



MicroSurvey[®]

TRACKER

Xtreme

USER'S GUIDE

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To maintain your warranty and to avoid creating hazards, only qualified personnel should perform authorized modifications to MicroSurvey Software's products. MicroSurvey Software cannot assume responsibility for any condition affecting the proper operation of this equipment that may result from unauthorized modifications.

PRODUCT RETURNS

If, after inspection, you note any product damage or discrepancies, please contact us promptly within five days of receipt. If the exterior of the package shows obvious signs of damage, please contact your carrier directly.

All items returned to MicroSurvey Software require a Return Material Authorization number (RMA). Please contact MicroSurvey Software' Service department to request an RMA number.

REGULATORY NOTICES (PENDING)

FCC PART 15 CLASS A

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC ID: RYJJETTXL

Two Technologies Incorporated

419 Sargon Way, Horsham, PA 19044

Phone: 215.441.5305

FCC SECTION 15.21

Changes or modifications to this unit not expressly approved by Two Technologies may void the user's authority to operate the equipment.

CANADIAN DEPARTMENT OF COMMUNICATIONS

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications

CENELEC



*Pending

EMI STANDARDS:

- EN 55022:1998 (CISPR22), Class A
- ETSI EN 300 330-2: 2001

EMC STANDARDS:

- EN 55024: 1998
- ETSI EN 301489-1: 2002, 301489-3: 2002
- EN/IEC 61000-4-2, 61000-4-3, 61000-4-4

WARNINGS

Changes or modifications to this unit not expressly approved by the party responsible for regulatory compliance could void the user's authority to operate the equipment.

***ELECTROSTATIC DISCHARGE (ESD)***

Electrostatic discharge (static electricity) can have unpredictable adverse effects on any electronic device. Although the design of this product incorporates extensive ESD-related precautions, ESD can still cause problems. It is good practice to discharge static by touching a grounded metal object before inserting cards or connecting devices.

***SERVICING INFORMATION***

When servicing the unit, the plug (JETT•connect cable) is the disconnect device. Simply unplug the unit before servicing.

***BATTERY REPLACEMENT***

CAUTION! There is a risk of explosion if you replace the NiMH battery with an incorrect type. Only use the NiMH battery supplied with your unit or a replacement NiMH battery supplied, recommended, or approved by Two Technologies, Inc.

***BATTERY DISPOSAL***

Dispose of batteries in a safe manner. The following are general guidelines for the safe use and disposal of NiMH batteries:

- Replace a defective NiMH battery immediately as it could damage the unit.
- Do not throw the NiMH battery in trash that is disposed of in landfills as it contains heavy metals. Recycle or dispose the NiMH battery as required by local ordinances or regulations.
- Do not disassemble, incinerate, short-circuit the NiMH battery or throw it into a fire. It can explode and cause severe personal injury.
- Excessive discharge damages a NiMH battery. Recharge the NiMH battery when your unit indicates low battery power.

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CHAPTER 1



OVERVIEW

ABOUT THIS MANUAL

This manual describes the standard features and operation of the Tracker Xtreme. Unless otherwise stated, the operational characteristics described herein correspond to factory default configurations and settings as shipped from MicroSurvey Software. Wherever used herein, the term “Xtreme” applies to all Tracker Xtreme models (except as noted).

ABOUT THE Tracker Xtreme

With its modern, ergonomic appearance and design, the TRACKER XTREME is the most recent addition to MicroSurvey Software's series of rugged hand held computers for industrial and commercial use. Its quick mount connector system allows easy insertion and removal in cradle or vehicle mounts.

The TRACKER XTREME comes standard with the Windows CE 5.0 operating system and an Intel PXA270 XScale processor that operates up to 624 MHz. It also has configuration options for, Bluetooth, WLAN, GPRS, RS-232, RS-485, RS-422 and USB. WWAN GSM/GPRS are also optionally available

When you combine the TRACKER XTREME and the JETT•pack, you can integrate GPS, RFID, bar code, bar-code scanners, GPRS/GSM, Imagers and cameras.

TRACKER XTREME FEATURES

OPERATING SYSTEM

The TRACKER XTREME uses Windows CE 5.0 as its operating system. You can develop applications quickly and easily using the latest development tools and network connectivity from Microsoft, such as eMbedded Visual C++ 4.0, Visual Studio .NET 2003 and ActiveSync 3.8.

RECHARGEABLE BATTERY PACK

The TRACKER XTREME comes with a rechargeable Nickel Metal Hydride (NiMH) battery pack that can provide up to eight hours of operating time on a full charge (depending on power management and use).

The NiMH technology used in the TRACKER XTREME has exceptional charge life without the “charge memory” characteristic of conventional nickel cadmium batteries. Partially discharged batteries or extended periods with the charger left connected will not adversely affect battery life or performance. The TRACKER XTREME can also run on six AA Alkaline batteries.

PROCESSOR

The TRACKER XTREME utilizes an Intel PXA270 processor designed specifically for high-performance, low power, portable, handheld devices. It incorporates Intel XScale technology with on-the-fly voltage, frequency scaling and sophisticated power management. It also complies with the ARM Architecture V5TE instruction set

MEMORY AND MASS STORAGE

The TRACKER XTREME comes standard with 128MB of SDRAM (approximately 30MB used for the operating system) and 512MB of internal compact flash memory. An additional 256 MB of SDRAM is

optionally available. Internal compact flash memory is optionally expandable to 8GB+.

For removable data storage or I/O cards, the TRACKER XTREME is equipped with a Compact Flash (CF) slot.

DISPLAYS

The TRACKER XTREME features a supertwist nematic liquid crystal 320 x 240 QVGA-TFT color sunlight readable display with touch screen and LED backlight.

KEYPADS

Keypad configurations for the TRACKER XTREME include a 52-key elastomeric keypad.

INDICATORS

The TRACKER XTREME has five LED indicators that provide a number of useful functions including the state of keypad modifier keys. An additional LED indicates the charge and low battery statuses.

CONFIGURATION OPTIONS

The TRACKER XTREME comes standard with a RS-232 and a USB port. The TRACKER XTREME also includes Wireless LAN (802.11b) and Bluetooth (1.1)

DURABILITY

The case is made of General Electric Xenoy, one of the most durable chemical resistant materials available today.

INGRESS PROTECTION

The TRACKER XTREME is completely dust-tight and can withstand exposure to jets of water and has an IP (Ingress Protection) rating of 65 as defined by IEC standard 529.

Please note, that the product warranty does not cover TRACKER XTREME's that fail due to electrolysis.

CHAPTER 2



COMPONENTS AND INDICATORS

FRONT COMPONENTS

This section describes the components found on the front of the TRACKER XTREME.

Figure 2-1: Front Components

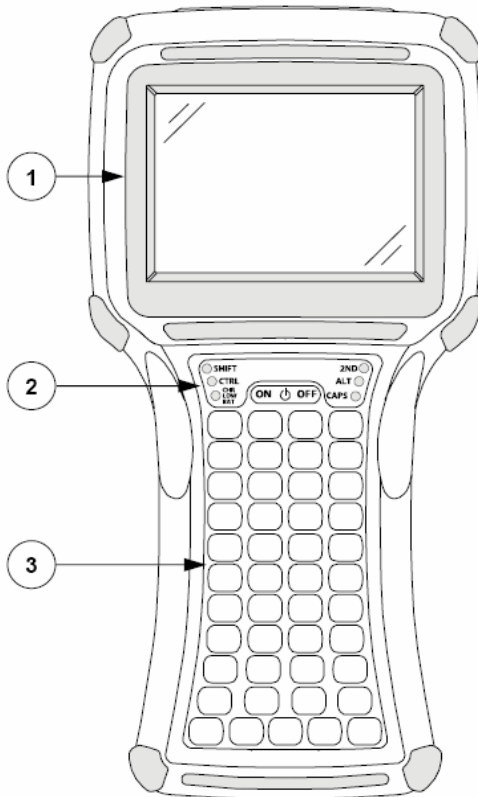


Table 2-1: Front Components and Indicators

Item	Component	Description
1	Display	Supertwist nematic liquid crystal display with touch screen
2	Front Panel	Contains the On/Off switch and modifier keys indicators (see Figure 2-2)
3	Keypad	45-key keypad shown (other keypads are also available, see Figure 3-9)

FRONT PANEL

This section describes the components found on the front panel.

Figure 2-2: Front Panel Components

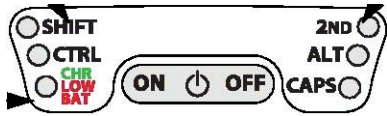


Table 2-2: Front Components and Indicators

Item	Component	Description
1	Modifier LEDs	Indicates use of the SHIFT, CTRL, 2ND ALT and CAPS modifier keys
2	Battery LED	Lights red to indicate a low battery or green a charging battery
3	On/Off Switch	Controls the Power, Suspend and Resume operations

COMPACT FLASH SLOT COVER

The standard compact flash slot cover located on the top of the unit provides access to the compact flash slot that stores memory and device cards. In addition to the standard cover, a modified cover which has a machined opening that allows you to easily insert and remove device cards that exceed 1.437 inches in height, is also available.

Two phillips-head screws+ (2-56 x 5/16”) secure the cover to the top of the JETT. To insert device or memory cards into the compact flash slot, you must first remove these screws using a phillips # 0 non-magnetic tip screwdriver.

For information about inserting and removing memory and device cards, see Using the Compact Flash Slot.

Figure 2-3: Standard Compact Flash Slot Cover, Closed

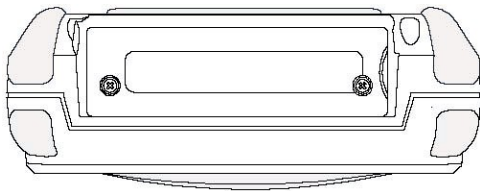


Figure 2-4: Standard Compact Flash Slot Cover, Opened

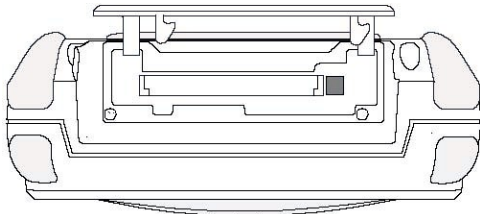
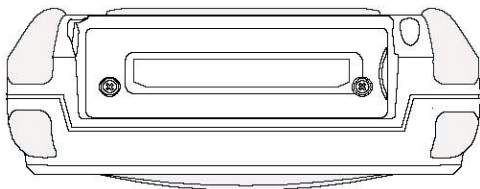


Figure 2-5: Modified Compact Flash Slot Cover for Long Device Cards



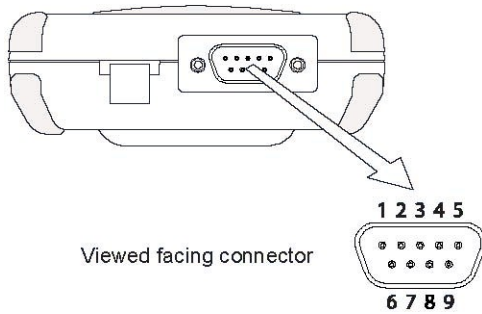
TRACKER XTREME•CONNECT SYSTEM

The XTREME connect system is a set of rugged interface and cable connectors especially designed for industrial environments. It features positive connector retention without any hardware restraints for quick connect/disconnect operations and a contact design that prevents failure due to pin fatigue and cable stress after repeated use.

DB-9 CONNECTORS

The DB-9 connectors emulate standard serial pin-out connections, and allow you to connect the XTREME to most desktop PCs using a standard null modem cable.

Figure 2-7: DE-9 Male Interface Connector



RS-232 Interface Pin-Outs	
Pin 1 = DCD	Pin 6 = DSR
Pin 2 = RXD	Pin 7 = RTS
Pin 3 = TXD	Pin 8 = CTS
Pin 4 = DTR	Pin 9 = 11-18VDC Input

CHAPTER 3

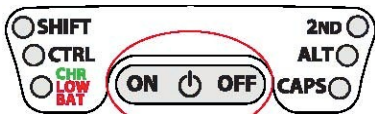
 OPERATION

THE POWER/SUSPEND SWITCH

The On/Off switch is located above the keypad. Its function depends on the state of the XTREME at the time the switch is pressed and on the length of time that the switch is depressed. Operations that the Power switch can initiate are:

- Power On
- Power Off
- Suspend

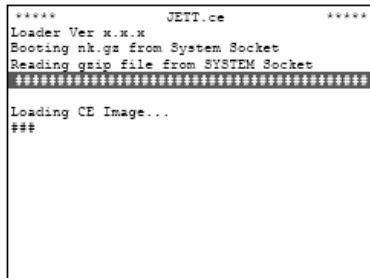
Figure 3-1: Power/Suspend Switch



POWER ON

To power on the XTREME:

- 1) Press and hold the ON/OFF switch for one second. The unit should turn on and begin displaying the boot-up process. For example:



Where x.x.x is the version number

- 2) After approximately 15 seconds, the Windows CE .NET desktop should appear. If the unit does not power up or you cannot select any items from the desktop, refer to the “Troubleshooting” chapter for help.



POWER OFF

To turn off the XTREME, press and hold the ON/Off switch for approximately eight seconds. This action will also terminate running applications and cease serial port operations).

SUSPEND MODE

Suspend mode allows you to suspend, but not terminate active applications. In this mode, the display will turn off and the XTREME will cease serial port operations. For battery-powered units, use of Suspend mode also conserves battery power.

To place the unit in Suspend mode, press and release the ON/Off switch.

To take the XTREME out of Suspend mode, press and release the ON/Off switch again. The display will turn on and the XTREME will resume running any suspended application, but you must restart any serial port operations.

If you attempt to resume immediately after suspending the XTREME or vice versa, the unit will automatically delay three seconds before resuming or suspending.

USING THE RECHARGEABLE BATTERY

The XTREME comes with a rechargeable Nickel Metal Hydride (NiMH) battery pack that can provide up to six hours of operating time on a full charge (depending on power management and use). This battery is fully charged and installed in the unit when shipped. However, because some battery dissipation occurs between the time when the unit ships and when you start using it, you should charge the unit for approximately four hours before using it without the battery charger/power supply connected.

CHARGE/LOW BATTERY INDICATOR

When using the NiMH battery pack, the CHARGE/LOW BAT LED will indicate the current battery status as shown in the table below.

Figure 3-2: Charge/Low Battery Indicator



Table 3-1: Charge/Low Battery Indicator Functions

Function	Description
CHARGE	<p>With the power supply connected, the CHARGE/LOW BAT LED will indicate one of following conditions:</p> <p>High Power Charge—the LED will turn solid green until the battery reaches 80% capacity of its charge capacity</p> <p>Trickle Charge—the LED will blink green about four times a second when the battery reaches 80% capacity of its charge capacity</p>
LOW BAT	<p>With the power supply disconnected, the CHARGE/LOW BAT LED will indicate one of following conditions:</p> <p>Batteries are low—the CHARGE/LOW BAT LED will blink red once per second when there is approximately 30 minutes of power remaining</p> <p>Batteries are very low—the CHARGE/LOW BAT LED will turn solid red when there is approximately 10 minutes of power is remaining</p>

Charging the Unit

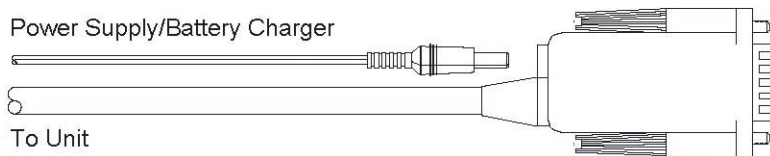
The nickel metal hydride battery technology used in the JETT has exceptional charge life without the “charge memory” characteristic of conventional nickel cadmium batteries. Partially discharged batteries or extended periods with the charger left connected will not adversely affect battery life or performance.

Note: Because the internal battery charger senses several conditions, including temperature, you should charge the unit away from any known or potential heat sources. Units exposed to temperatures in excess of 110 degrees Fahrenheit during the charge cycle may experience incomplete charging and reduced operating time per charge.

Use of other power supplies unless approved by MicroSurvey Software may cause damage to the unit and void the warranty.

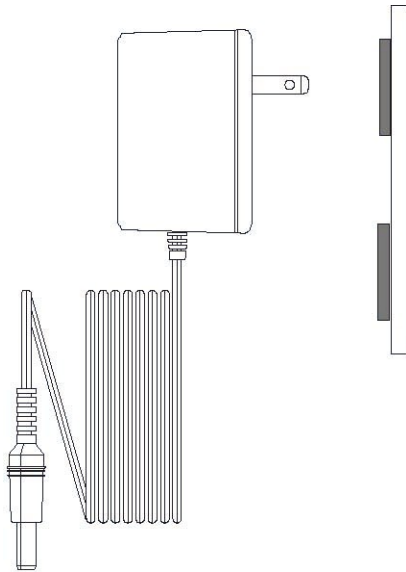
- 1) Depending on your configuration, plug the power jack of the battery charger/power supply into the corresponding cables connector and/or adaptors as shown below.

Figure 3-3: Using 91708/ 91709, and14375 Cables



- 2) Plug the battery charger/power supply into a power outlet. The Charge LED should turn on, indicating that the batteries are charging (see Table 3-1).

Figure 3-4: Power Supply



- 3) Once the battery is fully charged (approximately four hours), you can disconnect the AC power supply and run the XTREME exclusively on battery power.

REPLACING BATTERIES / BATTERY PACK

CAUTION! There is a risk of explosion if you replace the NiMH battery with an incorrect type. Only use a NiMH battery supplied with your unit or a replacement NiMH battery supplied, recommended, or approved by MicroSurvey Software, Inc.

