VX6 User's Guide

Declarations of Conformity for the Wireless Transceivers and VX6 equipment, all graphics and informational tables are in the full version of the VX6 User's Guide on the LXE Manuals CD and on the LXE ServicePass Website. This user guide is designed for delivery on a mobile device small screen.

The reader is strongly encouraged to read Appendix B, "Regulatory Notices and Safety Information". Important safety cautions, warnings and regulatory information is contained in Appendix B in the full version of the VX6 User Guide.

E-EB-VX6UG-E

LANGUAGE: ENGLISH

Notice:

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Important: This symbol is placed on the product to remind users to dispose of Waste Electrical and Electronic Equipment (WEEE) appropriately, per Directive 2002-96-EC. In most areas, this product can be recycled, reclaimed and re-used when properly discarded. Do not discard labeled units with trash. For information about proper disposal, contact LXE through your local sales representative, or visit www.lxe.com.

Revision Notice

Notices – Updated copyrights and trademarks.

Accessories – Updated Accessories listing and included ROHS classifications.

Input Panel (Virtual Keyboard) – Revised section.

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The VX6 Vehicle Mount Computer

Introduction

The VX6 Vehicle Mount Computer (VMC) is a rugged, vehicle-mounted, Microsoft® Windows® CE .NET equipped computer. The VX6 is capable of wireless data communications from a fork-lift truck or any properly configured vehicle. The unit uses a 2.4 GHz device for wireless data communications.

The VX6 is a tablet-style computer and features a half screen SVGA color TFT display. The touch-screen display supports graphic features and Microsoft Windows CE .NET icons that the Windows CE .NET operating system supports. The keyboard is illuminated to facilitate use in dimly lit areas.

The VX6 provides the power and functionality of a desktop computer in a vehicle mounted unit, with a wide range of options:

- *400MHz Intel® PXA255 CPU*
- *64 or 128MB of DRAM*
- *Wireless LAN devices with internal, single external or dual external antenna options*
- *Ethernet port*
- *USB Host and Client ports*
- *Choice of half screen display brightness based on ambient light in daily use*
- *Available touch screen protective film*
- *Available Uninterruptible Power Supply (UPS) Battery Pack*
- *Available RAM Mount™ options*
- *Extended temperature version includes touchscreen heater*

Note: The "VX6 Reference Guide" contains VX6 technical information and advanced functions.

Environmental Specifications

Feature	Specification
Operating Temperature	
Standard version	-4°F to 122°F (-20°C to 50°C) [non-condensing]
Extended Temperature version	-22º to 122º F (-30ºC to 50ºC [condensing]
Storage Temperature	
Standard version	-22°F to 140°F (-30°C to 60°C) [non-condensing]
Extended Temperature version	-22°F to 140°F (-30°C to 60°C) [condensing]
Water, Sand Dust	IP66 per IEC60529
Operating Humidity	
Standard version	Up to 90% non-condensing at 104°F (40°C)
Extended Temperature version	100%
Vibration	Based on MIL Std 810F
ESD	15 kV

Quick Start

This section's instructions are based on the assumption that your new system is pre-configured and requires only accessory installation (e.g. antenna and/or barcode scanner) and a power source.

Use this guide as you would any other source book -- reading portions to learn about the VX6, and then referring to it when you need more information about a particular subject. This guide takes you through installation and operation of the LXE VX6.

In general, the sequence of events is:

1. Install Vehicle Mounting Bracket on vehicle and secure VX6 in Mounting Bracket Assembly (see "Installation", later in this manual).
2. Connect power cable to the VX6. The power cable can also be connected to a UPS battery pack, which is then connected to the VX6.
3. Connect accessories to VX6, e.g. scanner, antenna, etc.
4. Secure all cables to the VX6 with the Strain Relief Cable Clamps.
5. Turn the VX6 on.
6. When instructed, calibrate the touchscreen.
7. The screen may appear white while applications and drivers are loading. When complete, set Date and Time (see the "VX6 Reference Guide").
8. Configure wireless client (see the VX6 Reference Guide").
9. Warmboot to ensure all registry settings are saved.

Device is ready for use.

The VX6 should be mounted in an area in the vehicle where it:

- *Does not obstruct the vehicle driver's vision or safe vehicle operation.*
- *Can be easily accessed by anyone seated in the driver's seat.*

Note: If your VX6 has AppLock installed, please contact your system administrator for setup and processing information. AppLock is configured by an administrator to limit general users to only certain programs.

Note: When the internal antenna option is ordered, the internal antenna is mounted on the inside of the Access Panel Cover.

Note: COM1 is configured with Pin 9 +5V. COM3 is labeled "COM2/3" and is configured with Pin 9 RI. Please see the VX6 Reference Guide for details.

The Half-Screen Display

The VX6 has a half screen TFT color display capable of supporting SVGA graphics mode. The resolution is 800 x 320 pixels.

VX6 Control Panel

The VX6 control panel contains the status LED, power button and display brightness adjustment buttons. Please refer to the "Operation" section, later in this manual, for details on the VX6 Control Panel.

Microsoft Windows CE .NET Control Panel

The Microsoft Windows CE .NET Control Panel provides standard Windows CE .NET options for configuring the VX6, such as:

- *Sounds and volume control*
- *Display configuration (including backlight power management)*

Note: Please consult your System Administrator or refer to commercially available Microsoft Windows CE .NET user guides or the on-line Help application for these standard configuration options.

PCMCIA, ATA and SD Slots

The VX6 has two PCMCIA slots. These slots are intended for use with Type I or II cards, such as LXE's 2.4GHz wireless devices. These slots are hot swappable per PCMCIA specifications.

The Compact Flash (CF) slot contains the Compact Flash ATA hard drive. This drive contains

the Operating System and the Documents and Settings. The VX6 does not operate without this card installed. The CF card is not hot swappable.

One Secure Digital (SD) slot is provided for SD memory cards. The SD card is hot swappable.

Please see the "VX6 Reference Guide" for more details on the PCMCIA, CF and SD slots.

AppLock and the VX6

AppLock may be installed and running on the mobile device. AppLock restricts access to programs and the Windows CE .NET Control Panel. Please contact your system administrator for details.

Single Application AppLock

Single application AppLock restricts a user to one application. The user is unable to exit the application (or if the application exits, it immediately restarts).

Multi-Application AppLock

The appearance of taskbar icons are different on various mobile device platforms and may differ from the example shown below. This example is shown only to aid in describing how the user can switch between applications using a stylus. If RFTerm and Microsoft Word were the two applications locked, and the user tapped the taskbar icon to place the popup menu on screen, a switching menu showing both application icons is displayed on the screen.

Touch

Tap the taskbar icon to place the popup menu on screen. Tap one of the application icons in the popup menu. The selected application is brought to the foreground while the other application continues to run in the background. Stylus taps affect the application running in the foreground only. Alternatively you can use the Tab, BackTab and/or cursor keys to move the on-screen cursor. Then press the Enter key to activate the highlighted choice.

Hotkey

If the mobile device uses LXE's Dual AppLock to allow the user to switch between two applications, the default Activation key is Ctrl+Spc. The key sequence switches the focus

between one application and another. Data entry affects the application running in the foreground only. Note that the system administrator may have assigned a different key sequence to use when switching applications.

Note: The hotkey method can still be used if the touchscreen on the VX6 is disabled.

The QWERTY Keyboard

The VX6 has a QWERTY keyboard, available with a standard overlay, an IBM 3270 overlay or an IBM 5250 overlay. These keyboards have 101 keyboard functions, including a numeric keypad. Please refer to Appendix A, “Key Maps”, for keypress combinations.

