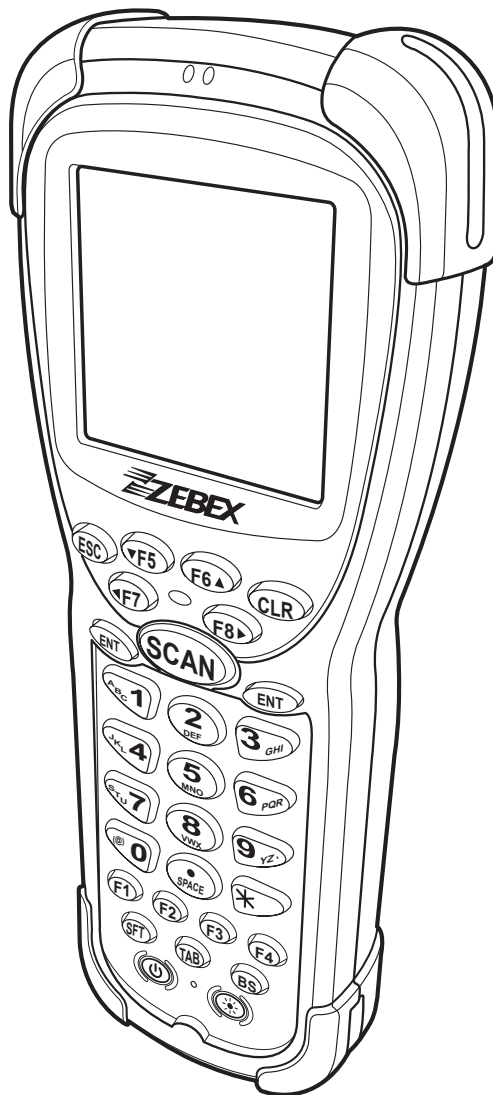




Z-2050 Mobile Data Collector



User Manual

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Preface

About This Manual

Thank you for your purchase of the Zebex Z-2050 mobile data collector. This product is at the forefront of portable data terminal technology and this manual will provide information on the many and varied options available to you, the user.

The Z-2050 is a compact, ergonomic and durable portable data terminal. It is designed with an integrated wireless communication and 1D/2D with optional barcode data capture, touch screen and 30-key keypad. The design is ideal for the mobile worker as it simple and easy to use anywhere along a supply chain. It complies with IP 54 regulations.

Symbols used in this manual



WARNING

The warning symbol denotes information that **MUST** be observed by the user. Failure to observe these warnings may result in personal injury or irreversible damage to the hardware.



NOTE

The note symbol denotes information that is important and should be observed.

Copyright

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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-2050 laser scanner complies with safety standard IEC 825-1(1993) for a Class 2 laser product. It also complies with U.S. 21CFR1040 as applicable to a Class IIa laser product. Avoid staring at direct laser light as the laser beam may hurt your eyes.

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.

Safe Operation




WARNING

- Be careful when using the Z-2050; do not drop or knock the device as irreversible damage to the unit may occur.
- Keep the Z-2050 away from water or any other liquids.
- Do not operate the Z-2050 under extreme temperatures.
- Use only the battery and charger supplied by the manufacturer. The use of third-party batteries or chargers may either damage the unit or shorten the life of the device.
- Unplug the power adapter and cradle if the device is not being used for long periods of time.
- Do not attempt to service this product yourself. All servicing should be carried out by qualified Zebex personnel or Zebex-approved engineers.


Overview

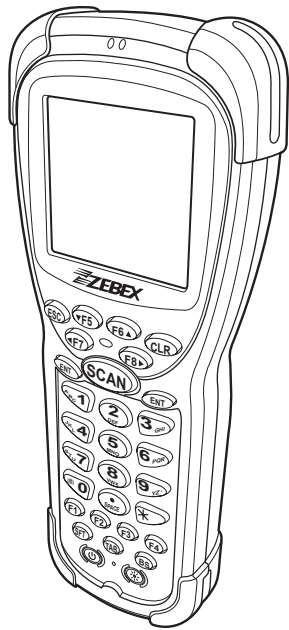
System Requirements

Windows XP Operating System
64 MB RAM
50 MB free HDD space 
COM1 port
USB ports
WLAN transmitter (optional)
Bluetooth transmitter/receiver (optional)

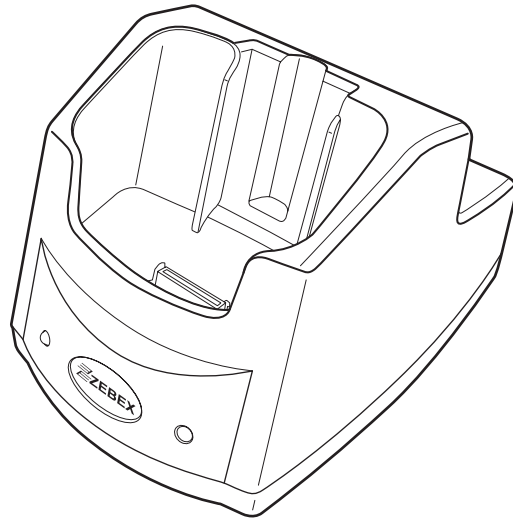
Unpacking

The Z-2050 package should contain the following:

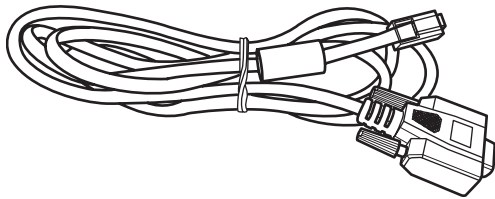
Z-2050 Bar Mobile Data Collector
Docking cradle
1 Stylus 
1 AC Mains power cable
1 USB cable (Scanner to USB)
1 USB cable (Cradle to USB)
1 RS-232 / COM1 cable
1 Li-ion 3.7V rechargeable battery
1 Software CD
User Manual
SDK Reference Manual



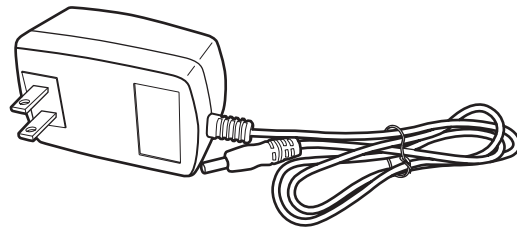
**Z-2050
Mobile Data
Collector**



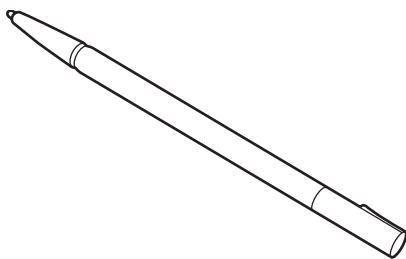
Docking Cradle



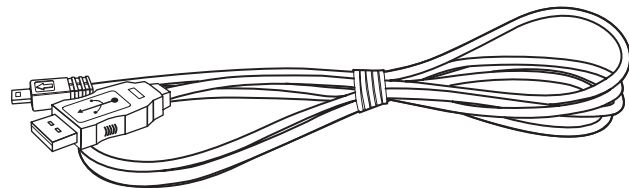
RS-232 / COM1 cable



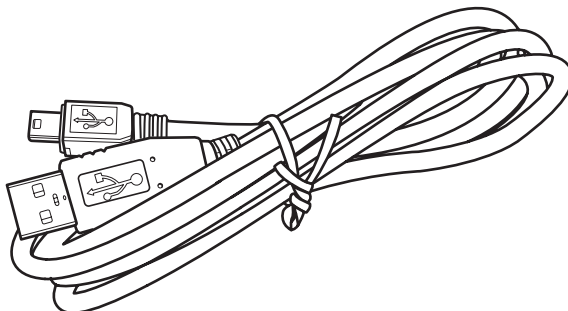
AC Mains power adapter



Stylus Pen



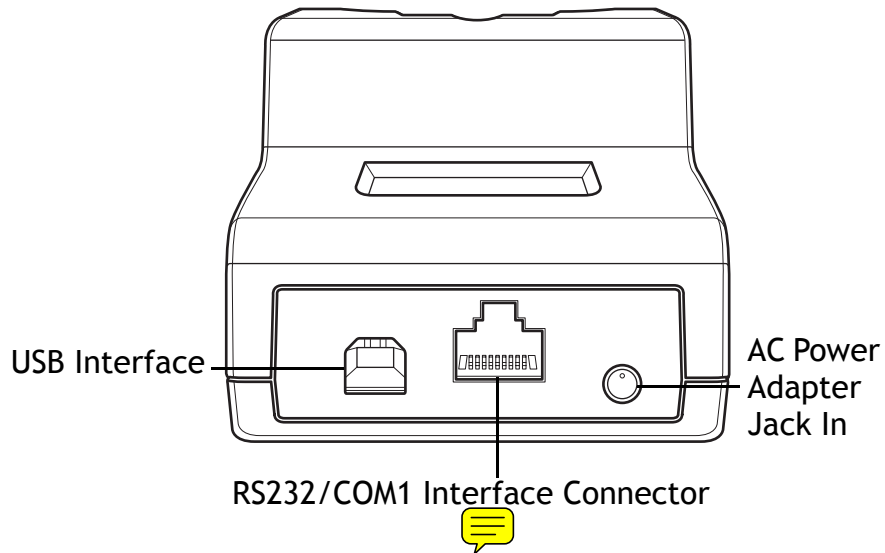
USB cable (Scanner to USB)



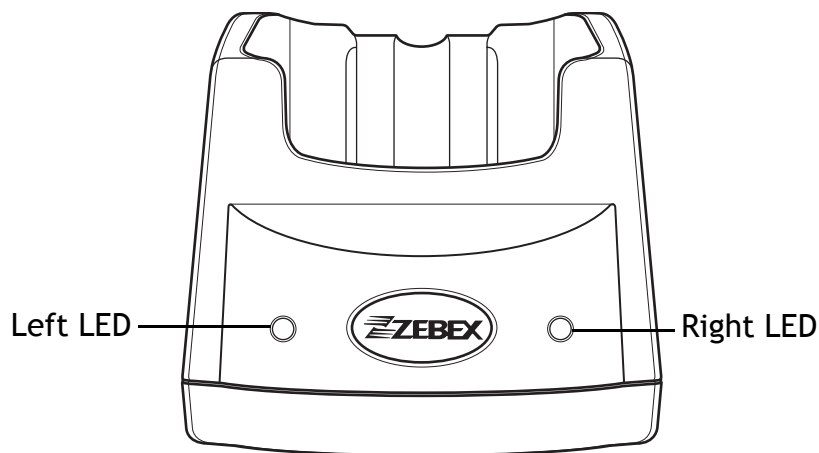
USB cable (Cradle to USB)

Charging the battery

The Li-ion 3.7V rechargeable battery can be charged whilst inserted in the device itself or independently via the recharging slot at the back of the cradle.



Cradle - rear view



Cradle - front view

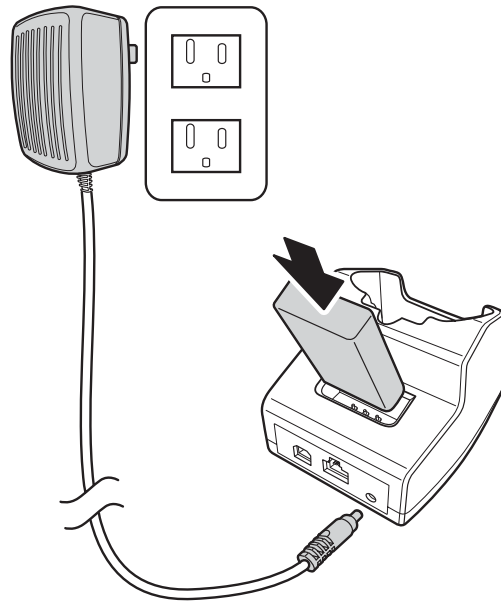
Cradle LEDs

Right LED - This is lit when a battery is inserted into the rear compartment of the cradle for recharge. It remains lit until the charge is complete.

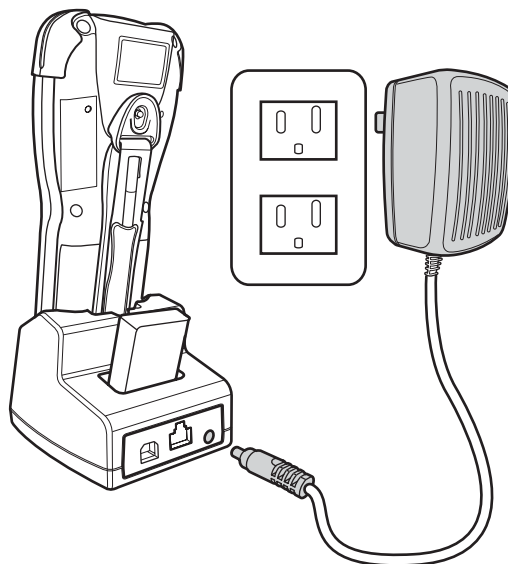
Left LED - This is lit when the cradle is connected to AC power.