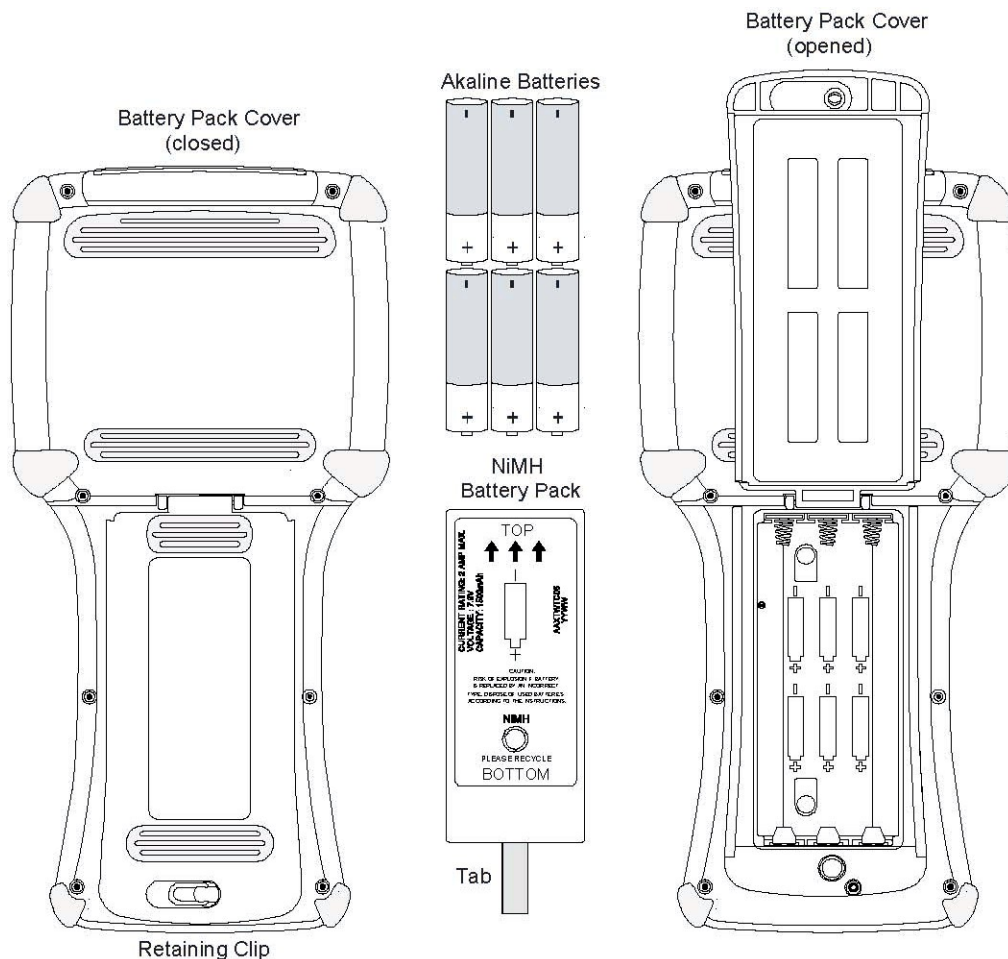
When using alkaline batteries, replace all alkaline batteries in the XTREME at the same time. Do not mix old and new batteries, mix different types or brands of batteries, or dispose of the batteries in a fire. These actions can cause battery rupture or leakage that result in personal injury or property damage.

Remove the batteries from the XTREME when not using the XTREME for extended periods. Store the batteries in a cool, dry location at normal room temperature.

To replace the rechargeable battery pack or change AA batteries:

- 1) Turn the power off. With the unit face down, pull the battery cover retaining clip up from its recessed slot and turn the clip in a counter clockwise motion (see Figure 3-5).
- 2) Lift the cover up and remove the batteries/battery pack.
- 3) If the unit contains a NIMH battery pack, use the tab to lift up on the battery pack and then out.
- 4) Close the battery cover and turn the battery cover retaining clip clockwise to lock the cover.

Figure 3-5: Changing Batteries



DATA ENTRY

52-KEY KEYPADS

This joystick style keypad with bezel nomenclature features easy screen navigation and alphanumeric keypad entry and four programmable function keys. Users can also access navigation keys and backlight control via the SHIFT key.

CTRL and ALT Keys—operate in the same manner as on conventional PCs, except that by default they have a one-time locking action to facilitate one-handed operation.

SHIFT Key—unlike conventional PC keyboards, the SHIFT key enables you to access symbols, punctuation marks and navigation arrows rather than shift alphabetic keys to uppercase. By default, the SHIFT key has a one-time action. However, you can press the Shift key twice and lock the keypad into Shift mode. Pressing the Shift key a third time will release Shift mode.

2ND Key— shifts the numeric keys to corresponding function keys (1 = F1, 2 =F2, etc.) that are found on conventional PC keyboards. It also shifts other keys for punctuation, non-printing characters (such as Delete and TAB), and PC key definitions (such as Page Up, Page Down, Home, Insert and Caps Lock).

Like the Shift key, the 2ND key has a default one-time action and a locking mode (i.e., pressing the 2ND key twice will lock the keypad into 2ND mode).

KEY REPEAT

By default, the XTREME does not automatically repeat a key stroke when you hold down a key. However, you can enable the key repeat function by configuring the Keyboard setting in the Control Panel.

CE KEYBOARD

In addition to entering data through the keypad, you can also enter data by using the CE Keyboard. This utility displays a keyboard on the screen to allow data entry via the Command Line or into applications where “text accessibility” control has focus (i.e., text or combo box).

To use the CE Keyboard, select Programs > Tools> CeKeys from the Start menu.



To minimize the keyboard, click the keyboard icon that appears in the system tray

Figure 3-11: CE Keyboard

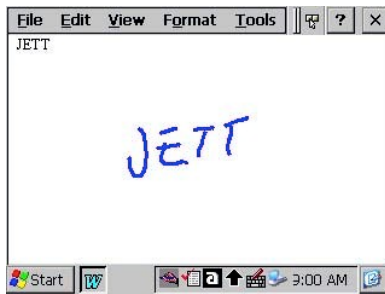


TRANSCRIBER

Microsoft Transcriber is a natural handwriting recognition software program that interprets pen movement across the screen as handwriting (cursive, print or mixed) input. For more information, please refer to Microsoft Transcriber Help on the XTREME.

To run Microsoft Transcriber, select Programs > Tools> Transcriber from the Start menu.

Figure 3-12: Transcriber



THE WINDOWS CE DESKTOP

This section provides a brief overview of the functions that appear on the XTREME desktop. For information on how to change desktop settings, refer to Windows CE .NET help (Start > Help).








Figure 3-13: Windows CE .NET Desktop




DESKTOP FUNCTIONS

You can access the following applications, functions and data entry utilities from the XTREME desktop:

Table 3-3: Desktop Functions

Icon	Function	Description
	Recycle Bin	Use the Recycle Bin to restore deleted files or empty the bin to create more disk space.
	My Device	Use My Computer to navigate and view the folders and files stored on the XTREME.
	Inbox	Use the Inbox to send and receive e-mail by connecting to a POP3 or IMAP4 server.
	My Documents	The default storage location for documents, graphics, and other files.
	Microsoft WordPad	Use WordPad to create or edit text files that contain formatting or graphics.
	Internet Explorer	Use Internet Explorer to view Web pages. You will need a modem or Ethernet card to connect to an Internet service provider (ISP) or network.
	PC Link	Use PC Link to make an ActiveSync, Bluetooth or other type of connection to another device

	Media Player	With Windows Media Player, you can view and listen to multimedia files (audio playback requires a Bluetooth stereo headset and appropriate service).
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THE TASKBAR

The taskbar at the bottom of the XTREME desktop displays the Start button, buttons of currently running applications, the Status Area and the Show Desktop icon.

Tap the Start button to display the Start menu (see below for details). For each open application, a button appears on the taskbar. Simply tap the button to activate the application.

The status area appears on the right and by default displays small icons for the input panel, current time, power status and network connections. Tap an icon to activate the related program.

Tapping the Show Desktop icon minimizes active applications and redisplay the desktop. Tapping the Keyboard icon displays the Input Panel menu for data entry.





Figure 3-14: Windows CE Desktop Taskbar



POWER STATUS ICONS

The XTREME will display power status icons (Table 3-4) in the taskbar status area (Figure 3-14) to indicate power use, charging status and low battery conditions.

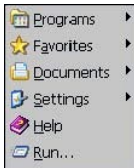
Table 3-4: Power Status Icons

Icon	Description
	External AC power supply connected
	Batteries are charging
	Batteries are low – approximately 60 minutes or less of use remaining (the CHARGE/LOW BAT LED will blink red once per second)
	Batteries are very low – approximately 10 minutes or less of use remaining (the CHARGE/LOW BAT LED will turn solid red)

THE START MENU

When you tap Start, the Start menu appears.

Figure 3-15: Start Menu



By tapping one of the menu's icons (and not the name), you can:

- Open programs that do not appear on the desktop
- View a list of web sites added to your Favorites List
- View recently accessed documents and images
- Access the Control Panel, establish connections, or configure the Taskbar and Start Menu
- View Help
- Start an application using the Run command

MISCELLANEOUS TOOLS

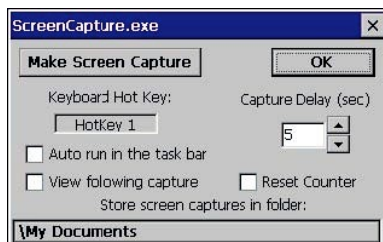
You can access the following utility programs from the Tools menu.

SCREEN CAPTURE

The Screen Capture program takes a picture of the screen and saves it as a bitmap file (.BMP) to a designated location. You can set up the program to run from the system tray, or by pressing a hot key.

To setup the Screen Capture program:

- 1) From the Start menu, select Programs > Tools > Screen Capture. The ScreenCapture.exe dialog box appears:



By default, the Screen Capture program is set to take a picture by pressing HotKey1 after a five-second delay.

- 2) To change the wait time before the Screen Capture program takes a picture, tapping the up or down scroll bars under Capture Delay (sec). The default value is five seconds.
- 3) To change the Keyboard Hot Key assignment, you must access the Hot Key applet in the Control Panel. The default value is five HotKey1
- 4) To have the Screen Capture program take a picture when you tap its icon in the System Tray, check Auto run in the task bar.

Note: To deselect this option after making it active, tap and hold the icon until the Screen Capture program appears.

- 5) To view the picture immediately following the screen capture, check View following capture.
- 6) To change the default folder (My Document) where picture are stored, tap the button under Store screen capture in folder.



- 7) Select a new location and tap OK.
- 8) By default the Screen Capture program, automatically assigns a number to each screen capture. The numbering scheme starts at JET00000 and increment by one after each capture. To set this number back to JET00000, check Reset the counter.

Note: Screen captures stored in folders other than the SystemCF folder will be lost if you remove power from the unit.

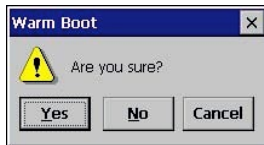
Reset Device

WARM BOOT

Occasionally, a program may encounter an error from which it cannot recover. In these cases, you can perform a warm boot, which will reinitialize the unit without affecting the contents stored in virtual memory.

To perform a warm boot:

- 1) Select Programs | Tools | Warm Boot. The “Are you sure” prompt appears.



- 2) Tap **Yes** to warm boot the unit.

Hard Reset

To hard reset the MicroSurvey Tracker, press and hold the ON/Off switch between 10 and 15 seconds. The screen should turn off, and the boot-up process should start when you press the ON/Off switch. After approximately 20-25 seconds, the Windows CE .NET desktop should appear.

Note: Holding the Power/Resume button longer than six seconds will turn off the MicroSurvey Tracker.

Note: A hard reset will not erase anything saved in the System CF location on your Tracker.

The Tracker is set up to create a shortcut to FieldGenius/EVR on the main desktop after a hard reset.

MANUALLY SAVING THE PERSISTENT REGISTRY

The XTREME internal memory consists of DRAM and Flash. Typically, any changes made to the XTREME including file creation are temporarily stored in the unit’s DRAM. You must then copy the files from DRAM to internal flash memory or a removable compact flash card to store the information permanently.

Consequently, if you do not store the information to flash memory and the unit loses power, all information

stored in DRAM will be lost. However, whenever you make changes that affect the registry, such as changing settings in the Control Panel or installing software, you can permanently store registry changes without writing to flash memory by using the Persistent Registry.

Note: The XTREME will also store registry information every time you perform a suspend/resume operation.

To store registry information on the XTREME permanently:

- 1) From the Start menu, select Programs | Tools | SaveReg.
- 2) The XTREME will begin saving the registry.

Saving Registry. Standby..

- 3) After you successfully save the registry, a message box will appear:

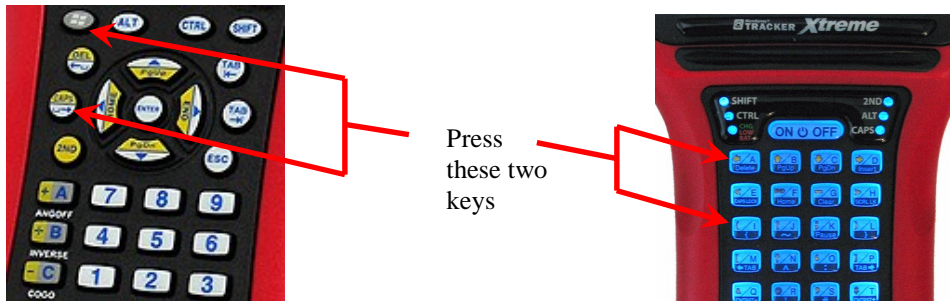


- 4) Tap OK to close the message box.

RESETTING THE REGISTRY

To reset the Windows CE .NET registry back to the factory default settings:

- 1) Turn off the MicroSurvey Tracker and hold the power button for 10 seconds.
- 2) Release the power button
- 3) Press and release the power button to start the reboot process.
- 4) This step is important. As soon as you release the power button in step 3, you then have to hold down the “Windows Key” and “Caps” keys, or the “A” and “I” keys (depending on which keypad your Tracker has, see below) and continue holding them until the white reboot screen appears.



- 5) When the white screen appears, you can release the two keys.
- 6) If you are successful, the screen will display version information, followed by “Invalidating Persistent Registry,” before it completes the boot up process: For example:

```

***** JETT.ce *****
Loader Ver x.x.x
Invalidating Persistent
Registry
Booting from System Socket
Loading CE image...
#####

```

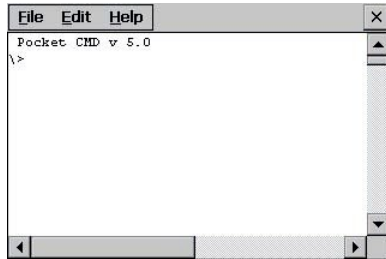
Where x.x.x is the version number

COMMAND PROMPT WINDOWS

The command prompt window allows you to execute limited MS-DOS command line arguments (e.g., CD SystemCF, Run TEST.BAT, etc.).

To open the Command Prompt window:

- 1) From the Start menu, select Programs > Tools> Command Prompt. The Command Prompt window opens:



- 2) You can then type in your commands. For a list of supported commands, type Help and press Enter.
- 3) To end the session, type Exit and press Enter.

SYSTEMCF FOLDER

The only folder that provides non-volatile (permanent) storage is the SystemCF folder. Information stored in other folders will be lost when you remove power from the XTREME. You can however, have the XTREME automatically copy files from the SystemCF to other folders when booting up.

USING THE COMPACT FLASH SLOT

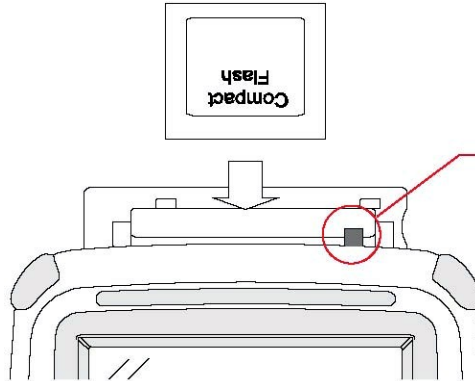
The Compact Flash Slot located on top of the XTREME enables you utilize a variety of devices such as memory cards, barcode scanners, GPS cards and network cards.

If you intend to use a device card, it may also be necessary to install a driver. If so, make sure the card is Windows CE 5.0 compatible and you have the necessary drivers. If you are not sure, check with the card manufacturer before attempting to install the card.

To use the compact flash slot:

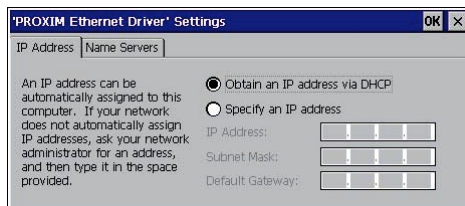
- 1) If needed, remove any screws from the cover to access the Compact Flash slot. Refer to the “Compact Flash Slot Cover” section for information about cover and screw types.
- 2) With the front of the display facing you, push the compact flash slot cover to the left. The slot cover will automatically pop open. If the cover has a slot, you can skip this step.
- 3) Insert the compact flash/device card into the slot with the front of the display facing you and the top of the card pointed to the slot until it clicks and the release lever moves upward.

Figure 3-16: Using the Compact Flash Slot

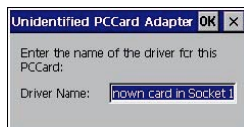


Close the cover.

- 4) Close the cover.
- 5) When inserting memory cards, a “UserCF” folder will appear when you open My Computer. You can then copy and paste the contents of UserCF to the other folders on the XTREME.
- 6) When inserting device cards, the XTREME will attempt to recognize the device. If it finds a driver for the device, the XTREME will display a dialog box for that device. For example:



- 7) If the XTREME cannot find a driver for the device, it will display the following dialog box:



- 8) If the correct card type appears, you can enter the appropriate information in the dialog box and then tap OK to complete the installation.
- 9) To remove a card from a slot, simply push the card release lever down and remove the card.

CHAPTER 4



























CONFIGURATION

THE CONTROL PANEL

The table below lists the available control panel functions on the XTREME.

