MX3 Installation and Operator's Guide

LXE ®

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The user is strongly encouraged to read Appendix C, "Regulatory Notices and Safety Information. Important safety cautions, warnings and regulatory information are contained in Appendix C.

Revision Notice

MX3 Installation and Operator's Guide
Upgrade From Revision C to Revision D

Section	Explanation
Notices	Updated Notices, Copyrights and Trademarks.
The MX3 Handheld Computer	Added "Cleaning the Display" section. Revised "Terminal Emulation Screen Sizes" section.
Scanner Warnings and Labels	Added "Cleaning the Scan Aperture" section.
Appendix C – Regulatory Notices and Safety Information	Revised Approvals table. Added 6816 Declaration of Conformity.

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Illustrations

The MX3 Hand Held Computer

Introduction

The MX3 is a rugged, portable, hand-held PC-compatible computer capable of wireless data communications. The MX3 can transmit information using either a 900 MHz or 2.4 GHz radio (with an internally mounted antenna). It can store information for later transmission through an RS-232 or InfraRed port. The MX3 is horizontally oriented and features electroluminescent backlighting for the display. The keys on the keypad are constructed of a phosphorescent material that can easily be seen in dimly lighted areas.

The MX3 is an MS-DOS compatible computer designed to run as a batch unit or run software applications such as LXE's Terminal Emulator applications (ANSI Plus, LDS Plus, DOS 5250, DOS 3270, TN3270 and TN5250).

Note: The "MX3 Reference Guide" contains MX3 technical information and advanced functions.

Components

1. Endcap
2. Display
3. Field Exit or Scan or Enter
4. Beeper
5. On/Off Button
6. 2nd LED
7. Alt LED
8. Ctrl LED
9. Shift LED
10. Caps LED
11. Scanner LED
12. Backup Battery LED
13. Status LED
14. Main Battery LED
15. Charger LED
16. Scan or Enter

Figure 1 Front of MX3

1. Endcap
2. Leather Handstrap Connector
3. IR Port
4. Cradle Input Contacts
5. Main Battery
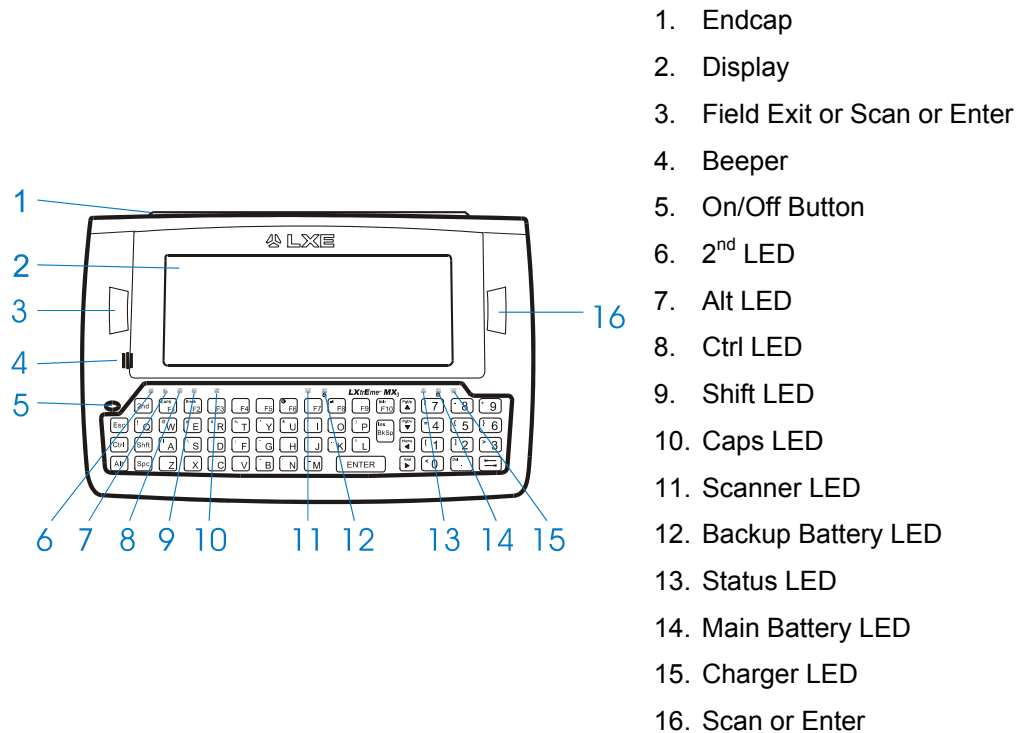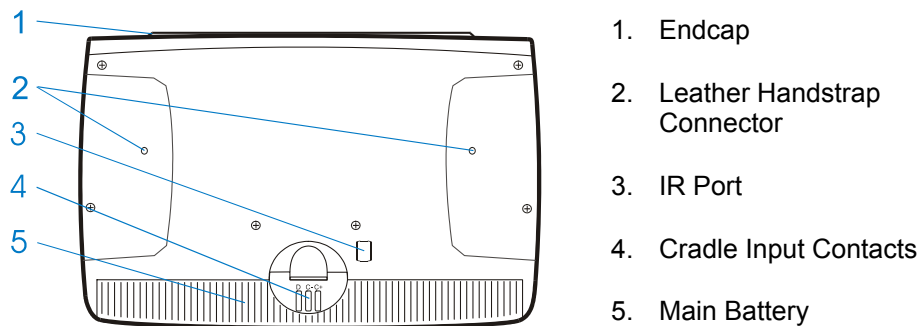
Figure 2 Back of MX3