Note: Press the <CTRL> + <Enter> keys to initiate the IBM 5250 Field Exit Function.

Key Maps

The keyboard supports all 101 keyboard functions. However, because the keyboard only has 60 keys, all functions are not visible (or printed on the keyboard). Therefore the VX6 keyboard supports what is called hidden keys -- keys that are accessible but not visible on the keyboard.

The hidden keys supported by the VX6 are listed in Appendix A, “Key Maps”.

Unused Key Functions

There are several key functions on the keyboard that are not used on the VX6. These include:

- *<2nd> <F3> – The Resume/Suspend function is not used, as the VX6 does not support these power management modes.*
- *<2nd> <F4> and <2nd> <F5> – The Display Brightness functions are not used as the display brightness is adjusted by the buttons on the VX6 control panel.*
- *<2nd> <F6> and <2nd> <F7> – The Contrast functions are not used as the contrast is not adjustable on the TFT display on the VX6.*
- *<2nd> <F8> and <2nd> <F9> – The Volume control keys are not used as volume is adjusted via the Microsoft Windows CE .NET Control Panel.*
- *<2nd> <F10> – The keyboard backlight in controlled by Windows CE .NET Power Management.*

Custom Key Maps

The System Administrator creates Custom Key Maps for the VX6. To activate the Custom keymap, select **Start | Settings | Control Panel | Keyboard** icon. Select the Custom keymap from the keyboard popup menu, and close the control panel with the OK button.

To return to the default keymap, select **0409** or **Preload**, depending on system version, from the keymap popup and click OK.

NumLock and the VX6

The keyboard does not have a NumLock indicator or key. By default, the VX6 turns NumLock On each time the VX6 is turned on.

NumLock can be toggled On or Off using the <2nd> <SHIFT> <F10> keypress sequence.

The warmboot behavior of NumLock can be configured. Please refer to the "VX6 Reference Guide" for more information on NumLock.

Keyboard Backlight

The LXE keyboard keys are backlit. The keyboard backlight and the display share the same timer, which is configured in the Windows CE .NET Control Panel. When the display is On, the keyboard backlight is also On. Please refer to the "Display" section under "Control Panel Options" in Chapter 4, "System Configuration" for information on configuring the timeout.

Keyboard LEDs

The VX6 keyboard has two (2) LED indicators.

CAPS LED

This LED indicates the state of the keyboard CapsLock mode. If CapsLock is enabled this LED is illuminated green. When CapsLock is off, the LED is dark.

Press <2nd> then <F1> to toggle CapsLock On and Off.

The default value of CapsLock is "Off". For information on configuring the behavior of CapsLock after a reboot, please refer to the "VX6 Reference Guide".

Secondary Keys LED

The keyboard is equipped with several secondary keys. These keys are identified by the superscripted text found on the keyboard keys. The secondary keys are accessible by using two (2) keystrokes: the <2nd> key followed by the superscripted key.

Once the <2nd> state is enabled (by pressing the <2nd> key) the Secondary Mode LED is illuminated and the <2nd> state is enabled until another key is pressed. The <2nd> key is toggled on with a <2nd> keypress and then immediately off with another <2nd> keypress.

For example:

Press <2nd> and <F1> to turn CapsLock on and off.

Press <2nd> and <↑> to initiate the PgUp command.

Press <2nd> and <Q> to type the "!" key.

Press <2nd> and <BkSp> to enter the Insert (Ins) mode.

Control Keys

The keyboard has several control keys, which are not used on the VX6.

Note: The 2nd functions of the <F4> and <F5>keys are not used as the display brightness is adjusted via the buttons on the control panel.

The 2nd functions of the <F6>, and <F7> keys are not used as the VX6 has TFT LCD screen with no provision for contrast adjustments.

The 2nd functions of the <F8> and <F9> keys are not used as the sound volume on the VX6 is controlled with the Volume and Sounds icon in the Microsoft Windows CE .NE Control Panel.

The 2nd function of the <F10> key is not used as the display backlight timer also controls the keyboard backlight.

General Windows CE .NET Keyboard Shortcuts

Use the keyboard shortcuts in the chart below to navigate with the VX6 keyboard. These are standard keyboard shortcuts for Windows CE .NET applications.

Press these keys ...	To ...
CTRL + C	Copy
CTRL + X	Cut
CTRL + V	Paste
CTRL + Z	Undo
DELETE	Delete
SHIFT with any of the arrow keys	Select more than one item in a window or on the desktop, or select text within a document.
CTRL+A	Select all.
ALT+ESC	Cycle through items in the order they were opened.
CTRL+ESC	Display the Start menu.
ALT+Underlined letter in a menu name	Display the corresponding menu.
Underlined letter in a command name on an open menu	Carry out the corresponding command.
ESC	Cancel the current task.

The touchscreen provides equivalent functionality to a mouse:

- *A touch on the touchscreen is equivalent to a left mouse click.*
- *Many items can be moved by the "drag and drop" method, touching the desired item, moving the stylus across the screen and releasing the stylus in the desired location.*
- *A double stylus tap is equivalent to a double click.*
- *A touch and hold is equivalent to a right mouse click.*

Input Panel (Virtual Keyboard)

The Input Panel may be enabled via the Input Panel icon in the Windows CE .NET Control Panel. The Input Panel can be displayed as a large or small keyboard.

Virtual keyboards display the actual character a keypress results in. For example, pressing the <Shift> key on the virtual keyboard toggles the characters displayed on the keys between upper and lower case. The <123> key toggles the keys displayed between alphabetic and numeric characters. The <áü> key toggles the keys between standard and international symbols. The <Shift> and <áü> keys can be used in combination for capitalized international characters.

Note: When the virtual keyboard is displayed, the physical keyboard is still active. Therefore it is possible to input data from both keyboards.

Enabling the Input Panel

The Input Panel is disabled by default. To enable the Input Panel, select **Start | Settings | Control Panel | Input Panel** icon. Make sure the "Allow applications to change the input panel state" checkbox is checked and warmboot the VX6.

Power Supply

Vehicle power input for the VX6 is 12V to 80V DC and is accepted without the need to perform any manual adjustments within the VX6. See the section titled "Installation", sub-section titled "Vehicle 12-80V DC Direct Connection". An optional Uninterruptible Power Supply (UPS) battery pack is available for the vehicle power supply connection.

If 12V to 80V DC power is not available – for example, in an office environment – an optional external Input Power Supply can be used to convert AC wall power to an appropriate DC level. See the section titled "Installation", sub-section titled "External Power Supply".

Power input is fused for protection and the fuse is externally accessible. See section titled "Installation", sub-section titled "Fuse Replacement for the VX6".

Uninterruptible Power Supply Battery Pack

An optional Uninterruptible Power Supply (UPS) battery pack is designed to provide power to the VX6 for short periods of time when vehicle power is unavailable (such as when vehicle batteries are swapped). Fully charged, the UPS battery powers the VX6 for a minimum of 15 minutes at 25º C (77º F) ambient temperature.

The Power Status LED on the VX6 indicates the UPS battery status:

Green – Running on 12V – 80V power input

Solid Yellow – Running on UPS battery, battery is not low on power

Flashing Yellow – Running on UPS battery, battery is critically low.

Backup Battery

The internal 190 mAh Lithium backup (coin cell) battery provides power to maintain date and time when the VX6 is not powered from an external source.

Caution

Danger of explosion if battery is incorrectly replaced.

Replace only with the same type or equivalent type recommended by the manufacturer.

Dispose of used batteries according to the manufacturer's instructions.

Getting Help

All LXE manuals are now available on one CD and they can also be viewed / downloaded from the LXE ServicePass website on the ServicePass / Documentation page. Contact your LXE representative to obtain the LXE Manuals CD or logon information for the ServicePass web pages.