Table 4-1: Control Panel Functions

Icon	Function	Description
	Aux CF Card	This function enables you to enable/disable power to CF cards installed in the internal CF Card slot, which not user accessible.
	Aux Switch	For units with a second COM that supplies 5VDC output, use this function to set the default power state (On or Off), and test the connected devices.
	Backlight	Use this function to adjust the backlight setting for the following conditions: Line Active, Line Active Inactive, Battery Active and Battery Inactive.
	Battery Select	Select one of the following options to calibrate the power status icons for proper use: NIMH, AC Line or Alkaline.
	Beep Select	Use this function to change the frequency, volume and duration properties of the beep.
	Certificates	Use this function to import, view or remove certificates, which protect your personal information on the Internet, and protect your computer from unsafe software.
	CPU Speed	Use this function to determine the current CPU and cold boot-up speed. Allowable selections are 312 MHz and 624 MHz).
	Date/Time	Use this function to adjust the date, time and time zone.
	Dialing	Use this function to adjust the dialing location settings and dialing patterns when using a modem.
	Display	Use this function to adjust the backlight timeout, change the background image or change the desktop color scheme.
	Display Rotation	Use this function to rotate the screen 180 degrees (upside down).
	Hot Keys	Use this function to assign functionality to the unit's eight programmable keys.

	Internet Options	Use this function to set up connections, security settings and internet related functions.
	Keyboard	Use this function to change the repeat delay and repeat rate.
	Network and Dial-up Connections	Use this function to change network adapter settings and/or set up identification for remote networks.
	Owner	Use this function to enter the owner name, address, phone numbers, notes and network ID.
	Password	Use this function to enable password protection and set a password.
	PC Connection	Use this function to enable direct connection to a desktop computer
	Power	Use this function to: Check battery power Set device to turn off when idle Set up power schemes Check the power levels of your system devices
	Regional Settings	Use this function to change the appearance of region specific information, such as date, time and currency.
	Remove Programs	This function enables you to remove programs installed in RAM.
	Stylus	Use this function to recalibrate the touch screen and adjust the stylus double-tap rate.
	System	Use this function to view system information, change the RAM (Program/Storage memory) division, change the device name and change the device description.
	VComAdj	Use this function to minimize screen flicker and adjust contrast.

POWER MANAGEMENT

Battery-powered units can utilize a rechargeable Nickel Metal Hydride (NiMH) battery pack that has an average operating time of four hours on a full charge with power management and approximately six hours without power management. As with all battery-powered devices, the operating time is completely dependent on the environment, device usage and the number and type of power-drawing peripherals attached. The battery discharge rate in a full “Power Off” state is only slightly higher to the self-discharge rate of the battery itself.

Note: Allowing the batteries to remain in a low or very low condition will cause the unit to enter Suspend mode. In either case, you should save your work and recharge the unit as soon as possible

To lengthen the time between charges, you can perform the following actions:

- Use external power for PC Card operations whenever possible— some PC Cards as well as extended communication via the serial port, may require large amounts of power to operate, and can

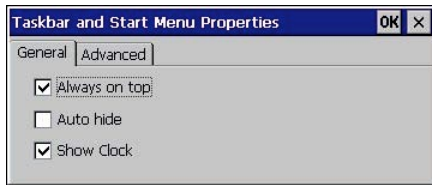
quickly drain the batteries.

- Limit the use of backlight—minimize backlight use when you are operating on battery power. You can adjust the backlight timeout level through the Display Settings in the Control Panel or on some units by using the keypad.
- Shorten Auto-suspend time—the XTREME is automatically set to suspend operation to conserve battery power when you have not used the keyboard or the stylus after three minutes. You can increase the Auto-suspend time by changing the Power settings in the Control Panel.
- Disable WIFI and Bluetooth communications if they are not being used.

TASKBAR AND START MENU SETTINGS

To change the Taskbar and Start Menu settings:

- 1) Select Start > Settings> Taskbar & Start Menu. The Taskbar and Start Menu Properties dialog box opens:
- 2) Select the General tab:



- 3) Check Always on Top to ensure that the taskbar is always visible, even when a program appears in a full window (maximized).
- 4) Check Auto hide to display the taskbar just when you point to the taskbar area.
- 5) Check Show Clock to display the time of day in the taskbar.
- 6) Select the Advanced tab:



- 7) Tap the Clear button to remove the contents of the documents menu.
- 8) Check the Expand Control Panel box to display the contents of the Control Panel as items on the Settings| Control Panel menu.
- 9) Tap OK to save the settings and exit the menu.

NETWORK CONNECTIONS

You can connect directly to a network to access e-mail, access files available on a network server or browse the Internet via the TRACKER XTREME's integrated Bluetooth or internal WLAN options. You can also connect directly to a network using one of the following approved card:

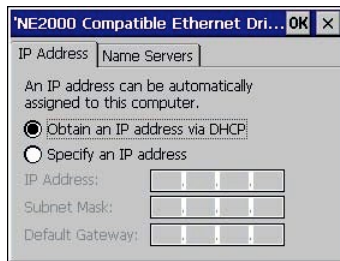
- Socket Low Power Wired Ethernet CF Card
- Socket Low Power Wireless LAN CF Card (U.S.A. or International)

Note: If you are using communications cards other than those supplied by MicroSurvey Software, you will need to ensure that the card manufacturer supports Windows CE 5.0.

CREATING A WIRED ETHERNET NETWORK CONNECTION

To create a Wired Ethernet connection:

- 1) Insert the Ethernet card into the XTREME and connect the cable to the network.
- 2) Select Start > Settings > Control Panel. Double-tap Network and Dial-Up Connections.
- 3) Double-tap the connection icon for the adapter. For example, if you have a NE2001 Ethernet adapter, double-click the NE2001 connection icon.
- 4) In the Ethernet Driver Settings dialog box, select Obtain an IP address via DHCP and tap OK.



- 5) If prompted, enter the User Name, Password, and Domain name used to log on to your network.

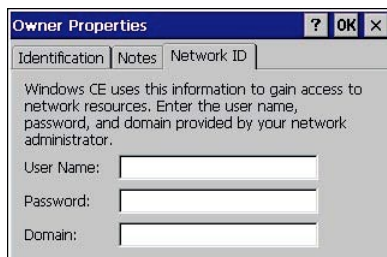
CREATING A WIRELESS CONNECTION

To create a wireless network connection, using an approved wireless card or integrated option, refer to either the TRACKER XTREME Wi-Fi Setup and Configuration Guide or the TRACKER XTREME Bluetooth Setup and Configuration Guide.

SETTING UP IDENTIFICATION FOR REMOTE NETWORKS

To set up identification for remote networks:

- 1) Select Start > Settings > Control Panel.
- 2) Double-tap Owner.
- 3) In the Network ID tab, enter the user name, password, and domain name you use to log on to the remote network.



CONNECTING TO A MAIL SERVER

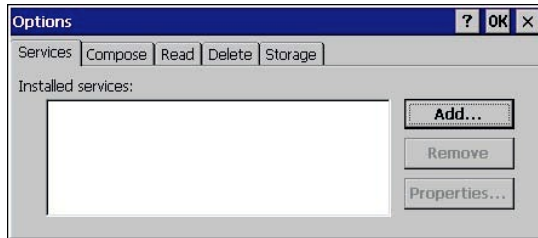
You can send and receive e-mail by connecting to a POP3 or IMAP4 server. Inbox contains an e-mail service for each method you use. For either service, you must establish a connection to your Internet service provider (ISP) or to the appropriate mail server in your local area network. In addition to creating this connection, you must also create the e-mail service.

Prior to setting up a service, you should obtain the following information from your ISP or network administrator: POP3 or IMAP4 server name, SMTP host name, user name, password and domain name (for network connections only).

Notes: Windows CE .Net does not support other mail protocols such as AOL or services that use special authentication, such as MSN. However, you can gain access to the Internet through these services. If you use the same service to connect to different mailboxes, set up and name a different service for each connection. For additional information about the inbox, refer to Windows CE .NET online help.

To connect to your POP3 or IMAP4 mail server:

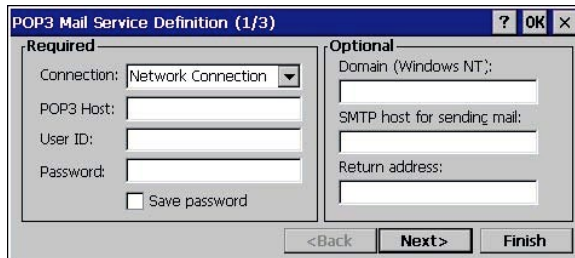
- 1) Select Start > Programs > Inbox > Services > Options. The Options dialog box opens.



- 2) Select the Services tab and tap Add. The Service Name dialog box opens.



- 3) From the Service type list, select POP3 Mail or IMAP4 Mail.
- 4) Enter a unique name for the service (you cannot change this name once entered).
- 5) Tap OK. The Mail Service Setup wizard appears.



- 6) In the Required panel:

Select the name of the connection you created to connect to the mail server. If you are receiving e-mail through a network (Ethernet) connection, select Network Connection.

If you want Inbox to use your current connection, select (none).

If you have not created a connection, select Create new connection, double-tap the Make New Connection icon, and follow the instructions in the wizard. When finished, select Inbox in the Taskbar and continue setting up Inbox.

Enter the POP3 Host or Server (IMAP4) name of the mail server you use to receive and send messages.

Enter the User ID (user name or mailbox ID) assigned to you.

Enter the Password you will use to access this mail account. If you do not want a prompt to enter the password each time you connect, select Save password.

- 7) In the Optional panel:

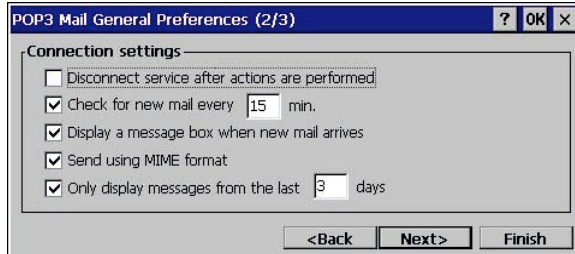
If connecting to a network that uses Windows NT domain security, enter the Windows NT domain

name.

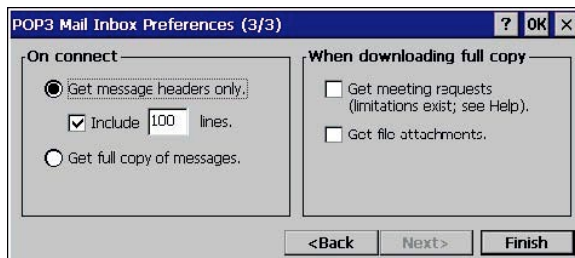
If your mail service uses a separate server for SMTP, enter the SMTP Host name. For POP3 Mail service with an ISP, the ISP must use an SMTP mail gateway.

Enter your return e-mail address.

- 8) Tap Next. The General Preferences dialog box opens.



- 9) Choose any of the settings, all of which are optional, then click Next. The Inbox Preferences dialog box opens.



- 10) Choose any of the settings as needed, then click Finish. The Mail Service Setup wizard closes and the Options dialog box reappears.

Note: Receiving entire messages consumes storage memory.

- 11) Close the Options dialog box to return to the Inbox. .

CREATING AN ACTIVESYNC CONNECTION

ActiveSync is a desktop utility program (available as a free download from Microsoft) that allows you to synchronize certain types of information between a PC and the XTREME. You can also use ActiveSync to transfer files and install programs on the XTREME.

When connecting the XTREME to the PC via ActiveSync, you can opt to create a partnership and subsequently have the PC automatically recognize the XTREME and synchronize information. You can also create a temporary Guest partnership to copy files and install programs.

The following procedures describe how to make an ActiveSync connection using a serial interface cable. For information on how to make an ActiveSync connection using Bluetooth or Wi-Fi, refer to the appropriate manual.

INITIAL COMMUNICATION (Serial)

To setup initial communication between the PC and the XTREME using a serial connection:

- 1) Connect an interface cable to an available COM port on the PC and the XTREME's RS-232 port.
- 2) On the PC, start ActiveSync.



- 3) On the ActiveSync menu bar, select Connection Settings from the File menu. The Connection Settings dialog box opens.



- 4) If not selected, check the Allow serial cable or infrared connection to this COM port box, and assign the number of the available COM port (typically COM1).
- 5) Click OK to exit.
- 6) On the ActiveSync menu bar, select Get Connected from the File menu. ActiveSync will then start the Get Connected wizard.



- 7) Click Next. ActiveSync will start attempting to establish a connection (this process will take several seconds).



- 8) On the XTREME, tap PC Link.



- 9) The following message box appears:

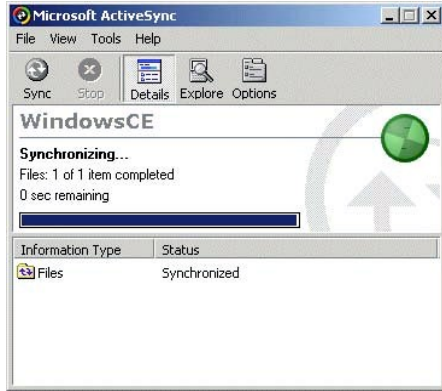


If you don't see "Connecting to PC-115" in the dialog heading, you need to go to Start | Settings | Control Panel. In the Control Panel, find the PC Connection icon and open it. In the PC Connection Properties dialog, press the Change Connection button to select PC-115K. You will need to start over at step 6.

- 10) If ActiveSync successfully establishes communications, the ActiveSync dialog will briefly reappear on the PC and start the New Partnership dialog wizard.



- 11) Select your Partnership option as needed and complete the wizard. The ActiveSync dialog box will reappear and display a status of "Connected." For example:



Note: When creating a partnership, the XTREME will only synchronize files, other information types, such as Inbox, tasks and calendar are not supported.

- 12) On the XTREME, an icon indicating a ActiveSync connection will appear in the system tray.



- 13) To terminate the ActiveSync connection, double-tap the connection icon to display the Connect to PC-115K dialog box and tap Disconnect.



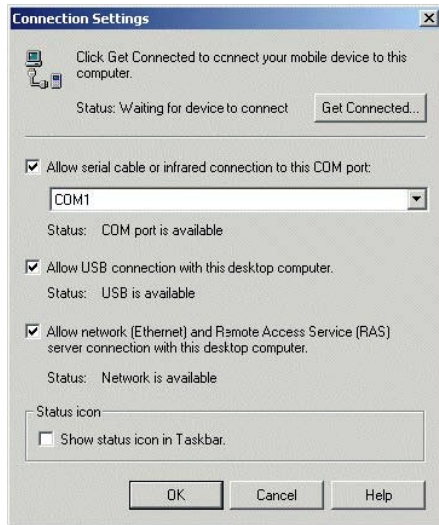
INITIAL COMMUNICATION (USB)

To setup initial communication between the PC and the XTREME using a USB connection:

- 1) Connect an interface cable to an available USB port on the PC. Do not connect it to the XTREME's USB port.
- 2) On the PC, start ActiveSync.



- 3) On the ActiveSync menu bar, select Connection Settings from the File menu. The Connection Settings dialog box opens.



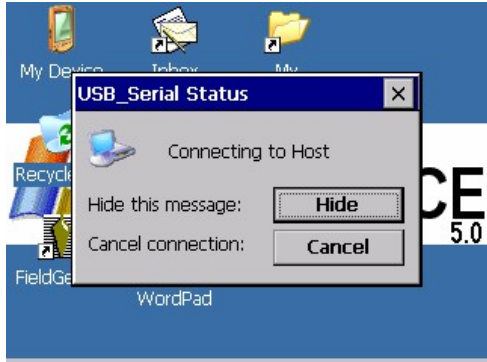
- 4) If not selected, check the Allow USB connection with this desktop computer
- 5) Click OK to exit.
- 6) On the ActiveSync menu bar, select Get Connected from the File menu. ActiveSync will then start the Get Connected wizard.



- 7) Click Next. ActiveSync will start attempting to establish a connection (this process will take several seconds).



- 8) On the XTREME, connect the USB cable to the available USB port.
- 9) The following message box appears:

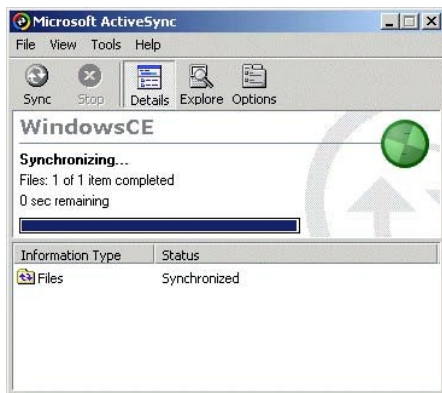


If you don't see "USB_Serial" in the dialog heading, you need to go to Start | Settings | Control Panel. In the Control Panel, find the PC Connection icon and open it. In the PC Connection Properties dialog, press the Change Connection button to select USB_Serial. You will need to start over at step 6.

- 10) If ActiveSync successfully establishes communications, the ActiveSync dialog will briefly reappear on the PC and start the New Partnership dialog wizard.



- 11) Select your Partnership option as needed and complete the wizard. The ActiveSync dialog box will reappear and display a status of "Connected." For example:



Note: When creating a partnership, the XTREME will only synchronize files, other information types, such as Inbox, tasks and calendar are not supported.

- 12) On the XTREME, an icon indicating a ActiveSync connection will appear in the system tray.



- 13) To terminate the ActiveSync connection, double-tap the connection icon to display the Connect to PC-115K dialog box and tap Disconnect.



SUBSEQUENT COMMUNICATION

After you install ActiveSync and establish the initial communication between the PC and the XTREME, use the following procedure to set up subsequent sessions:

- 1) If not already attached, connect an interface cable to an available COM port or USB port on the PC and the RS-232 port or USB port on the XTREME.
- 2) On the XTREME desktop, tap PC Link to attempt to reestablish communications if connecting via a serial connection. If using USB, communication should start automatically when the USB cable is connected to the XTREME.
- 3) If you have setup a partnership, the XTREME will automatically reconnect and attempt to synchronize any files.

If you have not setup a partnership, the New Partnership wizard will appear.



- 4) Select No on the PC and then click Next. A status of "Connected" should appear in the ActiveSync window.