Display
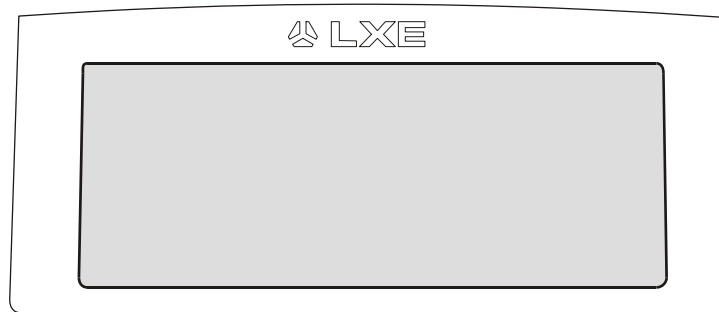
Figure 3 MX3 Display

The MX3 Display is a transflective monochrome LCD unit capable of supporting VGA graphics modes. Display size is 640 x 240 pixels with an electroluminescent backlight. An optional touch screen is available for batch and client server MX3s only.

Cleaning the Display

Keep fingers and rough or sharp objects away from the scan aperture and 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.

Optional Touch Screen

A touch screen option is available that allows signature capture and touch input with the appropriate software load. A pen stylus is included with the touch screen option. Contact LXE for availability.

Display Backlight

A display backlighting feature is available and depending upon programming, will operate in one of three ways:

1. **Backlighting Off.** This is the most efficient way to operate the computer with battery power.

2. **Backlighting On For A Short Time.** This will provide display backlighting for a predetermined amount of time. Use of this feature will result in reduced battery life.

3. **Backlighting On Whenever The Unit Is On.** This provides full time backlighting to the display whenever the unit is turned on. It greatly reduces the expected battery life.

Display Backlight Timer

When the Display Backlight Timer expires the display backlight is turned off. The default value for this parameter is 3 seconds. The value can be adjusted using the BIOS Setup. Refer to the "MX3 Reference Guide".

Any of the following will wake the display and display backlight:

- Display update by host or currently running application on the MX3

- Any key on the keypad

- Pen-touch on a touch screen display

When the display wakes up, the Display Backlight Timer will begin the countdown again. When any of the above events occur prior to the timer expiring, the timer starts the countdown again.

The ability of touch screen activation to wake up the MX3 is configurable in BIOS Setup. Refer to the "MX3 Reference Guide" for details.

Panning

Panning keypresses - 2nd+Ctrl+Up Arrow or Down Arrow

Note: Panning functions may be overridden by terminal emulation programs running on the MX3.

The *virtual screen* is the full 25 line x 80 column screen generated by the host computer. An example of a virtual screen is the screen you view when you use a personal computer. The *display window* is the screen on the computer that allows portions of the virtual screen to be seen. Depending on the font size used, the MX3 display window is:

Font Size in Pixels	Rows	Columns
8x8	30	80
8x16	15	80

The MX3 display window can be panned up and down using keypress sequences so the user can view an entire virtual 640 x 480 pixel screen.