Charging the battery separately in the cradle

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



2. Connect the AC mains adapter power jack to the cradle and the other to mains power.



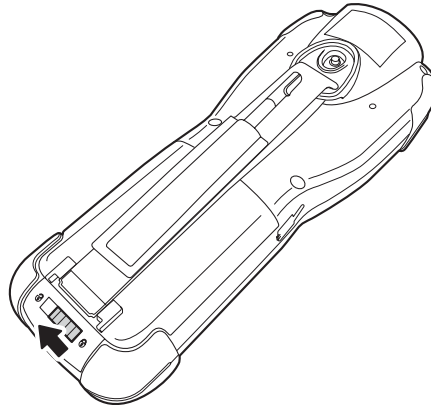
NOTES

- When charging the battery for the first time, charge for at least 12 hours prior to use.
- When charging the battery in the rear compartment of the cradle, charging time will be doubled (approximately).

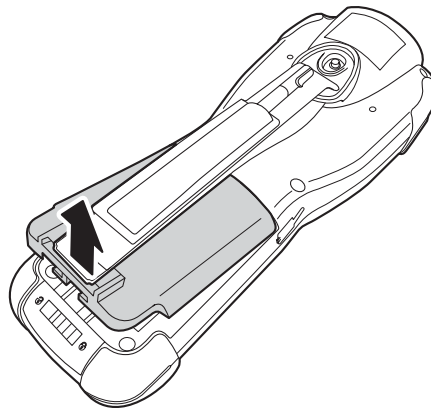
Inserting the battery

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

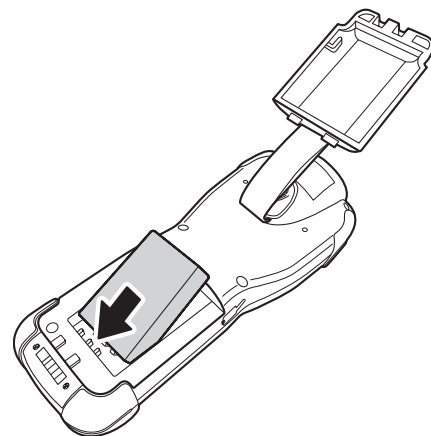
1. Slide the lock latch to the left to open the battery compartment.



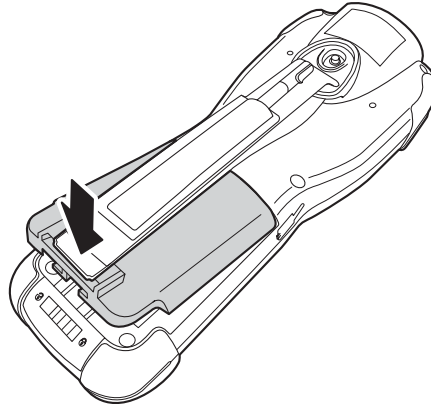
2. Push up to open the battery compartment cover.



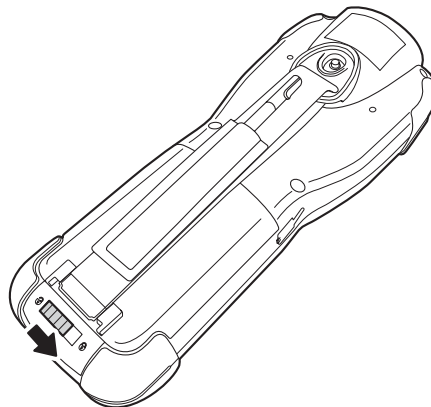
3. Insert the battery as shown.



-
4. Push down the compartment cover until it clicks into place.



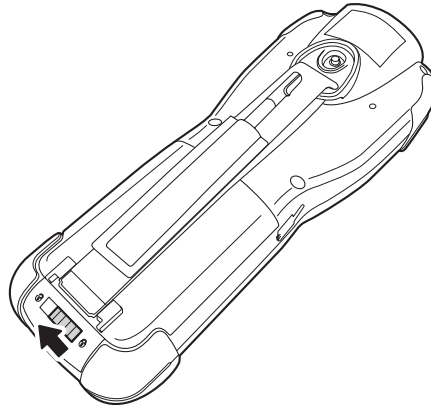
5. Lock the battery compartment by sliding the latch to the right until it locks into place.



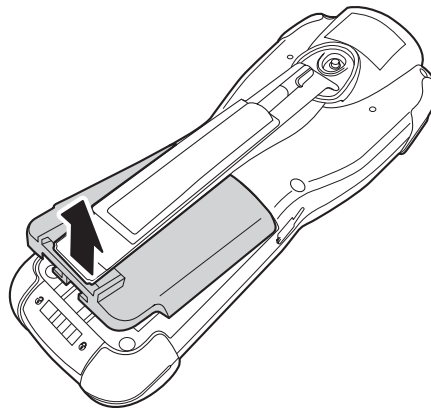
Inserting an SD card

The Z-2050's internal storage capacity can be expanded with the use of an SD card. To insert the SD card, follow these directions:

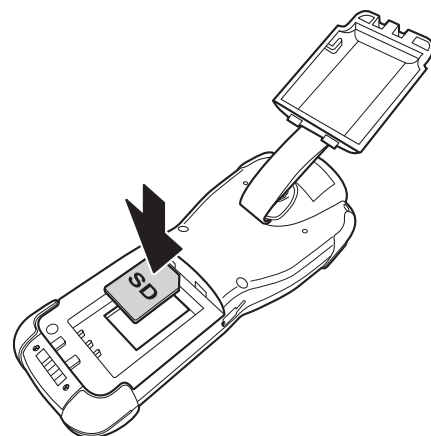
1. Slide the lock latch to the left to open the battery compartment.



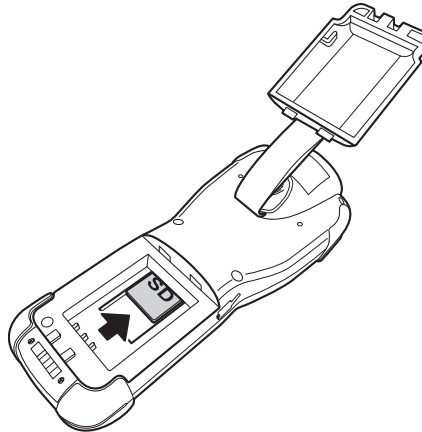
2. Push up to open the battery compartment cover.



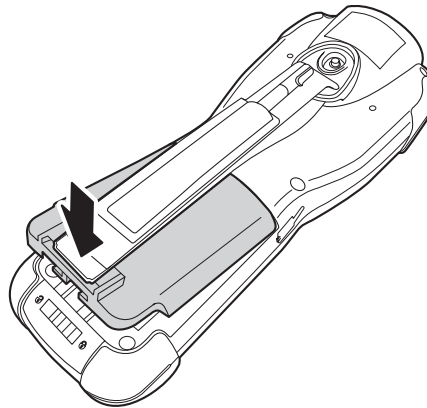
3. Remove the battery and place the SD card in the compartment, making sure that the gold connectors are face down.



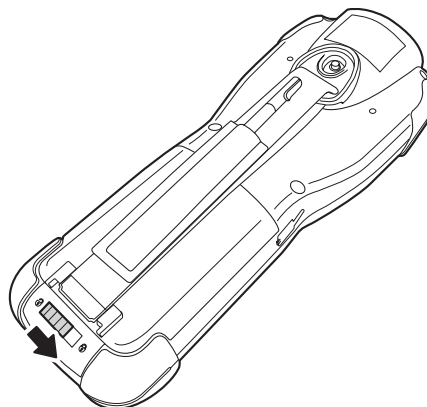
-
4. Slide the SD upwards into the card slot.



5. Replace the battery and close the compartment door.



6. Lock the battery compartment by sliding the latch to the right until it locks into place

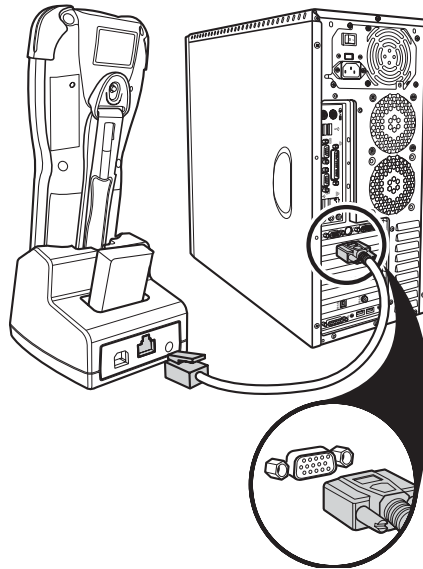


Connecting to a PC

In order to use the software supplied with the Z-2050, the mobile data collector must be connected to a PC.

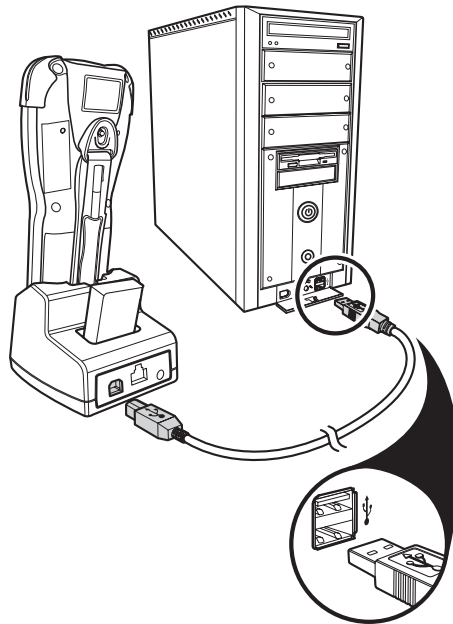
Connecting via the COM1 port

In order for the sync software to work properly, the cradle must be connected to your computer's COM1 port. Attach one end of the RS-232 cable to the RS-232/COM1 interface connector on the cradle and the other to the COM1 port on your PC.



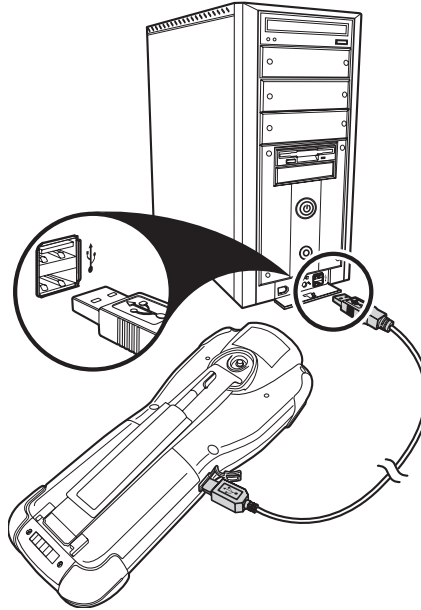
Connecting via USB

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-2050 directly via USB

You can connect the Z-2050 directly to your PC, without the need for the cradle, using the USB cable, attaching it to the port on the left hand side of the device.





About the Product


The Z-2050 is a compact, ergonomic and durable portable data terminal. It is designed with an integrated wireless communication and 1D/2D with optional barcode data capture, touch screen and 30-key keypad. The design is ideal for the mobile worker as it simple and easy to use anywhere along a supply chain. It complies with IP 54 regulations. The Z-2050 is also expandable with WLAN communication vi the CF slot and offers expandable memory through the SD slot.

The Z-2050 features a MOTOROLA Dragonball 32 bit processor and proprietary operating system. This combination delivers high performance, low power consumption and the diversity of a wireless networking platform. Compared with other systems currently available on the market, it is the most cost-effective, offering optimum performance.

Features

- Scan and access real-time data anytime and anywhere
- Bluetooth-enabled and Wi-Fi 802.11b communications
- Durable ergonomic design for comfort and portability
- Easy to read, backlit LCD screen with touch panel
- Cable-free scanning using Bluetooth technology, class 1 specification
- Easy to use VC 6.0 development environment and communication software
- Supports GUI, database and networking over 1000 API 
- 4 MB core flash and 64 MB data flash memories, 8 MB SDRAM
- Rechargeable li-Ion battery for power management
- Integrated wither 1D or 2D
- Proprietary OS supports delivery of wireless communications 

Applications and uses:

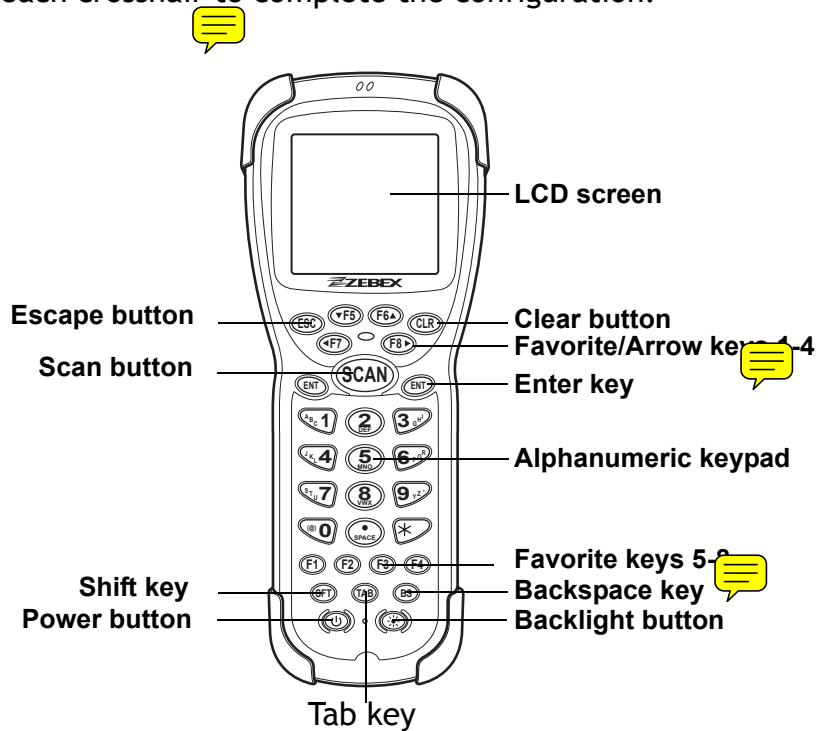
- Retail /Manufacturing / Education / Health care 
- Logistics and packaging handling markets
- Inventory and asset management
- Shipping and receiving
- Express delivery tracking
- Meter recording.