CREATING A REMOTE PC LINK ACTIVESYNC CONNECTION

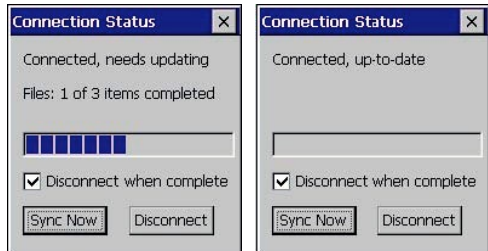
When a wired Ethernet or Wi-Fi card installed on your XTREME, you can connect to a LAN (local area network) to synchronize or copy files.

To make a remote PC link:

- 1) Set up a partnership, between the XTREME device and your desktop computer using a serial connection.
- 2) In ActiveSync, enable the network (Ethernet) connection.
- 3) On the XTREME, insert an approved wired Ethernet or Wi-Fi card into the CF slot. A network connection icon should appear in the system tray.
- 4) Tap the network connection icon in the system tray to establish a network connection on the XTREME.
- 5) After making a connection, tap Start and then select Programs > Communications > PC Link Remote. The ActiveSync dialog box appears.



- 6) From the Connect to drop down list, select the PC name g. The XTREME will then establish a connection and automatically synchronize the files in your computer's desktop folder.



- 7) Tap Sync Now to update your folders manually.
- 8) Tap Disconnect to terminate the connection.

CHAPTER 5



TROUBLESHOOTING

Troubleshooting

MY XTREME DOES NOT RESPOND WHEN I PRESS THE POWER BUTTON.

- Is the unit in Suspend mode?
- If battery-powered, check the batteries.
- Are all cables connected properly:
- Is the power supply plugged into an active AC outlet?
- Is the power connector securely plugged into the XTREME?

I CHANGED MY SYSTEM SETTINGS, BUT WHEN I TURN ON THE XTREME, MY SETTINGS ARE GONE.

- You must save the registry after making any system or configuration changes.

I TRANSFERRED FILES TO THE XTREME FROM MY HOST COMPUTER, BUT WHEN I TURN ON THE XTREME MY TRANSFERRED FILES ARE MISSING.

- To store transferred files permanently, you must file copy the files into internal flash memory or a compact flash card.
- Occasionally, transferred files can be hidden from view, double-tap My Computer, select Options from the View menu and clear all boxes.

THE XTREME ACTS SLOWLY.

- The unit may be short of program memory or storage memory.
- Increase the amount of storage or program memory through the System control in the Control Panel.
- You can also delete any unnecessary files.

I GET LITTLE OR NO SOUND FROM THE XTREME.

- Adjust the volume and sound properties via the Volume and Sound control in the Control Panel.

THE XTREME DOES NOT RECOGNIZE A COMPACT FLASH OR DEVICE CARD.

- The card is not installed or seated properly. Reinstall the card. There may be an unstable connection between the card and the XTREME.
- Remove the card, clean the edge connector with a soft dry cloth, and reinstall the card.

THE XTREME GOES INTO AUTO-SUSPEND AFTER A SHORT PERIOD OF INACTIVITY.

- As a default, the device will auto-suspend after two minutes of inactivity while running on batteries and after thirty minutes of inactivity when running on AC power.

- Adjust the power management properties via the Power control in the Control Panel.

I CANNOT CONNECT TO THE DESKTOP USING ACTIVESYNC

- Do you have ActiveSync installed?
- Check the cable connection between the Xtreme and your computer.
- Check serial or USB connection settings on the Xtreme.
- In ActiveSync, check the Connection Settings for the connection type you are using (USB, Serial or Ethernet)

THE SCREEN IS TOO LIGHT OR TOO DARK

- Adjust the brightness via brightness control in the Control Panel.

THE STYLUS DOESN'T RESPOND PROPERLY.

- The screen is not calibrated correctly to interpret the screen taps. You need to recalibrate the screen.

Appendix A - Specifications

POWER

- Recharge/Line-Power: 11 to 18 VDC, 1.2A
- Standard: Input at 11 to 18 VDC via XTREME connect system interface for line-power or battery charging operations
- Optional: Output at 5 VDC @ 1.2A to operate peripheral devices (either port)
- Rechargeable Battery Type: Nickel Metal Hydride (or 6 AA alkaline batteries)
- Current Rating: 2 Amp Maximum
- Voltage: 7.2 Volts
- Capacity: 2500 mAh

DISPLAY

- Supertwist Nematic Liquid Crystal TFT Touch Screen with white LED backlight
- Resolution: 320 x 240 pixels QVGA color

CPU

- Type: Intel PXA270 processor
- Speed: up to 624 MHz
- Operating System: Windows CE 5.0

MEMORY AND MASS STORAGE

- SDRAM: 128 MB (256 MB optional)
- Internal Compact Flash: 512 MB standard (30 MB reserved for OS), upgradeable to 2 GB
- Optional: Compact flash card slot

USER INPUT

- Touch Screen
- Key Pad: Choice of 52-key joystick style elastomeric keypad, 45-key elastomeric keypad (9 rows x 5 columns), 30-key elastomeric keypad (10 rows x 3 columns), 15-key elastomeric (5 x 3), or 45-key membrane (9 rows x 5 columns)
- Feedback: Tactile and audible
- Optional: LED backlighting

INDICATORS

- 5 Modifier Key/Programmable LEDs
- Charge/Low Battery Indicator (battery-powered units only)

CONNECTIVITY

- Standard: XTREME•connect serial port with choice of full RS-232 or a choice of two of the following: short RS-232 (2), short RS-422, short RS-485 or USB.
- Optional: Bluetooth (Class 1 or 2), Wi-Fi (802.11b) or GPRS

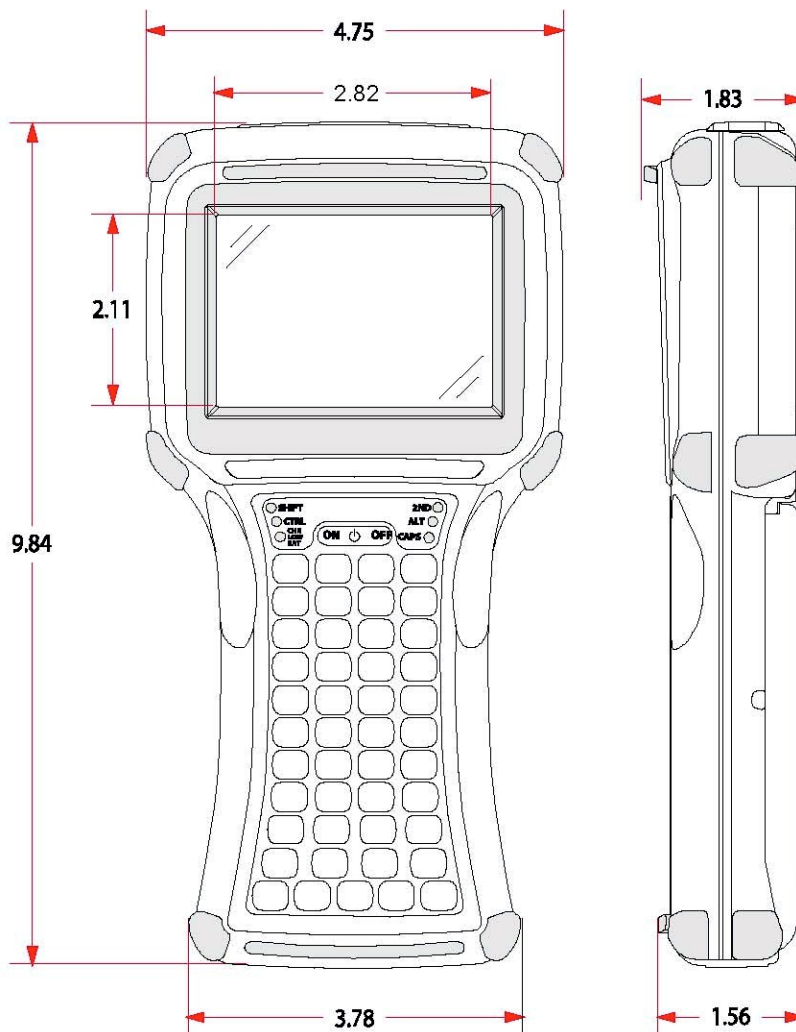
ENVIRONMENTAL

- Operating Temperature: -20°C to +50°C
- Storage Temperature: -20°C to +70°C
- Charging Temperature: -20°C to +40°C
- Humidity: 5-95% Non-condensing
- IP Rating: 65

PHYSICAL DIMENSIONS

- Height (H): 9.84 Inches (250 mm)
- Width (W): 4.75 Inches (120.7 mm)
- Depth (D): 1.83 Inches (46.5 mm)
- Weight with NiMH Batteries: 29 Ounces (822 grams)
- Weight with Alkaline Batteries: 28 Ounces (794 grams)
- Weight without Batteries: 23 Ounces (652 grams)

Figure A-1: Case Dimensions



Appendix B – FieldGenius/Evidence Recorder Information

Installation

All Tracker Xtreme units shipped from our office are shipped with **FieldGenius** or **Evidence Recorder** **already installed**; you do not need to install it from the CD shipped with the Tracker.

Transferring Files

To transfer files between your Tracker and your computer, you will need to install **Microsoft ActiveSync**. ActiveSync is available as a free download from Microsoft's website, or it can be installed directly from the FieldGenius or Evidence Recorder CD that is included with the Tracker. On [Page 26](#) of this manual, you will find detailed information about how to make a connection between your Tracker and your computer.

If you need to install ActiveSync from the FieldGenius or EVR CD, simply follow these instructions:

- 1) Put the CD in your CDROM drive.
- 2) On the main install screen, press **Install**.
- 3) In STEP 1 of the install screen, press the "**Install 4.2 here first**" link to install ActiveSync.

MicroSurvey Transfer

To help you transfer files and projects back and forth, you can install our MicroSurvey Transfer program. The Transfer program helps you define specific locations on your computer's hard drive where you always want to download your Evidence Recorder scenes to. The Transfer program can also automatically find your FieldGenius or Evidence Recorder projects on your Tracker Xtreme.

To learn how to use the Transfer program, once it is installed you can go to the help menu and open the help file. In there you will see instructions on how you can watch a short movie about the Transfer program.

Running FieldGenius or Evidence Recorder for the First Time

To run FieldGenius or Evidence Recorder, all you need to do is find the FieldGenius or EVR icon on the Tracker Desktop. Simply double tap this icon to start the program. Normally FieldGenius or Evidence Recorder is shipped from our office in an unregistered state so when you run the program for the first time, you will see the registration screen.

You will need to call 800-668-3312 and tell us what your machine id is. MicroSurvey will then issue you a key code that will license your copy of FieldGenius or Evidence Recorder.

Getting Help

FieldGenius and Evidence Recorder have a built in help system. On most dialogs, you can tap the help button at the top right corner of the screen to open our help system.

If you didn't find an answer to your question, you can always call our technical support line at 800-668-3312.

Appendix C – Bluetooth Configuration

ABOUT BLUETOOTH

Named after a tenth-century Danish king that united Denmark and Norway, Bluetooth is a worldwide standard for the wireless exchange of data between two devices. Typical uses of Bluetooth include:

- File Transfer
- Local Area Network access
- Object exchange between computers (OBEX)
- Serial port emulation
- File system synchronization

Bluetooth technology utilizes a radio link that operates in the unlicensed Industrial Scientific and Medical (ISM) 2.4GHz band to transmit data at speeds up to 721 Kbps. The effective range between devices is dependent on class. Class 1 devices have a range of approximately 100 meters; Class 2 devices have a range of approximately 10 meters.

Bluetooth technology also employs a Frequency Hopping Spread Spectrum (FHSS) scheme to make the connection robust and operate in a noisy radio frequency environment. FHSS works by hopping to a new frequency each time it transmits or receives a data packet (up to 1600 times per second) to avoid interference from other signals.

When Bluetooth devices come within range of each other, they form an ad hoc network. Each device can then perform a query to discover the available services of the other device.

In order to connect and share services via Bluetooth wireless technology, two devices must support the same Bluetooth Profile(s) as well as opposite device roles (i.e., one must be the server, and the other must be the client). Bluetooth enabled devices often support multiple profiles, and if involved in multiple connections, can perform different device roles simultaneously.

To provide security, each link is encoded and protected against eavesdropping and interference. Bluetooth devices can also request the entry of a matching passkey or Personal Identification Number (PIN) to enable access to its services.

INTRODUCTION

This chapter discusses how to:

- Enable/disable the Bluetooth transmitter
- Making the JETT accessible
- Configuring Bluetooth services

BEFORE YOU START

Before you start, make sure that you enable the Bluetooth device you wish to connect to the JETT and that it is set in discoverable mode. You may also need to configure the service you want to use on the device for authentication, encryption and COM port assignment

When frequently exchanging data, it is best to pair the JETT with the other Bluetooth device. This process saves the connection information (device name, passkey, etc.) and allows automatic actions (such as ActiveSync connections) to occur without operator intervention. Refer to the remote device's user documentation for instructions.

If you are using authentication, make sure you have any PIN codes or passkeys handy at both devices.

BLUETOOTH ICON

The Bluetooth icon in the system tray provides access to the Bluetooth Control Center. It also indicates the state of the Bluetooth transmitter. When the transmitter is active (on), the Bluetooth icon is blue. When the transmitter is inactive (off), the Bluetooth icon is gray with a red “X” next to it.



BLUETOOTH CONTROL CENTER

The Bluetooth Control Center (BCC) is an application that manages Bluetooth operation, accessibility, and services. You can use the BCC to change the settings for connectability/discoverability/pairing modes, authentication/encryption, COM ports, assignments, etc.

To access the Bluetooth Control Center, tap the Bluetooth icon in the System Tray. The Bluetooth Control Center dialog box appears:



The BCC has four tabs: **General**, **Accessibility**, **Services** and **About**.

Through the General tab, you can turn the Bluetooth transmitter on or off and access the Bluetooth Connection Manager and Bluetooth Pairing Wizard.

The Accessibility tab allows you to set the device name (as it will appear to devices trying to make a connection), make the JETT connectable discoverable to other devices.

The Services tab enables you to configure File Transfer, Push and Generic Serial service.

The About tab displays BCC version information.

ENABLE/DISABLE THE BLUETOOTH TRANSMITTER

To enable the Bluetooth transmitter, when its disabled:

- 1) Tap the Bluetooth icon in the System Tray. The Bluetooth Control Center (BCC) dialog box opens.



- 2) Tap the **ON** button. After the JETT successfully enables the transmitter, it will update the status, change the **ON** button to **OFF**, and display the device address in the BCC dialog box.



- 3) After making your selection, tap **OK** to save your changes and exit the BCC.

To disable the Bluetooth transmitter, when its enabled:

- 1) Tap the Bluetooth icon in the System Tray. The Bluetooth Control Center (BCC) dialog box opens.



- 2) Tap the **OFF** button. After the JETT successfully disables the transmitter, it will update the status, change the **OFF** button to **ON**, and no longer display the device address in the BCC dialog box.

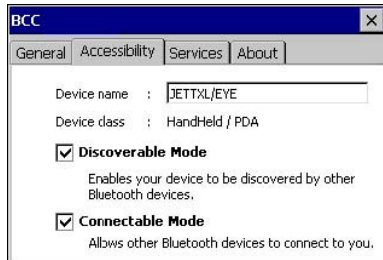


- 3) After making your selection, tap **OK** to save your changes and exit the BCC.

MAKING THE JETT ACCESSIBLE

To determine how the JETT interacts with other Bluetooth devices:

- 1) Tap the Bluetooth icon in the System Tray. The Bluetooth Control Center (BCC) dialog box opens.
- 2) Select the **Accessibility** tab.



- 3) Enter a name that uniquely identifies this JETT to other Bluetooth devices. The default value is "JETTXL/EYE."
- 4) Check or clear the **Discoverable Mode** box to make the JETT viewable/not viewable to other Bluetooth devices. The default value is discoverable.
- 5) Check or clear the **Connectable Mode** box to allow/prevent other Bluetooth devices from connecting to the JETT. The default value is connectable.
- 6) After making your selection, tap **OK** to save your changes and exit the BCC.

CONFIGURING BLUETOOTH SERVICES

You can enable and configure the following Bluetooth services on the JETT:

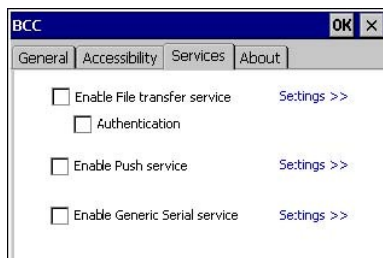
- File Transfer Service
- Push Service
- Generic Serial Service

CONFIGURING FILE TRANSFER SERVICE

The File transfer service enables a remote device to connect to the JETT and perform file transfers via FTP.

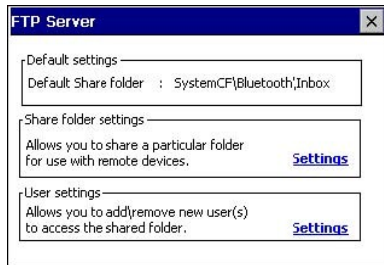
To setup the File Transfer service:

- 1) Tap the Bluetooth icon in the System Tray. The Bluetooth Control Center (BCC) dialog box opens.
- 2) Select the **Services** tab.



- 3) If you do not require connected users to enter a username and password, to perform file transfers, then check **Enable File transfer service**.
- 4) To require users enter a username and password to perform file transfers, check **Authentication** and then check **Enable File transfer service**.

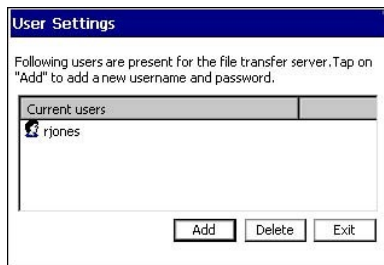
- 5) To configure the shared folder or create users, click the **Settings** >> link that appears next to the Enable File transfer service box. The FTP Server dialog box opens.



