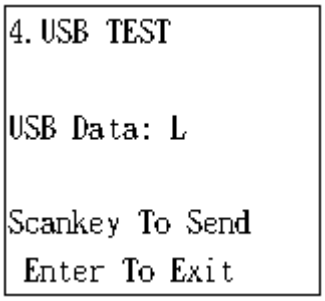


Fig 9

After finish the setting, when press SCAN key once, the display of Hyper Terminal as Fig 8 will show on USB TEST. Press any key in the PC, and the display will show on L, and then press E to leave the screen.

SRAM Function Test

Fig 10

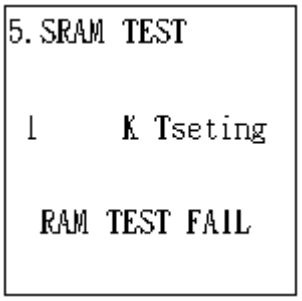


Fig 11

In Fig 10 is shown for SRAM function test. When last screen is entered into the screen, there will be a bee after test finished. If there is any problem, the screen will show on error message and bee once as Fig 11, after confirmed press E to leave the screen.

Main Battery and Backup Battery Function Test

Fig 12

In Fig 12 is shown for Main Battery and Backup Battery function test. **Vbat** in shown on the volt of main battery, **Bbat** is the volt of backup battery.

Barcode Scan Function Test

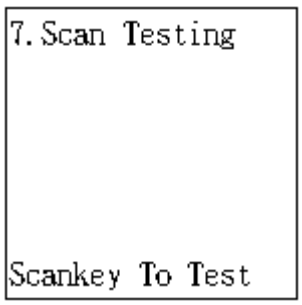


Fig 13

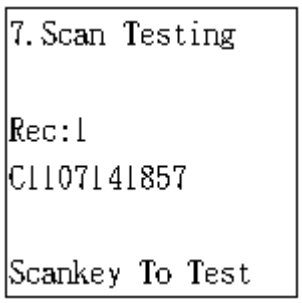


Fig 14

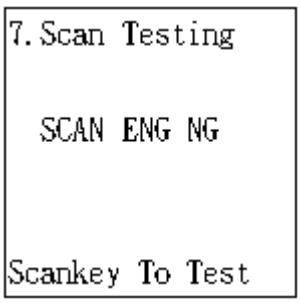


Fig 15

In Fig 13 is shown for Barcode Scan function test. Press SCAN key, to scan the barcode, the Yellow LED will light up once. In Fig 14 is shown on first data and the barcode number C1107141857. If there is any problem of the laser engine will show as Fig 15, after confirmed press E to leave the screen.

RS-232 Function Test

Fig 16

In Fig 16 is shown for RS-232 function test. Plug RS-232 cable with PC, and set the COM PORT of Hyper Terminal in COM 1.

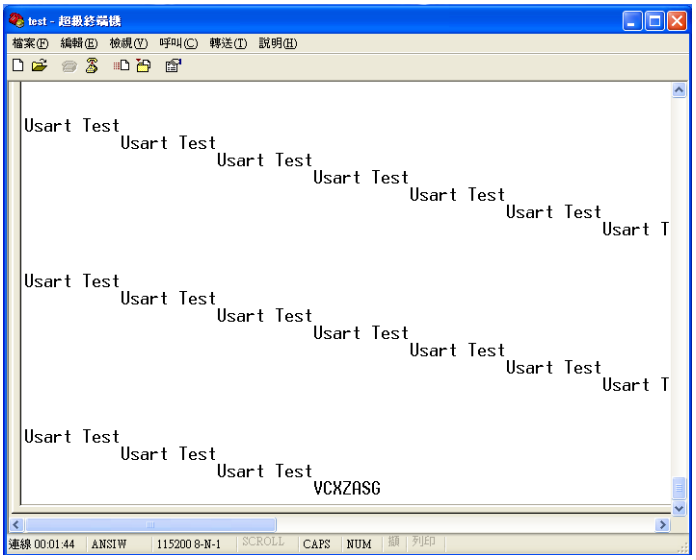


Fig 17

Fig 18

After finish the setting, when press SCAN key once, the display of Hyper

Terminal as Fig 17 will show on USB TEST. Press any key in the PC, and the display will show on G, and then press E to leave the screen.

Bluetooth Function Test

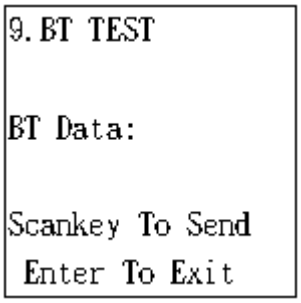


Fig 19

In Fig 19 is shown for Bluetooth function test. Please install Bluetooth USB Adaptor driver, plug Bluetooth USB Adaptor with PC, and then turn on the Bluetooth main screen as Fig 20 to click and renew the setting, the screen will show on the Bluetooth IP as **00 : 02 : 72 : E1 : DC : 9E**, click the right key of the mouse to make the pairing and linking, the screen will show on the password as Fig 21, key in **12345678** and make the confirmation. The screen will show on the quick linking of COM 5, after click **Yes**, it will enter into the linking status, and the Hyper Terminal will keep the COM PORT in COM 5.