Initially, using the default 8 x 16 pixel font, the top half (15 rows x 80 columns) of a 25 line virtual screen is displayed.

When the top portion of the virtual screen is displayed and the Pan Down key sequence is pressed, rows 10 through 25 are shown on the display (this action leaves rows 10 through 15 on the screen).

When the Home key sequence (2nd + Left Arrow) is pressed, the cursor moves to the top left hand corner of the virtual screen display.

Note: Additional fonts are supported in graphics mode and are dependent on the Terminal Emulator.

Please refer to the "MX3 Reference Guide" for technical information about the Panning function.

Terminal Emulation Screen Sizes

The fonts/screen sizes available on the MX3 in Batch mode or at the DOS prompt are:

- 30 rows by 80 columns
- 15 rows by 80 columns

For the screen sizes available on the MX3 when running a Terminal Emulation, please refer to the ScreenSize parameter in the appropriate Terminal Emulation reference guide.

Endcaps

> *Note: Your configuration may be different than those shown below.*

Scanner / Serial Port

1. DC Power Jack
2. Scanner Aperture (COM1)
3. Serial Port (COM 2)
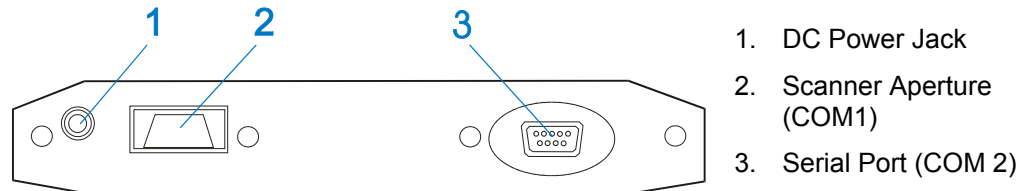
Figure 4 Standard Range Scanner / Serial Port Endcap

The internal barcode scanner scans only when the Scan button is pressed. Scan buttons have no effect on externally attached barcode scanners.

Laser Scanner Indicator

Read all cautions, warnings and labels **before** using the laser scanner.
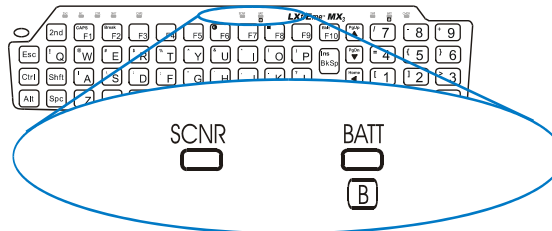
Figure 5 Scanner LED Location

Dual Serial Port

1. DC Power jack
2. Dual Serial Port (COM 1 and COM 2)
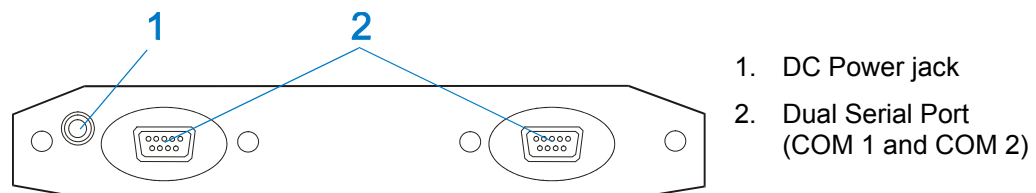
Figure 6 Dual Serial Port

COM Port Switching

The default COM 2 port is always the IR port on the back of the MX3, regardless of the endcap installed on the MX3.

On the Standard Range Scanner / Serial Port endcap COM 1 is the Integrated Scanner port.

On the Dual Serial Port endcap the COM1 port is the serial port on the left side of the endcap when the display is facing you.

An API can be run to switch power to the DB9 Serial port. If a tethered scanner is connected to the Serial Port without switching the power to the COM2 port (serial port), the scanner will not work.