Getting Started

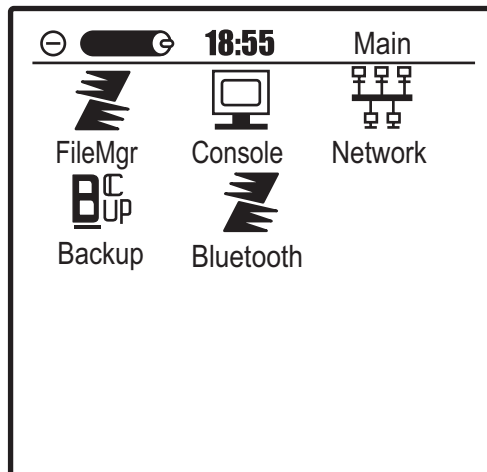
Turning on for the First Time

Once a full battery charge is completed, insert the battery as shown in "Charging the battery" on page 7.

















1. Press the power on button.
2. You will be prompted to configure the touch screen.
3. Touch each crosshair to complete the configuration.



Once the touch screen has been configured, the main desktop screen appears:



Key Functions

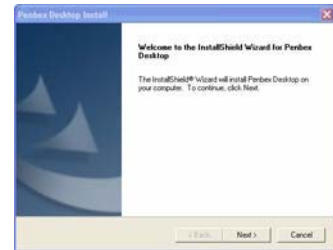
Key	Name	Function
	Escape	Press to leave the current screen.
	Scan	Press and hold to scan a barcode.
	Clear	Press to clear any data from the screen.
 	Favorite/Arrow keys 5-8	Press these to move around the screen or to access favorites numbered 5-8.
	Enter keys	Press to confirm entries or commands.
	Alphanumeric keypad	Press to enter data, in either numerical or alphabetical format.
 	Favorite keys 1-4	Press to access favorites numbered 1-4.
	Shift	Press to change method input. Choose from upper or lower case alphabetical input and numeric input.
	Tab	Press to add a tab indent.
 	Backslash	Press to enter a backslash 
	Power on /off	Press to turn the power on or off.
	Backlight	Press to turn the LCD backlight on or off.

Software Installation

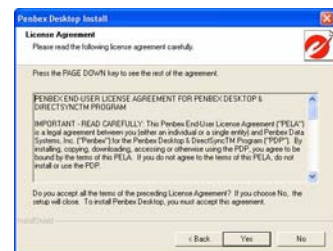


To configure the Penbex Desktop program, use the software cd that came with the device. Insert the CD and the setup program will run automatically.

1. Click **Next** to begin installation.

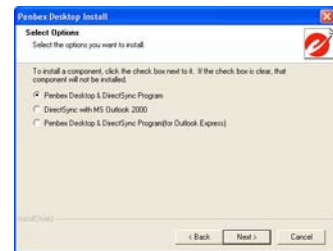


Click **Yes** to agree to the license terms and conditions.

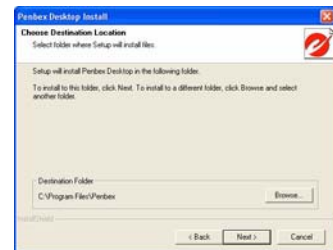


2. Select which option you wish to install:

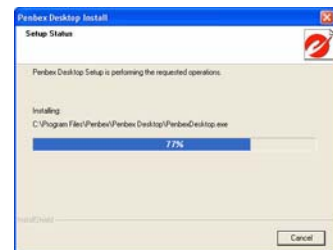
- Penbex Desktop & DirectSync program
- DirectSync with MS Outlook 2000
- Penbex Desktop & DirectSync program (for Outlook Express)



3. Click **Next** to continue. Select a folder where the program files will be installed.



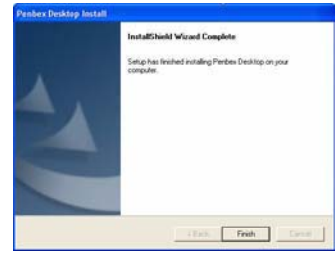
4. The setup program will install all necessary files.



5. A dialog window appears. Click **Yes** to add the Penbex desktop program to your startup menu.



-
6. A confirmation window will appear upon successful installation. Click **Finish** to exit.



Using the software for the first time

When using the software for the first time, certain settings that need must be configured.

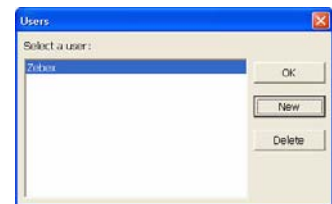
1. Double click the Penbex Desktop icon on your desktop. You will be prompted to select a user. As this is the first time the program has been run, click **New** to enter one or more users.



2. Enter a new user name. Click **OK** to continue.

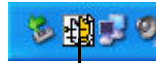


3. The new user now appears in the list. Select the user and click **OK**.



DirectSync

DirectSync is automatically installed along with the desktop program. Double-click on the DirectSync icon on your desktop. The program will run in the background but is accessible via an icon in the notification area of your desktop.



DirectSync Icon

Right click on the icon and the DirectSync menu will appear.



DirectSync Log

Click to display all recent DirectSync activity. Setting

Click to select which interface to use (COM1, Modem, USB). If COM1 is selected, choose which COM port you wish to use from the drop down menu.



Download

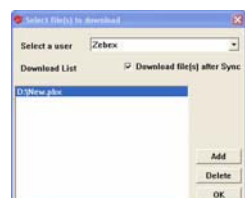
Click to download files from your PC onto the Z-2050.

1. Select your user name from the list that appears.



2. Click **Add** to add the files you wish to download. Should you want to delete a file you have added to the list, select the file and click **Delete**.

3. Click **OK** to download the files.



Software Development Kit (SDK)

The Penbex OS that is the core of the Z-2050 features a unique modular system architecture that allows you to develop and add your own custom-built applications to get the most out of the device.

It features a user-intuitive and easy-to-use UI, which also features a Chinese-English handwriting recognition system, making it accessible to a wide range of users.

The Z-2050 comes with a Software Development Kit (SDK) which works in conjunction with the Penbex OS. It is a powerful and versatile software package that allows you to customize the Z-2050 to meet your specific needs.

The simplicity of its system is the key, eliminating a steep learning curve and allowing you to pick up and develop your own applications within a short space of time.

Refer to the *SDK Reference Manual* for more detailed information. Below are listed the main features and requirements of this powerful development kit.

Software Requirements:

- Microsoft VC 6.0 Environment
- ANSI C Syntax
- Penbex OS Architecture
- Penbex Objects

Documents

- Documents for APIs, objects' behavior, messages.
- Developing/Debugging procedures for external applications.

Emulator

- Workspace for IDE environment running on VC 6.0
- Header files for IDE environment running on VC 6.0
- OS library for IDE environment running on VC 6.0

Localization Support

- Supported languages: Simplified Chinese, Traditional Chinese, English, Spanish and German
- Input: offers PinYin input for simplified Chinese
- Offers Windows-like message boxes to display system messages.

Development Features of the SDK

The SDK allows you to use both UI and GUI objects to build new applications that can be used with the Z-2050. UI (User Interface) objects are the simple building blocks of the system and include:

- Label
- Button
- List
- Table
- Toolbar
- Whiteboard
- Progress Bar
- Menu Bar
- Keyboard
- Message Box
- Scroll Bar
- Combo Box
- Tree
- Single-Line Editor
- Multiple-Line Editor
- Field

GUI objects are more complex applications and include:

- SysGetDate() (to get the system date)
- SysGetTime() (to get the system time)
- GetFilename() (to get the file name)
- SysEngKB() (to use the system keyboard)

As mentioned above, creation of applications using the SDK, UI and GUI objects is explained in much more detail in the *SDK Reference Manual*.

The UI objects are divided into the following categories:

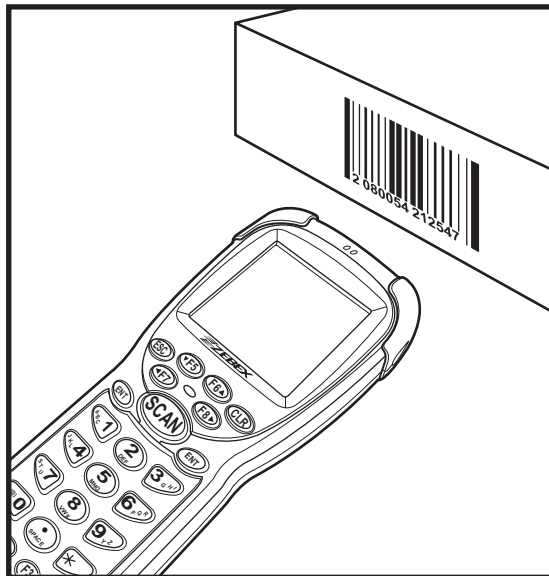
- Label
- Button
- List
- Table
- Toolbar
- Whiteboard
- Progress Bar
- Menu Bar
- Keyboard
- Message Box
- Scroll Bar
- Combo Box
- Tree
- Single-Line Editor
- Multiple-Line Editor
- Field

Scanning Barcodes

The Z-2050 is a highly versatile tool that can scan a wide range of barcodes (see “Barcode Settings and Symbologies” on page 59 for more details) but it is imperative that it is used in the correct manner.

To scan a barcode:

1. Hold the Z-2050 *horizontally* and point it directly at the barcode you wish to scan.



2. Once in the correct position, press the **SCAN** button.

An audible alarm is heard and the barcode digits will appear on the LCD screen if the scan is successful.

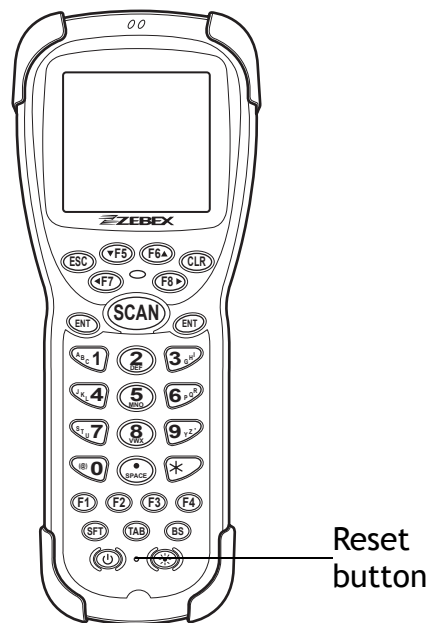
System Reset

Using the Cold Reset Function

Cold reset allows you to return the scanner to the default factory settings, wiping all data from the memory.

To use cold reset:

1. Remove the black cap on the stylus to reveal the needle.
2. Insert the needle into the reset button space, between the power and backlight buttons.



3. Press down gently, holding the power button at the same time.

All factory defaults will be restored.



WARNING

Cold reset will erase ALL pre-configured data on the scanner. Check carefully to make sure you have uploaded all important files to your PC before proceeding with the reset.

Using the Warm Reset Function

Warm reset allows you to reset the scanner without wiping any configuration data or files.

To use warm reset:

1. Remove the black cap on the stylus to reveal the needle.
2. Insert the needle into the reset hole, between the power and backlight buttons.
3. Press down gently.

The machine will reset itself. Proceed with the screen calibration process as explained in “Turning on for the First Time” on page 17.



NOTE

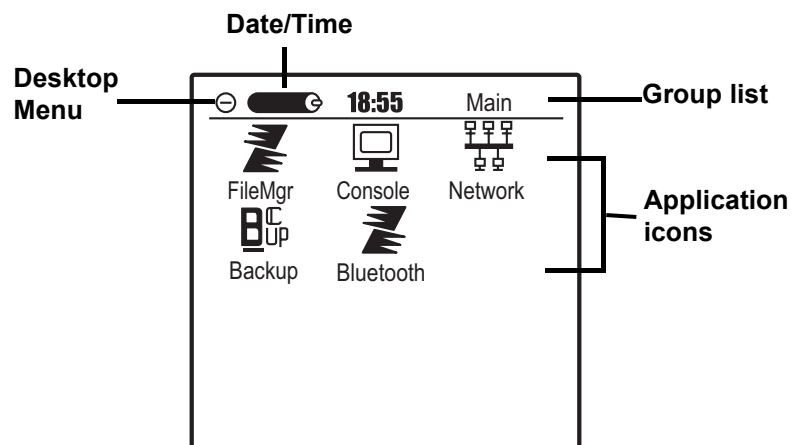
Following a cold or warm reset, you will be asked whether you want to format the Z-2050's flash disk or not. Formatting the disk will erase ALL data.

Using the Scanner

Desktop Features

The Z-2050 Mobile Data Collector is equipped with a multi-function desktop program manager that helps you to utilize the collected data with ease.