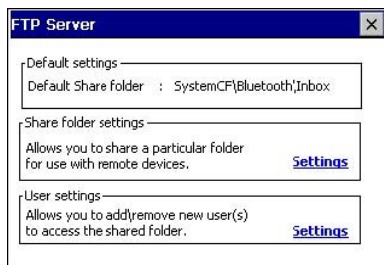
- 6) Under User Settings, click **Settings**. The User Settings dialog box opens.
 7) Tap **Add** to create a new user. The New User dialog box opens.



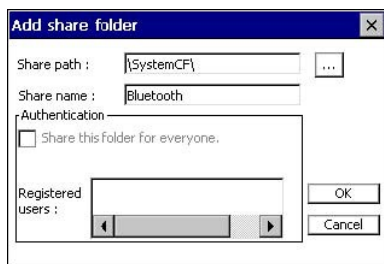
- 8) Type in the **Username** and **Password** and then click **OK**. The User Settings dialog box reopens and displays the current users.



- 9) After entering all your user names and passwords, tap **Exit** to return to the FTP Server dialog box.



- 10) To change the shared folder path, change the share path name or setup up authentication for everyone, click **Settings**. The Add Share folder dialog box opens.



- a) To change the path of the shared folder: Tap the **Browse** button. The Select Directory

dialog box opens.



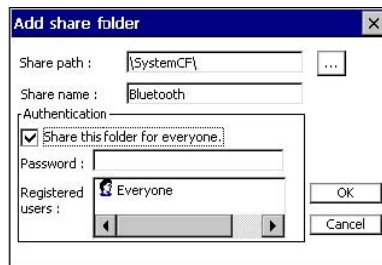
By default, the SystemCF folder is the designated shared folder. You can choose an existing subfolder from the list or tap **Up** to select a different folder.

Warning! If the JETT should lose power, it will only save the contents of the SystemCF folder.

After making your selection, tap **OK**. The Add a Share Folder dialog box reappears.

- b) To change the share name, simply type the new share name in the **share name** box.
- c) To setup authentication for everyone:

Check the **Share this folder for everyone** box. An entry for **Everyone** will appear in the **Registered users** box and a prompt for a **Password** will appear. If needed, type in the password.



- 11) After making all your selections, tap **OK** to return to the FTP Server dialog box and then close the FTP Server dialog box to return to the BCC Services dialog box.

CONFIGURING PUSH SERVICE

The Push Service enables a remote device to receive a vCard from a JETT.

Note: The JETT does not have a default vCard. You must first transfer a vCard from another device.

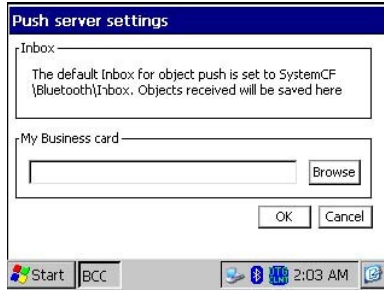
To enable the Push service:

- 1) Tap the Bluetooth icon in the System Tray. The Bluetooth Control Center (BCC) dialog box opens.
- 2) Select the **Services** tab.

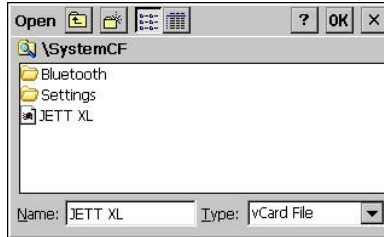


- 3) Click the **Settings >>** link that appears next to the Enable Push Service box. The Push Server Settings dialog box opens.

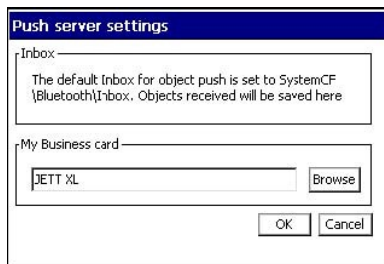
Appendix C – Bluetooth Configuration



- 4) Tap **Browse** to select a business card.



- 5) Tap **OK** to return to the Push Server Settings dialog box.



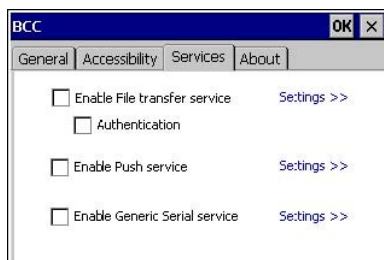
- 6) Tap **OK** to return to the BCC Services dialog box.
- 7) Check **Enable Push service**.

CONFIGURING GENERIC SERIAL SERVICE

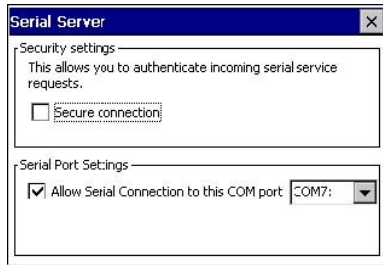
The Generic Serial service enables a remote device to connect to the JETT for RS-232 based serial communications.

To enable generic Serial service:

- 1) Tap the Bluetooth icon in the System Tray. The Bluetooth Control Center (BCC) dialog box opens.
- 2) Select the **Services** tab.



- 3) Click the **Settings >>** link that appears next to the Generic Serial service box. The Serial Server dialog box opens.



- 4) To authenticate incoming serial service request, check **Secure connections**.
- 5) To change the COM port for serial connection, ensure that you **Allow Serial Connection to this COM** port and then select an available COM port (6 or 7).
- 6) Close the Serial Server dialog box to return to the BCC dialog box.
- 7) Check the **Generic Serial service** box to enable serial service.

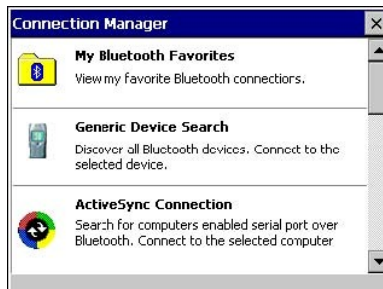
ACCESSING THE CONNECTION MANAGER

Before attempting to make a connection with another device, you should make sure that other device is Bluetooth ready, "Discoverable" and setup for the service you want to use.

- 1) To access the Bluetooth Connection Manager:
- 2) Tap the Bluetooth Connection Manager link in the BCC.



- 3) The Connection Manager wizard appears.



- 4) Use the scroll bars to find a device/service type to search for and then tap on that device/service to begin the connection process.

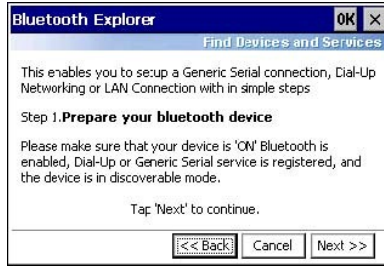
GENERIC DEVICE SEARCH

The Generic Device Search enables you to find all available Bluetooth devices in the immediate area and their available services.

To connect to a device via a generic device search:

- 1) Access the Connection Manager wizard and tap the **Generic Device Search** section. The Find Device and Services window appears.

Appendix C – Bluetooth Configuration



- 2) Follow the onscreen instructions and then tap **Next >>** to continue. The Bluetooth Connection Manager will then search and display a list of available devices.



- 3) Select a device and tap **Next**. The Bluetooth Connection Manager will then search and display the device's services.



- 4) Select a service and tap **Next**. The Bluetooth Connection Manager will prompt you to “Add to favorites.”



- 5) If you wish to add this connection configuration to your list of Bluetooth favorites, check the **Add this connection configuration** box
- 6) Tap **Connect** to continue. The Bluetooth Connection Manager will then attempt to make a connection.



Note: Your connecting device may request a passkey and/or an acknowledgment to complete the

connection.

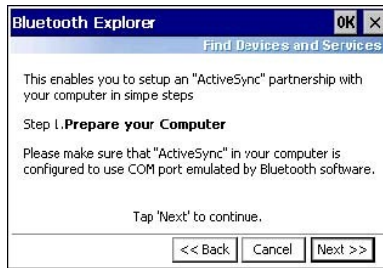
- 7) After making a connection, the Bluetooth Connection Manager will reappear.

MAKING AN ACTIVE SYNC CONNECTION

This section explains how to setup an ActiveSync connection with a computer

To connect to a device via ActiveSync:

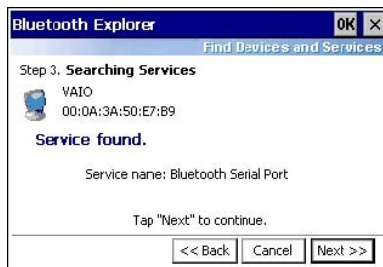
- 1) Access the Connection Manager wizard and tap the **ActiveSync Connection** section. The Find Device and Services window appears.



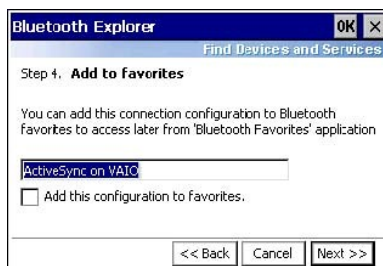
- 2) Follow the onscreen instructions and then tap **Next >>** to continue. The Bluetooth Connection Manager will then search and display a list of available computers.



- 3) Select a device and tap **Next**. The Bluetooth Connection Manager will then search and display the computer's services.



- 4) Tap **Next** to continue. The Bluetooth Connection Manager will prompt you to "Add to favorites."



- 5) If you wish to add this connection to your list of Bluetooth favorites, check the **Add this connection configuration** box

- 6) Tap **Connect** to continue. The Bluetooth Connection Manager will then attempt to make a connection.



- 7) **Note:** Your connecting device may request a passkey and/or an acknowledgment to complete the connection.
- 8) After making a connection, the Bluetooth Connection Manager will reappear.

FILE TRANSFERS

This section explains how to search and discover devices that support file transfer service and also how to:

- Send a file
- Receive a file
- Delete a file
- Create a new folder

MAKING A CONNECTION FOR FILE TRANSFERS

To connect to a computer to perform file transfers:

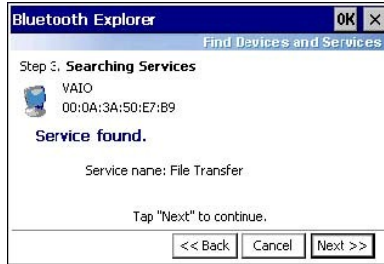
- 1) Access the Connection Manager wizard and tap the **File Transfer** section. The Find Device and Services window appears.



- 2) Follow the onscreen instructions and then tap **Next >>** to continue. The Bluetooth Connection Manager will then search and display a list of available computers.



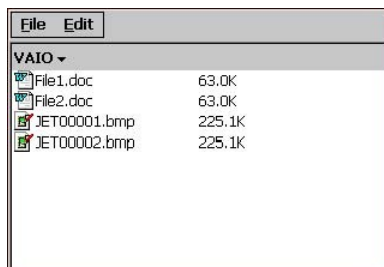
- 3) Select a device and tap **Next**. The Bluetooth Connection Manager will then search and display the computer's services.



- 4) Tap **Next** to continue. The Bluetooth Connection Manager will prompt you to “Add to favorites.”



- 5) If you wish to add this connection to your list of Bluetooth favorites, check the **Add this connection configuration** box
- 6) Tap **Connect** to continue. The Bluetooth Connection Manager will then display File Transfer dialog box, which lists the contents of the connected computer’s Bluetooth Exchange folder.



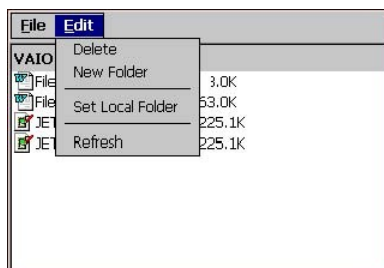
Note: Your connecting device may request a passkey and/or an acknowledgment to complete the connection.

CHANGING THE LOCAL FOLDER

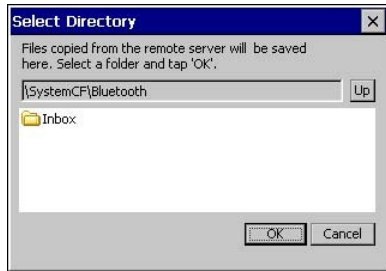
Before receiving files from a remote computer, you may want to change the path on the JETT where all the received files are stored (i.e., the “local” folder). The SystemCF\Bluetooth folder is the default local folder.

To change the path:

- 1) On the File Transfer dialog box, select **Set Local Folder** from the **Edit** menu.



- 2) The Select Directory dialog box appears.

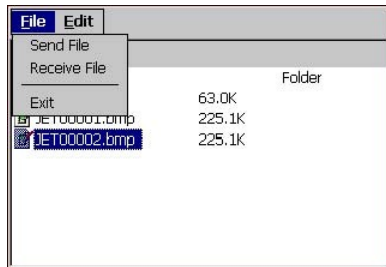


- 3) Select a folder from the list or tap **Up** to select another folder.
Warning! If the JETT should lose power, it will only save the contents of the SystemCF folder.
- 4) After making your selection, tap **OK**. The File Transfer dialog box reappears.
- 5) To end the connection, choose **Exit** from the **File** menu.

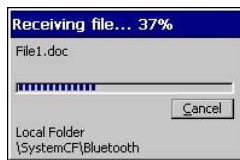
RECEIVING FILES

To receive a file from a remote computer:

- 1) On the File Transfer dialog box, select a file or folder and then choose **Receive File** from the **File** menu.



- 2) A message box will then appear indicating the completion progress. To stop the transfer, tap **Cancel**.

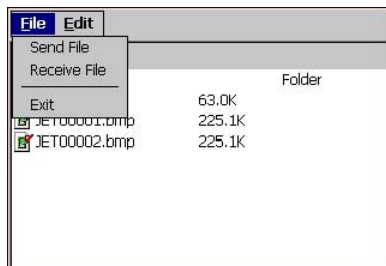


- 3) When the transfer is complete, the File Transfer dialog box reappears.
- 4) To end the connection, select **Exit** from the **File** menu.

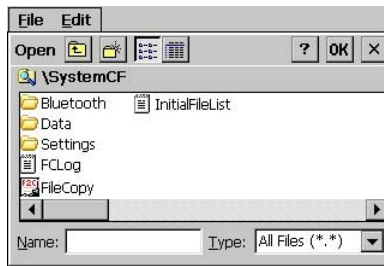
SENDING A FILE

To send a file to a remote computer:

- 1) From the **File** menu, select **Send File**.



- 2) The Open dialog box appears.



- 3) Select a file to send and then tap **OK**. A progress indicator box will then appear. To stop the transfer, tap **Cancel**.

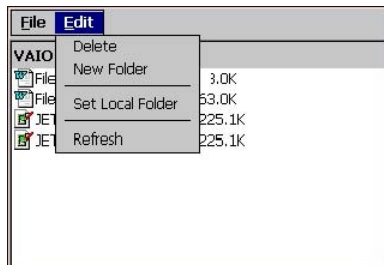


- 4) When the transfer is complete, the File Transfer dialog box reappears.
5) To end the connection, choose **Exit** from the **File** menu.

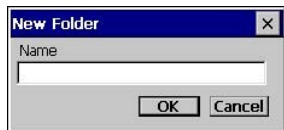
CREATING A NEW FOLDER

To create a new folder on the remote computer:

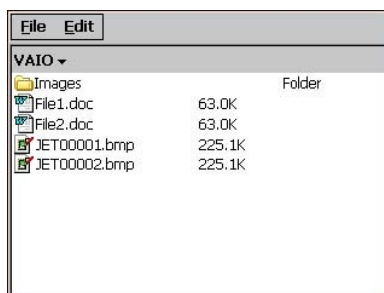
- 1) On the File Transfer dialog box, select **New Folder** from the **Edit** menu.



- 2) The New Folder dialog box appears.



- 3) Type in the name of the new folder and tap **OK**. After it is successfully created, the new folder will appear in the File Transfer dialog box

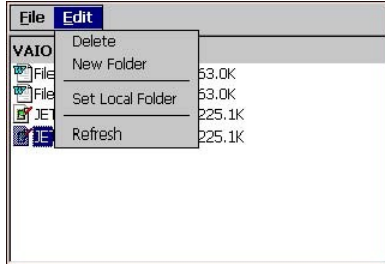


- 4) To end the connection, choose **Exit** from the **File** menu.

DELETING A FILE/FOLDER

To delete a folder on the remote computer:

- 1) On the File Transfer dialog box, select a file or folder to delete and then choose **Delete** from the **File** menu.



- 2) To end the connection, choose **Exit** from the **File** menu.

GENERIC SERIAL DEVICE CONNECTIVITY

The Generic Serial Device Search enables you to find a remote device and establish a serial connection.

To connect to a remote device and establish a serial connection:

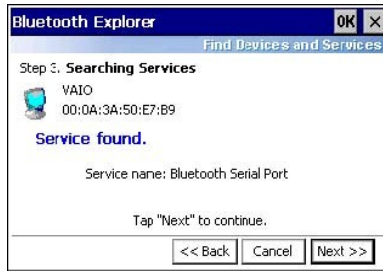
- 1) Access the Connection Manager wizard and tap the **Generic Serial** section. The Find Device and Services window appears.



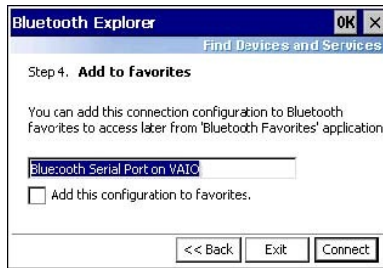
- 2) Follow the onscreen instructions and then tap **Next >>** to continue. The Bluetooth Connection Manager will then search and display a list of available devices.



- 3) Select a device and tap **Next**. The Bluetooth Connection Manager will then search and display the device's services.



- 4) Tap **Next** to continue. The Bluetooth Connection Manager will prompt you to “Add to favorites.”



- 5) If you wish to add this connection configuration to your list of Bluetooth favorites, check the **Add this connection configuration** box
- 6) Tap **Connect** to continue. The Bluetooth Connection Manager will then attempt to make a connection.



- 7) **Note:** Your connecting device may request a passkey and/or an acknowledgment to complete the connection.
- 8) After making a connection, the Bluetooth Connection Manager will reappear.