IR Port
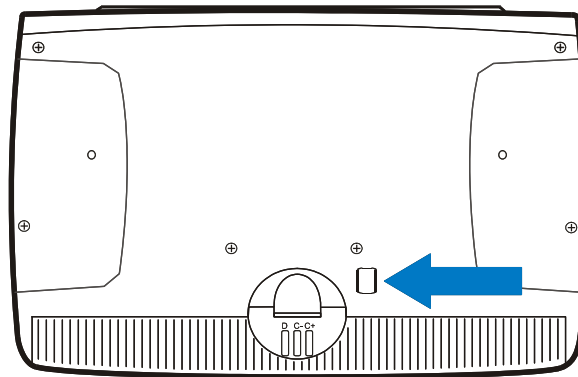
Figure 7 IR Port

The InfraRed (IR) port provides a means of transferring information to a device with a similar port and the proper software. The IR port can be used to communicate with printers or a host computer with the use of an adapter.

When sending data through the IR port to another MX3's IR port, make sure both units are in close proximity to each other. The IR operating envelope has a distance range of 2 cm (.79 inches) to 1 meter (3.2 feet) with a viewing angle of 30 degrees.

The IR Port is specified as COM 2 and is a bi-directional half-duplex infrared port. It supports the Slow IrDA (Infrared Data Access) PHY Layer standard that allows communication speeds up to 19.2k baud.

The Keypads

There are two keypads and three overlays available for the MX3. All keypads are phosphorescent. A phosphorescent keypad does not use a keypad backlight but glows in dim/dark areas after exposure to a light source.

All keypads are installed and configured by LXE.

The keymaps (keypress sequences) are located in "Appendix A - Key Maps".