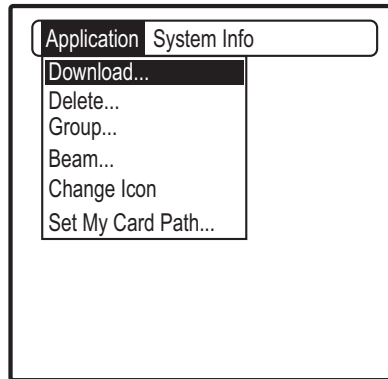
The Desktop tool bar contains the Desktop menu icon, power indicator, Date/Time, and the Group drop down list.



Tap the Desktop menu icon in the upper left corner of the main screen to display Application and System drop down menus.

Application

The **Application** menu enables you to download, delete, group the applications or receive applications via IrDa function.

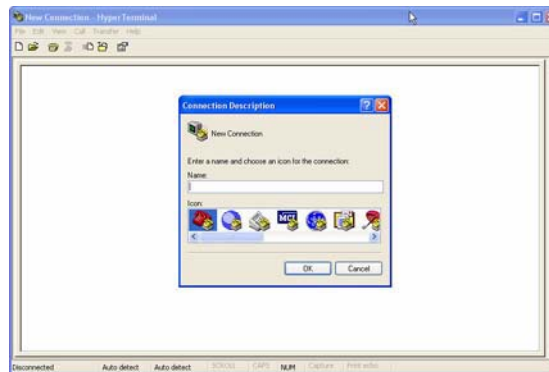


Downloading applications or files

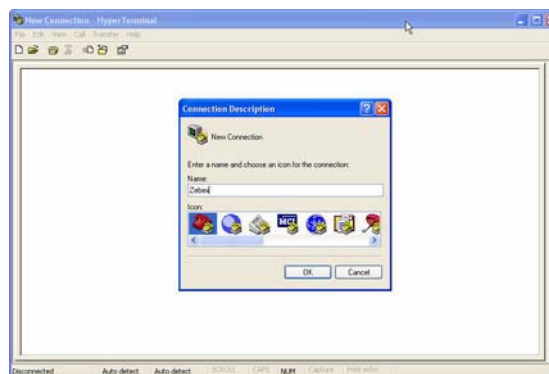
You can download applications from PC to the Z-2050 for enhanced performance.

To install an application on the Z-2050, do the following:

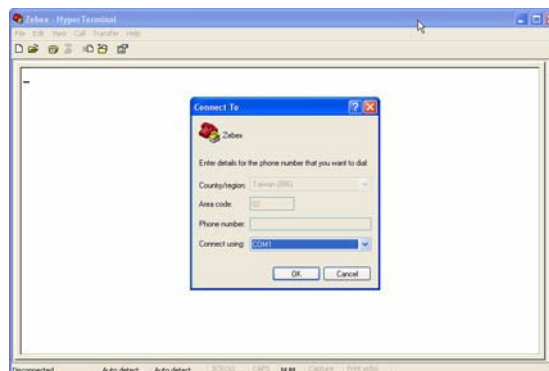
1. Go to the **Start** menu and select All Programs/Applications/Communications/Hyperterminal.
2. Create a new connection.



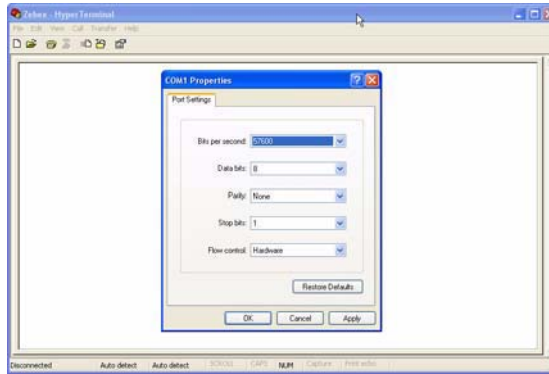
3. Enter a name for the connection. Click **OK** to continue.



4. Select COM1 in the Connect Using field. Click **OK** to continue.



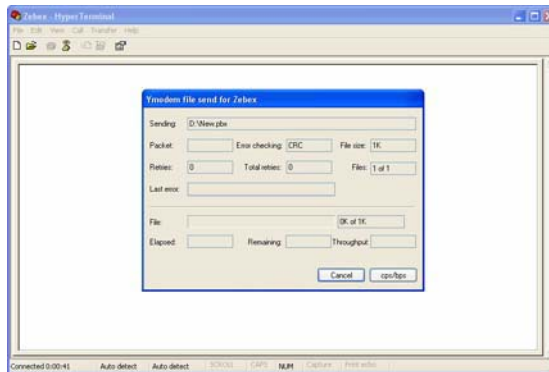
5. Configure the COM1 properties. Set the **Bits per second** rate to **57600** and **Flow Control** to **None**. Click **OK** to continue.



6. Select **Send file** from the **Transfer** menu. The Send File dialog box appears.
7. Select the file you want to upload to the Z-2050 and select **Ymodem** as protocol. Click **Send** to continue.



A file send progress screen appears. You will be notified upon successful file transfer.



NOTE

The applications that are installed on the Z-2050 are stored in RAM memory. You can delete them manually or automatically with a cold reset.

Deleting Applications

You can delete the applications that you have downloaded from the Z-2050.

Note: Built-in applications on the Z-2050 cannot be deleted

To delete an application, do the following:

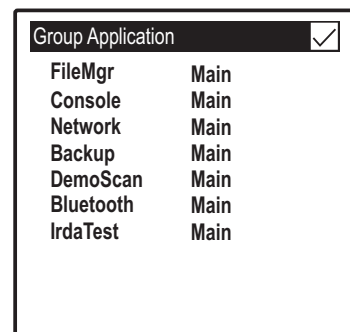
1. Select **Delete** in the **Application** drop down menu. A window displaying the applications installed on the Z-2050 appears.
2. Tap an application you wish to delete.
3. A warning box prompts for confirmation to delete the application. Tap **Yes** to proceed. The chosen program is deleted.

Group Application

The Desktop program enables you to group application icons into different categories. All built-in applications are listed in the main group.

To group application icons, do the following:

1. Select **Group** from the **Application** menu. The group screen appears; all applications and the groups they belong to are displayed.
2. Tap the group name next to the application you wish to move.
3. A drop down list of all available groups appears. Tap the group you wish to move the respective application to.
4. Tap the check mark in the top right hand corner to return to the main screen.

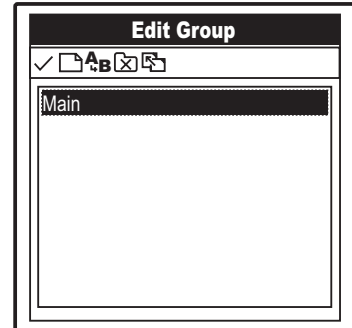


To edit a group, select **Edit Group** from the drop down menu group.


Editing Groups

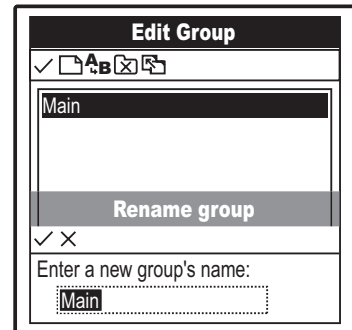
You can add, delete, rename groups or merge applications from Unfiled Group to a chosen group in the **Edit Group** function.

1. Select **Edit Group** from the **Application** menu.
2. The editing screen appears.




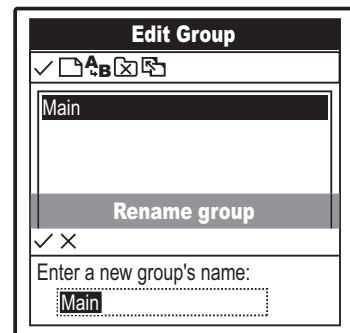
Adding Groups

1. Tap  to add a new group.
2. Enter the new group's name.
3. Tap the check mark to confirm and create the new group.




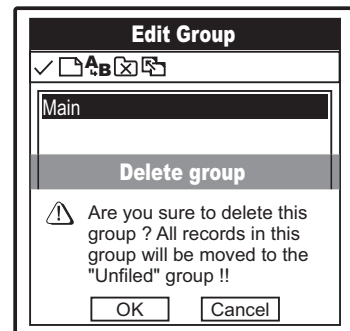
Renaming Groups

1. Tap  to rename an existing group.
2. Enter the group's new name.
3. Tap the check mark to confirm.




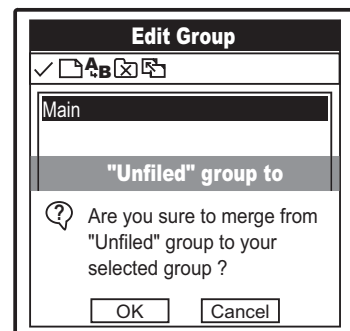
Deleting Groups

1. Tap  to delete a group. A warning dialog appears.
2. Click **OK** to proceed or **Cancel**.



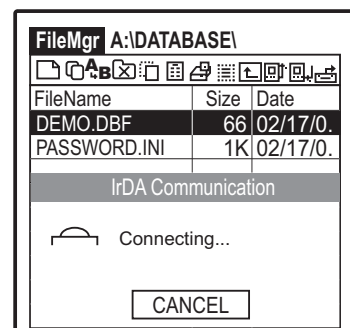
Merging groups

1. Tap  to merge two existing groups. A warning dialog appears.
2. Click **OK** to proceed or **Cancel**.



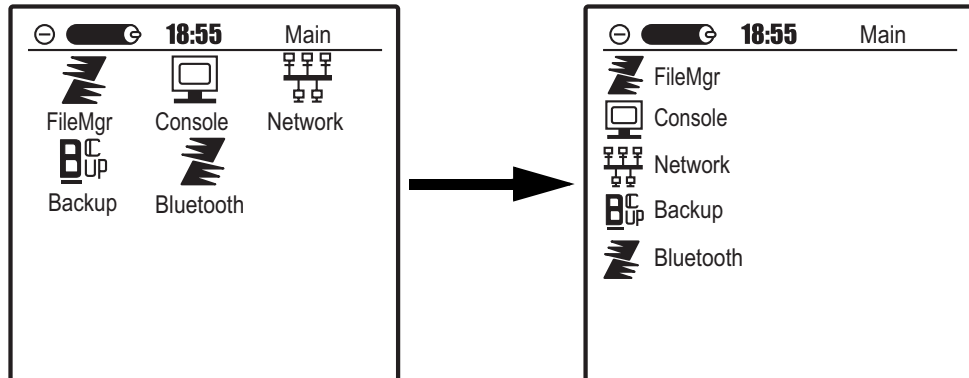
Beam Application Programs

The Beam option enables you to transfer application programs that are downloaded to your Z-2050 to another Z-2050 Mobile Data Collector device via IrDa.



Change Icon

Select this option to toggle between large and small icon views displayed on the LCD screen.

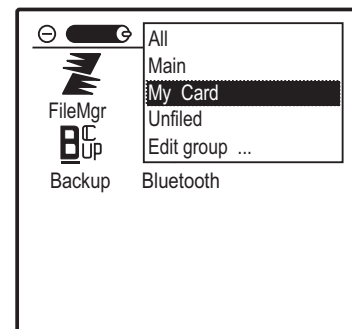


Set My Card path

The Z-2050 is equipped with an expansion memory card slot that enables you to expand memory for additional software applications and back up your data.

When an expansion card is inserted into the Z-2050, it automatically creates a new group called My Card for the *.pbx files stored in the expansion card path.

1. Select **My Card** from the **Group** menu to view the contents of your expansion card.



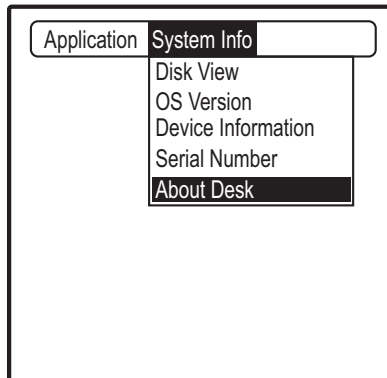
2. Open the **Application** menu and tap **My Card Path** to view the current path of your expansion card.



NOTE

An external memory card must be inserted to use this function otherwise a warning dialog will appear.

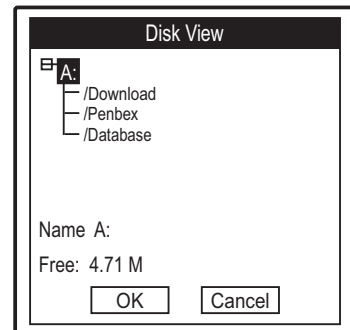
System Information



Disk View

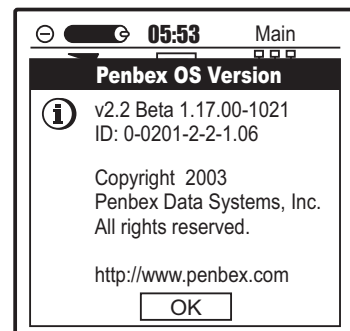
Disk View displays the available memory disks and their respective memory status.

1. Tap the drive to view the contents of the specific drive.
2. Tap the Disk View title bar to show Path and Type menus.
3. Tap Path to show a list of available drives on the Z-2050.
4. Tap a specific drive to view its contents.



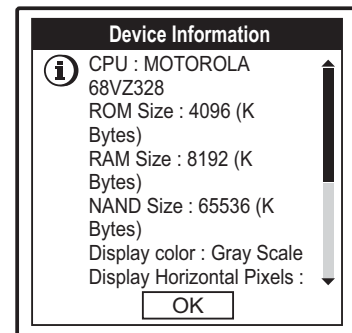
OS Version

Select this option to display OS version information for the Z-2050.