You can also get help from LXE by calling the telephone numbers listed on the LXE Manuals CD, in the file titled “Contacting LXE”. This information is also available on the LXE website.

Explanations of terms and acronyms used in this guide are located in the file titled “Glossary” on the LXE Manuals CD.

Manuals and Accessories

Manuals

The following manuals are available on the LXE Manuals CD:

- *VX6 Reference Guide*
- *Contacting LXE*
- *LXE Technical Glossary*

Accessories

The table below lists the available VX6 accessories.

- *Where two parts numbers are listed for a given part, the part number ending in "-R" is the RoHS compliant version.*
- *When only one part number is listed, the part is RoHS compliant unless otherwise noted.*

VX6 Brackets	
Bracket, U Style, VX6 VX77	9000A021UBRACKET-R
Kit, VXX U-Bracket to VX6 VX7 Adapter	9000A022BRKTADPTKIT-R
Bracket, RAM Mount VX6 VX7	9000A023BRKTRAMMOUNT-R
Bracket, VXX RAM ball on plate	9000A028RAMPLATEBALL-R
Bracket, RAM Squeeze Mount, VX6 VX7	9000A031BRKTRAMSQZMT-R
Data Cables	
Cable, Combo D15 to USB and Ethernet Adapter 1 Ft	9000A071CBLD15USBETH
Cable, Combo D15 to USB-H, USB-C and Ethernet Adapter	9000A075CBLUSBHCETH
Cable, Printer/PC, D9 to D25	9000A053CBL6D9D25 (above part is ***not*** RoHS compliant)
Cable, PC, D9 to D9	9000A054CBL6D9D9
Power Cables	
Cable, Input Power, 12 FT, VX5 VX6 VX7	9000A037CBLPWR12FT-R
Adapter Cable, VX1 VX2 VX4 Power Cable to VX5 VX6 VX7	9000A077CBLPWRADPTR
Power Supplies	
Power Supply, External, AC, W/US Power Cord VX5 VX6 VX7	9000A317PSACUS-R
Power Supply, External, AC, No Power Cord VX5 VX6 VX7	9000A318PSACWW-R
UPS Battery and Cables	
Battery, UPS Lead Acid, VX5 VX6 VX7	9000A378UPSBATTPACK-R
Cable, UPS Battery, Remote Mount Extender, 6	9000A074CBLUPSEXTNDR

Ft

Antenna and Antenna Mount Kits	
Replacement antenna, 2.4GHz	153180-0001
Remote Mount Antenna Assembly Kit, 8 Ft Cable	9000A279ANTREMOTE8 9000A279ANTREMOTE8-R
Remote Mount Antenna Assembly Kit, 6 Ft Cable	9000A278ANTREMOTE6-R
Right Angle Remote Mount Antenna Assembly Kit, 6 Ft Cable	9000A280ANTREMOTE6RT
Right Angle Remote Mount Antenna Assembly Kit, 15 Ft Cable	9000A281ANTREMOT15RT
Miscellaneous	
Stylus, with Tethers and Sleeves, 5 Pack	9000A510STYLUS
Protective Film, Touchscreen, 10 Pack, VX6	VX6A512PROTFILM
Voice Recognition Accessories	
Headset coiled adapter cable, with quick disconnect connector to a 2.5 mm audio jack. A headset (see below) is required	9000A076CBLHEADSET1
Headset, Single Band	HX1A501SINGHEADSET
Headset, Dual Band	HX1A502DUALHEADSET
Headset, Behind the Ear, Dual Ear	HX1A503BTHHEADSET
Foam, Replacement Block, Headset	HX1A504HSBLOCKFOAM
Yoke, Replacement for Dual Band Headset	HX1A505DUALYOKE
Yoke, Replacement for Single Band Headset	HX1A506SINGLEYOKE
Replacement Microphone Foam, Wind Screen, 10 pack	HX1A508WINDSREEN10
Replacement Microphone Foam, Wind Screen, 50 pack	HX1A509WINDSREEN50
Replacement Headset Foam, Ear Cover, 10 pack	HX1A510FOAMEAR10
Replacement Headset Foam, Ear Cover, 50 pack	HX1A511FOAMEAR

Scanners	
Scanner, Powerscan, SR, 8’ Cbl, WW	8300A326SCNRPWRSR8DA9F 8300A326SCNRPWRSR8DA9F-R
Scanner, Powerscan, SR, 12’ Cbl, US	8300A327SCNRPWRSR12DA9F (above part is ***not*** RoHS compliant)
Scanner, Powerscan, SR, Low Temp, 8’ Cbl	8300A332SCNRS8D9FLT (above part is ***not*** RoHS compliant)
Scanner, Powerscan, SR, Low Temp, 12’ Cbl	8300A333SCNRS12D9FLT (above part is ***not*** RoHS compliant)
Scanner, Powerscan, LR, 8’ Cbl, WW	8310A326SCNRPWRLR8DA9F 8310A326SCNRPWRLR8DA9F-R
Scanner, Powerscan, LR, 12’ Cbl, US	8310A327SCNRPWRLR12DA9F 8310A327SCNRPWRLR12DA9F-R
Scanner, Powerscan, LR, Low Temp, 8’ Cbl	8310A332SCNRL8D9FLT (above part is ***not*** RoHS compliant)
Scanner, Powerscan, LR, Low Temp, 12’ Cbl	8310A333SCNRL12D9FLT (above part is ***not*** RoHS compliant)
Scanner, Powerscan, XLR, 8’ Cbl, WW	8320A326SCNRPWRXLR8DA9F 8320A326SCNRPWRXLR8DA9F-R
Scanner, Powerscan, XLR, 12’ Cbl, US	8320A327SCNRPWRXLR12DA9F (above part is ***not*** RoHS compliant)
Scanner, Powerscan, XLR, Low Temp, 8’ Cbl	8320A332SCNRX8D9FLT (above part is ***not*** RoHS compliant)
Scanner, Powerscan, XLR, Low Temp, 12’ Cbl	8320A333SCNRX12D9FLT (above part is ***not*** RoHS compliant)
Scanner, LS3408 Fuzzy Logic SR, D9 Interface Cable, 8ft	8510A326SCNRFZYDA9F 8510A326SCNRFZYDA9F-R
Scanner, LS3408 Extended Range, D9 Interface Cable, 8ft	8520A326SCNRERDA9F 8520A326SCNRERDA9F-R

Installation

Install Mounting Brackets

Caution:

This device is intended to transmit RF energy. For protection against RF exposure to humans and in accordance with FCC rules and Industry Canada rules, this transmitter should be installed such that a minimum separation distance of at least 20 cm (7.8 in.) is maintained between the antenna and the general population. This device is not to be co-located with other transmitters.

Equipment Needed: Phillips No. 1 screwdriver and a Torque wrench capable of measuring to 50 inch pounds (5.64±.56 N/m).

Note: Torquing tool is not supplied by LXE. Bolts, washers, and wrench needed when attaching the bottom mounting bracket to the vehicle are not supplied by LXE.

Several types of mounting systems are provided for the VX6:

RAM mount system:

Available RAM ball base or RAM clamp mount

U-Bracket system:

Provision for integrated UPS battery mount

Available without U-Bracket for vehicles previously equipped with an LXE vehicle mounted computer

Remote mount for UPS battery pack

Before installation begins, verify you have the applicable vehicle mounting bracket assembly components necessary for your mount type, as shown in the following figures.