QWERTY Keys
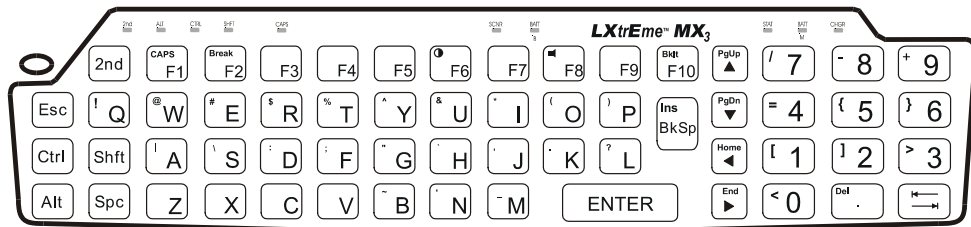
Figure 8 The QWERTY Keypad

ABCD Keys
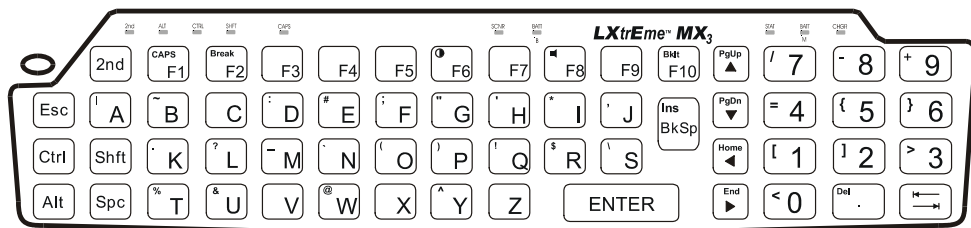
Figure 9 The ABCD Keypad

The Overlays

There are four keypad overlays. One for the ABCD keypad and three for the QWERTY keypad.
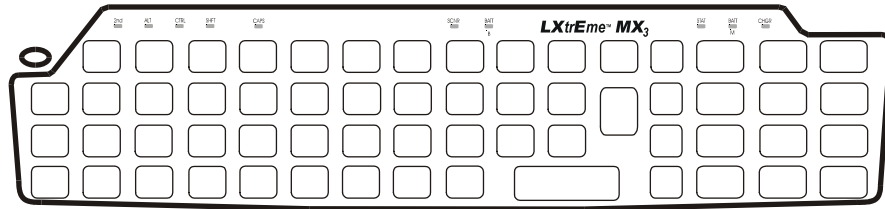
Figure 10 ABCD Keypad - ANSI/LDS/PC Overlay
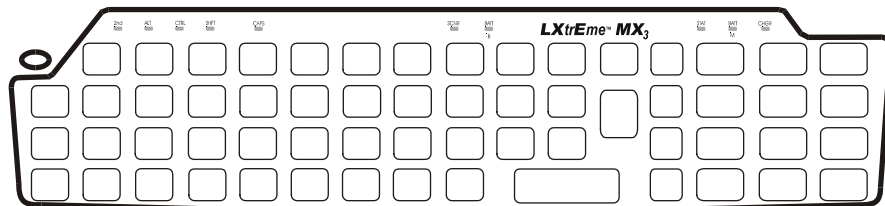
Figure 11 QWERTY Keypad - ANSI/LDS/PC Overlay
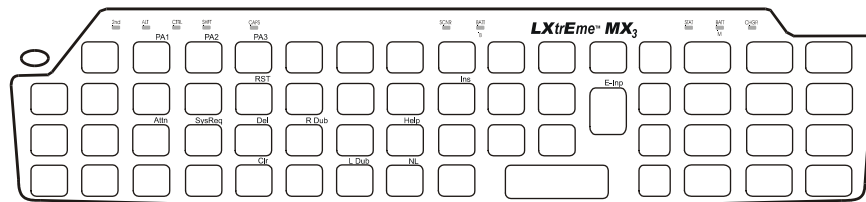
Figure 12 TN3270/3270 Overlay for QWERTY Keypad
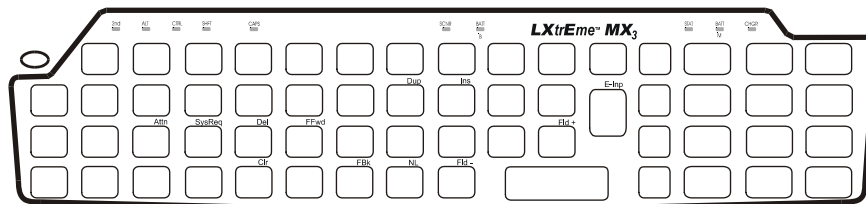
Figure 13 TN5250/5250 Overlay for QWERTY Keypad

Programmable Buttons
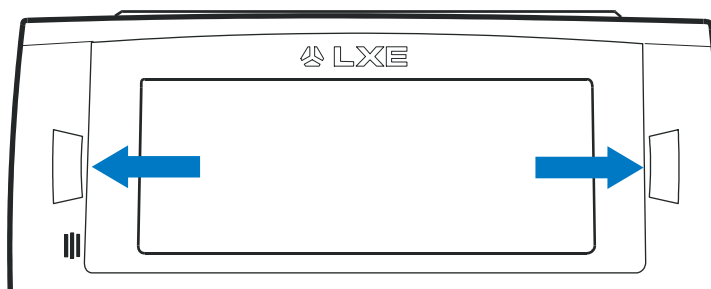
Figure 14 Programmable Buttons (Field Exit / Scan / Enter)

The buttons to the left and right of the display can be programmed by the System Administrator to perform the following functions:

Scan   Pressing this key activates the laser scanner. See the following section titled "Scan Key Function".

Enter   Pressing this key confirms a forms entry or transmits information. See the following section titled "Enter Key Function".

Field Exit   IBM 5250/TN5250 units only. Pressing this key exits an input field. See the following section titled "Field Exit Key Function".

Possible Button Configurations

Endcap	Right Button[1]	Left Button
Blank	Numeric keypad Enter	Numeric keypad Enter
Scanner/serial	Scan	Numeric keypad Enter
Serial/Serial	Numeric keypad Enter	Numeric keypad Enter
TN5250/5250 Terminal Emulation only:		
Blank	Numeric keypad Enter	Field Exit w/ FLD EXIT label
Scanner/Serial	Scan	Field Exit w/ FLD EXIT label
Serial/Serial	Numeric keypad Enter	Field Exit w/ FLD EXIT label

[1] Regardless of the type of endcap installed, the default value of the Right Button is always Scan.

Scan Key Function

(MX3's with Scanner endcaps only.) The Scan key activates the scanner when a scanner endcap is installed and the Scan button is pressed. The internal scanner scans only when the Scan button is pressed. A Scan button press has no effect on externally attached scanners.

Enter Key Function

Enter   The Enter key is used to confirm a forms entry or to transmit information. How it is used is determined by the application running on the computer.