Device Information

Select this option to view the hardware information for the Z-2050.



Serial number

Select this option to view the hardware serial number for the Z-2050.



About Desktop

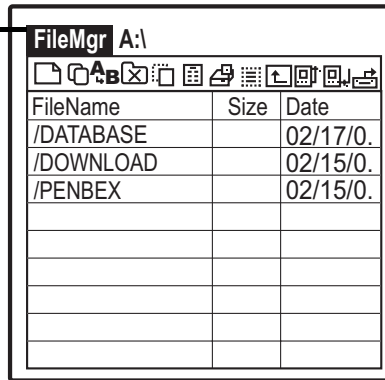
Select this option to view the desktop information for the Z-2050 OS.



Using the FileMgr Tool Bar

The File Manager displays the current contents of your local disks. It is equipped with a quick access tool bar which enables you to manage the data saved on the Z-2050 with the following functions:


FileMgr drop
down menu



Tool bar

Create a new folder

To create a new folder, do the following:

1. Tap  on the tool bar, the following screen appears.

Make New folder Name

Please specify a new folder name.

@	1	2	3	4	5	6	7	8	9	0	←
→	q	w	e	r	t	y	u	i	o	p	-
cap	a	s	d	f	g	h	j	k	l	;	'
shift	z	x	c	v	b	n	m	,	.	123	
[]	\	=	/		←	→	↵			

2. Use the on-screen keypad or the stylus to enter the name for the new folder. Tap **OK** to confirm.

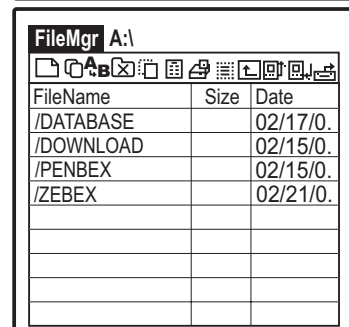
Make New folder Name

Please specify a new folder name.

Zebex _____


@	1	2	3	4	5	6	7	8	9	0	←
→	q	w	e	r	t	y	u	i	o	p	-
cap	a	s	d	f	g	h	j	k	l	;	'
shift	z	x	c	v	b	n	m	,	.	123	
[]	\	=	/		←	→	↵			

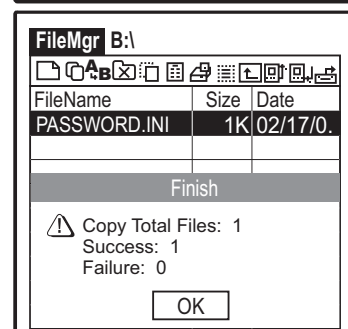
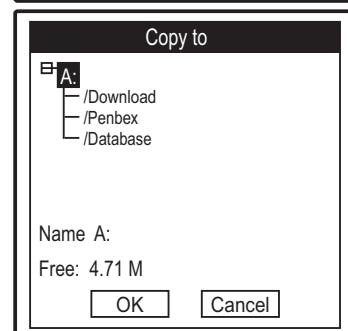
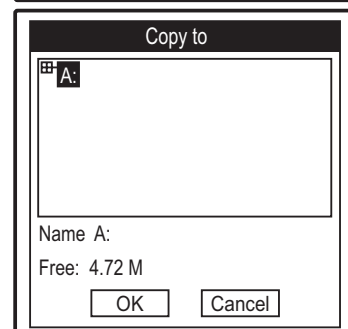
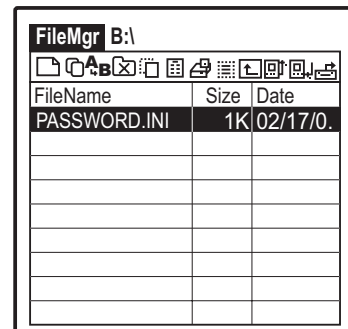
3. The new folder created is now listed in the FileMgr main screen.



Copy To

To copy a file to a selected folder, do the following:

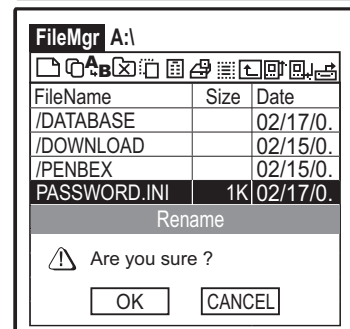
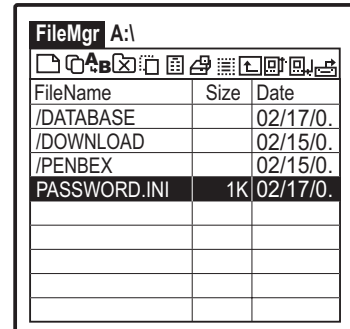
1. Tap the file you want to copy.
2. Tap  on the options bar, the following screen appear.
3. Tap the root of the disk drive to display the contents of the folders and the free disk space.
4. Tap the destination folder to save the copied file. Tap **OK** to confirm.
5. A dialog box appears displaying the task result. (success/failure) Tap **OK** to exit the menu.



Rename

To specify a new name for an existing file, do the following:

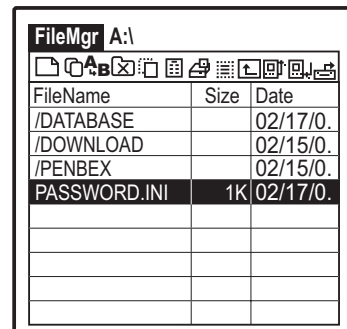
1. Tap the file you want to rename.
2. Tap **A** on the options bar. A warning dialog appears to confirm renaming of the folder. Press **OK** to proceed.
3. Use the on-screen keypad or the stylus to enter the new file name. Tap **OK** to confirm.
4. File name has been modified. The new file name is displayed on the FileMgr main screen.




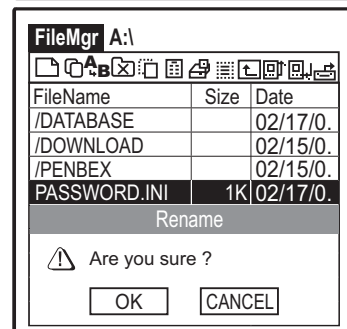
Delete

To delete a file from disk, do the following:

1. Tap the file you want to delete.




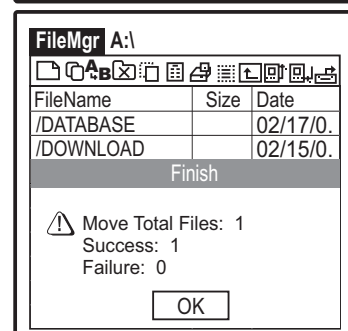
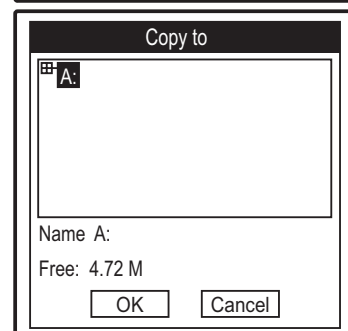
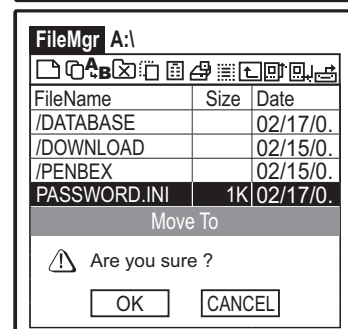
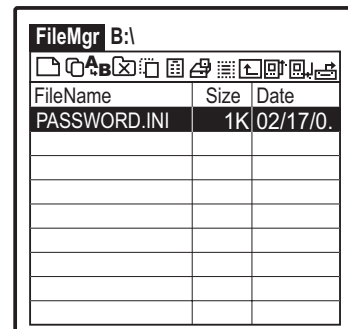
2. Tap  on the options bar. A warning dialog appears to confirm deletion of the selected file. Tap **OK** to confirm. The selected file is now deleted from the Z-2050.



Move To


To move a file to a selected folder, do the following:

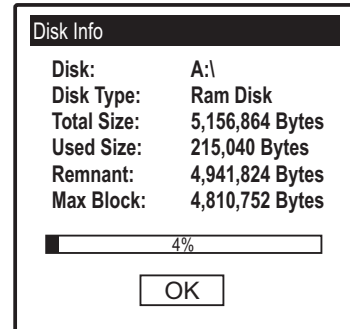
1. Tap the file you want to move.
2. Tap  icon on the options bar, the following screen appear.
3. The screen displays all the available folders and the respective free disk space.
4. Choose the destination disk or path to save the selected file. Tap **OK** to confirm.
5. A dialog box appears displaying task result. (success/failure) Tap **OK** to exit the menu.



Disk info


To view the disk information of the current drive, do the following:

1. Tap  on the options bar, the following screen appears.
2. The screen displays the information of the disk drive, disk type, total disk size, used disk space, remnant, and the maximum block of the selected disk.
3. Tap **OK** to exit and return to the FileMgr main screen.



Select Drive


To choose the designated disk drive, do the following:

1. Tap  on the options bar, and a drop down list of the available disks appears.
2. Tap the desired disk drive. The memory is switched to the chosen disk drive.
The files saved on the chosen disk are displayed on the main screen.

Return to previous level

Tap  to return to the previous level of the folder tree.


Select All

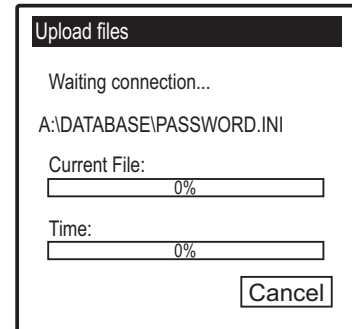
Tap  to select all the files in the current folder or drive. Tap the icon a second time to deselect all.

Upload files

The Z-2050 enables you to upload data to a notebook or PC via HyperTerminal program with Ymodem protocol.

For instructions on how to configure the Z-2050 and Hyperterminal on your PC, refer to “Downloading applications or files” on page 31.


1. Tap the file you wish to upload.
2. Tap  to begin uploading the file. The progress screen appears.
3. Tap **Cancel** at any time to cancel the download.

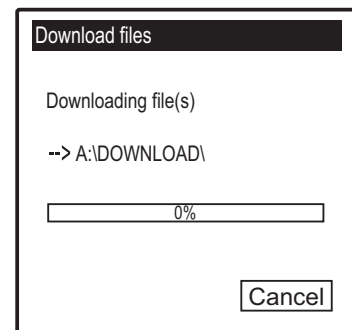


Download files

You can download files to the Z-2050 from a notebook or PC via HyperTerminal program with Ymodem protocol.

For instructions on how to configure the Z-2050 and Hyperterminal on your PC, refer to “Downloading applications or files” on page 31.

1. Tap the file you wish to download.
2. Tap  to begin downloading the file. The progress screen appears.
3. Tap **Cancel** at any time to cancel the download.

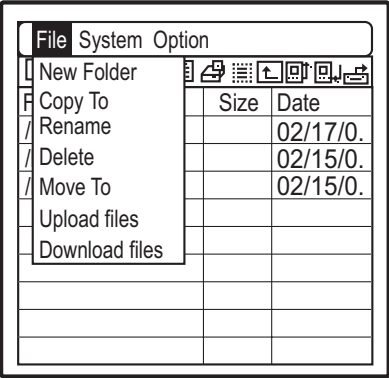


File Manager Menus

In addition, tapping the File Manager icon on the upper left corner of the screen displays the drop down menus for File, System, and Option.

File

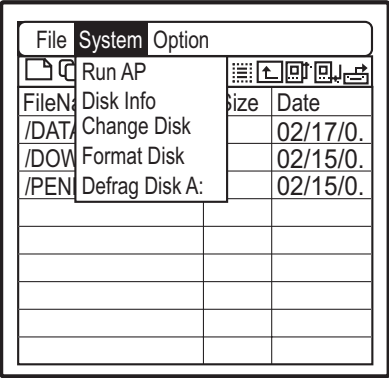
The File menu enables you to manage the files on the database by creating a new folder, copying, renaming, deleting, moving, uploading or downloading files.



Select a command from the drop down list to proceed; refer to the above sections above for more information on each command.

System

The System menu provides you with commands to run application on disk, display disk information, select a different disk source, format a disk, or perform disk defragmentation.



Run AP

Select this option to run an application you have downloaded onto your Z-2050.

1. Select the application you wish to run from the file manager.
2. Select **Run AP** from the **System** menu.

Disk Info

See "Disk info" on page 44.

Change Disk

See "Select Drive" on page 44.

Format disk

Select this option to format the current disk.

1. A warning dialog appears.
2. Tap **OK** to format the disk.
3. The disk will be formatted.



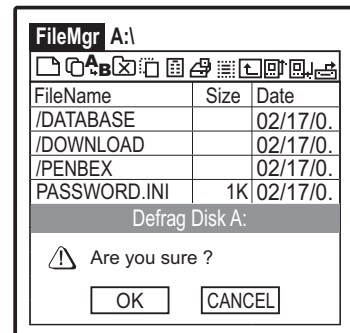
WARNING

Before formatting any disks, ensure that you have backed up all valuable data.