ESTABLISHING A LAN CONNECTION

This section describes how to connect the JETT to a Bluetooth enabled LAN Access Point (LAP) and browse the web pages.

To connect to a LAP and establish a connection:

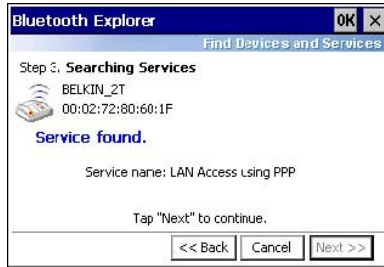
- 1) Access the Connection Manager wizard and tap the **LAN Access Connection** section. The Find Device and Services window appears.



- 2) Follow the onscreen instructions and then tap **Next >>** to continue. The Bluetooth Connection Manager will then search and display a list of available devices.



- 3) Select a LAP and tap **Next**. The Bluetooth Connection Manager will then search and display the device's services.



- 4) Tap **Next** to continue. The Bluetooth Connection Manager will then prompt for the entry of a username and password.



- 5) If the LAP has CHAP authentication, you must enter username and password to establish a connection and then tap **Next** to continue. If the LAP does not support CHAP authentication, just tap **Next** to continue. The Bluetooth Connection Manager will then prompt you to “Add to favorites.”



- 6) If you wish to add this connection configuration to your list of Bluetooth favorites, check the **Add this connection configuration** box

- 7) Tap **Connect** to continue. The Bluetooth Connection Manager will then attempt to make a connection.



- 8) **Note:** Your connecting device may request a passkey and/or an acknowledgment to complete the connection.
- 9) After making a connection, the Bluetooth Connection Manager will open Internet Explorer and attempt to connect to the Internet.



PERSONAL AREA NETWORKING

This section describes how to setup a JETT to join a Personal Area Network (PAN) and access LAN or WAN (e.g., GSM, GPRS, Internet, etc.) resources via a Bluetooth Network Access Point (NAP).

To connect the JETT to a Personal Area Network:

- 1) Access the Connection Manager wizard and tap the **PAN Connection** section. The Find Device and Services window appears.



- 2) Follow the onscreen instructions and then tap **Next >>** to continue. The Bluetooth Connection Manager will then search and display a list of available devices.



- 3) Select a PAN device and tap **Next**. The Bluetooth Connection Manager will then search and display the device's services.



- 4) Tap **Next** to continue. The Bluetooth Connection Manager will prompt you to “Add to favorites.”



- 5) If you wish to add this connection configuration to your list of Bluetooth favorites, check the **Add this connection configuration** box
- 6) Tap **Connect** to continue. The Bluetooth Connection Manager will then attempt to make a connection.



Note: Your connecting device may request a passkey and/or an acknowledgment to complete the connection.

- 7) After making a connection, the Bluetooth Connection Manager will reappear.

DIAL-UP NETWORKING

This section describes how to search for and connect to a Bluetooth enabled phone.

To connect the JETT to a Personal Area Network:

- 1) Access the Connection Manager wizard and tap the **PAN Connection** section. The Find Device and Services window appears.



- 2) Follow the onscreen instructions and then tap **Next >>** to continue. The Bluetooth Connection Manager will then search and display a list of available devices.



- 3) Select a PAN device and tap **Next**. The Bluetooth Connection Manager will then search and display the device’s services.



- 4) Tap **Next** to continue. The Bluetooth Connection Manager will prompt you to “Add to favorites.”



- 5) If you wish to add this connection configuration to your list of Bluetooth favorites, check the **Add this connection configuration** box
- 6) Tap **Connect** to continue. The Bluetooth Connection Manager will then attempt to make a connection.



- 7) **Note:** Your connecting device may request a passkey and/or an acknowledgment to complete the connection.
- 8) After making a connection, the Bluetooth Connection Manager will reappear.

HUMAN INTERFACE DEVICE CONNECTIONS

This section describes how to setup a Bluetooth enabled Human Interface Device (HID), such as keyboard or mouse to use with the JETT.

To connect to a Human Interface Device:

- 1) Access the Connection Manager wizard and tap the **HID Connection** section. The Find Device and Services window appears.



- 2) Follow the onscreen instructions and then tap **Next >>** to continue. The Bluetooth Connection Manager will then search and display a list of available devices.



- 3) Select a PAN device and tap **Next**. The Bluetooth Connection Manager will then search and display the device's services.



- 4) Tap **Next** to continue. In some cases (such as a keyboard connection), the Bluetooth Connection Manager will display a screen for added security. In this screen, the Bluetooth Connection Manager will display a random PIN, that you can use to pair the HID device.



- 5) To pair the device, tap **Initiate Pairing** and then type the displayed PIN on the HID. If you do not want to pair the device, just tap **Next** to continue.



- 6) If you wish to add this connection configuration to your list of Bluetooth favorites, check the **Add this connection configuration** box
- 7) Tap **Connect** to continue. The Bluetooth Connection Manager will then attempt to make a connection.



Note: Your connecting device may request a passkey and/or an acknowledgment to complete the connection.

- 8) After making a connection, the Bluetooth Connection Manager will reappear.

BUSINESS CARD EXCHANGES

This section describes how to send, request or exchange business cards (vCards) with other Bluetooth devices that provide PIM (Personal Information Manager) services.

To search for devices to perform a business card exchange:

- 1) Access the Connection Manager wizard and tap the Business Card Exchange section. The Find Device and Services window appears.



- 2) Follow the onscreen instructions and then tap **Next >>** to continue. The Bluetooth Connection Manager will then search and display a list of available devices.



- 3) Select a device and tap **Next**. The Bluetooth Connection Manager will then search and display the device's services.



- 4) Tap **Next** to continue. The Bluetooth Connection Manager will prompt you to "Add to favorites."



- 5) If you wish to add this connection configuration to your list of Bluetooth favorites, check the **Add this connection configuration** box
- 6) Tap **Connect** to continue. The Bluetooth Connection Manager will then display the Business Card Manager, where you can send an object, request a business card or exchange a business card.



REQUESTING A BUSINESS CARD

To request a business card:

- 1) Tap the **Request Business Card** icon in the Business Card Manager. The JETT will then connect to the other device and request a business card file. A pop-up dialog box will appear indicator transmission progress.



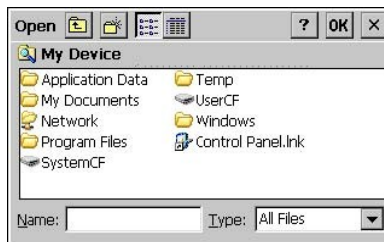
- 2) When the transmission is complete, tap **OK**. The business card file (“.vcf”) is stored in the SystemCF\Bluetooth\Inbox folder.

SENDING OBJECTS

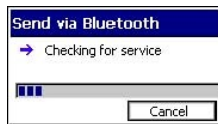
Note: Since the JETT has now provision to create a contact (i.e., business card), you must first create one on another device and either request a business card (see above) or copy it to the JETT before you can a send it to another device. In addition, you must enable the Push service.

To send an object:

- 1) Tap the **Send an Object** icon in the Business Card Manager. The Open dialog box appears.



- 2) Select a file to send and then tap **OK**. The JETT will then connect to the other device and send the file. A pop-up dialog box will appear indicator transmission progress.



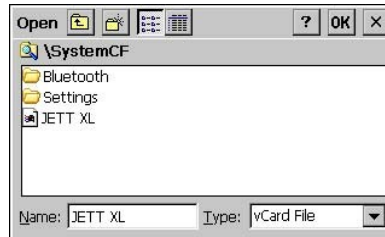
- 3) When the transmission is complete, tap **OK**.

EXCHANGING BUSINESS CARDS

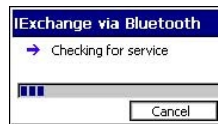
Note: Since the JETT has now provision to create a contact (i.e., business card), you must first create one on another device and either request a business card (see above) or copy it to the JETT before you can exchange cards with another device. In addition, you must enable the Push service.

To exchange business cards:

- 1) Tap the exchange business cards icon in the Business Card Manager. The Open dialog box appears.



- 2) Select a vCard file to exchange. The JETT will then connect to the other device and send the file. A pop-up dialog box will appear indicating transmission progress.



- 3) When the transmission is complete, tap **OK**. The business card file (".vcf") is stored in the SystemCF\Bluetooth\Inbox folder.

ACCESSING MY BLUETOOTH FAVORITES

One of the steps in the Bluetooth connection manager wizard is to add the discovered service of a selected device as a favorite for quick access the next time you wish to connect to that device and use that service.

MAKING A CONNECTION

To make a connection using a favorite:

- 1) Tap the Bluetooth Connection Manager link in the BCC.



- 2) The Connection Manager wizard appears.



- 3) Tap **My Bluetooth Favorites**. The Favorites dialog box appears.

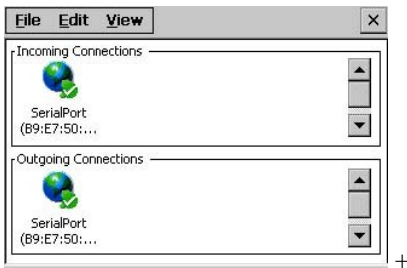


- 4) Double tap a favorite icon. The JETT will then connect to the other device



ACTIVE CONNECTIONS

You can view a list of all incoming and outgoing active connections by selecting **Active Connections** from **View** menu.



DISCONNECTING AN EXISTING CONNECTION

To disconnect an existing connection, tap and hold the corresponding icon, then **Disconnect** in the menu that appears.

PAIRING WIZARD

The Pairing Wizard enables you to authenticate Bluetooth connections using a secret key.

PAIRING THE JETT

To pairing the JETT with another device:

- 1) Tap the Bluetooth Connection Manager link in the BCC.



- 2) The Pairing Wizard starts and the Welcome screen appears.



- 3) Tap **Next** to continue.



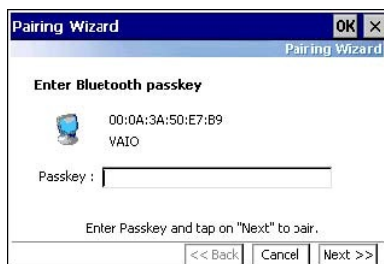
- 4) Select the device type and tap **Next**. The Pairing Wizard will begin searching for all devices of the selected types within range.



- 5) Select a device and tap **Next** to begin pairing. If the Pairing Wizard does not list the device you want to pair, tap the **Refresh** link to perform another search



- 6) After establishing a connection, the Pairing Wizard will prompt for the entry of a passkey.



- 7) Enter the passkey and then tap **Next**. A corresponding dialog box requesting the same information will appear on the connected device. Enter the same passkey on the device to continue.

- 8) If pairing was successful, the Pairing Wizard will display a “Pairing succeeded” message.



- 9) If pairing fails due to a passkey mismatch, the Pairing Wizard will display a “Pairing Failed” message.



UNPAIRING THE JETT

To unpair the JETT from another device:

- 1) Tap the **Pairing wizard** link in the BCC.



- 2) The Pairing Wizard starts and the Welcome screen appears.



- 3) Tap **Next** to continue. The Paired device list appears.



- 4) Select a device and tap the **Unpair** link.

Appendix D – Wireless Configuration

ABOUT THE WIRELESS LAN OPTION

With the Wireless LAN (WLAN) option installed, you can connect the JETT to enterprise and public Wi-Fi LAN systems to access the Internet, email and corporate servers.

For 802.11 networks, the WLAN supports Open or Shared authentication using 40, 64 or 128-bit Wired Equivalent Privacy (WEP) encryption keys. These key can be statically associated or dynamically created depending on the authentication type.

The WLAN also supports with networks that use 802.1X authentication with Extensible Authentication Protocol-Transport Level Security (EAP-TLS) or Protected EAP (PEAP).

EAP-TLS and PEAP provide authenticated access to 802.11 wireless networks and minimize wireless network security risks by providing user and computer identification, centralized authentication and encryption services based on the Wired Equivalent Privacy (WEP) algorithm.

Note: The WLAN only supports long radio preambles (headers). It will not connect to other access points or other WLAN radios that are use short preambles. If you cannot connect to your access point, please check the configuration to ensure it is set for long preamble.

ABOUT THE WLAN SOFTWARE



Installed on the JETT as part of the Windows CE operating system, The WLAN software consists of two components: Wireless Network Connection tools and Client tools.

The Network connection tools enable you setup, configure and connect to a WLAN, while the Client tools perform a variety of utility functions, such as power management and network troubleshooting

Whenever you turn on the JETT, it will automatically start searching for any wireless network advertising its SSID (network name). While searching for wireless networks, the JETT will display the following icons in the system tray to indicate the wireless connection status and the connectivity quality.







CONNECTION STATUS ICONS

The following icons will appear in the system tray to indicate the wireless connection status. Double tap the icon to access the Wireless Network Connection tools.

<i>Icon</i>	<i>Status</i>
	Connected to WLAN
	Disconnected from WLAN

CONNECTIVITY QUALITY ICONS

The following icons will appear in the system tray to indicate the connectivity quality. Tap the icon to access the WLAN Client tools.

<i>Icon</i>	<i>Status</i>
	Excellent connectivity
	Good connectivity
	Marginal connectivity
	Poor connectivity
	No connectivity
	No quality information available

802.11 CONFIGURATION REQUIREMENTS

Before you start, find out what security settings you need to connect to your WLAN network. If applicable, consult with the network administrator. The necessary settings may include one or more of the following:

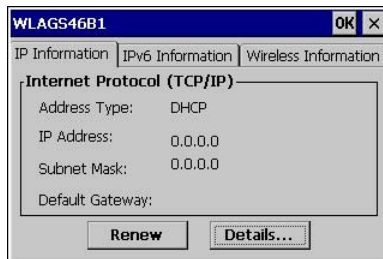
- Wireless network name (SSID)
- WEP key, WEP key format (Hex or ASCII) and Key Index number
- Use of DHCP or Static IP to assign IP addresses

Note: If using static IP addresses, you must assign the addresses through the WLAGS46B1 Network and Dial-up Connections dialog via the Settings menu.

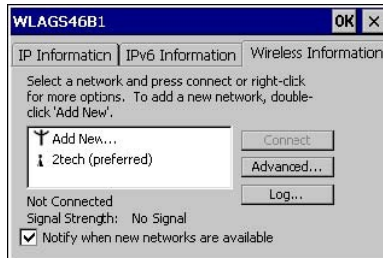
802.11 CONFIGURATION SETUP

To configure the JETT to connect to an 802.11 wireless network:

- 1) In the Status Bar, double-tap the Connection Status icon to access the Network Connection (WLAGS46B1) dialog box.



- 2) Select the Wireless Information tab.



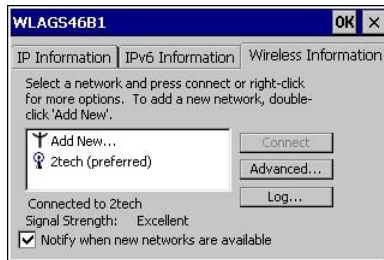
- 3) Double-tap the SSID (name is case-sensitive). If the name does not appear, double-tap Add New. In either case the Wireless Properties dialog box appears.



- 4) If needed, enter the Network name or SSID (case sensitive).
- 5) If using Open authentication without WEP encryption, select Disabled as the Encryption type.
- 6) If using Open or Shared authentication with WEP encryption:
 - a) Select the appropriate authentication type: Open or Shared.

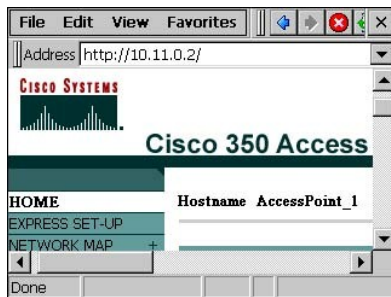
Appendix D – Wireless Configuration

- b) Select WEP as the Encryption type
 - c) Clear the Key is provided to me automatically box.
 - d) Enter the WEP key. For 40/64-bit keys, use either 10 hex digits or 5 ASCII characters. For 128-bit keys, use either 26 hex digits or 13 ASCII characters.
 - e) Enter the Key index number.
 - f) Clear the Enable 802.1X authentication box.
- 7) Tap Ok to exit the Wireless Properties dialog box. The Wireless Information dialog box reappears. The JETT will then begin to scan for the selected network and attempt to make a connection.
 - 8) If the connection was successful, the icon for the selected network will appear with a blue halo.



- 9) Tap Connect to Ok to exit the WLAGS46B1 dialog box.

To verify that you have a successful network connection, launch Internet Explorer and type in the AP's IP address. The AP's Summary Status page should appear.



802.1X CONFIGURATION REQUIREMENTS

This section describes how to install the certificates on the JETT required for PEAP or EAP-TLS authentication, as well as configure and connect the JETT to a 802.1X network.

Before you start, find out what security settings you need to connect to your WLAN network. If applicable, consult with the network administrator. The necessary settings may include one or more of the following:

- Wireless network name (SSID)
- Authentication type, user name and password
- Use of either DHCP or Static IP to assign IP addresses
- Authentication permission restrictions (e.g., domain administrators only)
- A copy of the root certificate from a Trusted Root Authority (no intermediary authority)

Note: If using static IP addresses, you must assign the addresses through the WLAGS46B1 Network and Dial-up Connections dialog via the Settings menu.

INSTALLING CERTIFICATES

Before you can connect to an 802.1X network, you will need to install the Root CA certificate of your network CA into the Trusted Root CA store on the JETT. To do this, you or your network administrator must export the certificate from the CA and make it available for installation on the JETT using an ActiveSync connection or a copying it from a Compact Flash card.

If your network uses EAP-TLS authentication, you also need to install a user (client) certificate.

INSTALLING ROOT CERTIFICATES

To install root certificates on the JETT:

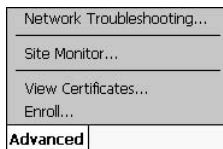
- 1) Using either an ActiveSync connection or Compact Flash card, copy the root certificate into the My Documents folder on the JETT.
- 2) On the JETT, tap the Connectivity Quality icon that appears in the system tray.