RAM Mount System

Components

RAM Mounting Assembly

The RAM mounting assembly consists of the following parts:

1. VXX RAM ball bracket
2. RAM arm, size D
3. RAM ball base

   - or -

   RAM clamp mount

   RAM Clamp Mount includes:

   Upper Clamp Piece with Ball

   Lower Clamp Piece

   Bolts (2 each)

   Nylon locking nuts (2 each)
4. Hardware:

   Bolts, 1/4-20x5/8 (4 each)

   Washers, 1/4 locking (4 each)

   Washers, 1/4 flat (4 each)

   RAM wrench

Torque Measurements

You will need a torquing tool capable of torquing to 50 inch pounds (5.64±.56 N/m).

Torque all screws and bolts according to the following table:

For these screws and bolts...	Torque to
1/4 bolts	50.0±5 in/lb (5.64±.56 N/m)

Procedure

Step 1a – Mount Vehicle RAM Ball Base

Note: If you are using the RAM clamp mount, please skip to Step 1b.

1. Determine the position for mounting the RAM ball base. Be sure to position the RAM ball base to allow access to the switches and ports on the bottom of the VX6.
2. Attach the RAM ball base to the vehicle mounting surface using four 1/4 bolts (or equivalent) fasteners.

   Note: ..... 1/4 Bolts not included.

IMPORTANT: Mount to the most rigid surface available.

Step 1b – Mount Vehicle RAM Clamp Mount

Note: If you are using the RAM ball base, complete Step 1a and skip Step 1b.

1. Determine the position for mounting the RAM clamp mount. The clamp mount can be used on a beam (such as on a fork lift truck) up to 2.5" (63.5 mm) wide and approximately 2" (50.8 mm) thick. The clamp may be attached to a thicker beam by substituting longer bolts (not included). Be sure to position the RAM clamp mount to allow access to the switches and ports on the bottom of the VX6.
2. Position the upper clamp piece with ball (A) on the beam. Place the bolts (B) through the holes in the upper clamp piece.
3. Position the lower clamp piece (C) below the beam. Align the bolts with the holes in the lower clamp piece.
4. Place the nylon locking nuts (D) on the bolts and tighten the bolts.

Step 2 – Attach RAM Mount Ball to the VX6

1. Turn the VX6 off before attaching the RAM mount ball.
2. Place the VX6 face down on a stable surface.
3. Position the RAM ball bracket on the rear of the VX6, aligning the curved edge on the RAM mount bracket with the curved edge on the VX6. Attach with four 1/4-20x5/8 bolts, using one flat washer and one locking washer per bolt. Place the locking washer on the bolt before the flat washer.

Caution

Failure to use one ¼ flat washer and one ¼ locking washer per bolt can result in damage to the backplate of the VX6 computer.

Step 2 – Attach VX6 Assembly to RAM Mount

Slip the RAM arm over the ball on the vehicle RAM ball bracket. Insert the ball of the RAM mount bracket into the RAM arm. Adjust the VX6 to the desired position and tighten the knob on the RAM arm using the supplied RAM wrench.

U-Bracket Mount System

Components

Bottom Mounting Bracket

This bracket is mounted to the vehicle. The VX6 can be mounted to the bottom mounting bracket. The UPS battery pack may be mounted to the bottom mounting bracket.

If the optional UPS battery pack is to be mounted to the bottom bracket, use the following parts included with the UPS battery pack (not shown):

1” long aluminum spacer w/through hole (2 each)

1/4 flat washer (2 each)

1/4 locking washer (2 each)

screw, pan head, 1/4-20x2 (2 each)

Back Bracket Assembly

1. Rear Bracket
2. Hardware:

1/4 flat washer (8 each)

1/4 locking washer (8 each)

1/4 flat washer (8 each)

The viewing angle can be adjusted through a wide range to provide the best viewing angle.

Torque Measurements

You will need a torquing tool capable of torquing to 50 inch pounds (5.64±.56 N/m).

Torque all screws and bolts according to the following table:

For these screws and bolts...	Torque to
1/4 bolts	50.0±5 in/lb (5.64±.56 N/m)

Procedure

Step 1 - Mount Bottom Mounting Bracket To Vehicle.

1. Position the bracket to allow access to the switches and ports on the bottom of the VX6.
2. Attach the bottom mounting bracket to the vehicle mounting surface using a minimum of four 1/4 bolts (or equivalent) fasteners.

   Note:1/4 Bolts and washers not included. It is recommended to use lock washers and flat washers on the fasteners.

IMPORTANT: Mount to the most rigid surface available.

After the bottom bracket has been attached to a rigid surface, you are ready to assemble the VX6 bracket configuration.

Step 2 - Connect Rear Bracket to VX6

1. Turn the VX6 off before attaching the rear bracket.
2. Place the VX6 face down on a stable surface.
3. Align the rear bracket with the holes on the back of the VX6. Attach with four 1/4-20x5/8 bolts, using one flat washer and one locking washer per bolt. Place the locking washer on the bolt before the flat washer.

Step 3 - Attach VX6 Assembly To Bottom Mounting Bracket.

1. Place lock washer first, then flat washer on 1/4-20x5/8 bolt. Next insert mounting bolts through the curved apertures in the bottom mounting bracket and into the screw holes on the side of the back mounting bracket.
2. Loosely tighten each bolt as it is inserted.

   Important: Do not torque bolts until all bolts are in place and viewing angle is adjusted.
3. Loosen the hex bolts on both sides to adjust the viewing angle of the mounted VX6.
4. Torque the hex bolts to 50±5 in lbf (5.64±.56 N m).

   Note: Test the torque on the bolts frequently during operation and re-tighten if necessary to 50±5 in lbf (5.64±.56 N m).
6. If using a UPS battery pack, the battery pack can be mounted to the bottom mounting bracket. Place a locking washer and then a flat washer on a 1/4-20x2 bolt. Thread the bolt through the UPS Battery Pack, then through the 1" aluminum spacer and into the mounting bracket.
7. Connect all cables to the VX6. Secure the cables with the strain relief cable clamps, ensuring a slack loop remains between the cable clamp and the accessory connector.
8. The vehicle mounted bracket and the VX6 are now ready to use.

Install Stylus Tether and Sleeve

The LXE stylus kit includes the stylus, tether and sleeves. The tether allows the stylus to be mounted to the VX6 and the sleeve provides storage for the stylus when not in use.

How To Install Stylus Tether and Sleeves

Locate the tether holes on the top of the VX6. (see below):

Select the mounting hole most convenient for the particular VX6 installation.

Slide the clip end of the stylus tether into the tether mounting hole.

Determine a convenient location for the stylus sleeve. Apply the adhesive baked Velcro® loop strip to the VX6. Attach the Velcro® hook strip on the elastic stylus sleeve to the loop strip.

Install/Remove Touchscreen Protective Film

LXE offers a replaceable touchscreen protective film to protect the touchscreen when the VX6 is used in an abrasive environment.

How To Install Touchscreen Protective Film

Make sure both the touchscreen and protective film are clean and dry before installation. Please review “Cleaning the Display”, later in this guide, for instructions on suitable cleaning agents.

Center the protective film over the touchscreen. The antiglare side must be facing outward. Do not cut or trim the protective film.

The protective film is approximately 1/10” (2.54cm) larger than the touchscreen at the centers of the edged (indicated by the arrows in the figure above).

Slide the protective film so that one of the edges of the film can be slid between the touchscreen and display housing when the protective film is re-centered on the touchscreen. Repeat for the other three edges, ensuring the protective film is centered over the touchscreen when finished.

How to Remove Touchscreen Protective Film

To remove the protective film, slide the protective film in one direction until the edge clears. Lift up on the edge of the film so it does not slide between the touchscreen and display housing when slid back. Repeat until all edges are free and remove the protective film.