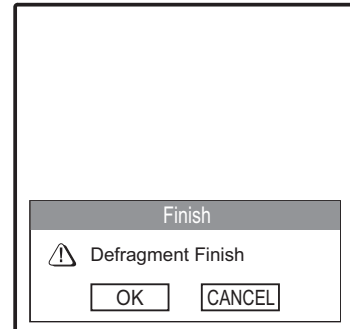
Defrag Disk A:

Select this option to defragment disk A.

1. A warning dialog appears.
2. Tap **OK** to defragment the disk.

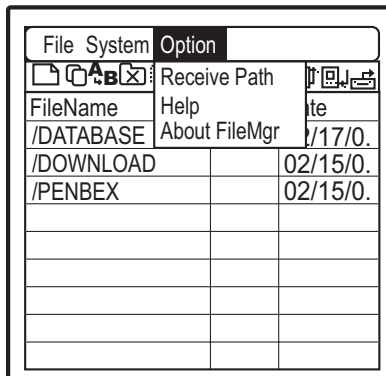


3. A dialog box appears if successful.
4. Tap **OK**.



Option

The Option menu allows you to view the set receive path, File Manager help file and File Manager version information.

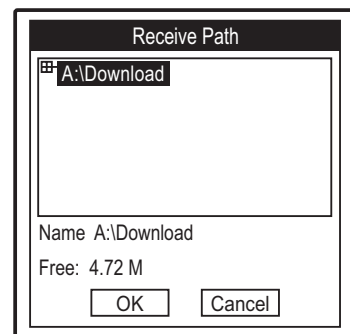


Receive Path

This screen displays the folder in which received files will be stored.

The default setting is **A:\Download**.

Tap **OK** to return to the File Manager.



Help

Select this option to view the File Manager help file.

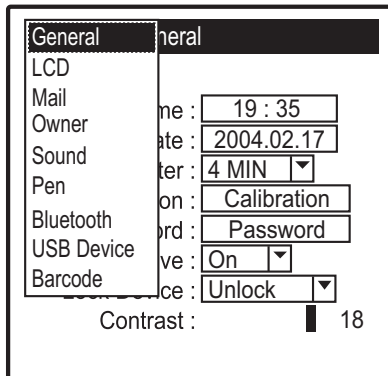
About FileMgr

Select this option to view general information about this version of File Manager.

Console

The Console application enables you to configure settings for the Z-2050. Tap the Console icon to enter Console application.

Tap the main bar to and the drop down menu appears.

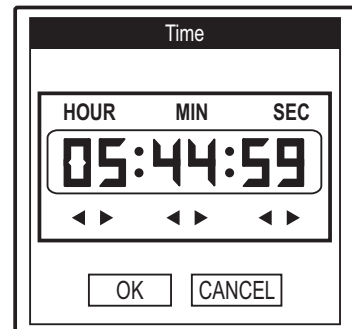


General Settings

Upon entering the Console main screen the general settings are displayed. This screen can also be accessed by selecting **General** from the drop down menu.

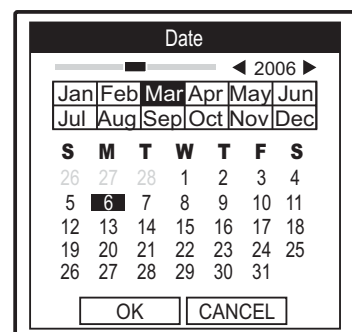
Set Time

1. Tap the **Set Time** field to adjust time settings.
2. Use the arrows to adjust the time.
3. Tap **OK** to confirm and return to the main Console screen.



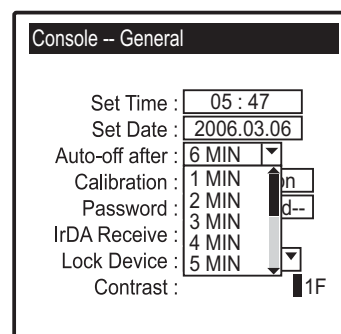
Set Date

1. Tap the **Set Date** field to adjust data settings.
2. Select the date, month and year using the on-screen calendar.
3. Tap **OK** to confirm and return to the main Console screen.



Auto-off after

1. Tap the arrow in the **Auto-off after** field to enter the drop down menu.
2. Select the length of time after which the Z-2050 will turn itself off when not in use.

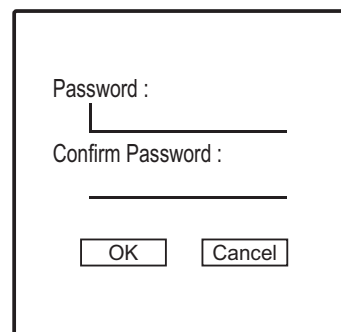


Calibration

1. Tap the **Calibration** field to re-calibrate the Z-2050.
2. Tap each of the cross-hairs as they appear (as described in "Turning on for the First Time" on page 17).

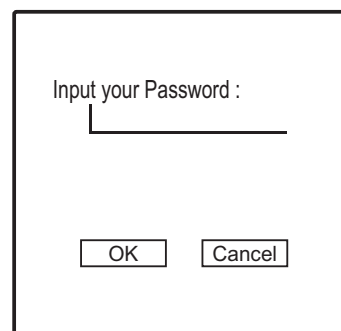
Password

1. Tap the **Password** field to adjust password settings.
2. Enter a password and re-confirm.
3. Tap **OK** to confirm and return to the main console screen.
4. The password field now shows **--Assigned--**.

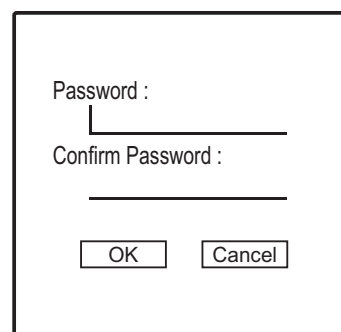


To change an existing password

1. Tap the **Password** field.
2. Enter your existing password and click **OK**.

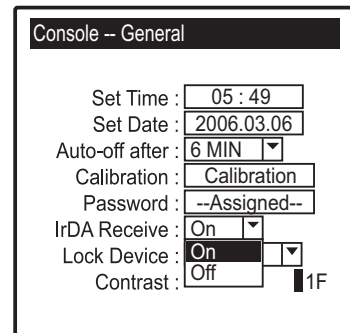


3. Enter the new password and re-confirm.
4. Tap **OK** to confirm and return to the main console screen.



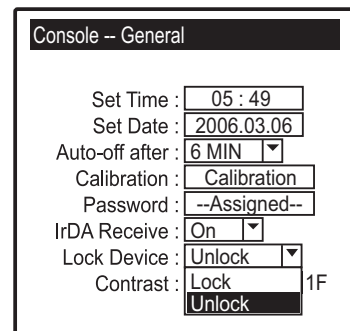
IrDA Receive

1. Tap the arrow in the **IrDA Receive** field to enter the drop down menu.
2. Select **Yes** or **No** to turn the receive function on or off.
3. Press **ESC** to return to the main Console screen.



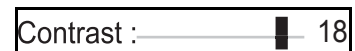
Lock Device

1. Tap the arrow in the **Lock Device** field to enter the drop down menu.
2. Select **Lock** or **Unlock** to lock or unlock the Z-2050.
3. Press **ESC** to return to the main Console screen.



Contrast

Use the stylus to hold and drag the slider to adjust screen contrast settings.



LCD Settings

Select **LCD** from the drop down menu to enter the LCD settings screen.

Light Gray

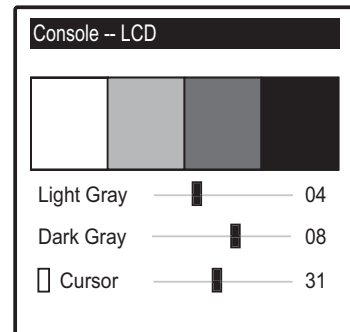
Hold and drag the slider to adjust the light gray level.

Dark Gray

Hold and drag the slider to adjust the dark gray level

Cursor

Hold and drag the slider to adjust the color and appearance of the cursor on screen.



Mail Settings

Select **Mail** from the drop down menu to enter the mail settings screen.

1. Enter the service name.
2. Enter the return mail address.
3. Enter the mail account name.
4. Enter the account password.
5. Enter the POP3 server settings.
6. Enter the SMTP server settings
7. Tap the check box if you wish to keep in server.



Deleting Configurations

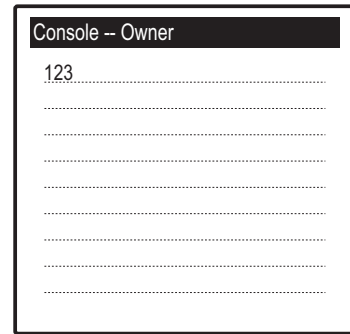
If you need to delete a whole mail configuration, do the following:

1. Tap the Delete button in the bottom right hand corner of the screen.
2. A warning dialog appears, asking you to confirm the deletion.
3. Tap **OK** to confirm or **Cancel**.
4. Press **ESC** to return to the main Console screen.

Owner Settings

Select **Owner** from the drop down menu to enter the owner settings screen.

1. Enter any information about the owner in the text field.
2. Press **(ESC)** to return to the main Console screen.

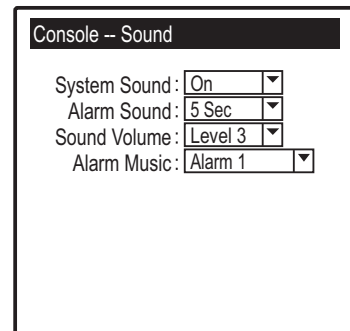


Sound Settings

Select **Sound** from the drop down menu to enter the sound settings screen.

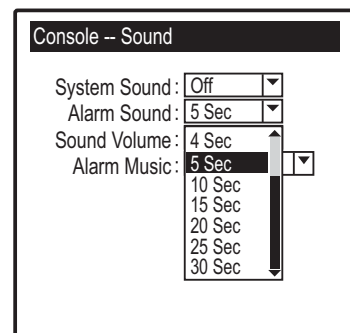
System Sound

1. Tap the arrow in the **System Sound** field to enter the drop down menu.
2. Select **On** or **Off** to turn the sound on or off.
3. Press **(ESC)** to return to the main Console screen.



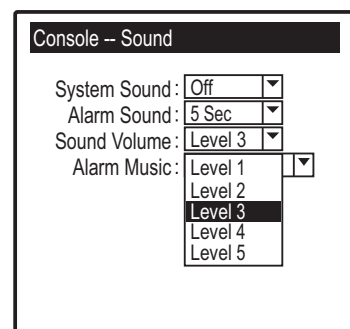
Alarm Sound

1. Tap the arrow in the **Alarm Sound** field to enter the drop down menu.
2. Select the alarm sound length; **Off** or between 1 - 30 seconds.
3. Press **(ESC)** to return to the main Console screen.



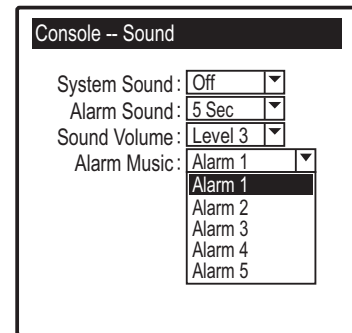
Sound Volume

1. Tap the arrow in the **Sound Volume** field to enter the drop down menu.
2. Select the volume level from Level 1 - 5.
3. Press **(ESC)** to return to the main Console screen.



Alarm Music

1. Tap the arrow in the **Alarm Music** field to enter the drop down menu.
2. Select the alarm music from Alarm 1 - 5.
3. Press **(ESC)** to return to the main Console screen.

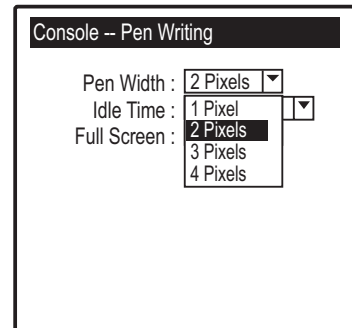


Pen Settings

Select **Pen** from the drop down menu to enter the pen settings screen.

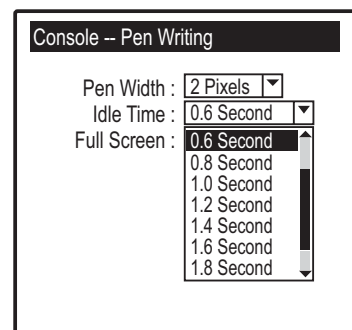
Pen Width

1. Tap the arrow in the **Pen Width** field to enter the drop down menu.
2. Select from 1 - 4 pixels as the pen width.
3. Press **(ESC)** to return to the main Console screen.



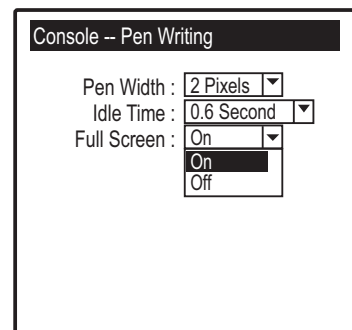
Idle Time

1. Tap the arrow in the **Idle Time** field to enter the drop down menu.
2. Select from 0.2 seconds - 2 seconds as the idle time.
3. Press **(ESC)** to return to the main Console screen.



Full Screen

1. Tap the arrow in the **Full Screen** field to enter the drop down menu.
2. Select **On** or **Off** to turn full screen mode on or off.
3. Press **(ESC)** to return to the main Console screen.



Bluetooth Settings

Select **Bluetooth** from the drop down menu to enter the bluetooth settings screen.