Field Exit Key Function (IBM 5250/TN5250 Only)

Fld
Exit   The Field Exit key is used to exit an input field. If the field is an Auto Enter field, the auto transmit function is activated. This key function is present on the IBM 5250/TN5250 specific keypad only.

2nd Key Function

2nd   The 2nd key is used to activate the 2nd functions of the keypad. Printed on many keys at the upper left corner are small characters that represent the 2nd function of that key. Using the 2nd key activates the second key function. Note that the 2nd key only stays active for one keystroke. Each time you need to use the 2nd function you must press the 2nd key. To cancel a 2nd function before pressing another key, press the 2nd key again. When the 2nd function is active, the 2nd LED illuminates.

Ctrl Key Function

Ctrl   The Ctrl key (blue characters) enables the control functions of the keypad. This function is similar to a regular keyboard's Control key. Note that the Ctrl key only stays active for one keystroke. Each time you need to use a Ctrl function, you need to press the Ctrl key before pressing the desired character key. When the Ctrl function is active, the Ctrl LED illuminates.

Alt Key Function

Alt   The Alt key enables the alternate functions of the keypad. This function is similar to a regular keyboard's Alt key. Note that the Alt key only stays active for one keystroke. Each time you need to use an alternate function, you need to press the Alt key before pressing the function key. When the Alt function is active, the Alt LED illuminates.

Shft Key Function

Shft
The Shft key enables the shifted functions of the keypad. This function is similar to a regular keyboard's Shift key. Note that the Shift key only stays active for one keystroke. Each time you need to use a Shifted function, you need to press the Shft key before pressing the function key. When the Shft function is active, the Shft LED illuminates.

When the Shft key is pressed the next key is determined by the major key legends, i.e., the alpha keys display lower case letters when CAPS is On and alpha characters are capitalized.

Spc Key Function

Spc
The Spc key adds a space to the line of data on the display. This function is similar to a regular keyboard's Spacebar. Note that the Spc key only stays active for one keystroke.

Mode Key Functions

Caps Key and CapsLock Mode

This function is similar to a regular keyboard's CapsLock key. Note that the CapsLock mode stays active until the CapsLock key sequence is pressed again. Each time you need to use a Caps function, you need to press the Caps key sequence first. To cancel a CapsLock function press the Caps key sequence again. When the CapsLock mode is active, the Caps LED illuminates.

CapsLock key sequence is 2nd + F1.

Keypress Sequences

See Appendix A, "Key Maps", for key maps for all keypads.

Reset Key Sequence

Reset Key Sequence is Ctrl + Alt + 2nd + Dot.

The Reset Key sequence can be disabled in the BIOS Setup. See the "MX3 Reference Guide".

DOS Key Functions Not Available on the MX3

Prnt Scrn   A function that is available at the DOS prompt on a desktop PC. The Prnt Scrn as a system function requires a parallel port and the MX3 has only serial ports.

Sys Req   A function that is available at the DOS prompt on a desktop PC. Sys Req is for use in a multi-tasking environment to switch between various running applications. The MX3 is not a multi-tasking computer, nor is DOS in general considered a multi-tasking environment.