UPS Battery Pack Remote Mount

The optional UPS battery pack must be mounted remotely when using the RAM mount system or a U-bracket designed for a previous model LXE computer. The remote mount can also be used with the VX6 U-bracket assembly if it is not convenient to mount the UPS battery pack to the U-bracket.

A six foot extension cable is available to connect the UPS battery pack to the VX6.

1. Position the UPS battery pack to allow cables to reach the vehicle battery and the VX6.
2. Attach the UPS battery pack to the vehicle mounting surface using two 1/4 bolts, lock washers and flat washers (or equivalent) fasteners.

   Note:1/4 Bolts and washers not included.

IMPORTANT: Mount to the most rigid surface available.

Connect Antenna

Several antenna options are available for the VX6. Options include single or dual external antennas, remote vehicle mount antennas and an internal antenna.

External Antenna

Note: VX6's are equipped with a wireless device and require an antenna. Some VX6's may be equipped with a dual antenna option. For these VX6's, an external antenna must be connected to each antenna connector.

Place the antenna over the antenna connector. Push down and twist clockwise until the antenna is secured. Repeat for second antenna connector, if present.

Adjust the antenna angle to improve RF communications with the computer network.

Note: Substitution of antennas is not permitted unless authorized by LXE. Use of unauthorized antennas will void the FCC emissions certification of the VX6.

Remote Vehicle Mount Antenna

The external antenna (or antennas) can be remotely mounted on the vehicle. Please refer to the "Vehicle Remote Mount Antenna Installation Sheet" for details.

Internal Antenna

If the internal antenna option is ordered, an antenna is mounted on the inside of the user access panel cover.

The internal antenna assembly has two antenna cables. Attach the antenna cables to the wireless client card. When this process is complete, reattach the access cover screws using a torque wrench capable of measuring to 9±1 inch pounds force (1.016±.11 N m). The screws must be fastened to 9 inch pounds each. The screws require a Phillips size 1 driver head.

Connect Serial Barcode Scanner

Refer to the documentation received with the barcode scanner for complete instructions. Read all warnings and caution labels.

Note: Before using the scanner, read section titled "Operation", sub- section titled "Laser Barcode Scanner Warnings".

Pin 9 of COM1 is configured to provide +5V. To change Pin 9 of the port, please refer to Chapter 4, "System Configuration" in the "VX6 Reference Guide".

The scanner cable is attached to the connector labeled "COM1/SCANNER". The scanner receives power from the VX6.

The cable requires a nine-pin D-shell female connector for the VX6.

Note: Use of a shielded cable is required to maintain FCC and CISPR22 emissions compliance.

1. Power off the VX6 before connecting the scanner cable to the VX6.
2. Seat the connector firmly over the pins and turn the thumbscrews in a clockwise direction. Do not overtighten.
3. Use a strain relief clamp to secure the cable.
4. Press the power button to power up the VX6.

When you have finished using the scanner, remove it from the VX6 and store the scanner in a closed container or bag.

Refer to the documentation received with the barcode scanner for complete instructions.

Connect Serial Printer or PC

Refer to the documentation received with the printer or PC for complete instructions.

Pin 9 of COM3 (labeled “COM2/3”) is configured to provide RI. To change Pin 9 of the port, please refer to Chapter 4, “System Configuration” in the “VX6 Reference Guide”.

The printer or PC cable requires a nine-pin D-shell female connector for the VX6.

The printer or PC cable is attached to the connector labeled “COM2/3”.

Note: Use of a shielded cable is required to maintain FCC and CISPR22 emissions compliance.

1. Power off the VX6 before connecting the cable to the VX6.
2. Seat the connector firmly over the pins and turn the thumbscrews in a clockwise direction. Do not overtighten.
3. Use a strain relief clamp to secure the cable.
4. Press the power button to power up the VX6.

Ethernet and USB Ports

An Ethernet port and different types of external USB ports are available via a dongle cable attached to the port labeled “ETHERNET/USB”, located on the bottom of the VX6. Please refer to the illustrations below for the connectors available via dongle cable.

1. Power off the VX6 before connecting the D15 connector to the VX6.
2. Insert the D15 end of the Ethernet/USB dongle cable into the VX6 USB connector. Seat the connector firmly over the pins and turn the thumbscrews in a clockwise direction. Do not over tighten.
3. Use a strain relief clamp to secure the cable.

   Note: The VX6 may be powered On any time after the D15 connector has been secured to the VX6.

4. Plug the desired device, such as a USB mouse or floppy drive, into the end of the dongle cable with the USB port. Refer to the documentation for your USB device for more details on installation. USB devices may be installed, removed or swapped without turning off the VX6.
5. Insert the network cable and ensure it is firmly seated in the connector jack.
6. To remove the Ethernet cable, press the release tab on the cable end.

USB Mouse

The USB port may be used to connect a USB mouse to the VX6, however the mouse pointer may not always be visible. Please see “Touchscreen and USB Mouse” later in this manual for more details.

Connect External Headset

The VX6 provides an external headset connection via an audio jack connector labeled “Audio”. The audio jack accepts a headset with a 2.5mm plug, such as a mono headset with microphone or a stereo headset. Please refer to the VX6 Reference Guide for information on configuring the audio port for a mono headset with microphone or a stereo headset.

1. Insert the speaker or headphone plug into the audio connector; making sure the plug is firmly seated in the audio jack.
2. Replace the plug when the speaker or headset is removed from the audio jack.
3. Use a strain relief clamp to secure the cable.

Connect Power Cable and Optional UPS Battery Pack

1. Turn the VX6 off before attaching the power plug.
2. Connect the power cable to vehicle power (See the following section titled “Vehicle 12-80VDC Direct Connection”.)

   - or -

   to an AC adapter. (See the following section titled “External Power Supply”.).
3. Several possibilities are available for routing the vehicle power to the VX6. See the following section titled “Vehicle 12-80VDC Direct Connection” for details.
4. All plugs and receptacles are keyed and care must be used when connecting the cables. Tighten the nut of the plugs clockwise until tight.

   Secure the cable with the strain relief cable clamps.
5. Turn the VX6 on.

External Power Supply, Optional

The LXE-approved AC Power Adapter is only intended for use in a 25ºC (77ºF) maximum ambient temperature environment.

In North America, this unit is intended for use with a UL Listed ITE power supply with output rated 12 – 80 VDC, minimum 75W. Outside North America, this unit is intended for use with an IEC certified ITE power supply with output rated 12 – 80 VDC, minimum 75W.

The external power supply may be connected to either a 120V, 60Hz supply or, outside North America, to a 230V, 50Hz supply, using the appropriate detachable cordset. In all cases, connect to a properly grounded source of supply provided with maximum 15 Amp overcurrent protection (10 Amp for 230V circuits).

How To: Connect External Power Supply

1. Turn the VX6 off.
2. Connect the detachable cordset provided by LXE (US only, all others must provide their own cable) to the external power supply (IEC 320 connector).
3. Plug cordset into appropriate, grounded, electrical supply receptacle (AC mains).
4. Connect the watertight connector end to the VX6's Power Connector by aligning the connector pins to the power connector; push down on the watertight connector and twist it to fasten securely.
5. Turn the VX6 on.

Vehicle 12-80VDC Power Connection

Caution:	*For proper and safe installation, the input power cable must be connected to a fused circuit on the vehicle. This fused circuit requires a 10 Amp maximum time delay (slow blow) high interrupting rating fuse. If the supply connection is made directly to the battery, the fuse should be installed in the positive lead within 5 inches of the battery positive (+) terminal.*
Caution:	*For installation by trained service personnel only.*
Warning :	*Risk of ignition or explosion. Explosive gas mixture may be vented from battery. Work only in well ventilated area. Avoid creating arcs and sparks at battery terminals.*

Note: Please see "Power Adapter Cable" later in this section for information on adapting a VX1, VX2 or VX4 DC power supply to the VX6.