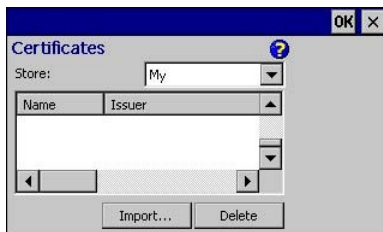
- 3) The WLAN Client Tools dialog box appears.



- 4) Tap Advanced then View Certificates...



- 5) The Certificate Enrollment wizard appears.



- 6) Tap Import... The Open dialog box appears.



- 7) Navigate to the My Documents folder, select the root certificate and tap OK. The JETT will then prompt you to add the certificate to the Root Store.



- 8) Tap Yes to continue. A confirmation message will then appear and indicate the addition of the certificate to the Root certificate store.



- 9) Tap OK to return to the Certificate Enrollment wizard. Select Root from the Store drop-down list to verify the addition. The new certificate should now appear.



- 10) Tap OK to exit.

INSTALLING USER (CLIENT) CERTIFICATES

If you are connection the JETT to a 8021.X network that uses EAP-TLS authentication, you will need to install a user (client) certificate via an ActiveSync connection between the JETT and the Certification Authority server.

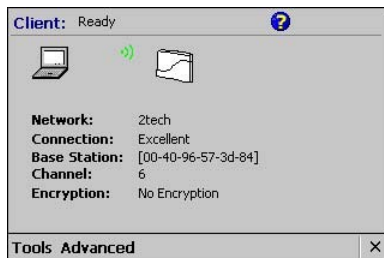
Note: Before starting this procedure you should maximize the desktop area of the JETT by selecting the Taskbar and Start Menu Properties from the Start menu and clearing the Always on top check box.

To install a user (client) certificate for EAP-TLS authentication:

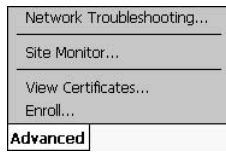
- 1) Establish an ActiveSync connection between the JETT and the Certification Authority server.
- 2) On the JETT, tap the Connectivity Quality icon that appears in the system tray.



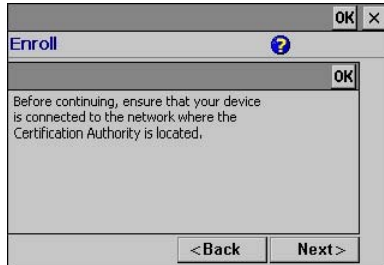
- 3) The WLAN Client Tools dialog box appears.



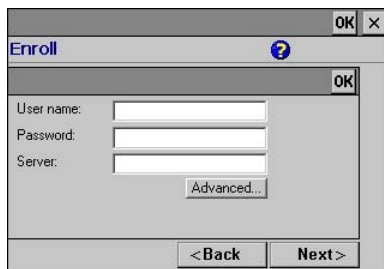
- 4) Tap Advanced then Enroll...



- 5) The Certificate Enrollment wizard appears.



- 6) Tap Next.



- 7) Enter the User name, Password and Server name, and then tap Next. When entering your user name use the format: domain\username. The JETT will then request the certificate from the Certificate Authority server.

- 8) After the JETT indicates the successful receipt of the certificate, tap Finish to complete the process and exit the wizard.

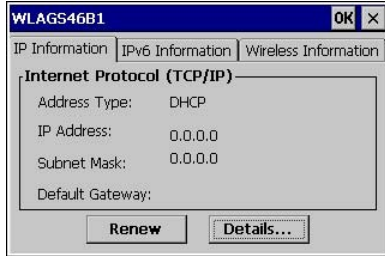


- 9) Disconnect the Active Sync connection. You are now ready to connect to the network.

802.1X CONFIGURATION SETUP

To configure the JETT to connect to an 802.1X wireless network:

- 1) In the Status Bar, double-tap the WLAN icon to access the WLAGS46B1 dialog box.



- 2) Select the Wireless Information tab.



- 3) Double-tap the SSID (name is case-sensitive). If the name does not appear, double-tap Add New. In either case the Wireless Properties dialog box appears.



- 4) Select WEP as the Encryption type.
- 5) Select Open as the Authentication type.
- 6) Check the Key is provided to me automatically box.
- 7) Check the Enable 802.1X authentication box.
- 8) Select the EAP type: TLS or PEAP.
- 9) Tap OK to exit the Wireless Properties dialog box and return to the WLAGS46B1 dialog box

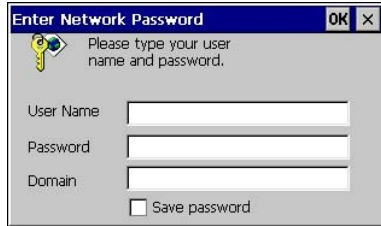


10) Select the network name and tap Connect. While attempting authentication, the JETT and display a User Logon dialog box.

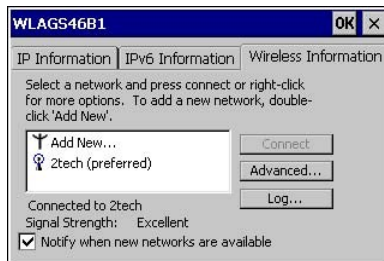
a) For TLS authentication, enter the user name and domain, and then tap OK.



b) For PEAP authentication, enter the user name, password and domain, and then tap OK.

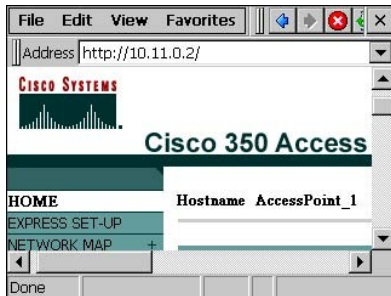


11) If the connection was successful, the icon for the selected network will appear with a blue halo.



12) Tap OK to exit the WLAGS46B1 dialog box.

To verify that you have a successful network connection, launch Internet Explorer and type in the AP's IP address. The AP's Summary Status page should appear.



ABOUT THE WLAN CLIENT TOOLS

The WLAN Client Tools is a set of utility functions that enable you to perform the following tasks:

- Enabling/disabling the radio
- Power Management
- Suspension of WLAN while connected
- Create and view the log file
- Display Version information

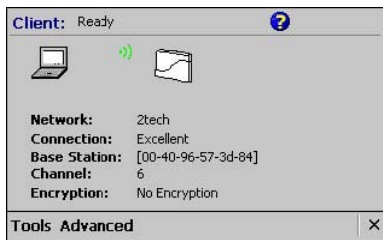
In addition, a set of advanced tools enables you to perform network troubleshooting, monitor site activity and manage certificates (discussed previously).

To access the standard WLAN Client Tools:

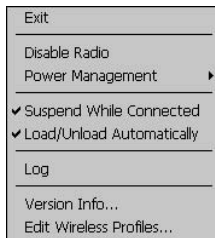
- 1) Tap the Connectivity Quality icon to display the WLAN Client Tools dialog box.



- 2) The WLAN Client Tools dialog box appears.



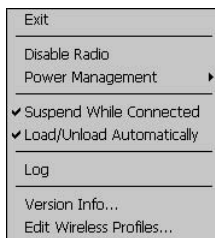
- 3) Tap Tools to display the standard WLAN Client Tools menu.



ENABLE/DISABLE RADIO

If needed, you can enable or disable the radio as follows:

- 1) Access the standard WLAN Client Tools menu.

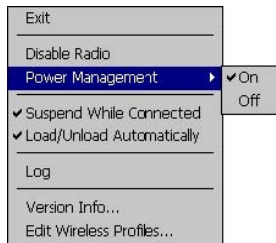


- 2) If enabled, check Disable Radio to turn off the radio. If disabled, check Enable Radio to turn on the radio.

POWER MANAGEMENT

For energy efficiency, you can enable the card's power management option.

- 1) Access the standard WLAN Client Tools menu.

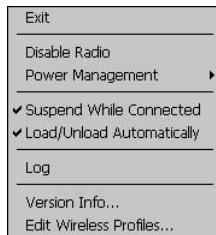


- 2) Select Power Management and then select either On to enable power management or Off to disable power management.

SUSPEND WHILE CONNECTED

To optimize battery life, you can allow the JETT to suspend according to its power settings whenever the WLAN card is connected and there is no data traffic. However, if the JETT suspends while connected to the WLAN, the connection will be dropped.

- 1) Access the standard WLAN Client Tools menu.

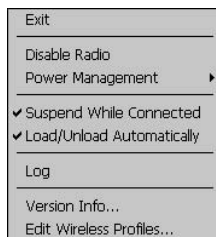


- 2) Clear Suspend While Connected to run the wireless option continuously.
- 3) Check Suspend While Connected to allow the JETT to suspend according to its power settings whenever the WLAN card is connected and there is no data traffic.
- 4) In either case, a message will prompt you to reset the JETT. Tap OK to continue.

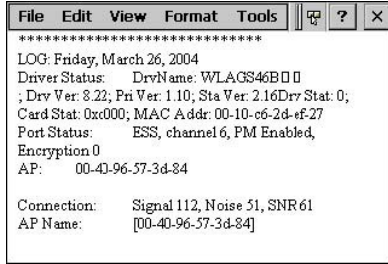
LOG FILE

To help troubleshoot connection problems, you can view the connection log. This log is a snapshot of a connection at the time you enable the log.

- 1) Access the standard WLAN Client Tools menu.



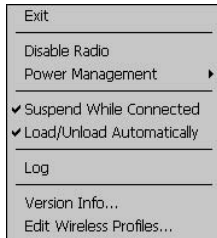
- 2) Tap Log.
- 3) When a confirmation message appears, tap OK to clear the message.
- 4) Open My Computer and double-tap wireless.txt to view the log in Pocket Word.



VERSION INFO

To view version information about the WLAN option:

- 1) Access the standard WLAN Client Tools menu.



- 2) Check Version Info. The Version Info window will appear.



- 3) Tap OK.

ADVANCED CLIENT TOOLS

The advanced Client Tool enables you to perform network troubleshooting, monitor site activity and manage certificates (discussed previously).

To access the advance WLAN Client Tools:

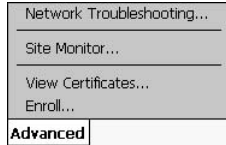
- 1) Tap the Connectivity Quality icon to display the WLAN Client Tools dialog box.



- 2) The WLAN Client Tools dialog box appears.



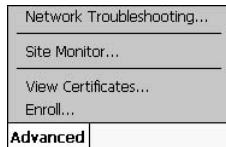
- 3) Tap Advanced to display the Advanced Tools menu.



NETWORK TROUBLESHOOTING

To perform network troubleshooting:

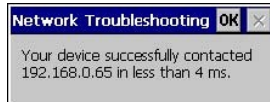
- 1) Access the Advanced Tools menu.



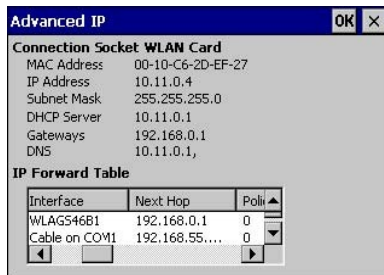
- 2) Tap Network Troubleshooting. The Network Troubleshooting dialog box will appear, displaying the IP address assigned to your JETT.



- 3) Note: If you have an ActiveSync, connection to your host PC, two IP addresses will appear.
- 4) To test network connectivity, select or enter the IP address of the target device, and then tap Ping. A pop-up message will display the results.



- 5) To view Advanced IP information, tap Advanced.



- 6) Use the scroll bars to review the data at the bottom of the screen.
- 7) After reviewing the data, tap OK to return to the Network Troubleshooting dialog box.
- 8) To request a new IP Address, tap IP Renew.



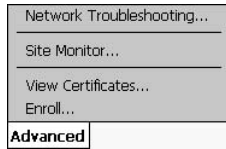
- 9) If updated, the Network Troubleshooting screen should display a new IP address.

- 10) Tap Close to return to the Network Troubleshooting dialog box.
- 11) Tap OK to exit the Network Troubleshooting screen.

SITE MONITOR

Use the Site Monitor option to check the signal qualities of WLAN networks within range.

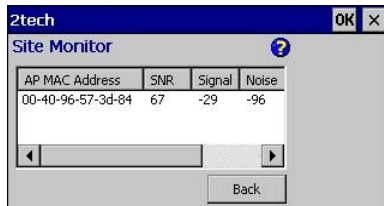
- 1) Access the Advanced Tools menu.



- 2) Tap Site Monitor. The Site Monitor dialog box will appear and list any WLAN networks detected in range.



- 3) To view information about a network, tap the network name. A screen will appear reporting the MAC address, SNR (Signal-to-Noise Ratio), Signal, and Noise of the WLAN network.



- 4) Tap Back to return to the previous screen
- 5) Tap OK to exit the Site Monitor screen.

Using WiFi and ActiveSync

ActiveSync is a desktop utility program (available as a free download from Microsoft) that allows you to synchronize certain types of information between a PC and the JETT. You can also use ActiveSync to transfer files and install programs on the JETT. To create a wireless ActiveSync connection, you must first create a partnership between the JETT and the PC.

Important Note: You must use ActiveSync 3.8 to create a WLAN remote PC link. ActiveSync 4.0 or above only supports a wireless remote PC link via Bluetooth; it does not support a remote PC link via WLAN.

SETTING UP YOUR NETWORK CONNECTION

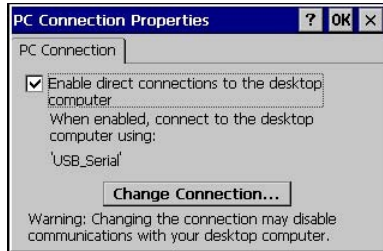
In order to setup a network connection, the WLAN card in your PC must be setup to use “Internet Protocol (TCP/IP).” If you are manually specifying an IP address, make sure that you are using NetBIOS over TCP/IP. If you are using a DHCP router or server to assign IP addresses automatically, make sure you are using NetBIOS over TCP/IP.

For more information about your PC network connection settings or setting up your PC to use a TCP/IP network connection, consult your system administrator or refer to Windows on-line help.

CONFIGURING THE JETT

To setup initial communication between the PC and the JETT, you must first configure the JETT with the correct communication setting.

- 1) Connect one end of your interface cable to an available COM or USB port on your desktop computer. Connect the other end of the cable to the JETT.
- 2) On the JETT, tap Settings> Control Panel > PC Connection. The PC Connection Properties Dialog box appears.



- 3) Verify your PC Connection type: "PC-115" for serial cable connection or "USB_Serial" for USB cable connections.
- 4) If you need to make a change, tap Change Connection. The Change Connection dialog box appears.



- 5) Select the correct setting from the drop-down list and tap OK. The PC Connection Properties Dialog box reappears.
- 6) Tap OK to exit.
- 7) Close the Control Panel and return to the JETT desktop.

CONFIGURING THE PC

After you configure the JETT, you must configure the PC before making an ActiveSync connection.

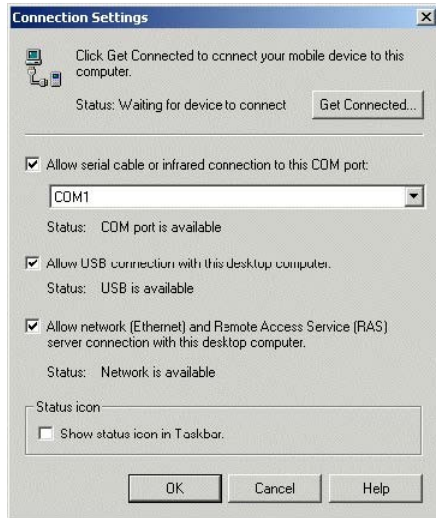
Note: If you are installing ActiveSync on the PC for the first time and the Get Connected wizard appears, click Cancel.

- 1) On the PC, start ActiveSync.



- 2) On the ActiveSync menu bar, select File and then Connection Settings. The Connection Settings

dialog box opens.



- 3) Depending upon your connection type, ensure that you have the correct connection type enabled (Serial or USB). If you are using a serial cable connection, make sure you select an available COM port (for example COM1), then click Get Connected. The Get Connected wizard opens.



- 4) Click Next. ActiveSync will then attempt to connect to the JETT.



- 5) On the JETT desktop, tap PC Link.



- 6) The following message box appears:



- 7) If ActiveSync successfully establishes communications, the ActiveSync dialog will briefly reappear on the PC and start the New Partnership dialog wizard.

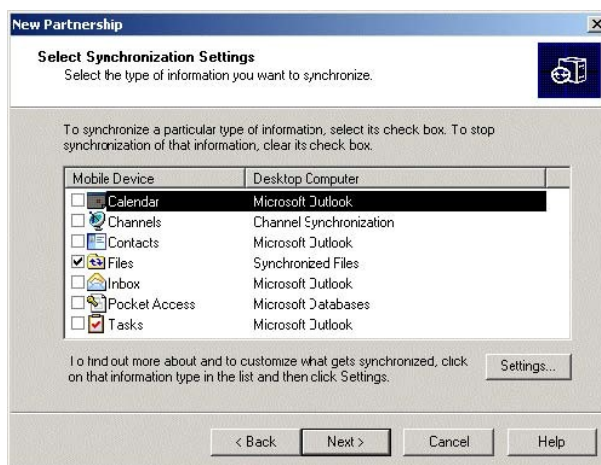
CREATING A PARTNERSHIP

To create a partnership during your initial setup:

- 1) When the New Partnership wizard appears, select Yes.



- 2) Click Next. ActiveSync will then prompt you to select the type of information you want to synchronize.



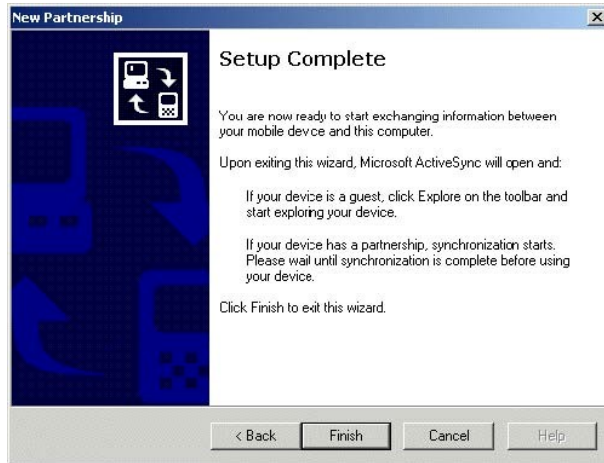
- 3) Check or clear the boxes that pertain to the type of information you want to synchronize.