1. Tap the check box to enable the bluetooth function.
2. Click **ADD** to enter the bluetooth BDA. Click **DEL** to delete a previous BDA.
3. Enter your bluetooth password.
4. Tap **Pair** to pair devices or **Connect** to connect to bluetooth.

Console -- Bluetooth Setting

Bluetooth Enabled

BT BDA

ADD []

DEL []

BT Password

Pair [] Connect []

Using the Bluetooth Function

1. Tap Connect BT to connect your bluetooth device.
2. Enter text in the field.
3. Tap Test BT to send.
4. Press **ESC** to return to the main Console screen.

Bluetooth Test

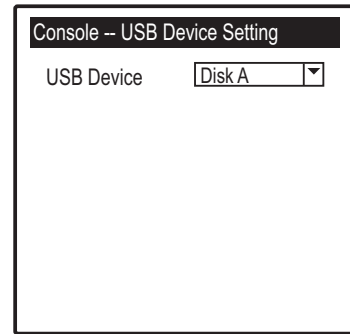
Connect BT [] Disconnect []

[]

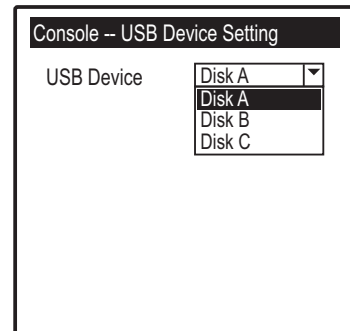
Test BT []

USB Device Settings

1. Select **USB Device** from the drop down menu to enter the USB device settings screen.



2. Tap the arrow in the **USB Device** field to enter the drop down menu.
3. Select **Disk A, B or C** as the USB device.
4. Press **(ESC)** to return to the main Console screen.



Barcode Settings and Symbologies

Select **Barcode** from the drop down menu to enter the barcode settings screen.

Console -- Barcode Setting	
<input type="checkbox"/> EAN/UPC Enabled	Set
<input type="checkbox"/> Code 39 Enabled	Set
<input type="checkbox"/> Codabar Enabled	Set
<input type="checkbox"/> ITF 2 of 5 Enabled	Set
<input type="checkbox"/> Code 128 Enabled	Set
<input type="checkbox"/> Code 93 Enabled	Set
<input type="checkbox"/> MSI Enabled	Set
<input type="checkbox"/> RSS Enabled	Set
<input type="checkbox"/> Code ID Enabled	Set
Pre/Suffix	

The Z-2050 can be configured to enable the following:

- EAN/UPC
- Code 39
- Codabar
- ITF2 of 5
- Code 128
- Code 93
- MSI
- RSS
- Code ID

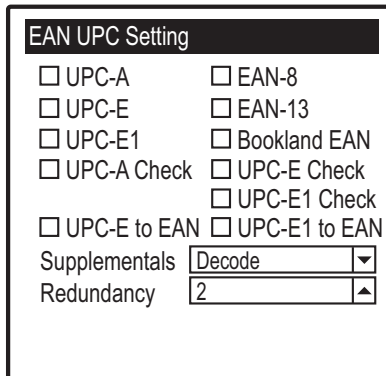
To enable any of all of these options, tick the check box to next to each description.

Console -- Barcode Setting	
<input checked="" type="checkbox"/> EAN/UPC Enabled	Set
<input type="checkbox"/> Code 39 Enabled	Set
<input type="checkbox"/> Codabar Enabled	Set
<input type="checkbox"/> ITF 2 of 5 Enabled	Set
<input type="checkbox"/> Code 128 Enabled	Set
<input type="checkbox"/> Code 93 Enabled	Set
<input type="checkbox"/> MSI Enabled	Set
<input type="checkbox"/> RSS Enabled	Set
<input type="checkbox"/> Code ID Enabled	Set
Pre/Suffix	

Tap **Set** to confirm.

EAN/UPC Settings

When EAN/UPC is enabled and you click Set, a second screen will appear. Here you can configure EAN/UPC settings in more detail.



EAN/UPC Setting	
<input type="checkbox"/> UPC-A	<input type="checkbox"/> EAN-8
<input type="checkbox"/> UPC-E	<input type="checkbox"/> EAN-13
<input type="checkbox"/> UPC-E1	<input type="checkbox"/> Bookland EAN
<input type="checkbox"/> UPC-A Check	<input type="checkbox"/> UPC-E Check
	<input type="checkbox"/> UPC-E1 Check
<input type="checkbox"/> UPC-E to EAN	<input type="checkbox"/> UPC-E1 to EAN
Supplementals	Decode
Redundancy	2

1. To enable any of the EAN/UPC types, tick the check box next to each description:

- UPC-A
- UPC-E
- UPC-E1
- UPC-A Check
- EAN-8
- EAN-13
- Bookland EAN
- UPC-E Check
- UPC-E1 Check
- UPC-E1 to EAN

2. Press **ESC** to return to the main Console screen.

Supplementals

1. Tap the arrow in the **Supplementals** field to enter the drop down menu.

2. Select from the following options:

- Decode
- Ignore
- Auto Discriminate
- Enable 378/379
- Enable 978
- Enable Smart

3. Press **ESC** to return to the main Console screen.

Redundancy

1. Tap the arrow in the **Redundancy** field to enter the drop down menu.

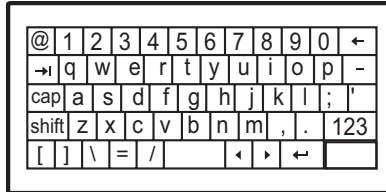
2. Select from 2-19 as the redundancy setting.

3. Press **ESC** to return to the main Console screen.

Inputting Data

Using the On-Screen Keyboard

The quickest way to enter data into the Z-2050 is via the on screen keyboard. Use the stylus to input data and then tap the check box in the top right hand corner of the screen to confirm.



The on screen keyboard is accessed by double-clicking on the field into which you are inputting data.

Using the Alphanumeric Keypad

You can also enter data via the alphanumeric keypad. To enter a letter, tap the corresponding key the appropriate amount of times.

For example, to enter the letter C, tap the key three times.

Press the key to toggle between alphabetical and numerical input.

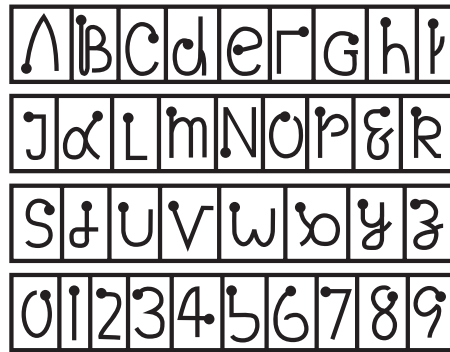
Using Handwritten Input

You can also enter data using the handwriting recognition function and the stylus.

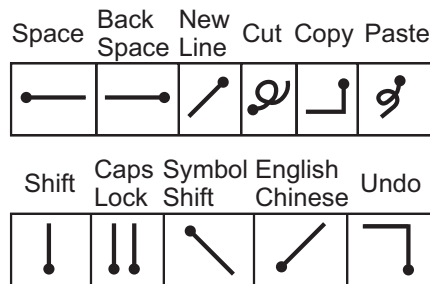
The full screen pen writing function must be turned on in order to get the most out of this function - see "Pen Settings" on page 56 for instructions on how to do this.

Handwriting script



In order to use this function, you must become familiar with a certain set of script characters. They resemble regular letters but as the stylus must remain in contact with the screen when writing, they require a different technique. As soon as the stylus is lifted from the screen, the Z-2050 will interpret and enter that letter into the text field. You must familiarize and practice the following script style.



Be careful to observe the starting point of each of the strokes. Punctuation, spacing and other editing commands are also possible:



Caps Lock Mode

Use two shift  strokes to activate caps lock .


Lower Case Mode

Use caps lock  and a single shift  stroke to turn off caps lock.

Change language

Use the English/Chinese  stroke to change between languages.

Symbol shift

The symbol shift  stroke is used to write a whole range of symbols:

Symbol shift= \	Symbol shift= \	Symbol shift= \
• ‘ , ? () "	% # ^ * < > - +	¥ £ ¤ ± § β μ
• ˆ ˘ ˙ ˚ ˛ ˜ ˝	ˆ ˘ ˙ ˚ ˛ ˜ ˝	ˆ ˘ ˙ ˚ ˛ ˜ ˝
\$ @ & / ; : !	= \ { } [] ~ ` Tab	—
\$ @ & / ; : !	= \ { } [] ~ ` Tab	—

Accents


See the following table for strokes when using accents:

Accentstrokes: write the stroke
below, then the letter.

Additional Non-English Characters					



NOTE

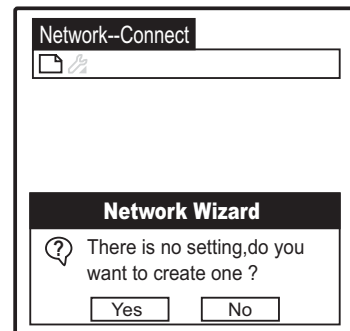
1. Observe the following when using the handwriting function:
2. Write as clearly as possible.
3. Do not take too much time writing each character as the system may time out. 
4. Ensure the stylus is always in contact with the screen until you have finished writing each character.
5. Practice writing each character stroke to ensure efficiency and accuracy.

Network Connections

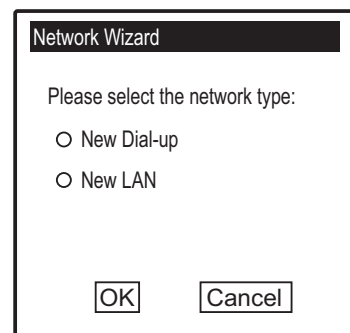
Creating a Network Connection for the First Time

In order to connect to local or remote networks, you must create separate connections on the Z-2050.

1. Tap **Network** from the main desktop screen.
2. The network wizard will ask if you want to create a new connection. Click **Yes** to continue.




3. Select the type of connection you wish to create; either via Dial-up or through a Local Area Network (LAN).

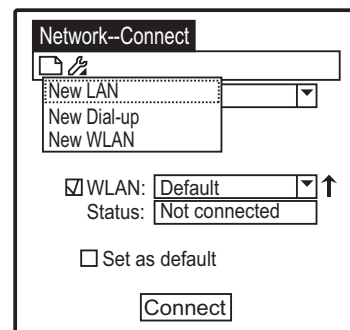


Creating additional Network Connections

Additional dial-up/LAN/WLAN connections can be created at anytime from the **Network Connect** screen.


1. Tap **Network** from the main desktop screen.
2. Tap  to enter the drop down menu.
3. Select from **New LAN**, **New Dial-up** or **New WLAN**.

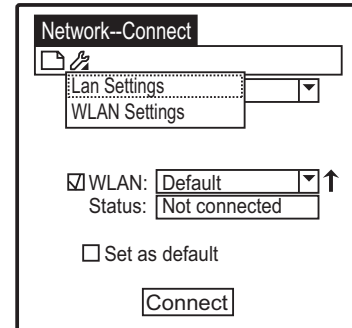
See below for more details on how to configure each of these respective connections.



Viewing Connection Settings

The second menu in the Network Connect screen provides information on your Dial-up and LAN settings.

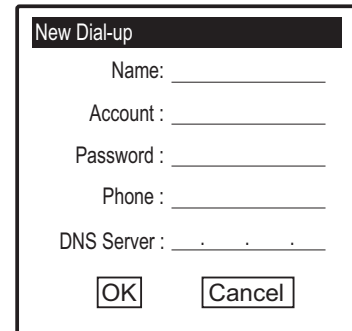
1. Tap **Network** from the main desktop screen.
2. Tap  to enter the drop down menu.
3. Select **Lan Settings** or **WLAN Settings** to view details.



Creating a new Dial-Up Connection

Select **New Dial-up** from the network wizard screen or **New Dial-up** from the drop down menu. The New Dial-up screen appears.

1. Enter your ISP name.
2. Enter your account details (the login details provided to you by your Internet Service Provider).
3. Enter your password.
4. Enter the phone number you use to dial into your Internet Service Provider.
5. Enter the DNS Server settings.
6. Tap **OK** to complete the configuration.



The screenshot shows a dialog box titled "New Dial-up". It contains the following fields and buttons:

- Name: _____
- Account: _____
- Password: _____
- Phone: _____
- DNS Server:
- OK button
- Cancel button



NOTE

Ask your ISP for DNS server settings. Some do not require such a setting, in which case you can leave this field blank.

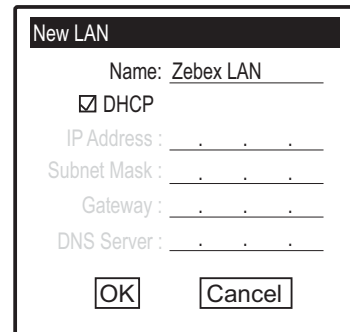


Creating a new LAN Connection

Select **New LAN** from the network wizard screen or **New LAN** from the drop down menu. The New LAN screen appears.

LAN Settings using DHCP

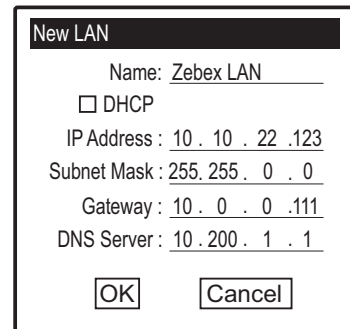
1. Enter an name for the LAN setting.
2. Tap the DHCP check box. The system will automatically scan and configure all settings automatically.
3. Tap **OK** to confirm and save all settings.