Note: Correct electrical polarity is required for safe and proper installation. Connecting the cable to the VX6 with the polarity reversed will cause the VX6's fuse to be blown. See the following figure titled "Vehicle Connection Wiring Color Codes" for additional wire color-coding specifics.

How To: Connect Vehicle 12-80VDC Connection

1. The VX6 must be turned off and the power cable must be UNPLUGGED from the VX6.
2. While observing the fuse requirements specified above, connect the power cable as close as possible to the actual battery terminals of the vehicle. When available, always connect to unswitched terminals in vehicle fuse panel, after providing proper fusing.

   ATTENTION:For uninterrupted power, electrical supply connections should not be made at any point after the ignition switch of the vehicle.

3. Route the power cable the shortest way possible. The cable is rated for a maximum temperature of 105°C (221°F). When routing this cable it should be protected from physical damage and from surfaces that might exceed this temperature.

   Do not expose the cable to chemicals or oil that may cause the wiring insulation to deteriorate.

   Note:If the vehicle is equipped with a panel containing Silicon Controller Rectifiers (SCR's), avoid routing the power cable in close proximity to these devices.

   Always route the cable so that it does not interfere with safe operation and maintenance of the vehicle.

   Use proper electrical and mechanical fastening means for terminating the cable. Properly sized "crimp" type electrical terminals are an accepted method of termination. Please select electrical connectors sized for use with 18AWG (1mm^2) conductors.

   Wiring color codes for LXE supplied DC input power cabling:

Vehicle Supply		Wire Color
+12 - 80VDC	(DC +)	White
Return	(DC -)	Black
Vehicle Chassis	GND	Green

Vehicle Connection Wiring Color Codes

4. Provide mechanical support for the cable by securing it to the vehicle structure at approximately one foot intervals, taking care not to over tighten and pinch conductors or penetrate outer cable jacket.
5. Refer to the following sections to complete the power connection to the VX6.

How To: Connect VX6 without a UPS Battery Pack

1. Connect the power cable to the vehicle's electrical system as described in "Connect Vehicle 12-80VDC Connection".
2. Connect the power cable to the VX6 by aligning the water-tight connector pins to the power connector on the bottom of the VX6; push down on the water-tight connector and twist it to fasten securely.
3. Turn the VX6 on.

How To: Connect VX6 to a Integrated Mount UPS Battery Pack

1. Connect the power cable to the vehicle's electrical system as described in "Connect Vehicle 12-80VDC Connection".
2. Connect the power cable to the UPS battery pack by aligning the water-tight connector pins to the input connector (labeled "From Vehicle"); push down on the water-tight connector and twist it to fasten securely.
3. Connect the output cable (labeled "To Computer") from the UPS battery pack to the power connector on the bottom of the VX6 by aligning the water-tight connector to the power connector; push down on the water-tight connector and twist it to fasten securely.
4. Turn the VX6 on.

How To: Connect VX6 to a Remotely Mounted UPS Battery Pack

1. Connect the power cable to the vehicle's electrical system as described in "Connect Vehicle 12-80VDC Connection".
2. Connect the power cable to the UPS battery pack by aligning the water-tight connector pins to the input connector (labeled "From Vehicle"); push down on the water-tight connector and twist it to fasten securely.
3. Connect the output cable (labeled "To Computer") from the UPS battery pack to the extension cable by aligning the water-tight connector to the input end of the extension cable; push down on the water-tight connector and twist it to fasten securely.
4. Route the extension cable the shortest way possible. The cable is rated for a maximum temperature of 105°C (221°F). When routing this cable it should be protected from physical damage and from surfaces that might exceed this temperature.

   Do not expose the cable to chemicals or oil that may cause the wiring insulation to

deteriorate. Always route the cable so that it does not interfere with safe operation and maintenance of the vehicle.

Note: If the vehicle is equipped with a panel containing Silicon Controller Rectifiers (SCR's), avoid routing the power cable in close proximity to these devices.

5. Provide mechanical support for the cable by securing it to the vehicle structure at approximately one foot intervals, taking care not to over tighten and pinch conductors or penetrate outer cable jacket.
6. Connect the output end of the extension cable to the power connector on the bottom of the VX6 by aligning the water-tight connector to the power connector; push down on the water-tight connector and twist it to fasten securely.
7. Turn the VX6 on.

Power Adapter Cable

LXE offers an adapter cable (part no. 9000A077CBLPWRADPTR) to adapt certain VX1, VX2 or VX4 DC power supplies to the VX6. Please read and follow all cautions below to determine if your present power supply can be used with the VX6.

Caution:	This document assumes the VX1/2/4 DC power cable, if applicable, is already properly connected to your vehicle. If this is not the case, please refer to the "VX1 User's Guide", "VX2 User's Guide" or "VX4 User's Guide" for direct vehicle connection details.
Caution:	For use only with VX1/2/4 DC power cables with yellow colored cable containing 18AWG wires. Do not use this cable with VX1/2/4 DC power cables with gray colored cable containing 22AWG wires. These power cables must be replaced with a VX5/6/7 power cable.
Caution:	When a DC power cable that is eight feet or longer is in a 12V application, there may be an excessive voltage drop over the longer cable. If this occurs, a new power cable is required.
Caution:	Do not use this adapter with AC power supplies originally designed for the 1380, 1390, VX1, VX2 or VX4. These power supplies do not have sufficient power for the VX6.

Note: For more information on the 12-80V DC direct, UPS battery pack and extension cable connections please refer to the appropriate section earlier in this manual.

How To Connect Power Adapter Cable

1. The VX6 must be turned off and the power cable must be UNPLUGGED from the VX6.
2. Attach the smaller end of the Power Adapter Cable to the VX1/2/4 power cable by aligning the water-tight connector pins to the power cable connector. Push down on the water-tight connector and twist it to fasten securely.
3. Connect the larger end of the Power Cable directly to the computer or to a UPS battery pack, as desired. Please refer to the appropriate section earlier in this manual for UPS battery pack connection details.

Fuse Replacement for the VX6

The VX6 uses a 100V, 10A time delay (slow blow), high current interrupting rating fuse that is externally accessible and user replaceable. Should it need replacement, replace with same size, rating and type of fuse – Littlefuse 0234010 or Optifuse MSC-10A (5x20mm).

1. **Turn the VX6 off and disconnect the power cable from the VX6.**

   Caution: **Fuse has voltage on it even when power is off. Always disconnect input power before changing fuse.**

2. While holding the VX6 over a level surface, push the fuse cover in and twist it one quarter turn counterclockwise. A flat head screwdriver may be used to twist the fuse cover.
3. Remove the fuse.
4. Discard the fuse and place a new fuse in the holder.
5. Push the fuse in and twist it clockwise one quarter turn.
6. Reconnect the power cable to the VX6.

Operation

Powering On/Off

Connect the VX6 to a power source, either AC or Vehicle.

The power (on/off) button is located on the front of the VX6. The switch is sealed by a rubber membrane. The Status LED on the LXE VX6 is illuminated when the power is on:

- ***Green*** *– VX6 is operating from vehicle or AC*
- ***Solid Yellow*** *– VX6 is operating from the UPS*
- ***Flashing Yellow*** *– VX6 is operating from the UPS, but UPS battery is critically low.*

Press the power button to start the VX6. You are now ready to use the computer.

Enter data using the keyboard, touchscreen or a Serial Barcode Scanner.

Note: Always turn the computer off prior to connecting or disconnecting any power source.