Notes: In order to synchronize files, you must enable the Files settings. The JETT does not support Pocket Access or the synchronization of Pocket Access files

- 4) When choosing to synchronize files, the following message will appear:



- 5) Click OK to continue. The New Partnership wizard reappears. Click Next.



- 6) Click Finish to complete the wizard. the ActiveSync dialog box will reappear as follows:



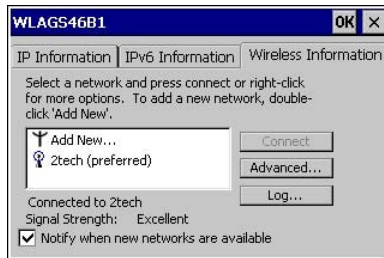
On the JETT, an icon indicating a ActiveSync connection will appear in the system tray.



MAKING A REMOTE PC LINK

To make a remote PC link:

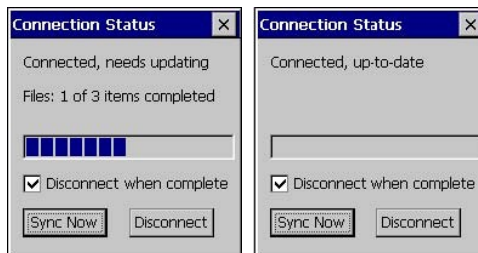
- 1) Make a network connection.



- 2) On the JETT desktop, Tap Start and select Programs > Communications > PC Link Remote. The ActiveSync dialog box opens.



- 3) From the Connect to drop down list, select the name of the PC you are linking. The JETT will then attempt to establish a connection, automatically update any out-of-date items and synchronize with your desktop folder.



- 4) Tap Sync Now to update your folders manually.
- 5) Tap Disconnect to terminate the connection.

Appendix E – Tracker Xtreme User Tips

This guide has been prepared to help you get the best performance from your Tracker Xtreme and also to help you fix some issues that might appear from time to time.

Battery Life

The Tracker Xtreme comes standard with a 2500 mAh battery. Average run times will vary depending on many different factors but on average you should expect 12 – 16 hours of use.

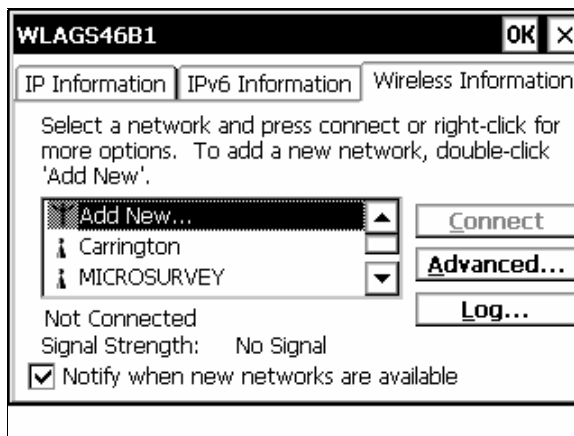
Hardware Settings - To help increase your battery life you should review the following settings on your Tracker Xtreme.

1. **Wireless Radio** – If you do not need to use the built-in wireless radio we suggest you disable it to conserve power. The Wi-Fi radio is very power demanding and can decrease the battery life to as little as 5 hours. Please refer to the Wireless Radio section for more details.
2. **Bluetooth Radio** - If you do not need to use the built-in Bluetooth radio we suggest you disable it to conserve power. Using the Bluetooth radio will decrease the battery life by 10% – 20%. Please refer to the Bluetooth Radio section for more details.
3. **Backlight Brightness** – We suggest you adjust this to a 25% brightness level to conserve power. In some situations you can turn the backlight off which can have a significant impact on battery life. Please refer to the Backlight Brightness section for more details.
4. **Keypad Backlight** – If your Tracker Xtreme has a backlit keypad, we suggest you turn off the backlight when it is not needed to conserve power. In some situations you can turn the keypad backlight off which can have a significant impact on battery life. Please refer to the Backlight Brightness section for more details.
5. **Power Suspend Mode** – We suggest you adjust these to help the Tracker conserve power. Please refer to the Power Suspend Mode section for more details.

Environmental Factors – Temperature can have a significant impact on battery life. In extreme cold temperatures, battery life can decrease by as much as 50%.

Wireless Radio

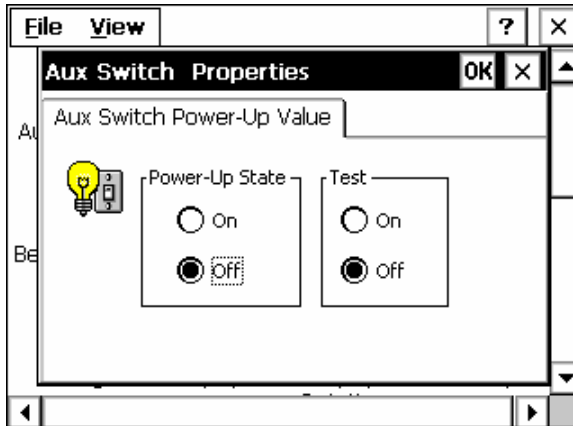
Your Tracker Xtreme is shipped with a built in wireless (Wi-Fi) radio. When this radio is enabled, upon power up you will see a screen appear allowing you to select a wireless network.



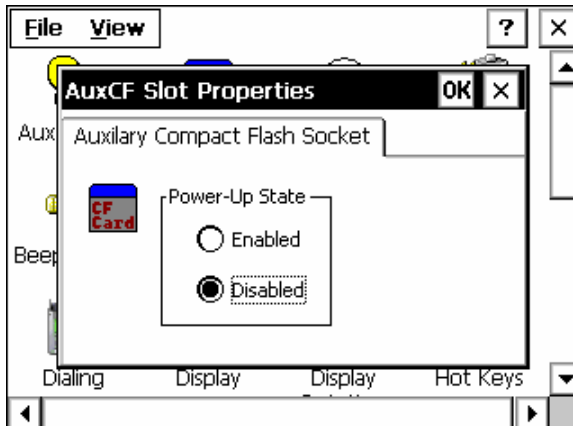
It is important to note that if the box “Notify when new networks are available” is unchecked it **will not disable** the wireless radio. All it does is stop the wireless radio from notifying you when new wireless networks are found. **If you do not need to use the wireless radio we suggest you turn it off.**

Instructions for Turning off the Wireless Radio

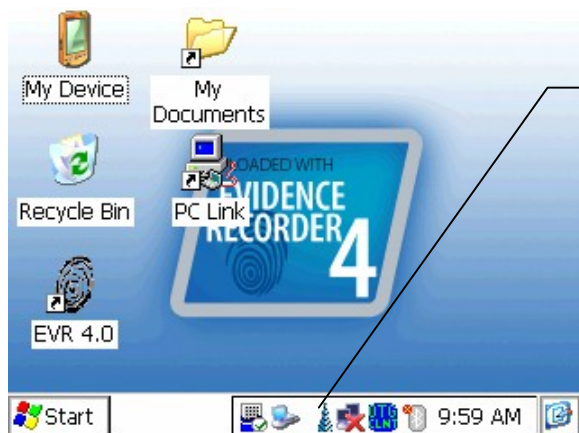
To turn it off go to **Start | Settings | Control Panel | Aux Switch**. In the Aux Switch screen, set the Power-Up and Test options to **Off**.



Next go to **Start | Settings | Control Panel | AuxCF Slot**. In the AuxCF Slot Properties screen, set the Power-Up State to **Disabled**.



Once these settings are changed you need to warm boot the Tracker before the changes take effect.



If you see this icon, it indicates that the wireless radio is on. If you've disabled the radio successfully, you should not see the "tower" icon.

Bluetooth Radio

Your Tracker Xtreme has a built in Bluetooth radio. The status of your Bluetooth radio can be determined by the Bluetooth icon on your taskbar.



A gray icon with a red “x” indicates that the Bluetooth radio is turned off.



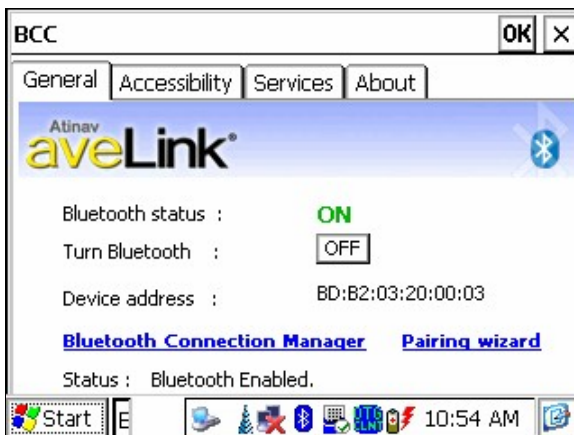
A solid blue icon indicates that the Bluetooth radio is turned on.

You can also get the status by tapping on the Bluetooth icon in the taskbar which will open the Bluetooth manager. Here you will see the status as being either On or Off.

If you do not need to use the Bluetooth radio we suggest you turn it off.

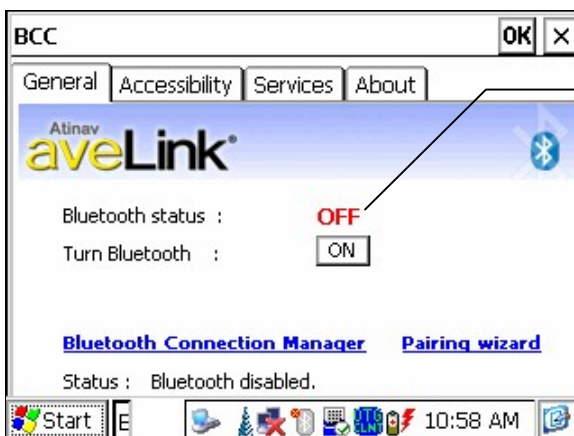
Instructions for Turning off the Bluetooth Radio

1. To turn the radio off, simply tap the Bluetooth icon on your taskbar.
2. Once selected you will see the Bluetooth Manager screen.



On this screen press the **OFF** button.

3. You should now see the following:



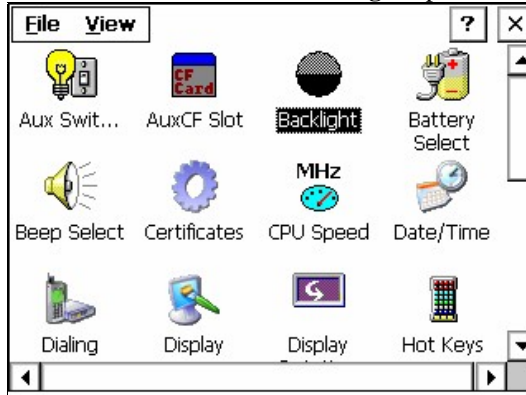
A Bluetooth status of OFF indicates that the radio is disabled.

Backlight Brightness

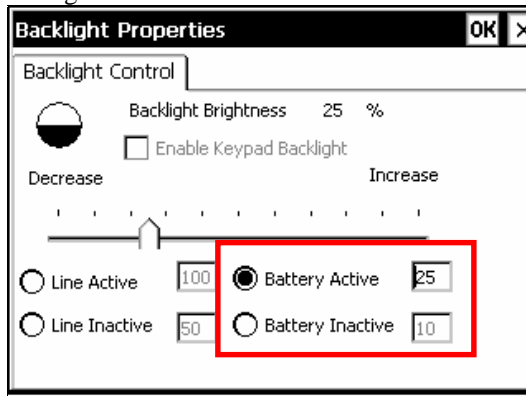
You can control the backlight brightness on your Tracker Xtreme. This setting can have a significant impact on battery life and we suggest you set it to 25% active and 0% inactive when using the battery.

To set or check your backlight brightness settings do the following:

1. Go to Start | Settings | Control Panel.
2. In Control Panel select the **Backlight** option.

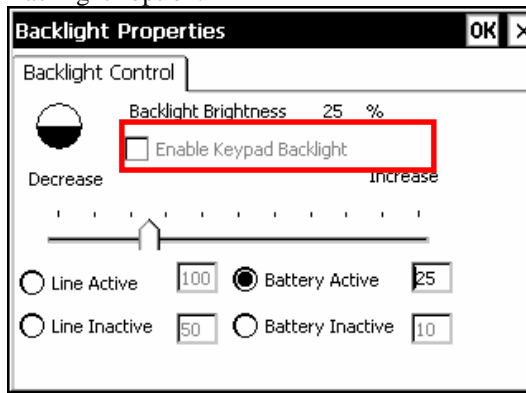


3. In the Backlight Properties screen set the **Battery Active** setting to **25**, and set the **Battery Inactive** setting to **0**.



Note: In some situations you can turn the backlight off (Battery Active 0%) which will drastically improve battery life.

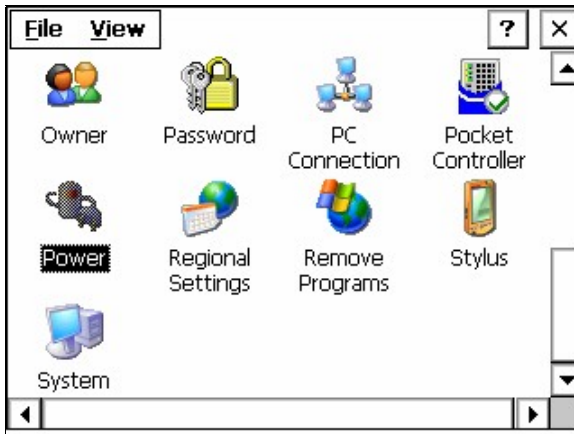
4. If your Tracker has a backlit keypad, you may also want to turn off the keypad backlight in some situations to improve battery life. In the Backlight Properties screen, uncheck the "Enable Keypad Backlight" option.



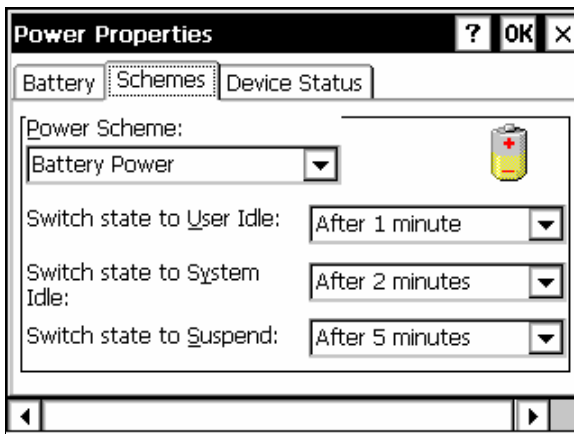
Power Suspend Mode

You can control the time it takes your Tracker to switch to different power save modes. Using these options can improve your battery life.

1. Go to Start | Settings | Control Panel.
2. In Control Panel select the **Power** option.

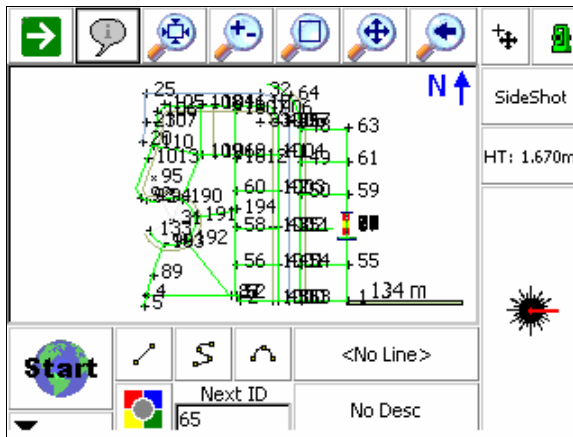


3. In the Power Properties screen click on the Schemes tab. In the Schemes page select the Battery Power Scheme from the drop down menu. We suggest you use the following settings:

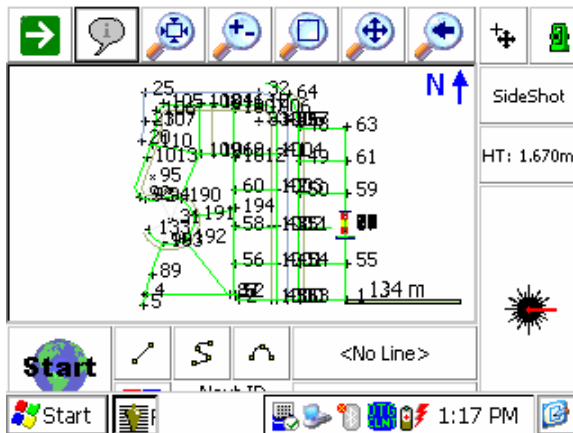


Taskbar Auto Hide

The FieldGenius and Evidence Recorder interfaces have been designed to use the entire screen. Prior to shipment, we change a setting that forces the taskbar to disappear. Your FieldGenius or Evidence Recorder screen should look like this.

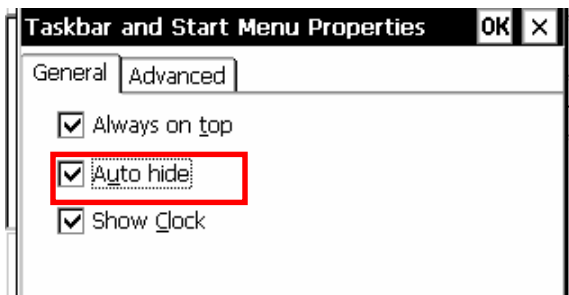


If you reset the registry in the Tracker, it will revert back to the default factory settings which are to always show the taskbar. When this happens, the bottom screen in FieldGenius or Evidence Recorder will be covered by the taskbar.



Instructions to Hide the Windows Taskbar

1. Go to Windows Start | Settings | Taskbar and Start Menu.
2. In the Taskbar and Start Menu Properties screen, **turn on** the “Auto hide” option.





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