The screenshot shows the 'New LAN' configuration dialog. The title bar reads 'New LAN'. Below it, the 'Name' field is filled with 'Zebex LAN'. The 'DHCP' checkbox is checked. The 'IP Address', 'Subnet Mask', 'Gateway', and 'DNS Server' fields are all empty, indicating they will be automatically configured.

LAN Settings without DHCP


1. Enter an name for the LAN setting.
2. Leave the DHCP check box unchecked.
3. Enter your IP address (ask your network administrator for these details).
4. Enter your subnet mask settings.
5. Enter your gateway settings.
6. Enter your DNS server settings.
7. Tap **OK** to confirm and save all settings.

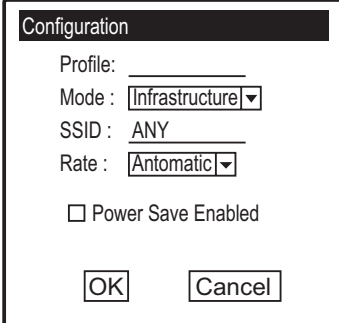


The screenshot shows the 'New LAN' configuration dialog. The title bar reads 'New LAN'. Below it, the 'Name' field is filled with 'Zebex LAN'. The 'DHCP' checkbox is unchecked. The 'IP Address' field is filled with '10 . 10 . 22 .123', 'Subnet Mask' with '255, 255 . 0 . 0', 'Gateway' with '10 . 0 . 0 .111', and 'DNS Server' with '10 . 200 . 1 . 1'.

Creating a new WLAN Connection

Once you have created a LAN connection, WLAN connection settings become available.

1. Tap **Network** from the main desktop screen.
2. Tap  and select **New WLAN**. The configuration screen appears.
3. Enter a profile name for the WLAN connection.
4. Select **Mode**. Choose from **Infrastructure** or **802.11 AdHoc** from the drop down menu.
5. Enter **SSID** settings (default is set to **ANY**).
6. Select **Rate**. Choose from **1MHz**, **2MHz**, **5.5MHz**, **11MHz** or **Automatic** from the drop down menu.
7. Tap the check box to enable **Power Save** mode.
8. Tap **OK** to confirm and save all settings.



Configuration

Profile: _____

Mode: [Infrastructure] ▾

SSID: ANY

Rate: [Automatic] ▾

Power Save Enabled

[OK] [Cancel]

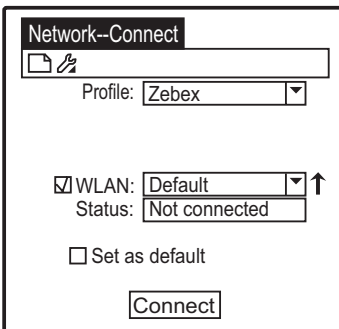


NOTE


When **Mode** is set to **802.11 AdHoc**, the **Channel** field becomes active. Select from **Channels 1-11** to adjust channels should you experience communication problems between the Z-2050 and your WLAN transmitter.

To disable your WLAN connection, do the following:

1. Tap **Network** from the main desktop screen. The Network--Connect screen appears.
2. Tap the WLAN check box so it is no longer selected.
3. Press **(ESC)** to return to the main Console screen.



Network--Connect

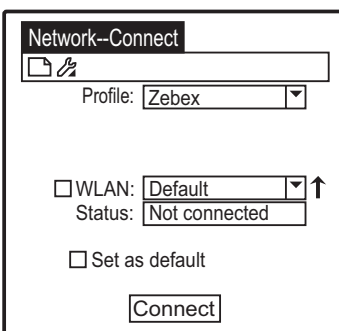
 Profile: Zebex ▾

WLAN: Default ▾ ↑


Status: Not connected

Set as default

[Connect]



Network--Connect

 Profile: Zebex ▾

WLAN: Default ▾ ↑

Status: Not connected

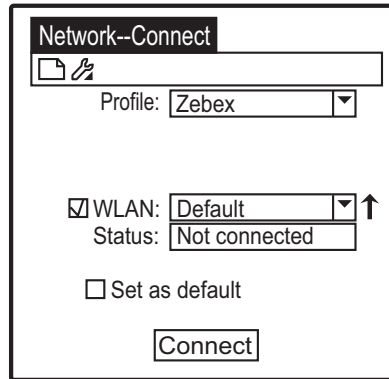
Set as default

[Connect]

Network Connect Screen

Once an initial network connection has been configured, the network wizard will no longer appear when you tap Network from the main desktop screen.

Instead the **Network--Connect** screen appears. Here you can modify options related to your connections.



Profile

Select this option to choose a connection profile from the drop down list.

WLAN

Tap the check box to enable/disable. You can select the WLAN profile you wish to use from the drop down list. Tap the arrow next to the profile name to view details of link status (State, Current Channel, Current Tx Rate, Link Quality and Signal Strength).

Status

Displays whether or not the connection is active.

Set as default

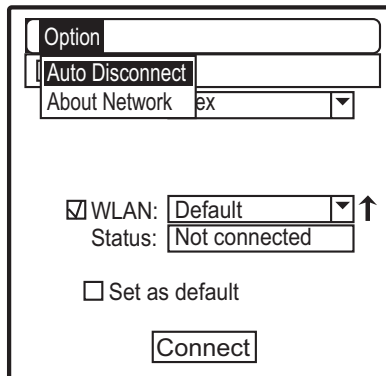
Tap the check box to set the current connection as your default setting.

Connect

Tap to connect to the selected connection.

Option

Tap the top left hand corner to enter the network connect drop down menu. Two options are available here.



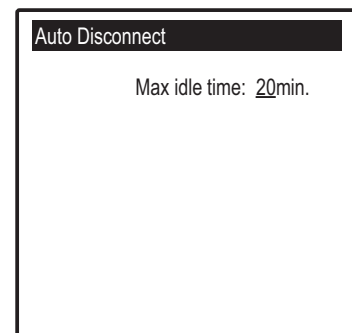
The screenshot shows a network settings menu with the following elements:

- Option
- Auto Disconnect
- About Network ex
- WLAN: Default
- Status: Not connected
- Set as default
- Connect

Auto Disconnect

Select this option to set the system idle time after which the connection will be terminated.

1. Tap the Idle Time field.
2. Enter a preferred value (in minutes) from 1-99.
3. Press **ESC** to confirm all changes and return to the Network Connect screen.



The screenshot shows the Auto Disconnect settings screen with the following text:

Auto Disconnect

Max idle time: 20min.

About Network

Select this option to view general information about this version of Network Manager.

Data Backup / Restore

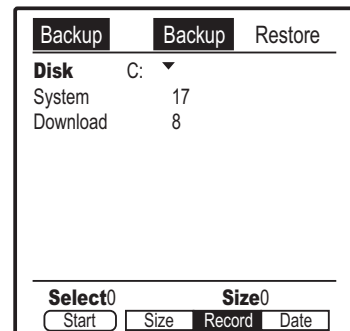
The Z-2050 features a data backup system which allows you to backup all data, including system settings and AP data, to an external memory card. You can also restore any previously backed-up data from a memory card using this function.

Backing Up Data

1. Tap **Backup** from the main desktop screen.
2. Ensure you have a memory card inserted and tap **Backup**.

3. Tap the three information tabs at the bottom of the screen to view further information:

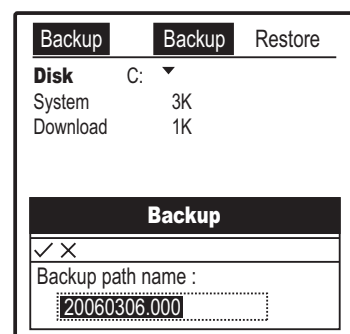
- **Size:** Displays folder size
- **Record:** Displays folder records
- **Date:** Displays when the folder was last updated



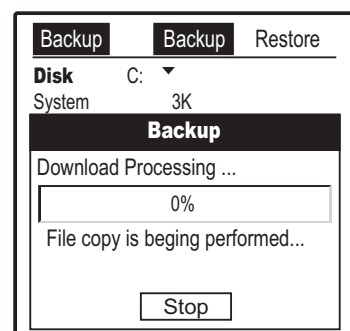
4. Select one or more folders you wish to backup.

5. Tap **Start** to begin the backup process. A dialog appears.

6. Enter a name for the backup file and tap the check mark to confirm.

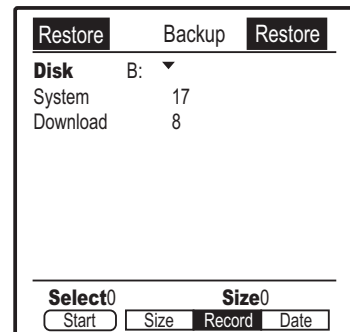


7. The backup begins. Tap **Stop** at any time to cancel the process.

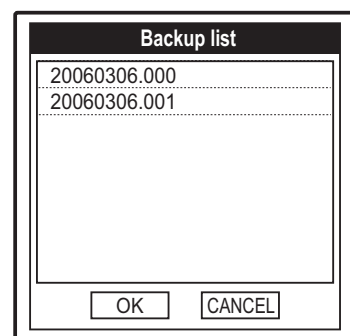


Restoring Data

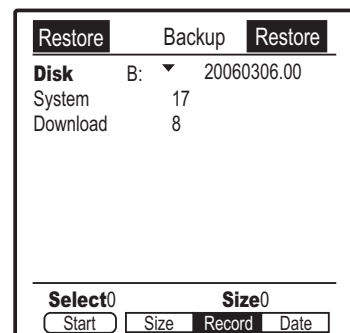
1. Tap **Backup** from the main desktop screen.
2. Ensure you have the memory card inserted and tap **Restore**.



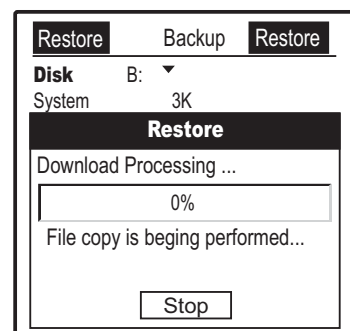
3. The Backup list appears. Select which backup file you wish to restore. Tap **OK**.



4. You will be taken back to the main Restore screen. Tap **Start** to restore the data.

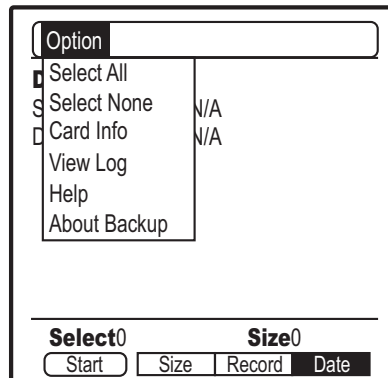


5. A warning dialog appears. Click **OK** to continue or **CANCEL** to abort the restore.
6. The restore begins. Tap **Stop** at any time to cancel the process.



Backup Option Menu

Tap the top left hand corner of the main backup screen to enter the backup menu.



Select All

Select this option to select all of the folders in the list.



NOTE

The **Select All** command is particularly useful when backing up/restoring whole disks. Select **All** and then tap **Start** to backup/restore an entire disk.

Select None

Select this option to select none of the folders in the list.

Card Info



Select this option to view card information, including total capacity and free capacity.

View Log

Select this option to view the backup log

Help











Select this option to view the Backup Manager help file.

About Backup

Select this option to view general information about this version of Backup Manager.



Technical Information

Z-2050 Specifications	
System	
CPU	MOTOROLA MC68VZ 33MHz 
RAM	8 MB SDRAM
ROM	4 MB for core flash memory 64 MB for data flash memory
LCD Display	FSTN 2.5", 160 X 160 with touch panel
Back Light	Green EL back light
Operating System	Proprietary OS with emulator
Power 	
Main Battery	3.7V 2,200 mAH Li-ion rechargeable
Back-up	3V, 25 mAH, rechargeable lithium battery
Battery Life	8 hours without wireless communication activated 
Scanning Performance	1D, 2D, (optional SKU)
Light Source	Visible laser diode 650 nm 
Scan Rate	39± 3 scans per second (bi-directional) 
Min. Print Contrast	Min. 25% absolute dark/light reflectance measure at 650nm 
Decoding capability	
Barcode Symbolologies	UPC/ EAN/ JAN, Code 128/EAN 128, Code 39, Code 93, Interleaved 2 of 5, Discrete 2 of 5, Codabar, MSI/Plessey
Card Slots	1 x CE card, 1 x SD card (optional)
	
Interfaces 	
Bluetooth	Bluetooth 1.2 spec. class one 
IrDa	Standard IrDA 1.1
USB	USB 1.0
RS-232	Programmable up to 115,200 bps
WLAN	802.1b (optional) 
Dimensions	190.5 mm (L) x 75.0 mm (W) x 47.8 mm (H)
Weight	Approx. 240 g (battery included)

Z-2050 Specifications

<i>Environmental</i>	
Operating Temp.	0°C ~ 50°C
Storage Temp.	-10°C ~ 60°C
Operating Humidity	10% ~ 70% (non-condensing)
Storage Humidity	5% ~ 70% (non-condensing)
Regulatory Approvals	CE & FCC Part 15B, 15 C
Cradle	Single slot USB / RS-232 charging cradle with spare battery slot
Software & Development	Microsoft VC 6.0 development environment Supports GUI, database and networking over 1,000 API Emulation software tool for program development and debug 