The VX6 is designed for an orderly shutdown when using the power button. An orderly shutdown first closes any open programs, and then shuts down the Windows CE .NET operating system. DO NOT remove power from the VX6 without shutting down the VX6.

The VX6 shutdown may be initiated in any of the following ways:

- *Momentarily pressing and releasing the power button (less than 5 seconds) performs an orderly shutdown.*
- *Pressing and holding the power button for more than five seconds forces a shutdown. Any open programs and the Windows CE .NET operating system are shut down before power off. Use this option to shut down the VX6 when the operating system is not responding.*

For more information on the shutdown process, please refer to the Windows CE .NET help function or commercially available help guides.

Display and Touchscreen

The VX6 Display is a thin-film transistor display capable of supporting Half SVGA+ graphics modes. Display size is half screen, 800 x 320 pixels. The display covering is designed to resist stains. The touch screen allows signature capture and touch input.

The touch screen is a Resistive Panel with a scratch resistant finish that can detect touches by a stylus, and translate them into computer commands. In effect, it simulates a computer mouse. Only Delrin or plastic styluses should be used.

Note: Always use the point of the stylus for tapping or making strokes on the display. Never use an actual pen, pencil or sharp object to write on the touch screen.

An extra or replacement stylus may be ordered from LXE. See the "Accessories" section for the stylus part number.

Adjusting Screen Display

The color TFT display is an active source of light. The VX6 display brightness can be adjusted via the brightness control keys located on the VX6 control panel. Pressing the brightness up button increases the display brightness incrementally until maximum brightness is achieved. Likewise, pressing the brightness down button decreases the display brightness until minimum brightness is achieved. Because there are 64 incremental levels of brightness intensity, a single press of either brightness adjustment button may not be noticeable. The up or down button can be pressed and held to accelerate brightness adjustment.

Note: The 2nd functions <F4>, <F5>, <F6>, and <F7> keys have no function on the VX6.

There are no provisions for adjusting the contrast of the display. The display remains on unless Microsoft Windows CE .NET power management is configured to turn the display off after a certain period of inactivity.

Cleaning the Display

Keep fingers and rough or sharp objects away from the display. If the glass becomes soiled or smudged, clean only with a standard household cleaner such as Windex® without vinegar or use Isopropyl Alcohol. Do not use paper towels or harsh-chemical-based cleaning fluids since

they may result in damage to the glass surface. Use a clean, damp, lint-free cloth. Do not scrub optical surfaces. If possible, clean only those areas which are soiled. Lint/particulates can be removed with clean, filtered canned air.

Disabling the Touchscreen

The touchscreen can be disabled, if desired. For more information, please refer to "Disabling the Touchscreen" in the "VX6 Reference Guide".

Disabling the Touchscreen Heater

The touchscreen heater included on extended temperature VX6 models can be disabled on certain VX6's, if desired. For more information, please refer to "Disabling the Touchscreen" in the "VX6 Reference Guide".

Calibrating the Touchscreen

Although the touch screen is installed and calibrated at the factory, users may make adjustments to it. To calibrate the touchscreen, select **Start|Settings** and double tap the Stylus icon.

The calibration utility displays a cross on the screen. Touch the center of the cross with the stylus and hold for a few seconds. Release and repeat with the next cross. After all locations have been touched, either press <Enter> or click the Calibration button.

Touchscreen Protective Film

LXE offers a replaceable touchscreen protective film to protect the touchscreen when the VX6 is used in an abrasive environment. Installation and removal instructions can be found earlier in this guide.

Touchscreen and USB Mouse

Please refer to the "VX6 Reference Guide" for information on identifying your VX6.

Platform 1 VX6's

Because the touchscreen also functions as a mouse, the pointer for on the 95-key keyboard, a USB mouse or a PS/2 mouse may not always be visible on the screen. The mouse pointer

reappears when the 95-key keyboard pointer or external mouse is moved or clicked. Please see “USB Mouse” earlier in this manual for more details.

- *When a USB mouse is first attached to the VX6, the mouse pointer may not be visible. However, moving or clicking the mouse causes the pointer to appear.*
- *When the USB mouse is unplugged, the pointer may remain visible until the touchscreen is tapped.*
- *If the touchscreen is used for input, the mouse pointer may disappear. However, moving or clicking the mouse or pointing device on the 95-key keyboard causes the pointer to reappear.*

Platform 2 VX6’s

The mouse pointer is not visible unless a USB mouse is attached.

If a mouse of any kind is attached, the mouse pointer is displayed on screen.

Adjust Speaker Volume

Microsoft Windows CE .NET provides volume adjustment by clicking the “Volume and Sounds” icon in the Windows CE .NET Control Panel. The volume control adjusts the built in speaker’s volume.

Note: The <F8> and <F9> keys on the VX6 keyboard have no function as Windows CE .NET controls the sound volume.

Microsoft Windows CE .NET Event Sounds

The VX6 includes a customized sound scheme. The customized WAV files are preferable to the standard Microsoft Windows CE .NET sounds when using the internal speakers.

Power Management

All Power Management is handled through the Microsoft Windows CE .NET Control Panel. Since the VX6 is externally powered, the only power management configuration is for the display/display backlight and the keyboard backlight. The display, the display backlight and the keyboard backlight are turned off at the same time. The time interval can be configured

using **Start** | **Settings** | **Control Panel** | **Display** | **Backlight** tab.

When enabled, the display, display backlight and keyboard backlight are turned off when the timer expires. The timer is reset by the following primary events:

- *Keypress, or*
- *Mouse movement, or*
- *Touchscreen touch*

For more information on configuring Microsoft Windows CE .NET Power Management, please refer to the VX6 Reference Guide.

Laser Barcode Scanner Warnings

- *Do not look into the laser's lens.*
- *Do not stare directly into the laser beam.*
- *Do not remove the laser caution labels from the scanner.*
- *Do not connect the laser barcode module to any other device.*

Caution:

Please read the caution labels.

Avoid exposure. Laser light is emitted from the scanner's aperture.

Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

The scanner uses laser light. The following labels are representations of caution and warning labels placed on laser scanners.

Do not pour, spray, or spill any liquid on the scanner. The Barcode Scanner contains the circuitry, scanning motor and laser. Handle with appropriate care.

Enter Data

You can enter data into the VX6 through several different methods:

- *The tethered scanner connected to the COM1 serial port provides barcode data entry*
- *The serial ports are used to input/output data*
- *The keyboard provides manual entry*
- *The touchscreen also provides manual entry*

Keyboard Entry

Refer to Appendix A “Key Maps” for specific keypresses.

The keyboard is used to manually input data that is not collected otherwise. Almost any function that a full sized computer keyboard can provide is duplicated on the VX6 keyboard but it may take a few more keystrokes to accomplish a keyed task.

Almost every key has two or three different functions. The primary alpha or numeric character is printed on the key.

For example, when the <2nd> key is selected pressing the desired second-function key produces the <2nd> character i.e. <2nd> + F1 toggles the CAPS Lock function. The specific <2nd> character is printed above the corresponding key.

Please refer to Appendix A “Key Maps” for instruction on the specific keypresses to access all PC-compatible keyboard functions.

Touchscreen Entry

Note: This section is directed to the VX6 user. The assumption is that the unit has been configured and the touch panel calibrated by the System Administrator prior to releasing the VX6 for use.

Note: Always use the point of the stylus for tapping or making strokes on the display. Never use an actual pen, pencil or sharp object to write on the touch screen.

The touchscreen input performs the same function as the mouse that is used to point to and

click elements on a desk top computer. The stylus is used in the same manner as a mouse – single tap or double tap to select menu options, drag the stylus across text to select, hold the stylus down to activate slider bars, etcetera. Holding the stylus down for ½ second performs the right mouse click function.