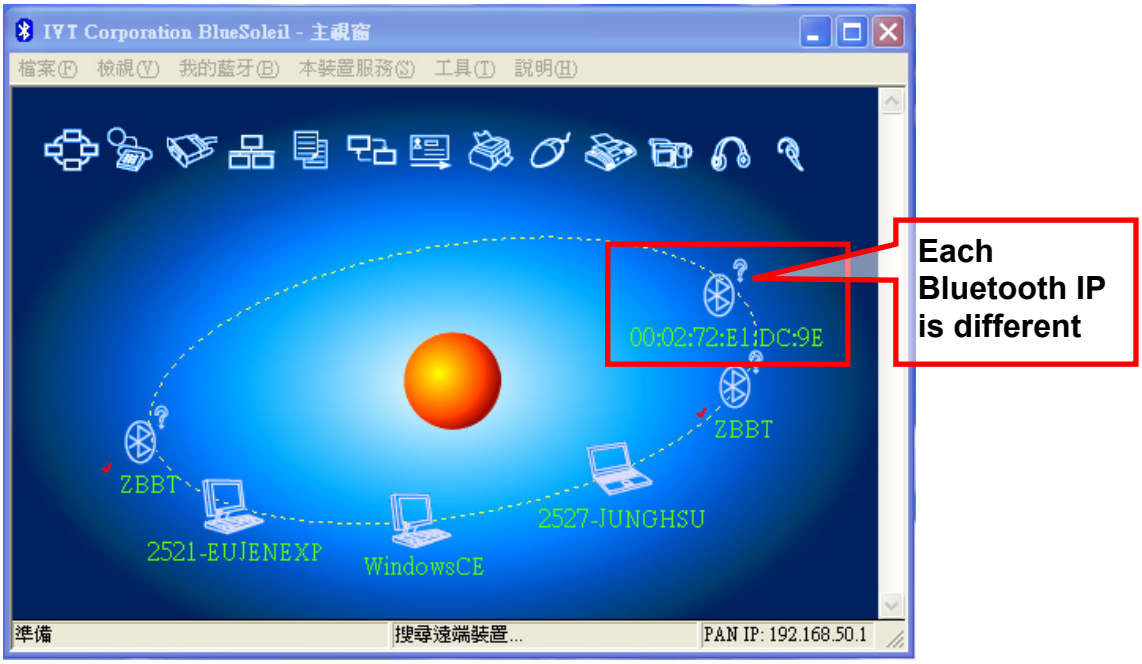


Fig 20

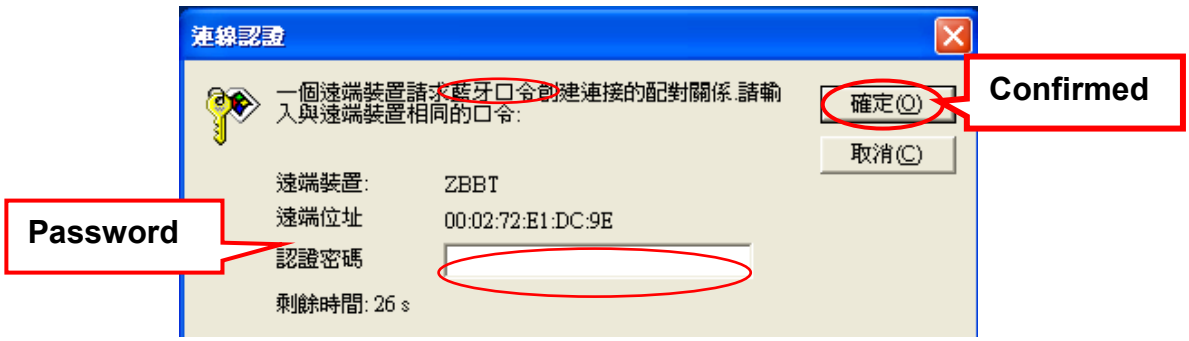


Fig 21

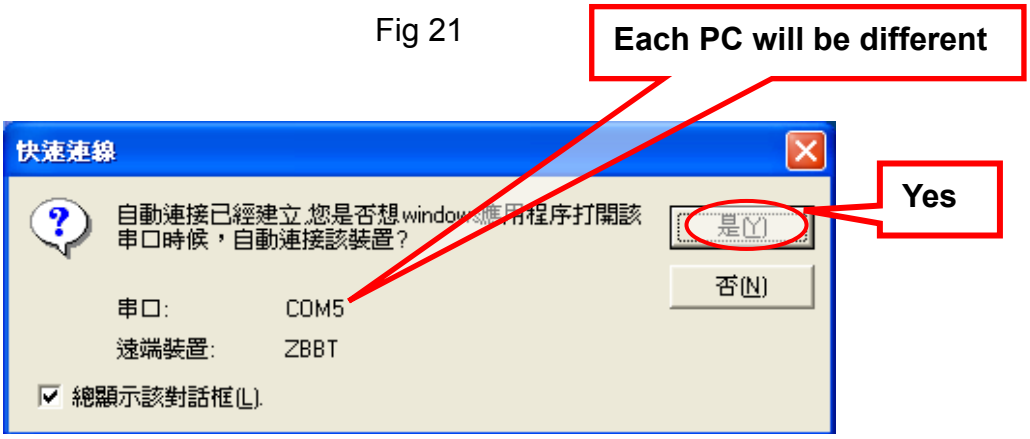


Fig 22

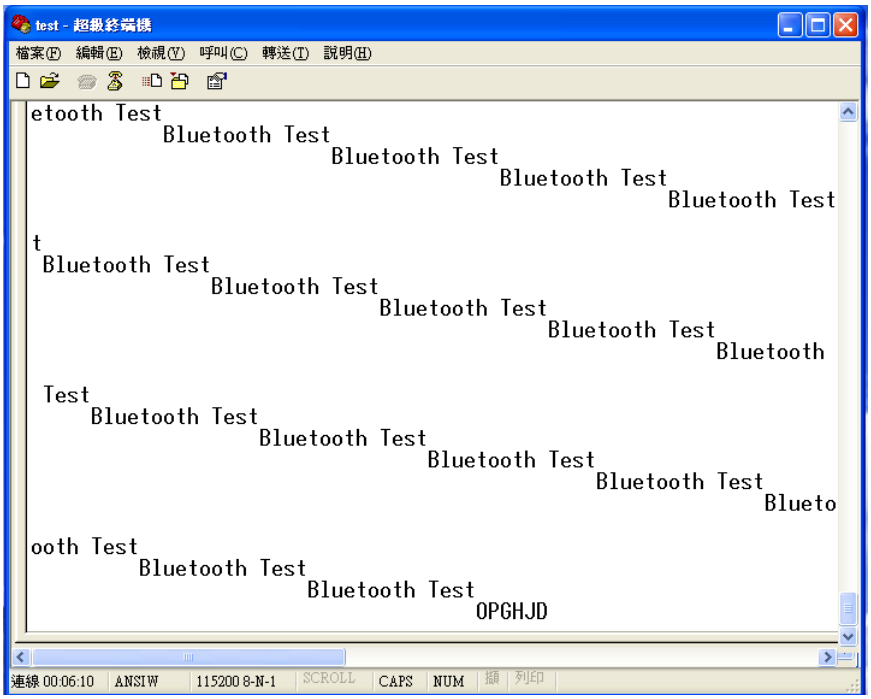


Fig 23

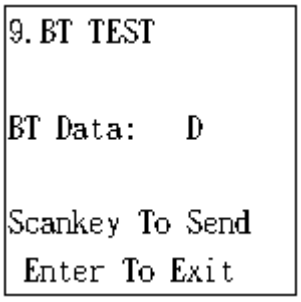


Fig 24

After finish the setting, when press SCAN key once, the display of Hyper Terminal as Fig 17 will show on Bluetooth TEST. Press any key in the PC, and the display will show on D, and then press E to leave the screen.

FLASH Function Test

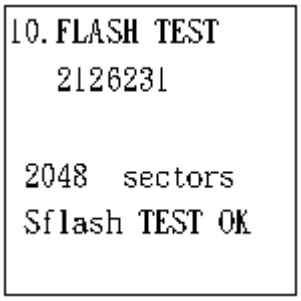


Fig 25

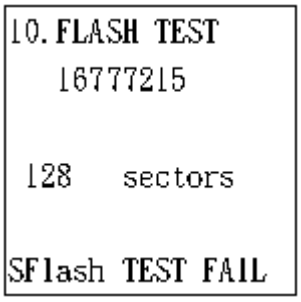


Fig 26

In Fig 25 is shown for FLASH function test. When last screen is entered into the screen, there will be a bee after test finished. If there is any problem, the screen will show on error message and bee once as Fig 26, after confirmed press E to leave the screen.

System Date Function Test

Fig 27

In Fig 27 is shown for System Date Function, follow up the process to press the key to adjust the number for Month, Day & Year, and can use

◀ or ▶ to back to the setting, after confirmed press E to enter into next screen.

System Timer Function Test

Fig 28

In Fig 28 is shown for System Timer Function, follow up the process to press the key to adjust the number for Hour, Minute & Second, and can use ◀ or ▶ to back to the setting, after confirmed press E to enter into the main screen of BOOTLOADER.

<< MEMO >>