When using a stylus, hold the stylus as if it were a pen or pencil. Touch an element on the screen with the tip of the stylus then remove the stylus from the screen. The touch screen responds to an actuation force (touch) of up to 4 oz. of pressure.

The touch screen can be used in conjunction with the keyboard and an input/output device connected to one of the VX6's serial ports.

- *Touch the stylus to the field of the data entry form to receive the next data feed.*
- *The cursor begins to flash in the field.*
- *The unit is ready to accept data from either the keyboard or a device connected to a serial port.*

Right Click

A right click can be simulated on the touch screen. To perform a right click, touch the touch screen with the stylus and hold it in the same location for a short time.

Scanner Entry

The following section is directed toward a generic tethered scanner connected to the COM1 serial port on the VX6.

Aiming the Barcode Scanner

Aim the scanner ***away*** from you, direct it at the barcode and press the trigger to scan.

The Scan On LED (or equivalent) turns red to indicate the scanner is on.

Adjust the aim so that the thin, red laser beam covers the entire length of the barcode.

Some scanners use a laser aiming beam which then spreads into a wide beam when the scanner's Aiming Beam Timer expires. Place the aiming beam in the center of the barcode and hold the scanner steady until the beam spreads and the barcode is decoded. Beeps may be heard as the barcode is decoded. Refer to the barcode scanner user's guide for information on the Aiming Beam Timer and beep sequences, and the TE reference guide for host generated

beep sequences.

The scan beam must cross every bar and space on the barcode.

Distance from Label

Large barcodes can be scanned at the maximum distance. Hold the scanner closer to small barcodes (or with bars that are very close together).

Note: Do not position the scanner exactly perpendicular to the barcode being scanned. In this position, light can bounce back into the scanner's exit window, and possibly prevent a successful decode.

Successful Scan

When the scan is successful, the scanner's good scan indicator illuminates, the scan on indicator is off, and the currently running application may produce a distinctive audible tone.

Unsuccessful Scan

When the scan is unsuccessful, the scan on indicator remains illuminated and the currently running application may produce distinctive audible tones. Check the following:

- *Is the scanner programmed for the barcode being read?*
- *Check the barcode for marks or physical damage e.g. ripped label, missing section, etc.*
- *Try scanning test symbols of the same code type at different distances and angles.*

Appendix A Key Maps

The VX6 Keypad

The key map table that follows lists the commands used for the VX6. Note that since the VX6 uses a Microsoft Windows CE .NET operating system, no DOS Terminal Emulation keypress sequences are provided.

Key Map 101-Key Equivalencies

When using a sequence of keys that includes the <2nd> key, press the <2nd> key first then the rest of the key sequence.

Note: The VX6 keyboard does not have a NumLock indicator. NumLock is enabled by default. The warmboot behavior of NumLock can be configured. Please refer to Chapter 4, "System Configuration" in the VX6 Reference Guide. When NumLock is off, only the numeric 0 through 9 and DOT keys are affected. All other keymaps are unchanged.

When the VX6 boots, the default condition of Caps (or CapsLock) is Off. The Caps (or CapsLock) condition can be set toggled with a <2nd>+<F1> key sequence. The CAPS LED is illuminated when CapsLock is On.

To get this key	Press These Keys and Then					Press this key
	2nd	Shift	Ctrl	Alt	CapsLock	
Suspend/Resume [1]	x					F3
2nd						2nd
Shift						Shift
Alt						Alt
Ctrl						Ctrl
Esc						Esc
Space						Sp
Enter						Enter

[1] The Suspend/Resume key has no function as Windows Power Management controls the power management modes.

To get this key	Press These Keys and Then					Press this key
	2nd	Shift	Ctrl	Alt	CapsLock	
Enter (numeric)	x					Enter
CapsLock (Toggle)	x					F1
Back Space						Ins/BkSp
Tab						Tab
BackTab	x					Tab
Ctrl-Break [2]	x		x			F2
Pause	x	x				F3
Up Arrow						Up Arrow
Down Arrow						Down Arrow
Right Arrow						Right Arrow
Left Arrow						Left Arrow
Insert	x					Ins/BkSp
Delete (numeric)	x					DEL
Home	x					Left Arrow
End	x					Right Arrow
Page Up	x					Up Arrow
Page Down	x					Down Arrow
Right Shift	x	x				F7
Right Alt	x	x				F8
Right Ctrl	x	x				F9
ScrollLock	x	x				F4
NumLock	x	x				F10
F1						F1
F2						F2
F3						F3
F4						F4
F5						F5
F6						F6
F7						F7
F8						F8
F9						F9
F10						F10
F11	x	x				F1
F12	x	x				F2
a						A
b						B
c						C
d						D

[2] Press <Ctrl> then <2nd> then <F2> to produce Ctrl-Break.

To get this key	Press These Keys and Then					Press this key
	2nd	Shift	Ctrl	Alt	CapsLock	
e						E
f						F
g						G
h						H
i						I
j						J
k						K
l						L
m						M
n						N
o						O
p						P
q						Q
r						R
s						S
t						T
u						U
v						V
w						W
x						X
y						Y
z						Z
A					x	A
B					x	B
C					x	C
D					x	D
E					x	E
F					x	F
G					x	G
H					x	H
I					x	I
J					x	J
K					x	K
L					x	L
M					x	M
N					x	N
O					x	O
P					x	P
Q					x	Q
R					x	R

To get this key	Press These Keys and Then					Press this key
	2nd	Shift	Ctrl	Alt	CapsLock	
S					x	S
T					x	T
U					x	U
V					x	V
W					x	W
X					x	X
Y					x	Y
Z					x	Z
1						1
2						2
3						3
4						4
5						5
6						6
7						7
8						8
9						9
0						0
DOT						DOT
<	x					0
[	x					1
]	x					2
>	x					3
=	x					4
{	x					5
}	x					6
/ (numeric)	x		x			7
/ (alpha)	x					7
- (numeric)	x		x			8
- (alpha)	x					8
+ (numeric)	x		x			9
+ (alpha)	x					9
* (numeric)	x					I
* (alpha)	x		x			I
: (colon)	x					D
; (semicolon)	x					F
?	x					L
`	x					N
_ (underscore)	x					M
, (comma)	x					J

To get this key	Press These Keys and Then					Press this key
	2nd	Shift	Ctrl	Alt	CapsLock	
‘ (apostrophe)	x					H
~ (tilde)	x					B
\	x					S
|	x					A
“	x					G
!	x					Q
@	x					W
#	x					E
$	x					R
%	x					T
^	x					Y
&	x					U
(	x					O
)	x					P

Safety Statements

RF Safety Notice:

Caution:

This device is intended to transmit RF energy. For protection against RF exposure to humans and in accordance with FCC rules and Industry Canada rules, this transmitter should be installed such that a minimum separation distance of at least 20 cm (7.8 in.) is maintained between the antenna and the general population. This device is not to be co-located with other transmitters.

Lithium Battery Safety Statement:

Lithium battery inside. Danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by battery manufacturer (US).

AC Power Supply Safety Statement – VX6 Output Rated 12 – 80 VDC, Minimum 75W

Optional A/C Power Supply:

Outside North America, this unit is intended for use with an IEC certified ITE power supply with output rated as stated at the top of this page. (US)

Vehicle Power Supply Connection Safety Statement:

Vehicle Power Supply Connection:

If the supply connection is made directly to the battery, a 10A slow-blow fuse should be installed in the positive lead within 5 inches (12.7 cm.) of the battery positive (+) terminal. (US)