Function LEDs
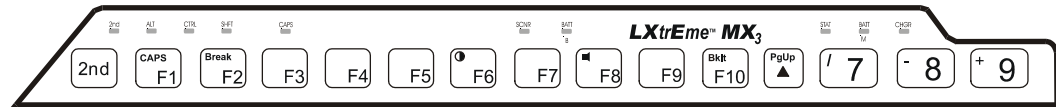
Figure 15 Function LEDs

Across the top of the keypad are LEDs that provide visual cues to current computer operation. When the LED is not illuminated, the function is inactive.
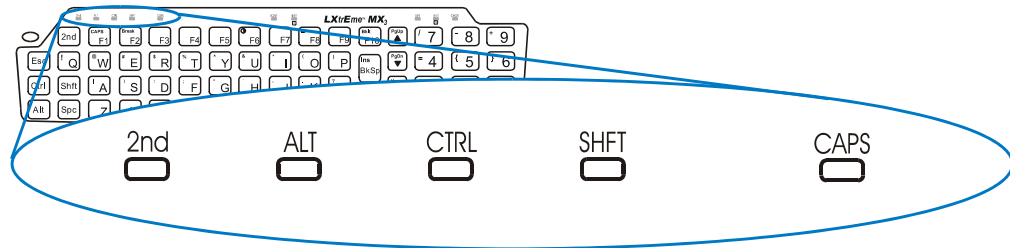
LED	When illuminated ...
2nd	The next keypress is a 2nd keypress.
	• **Orange** or unlit.
ALT	The next keypress is an ALT keypress.
	• **Orange** or unlit.
CTRL	The next keypress is a CTRL keypress.
	• **Orange** or unlit.
SHFT	The next letter is the uppercase letter on alpha keys and the shifted character on the numeric keypad keys.
	• **Orange** or unlit.
CAPS	Uppercase letters are active until the CAPS key sequence is pressed again.
	• **Orange** or unlit.
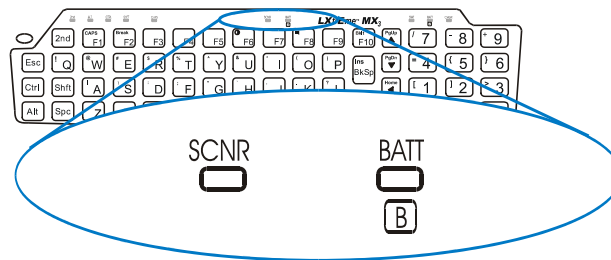
LED	When illuminated ...
SCNR	Barcode scanner function, affected by both tethered scanners and the scanner endcap.

- **Red** - scanning.
- **Green** - good scan.
- Unlit - scanner is inactive.

BATT B	Backup Battery. When illuminated, the backup battery is charging. When unlit, the Backup Battery is fully charged.

- **Orange** or unlit.
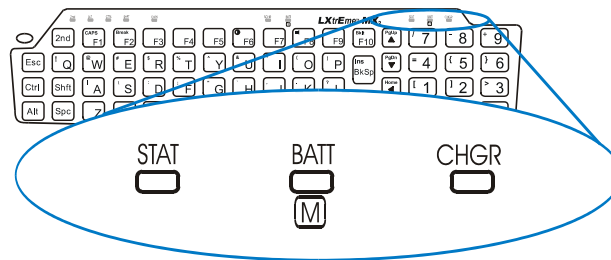
LED	When illuminated ...
STAT	Status Indicator. See section titled "Power Status and the Status LED".
BATT M	Main Battery. When illuminated, main battery capacity is low.

- **Red** - charging.
- Unlit - Main Battery is fully charged.

CHGR	Charger. The MX3 is seated in a powered cradle.

- **Red** - Main Battery is charging.
- **Green** - battery charge is complete.
- **Yellow** - Fault or Temperature Standby (contact LXE Customer Services).
- Unlit - MX3 is not seated properly in the cradle.

Power Button Functions
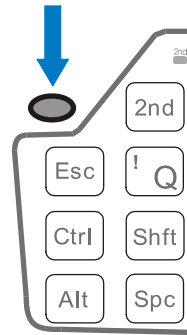
Figure 16 Location of the Power (PWR) Button

The Power button is used to turn the MX3 on and off and force it into the Suspend state. The MX3 will beep when the power key is pressed and beep once every second the button is held down.

How To

•	Turn the MX3 off	Hold the Power key down for 4 beeps (signifies 3 or more seconds) then release.
•	Turn the MX3 on	Hold the Power key down until the display turns on.
•	Force the Suspend state	Tap the Power key (1 beep). The Suspend state is useful for breaks or when swapping batteries as the unit does not need to be turned off prior to replacing the Main Battery.
•	Wake from Suspend	Wake the MX3 from Suspend (before the 5 minute timer expires) by tapping the Power key.

Note: The Suspend timer is configurable in the BIOS Setup. See the "MX3 Reference Guide".

Off Timer and Critical Suspend Mode

The MX3 is automatically turned off when the Off Timer expires. The Off Timer runs when the MX3 is in Critical Suspend mode. The MX3 automatically goes into Critical Suspend when the Main Battery is dead or removed. The Off Timer default is 5 minutes. The Off Timer value can be adjusted using the BIOS Setup.

Power Status and the Status LED
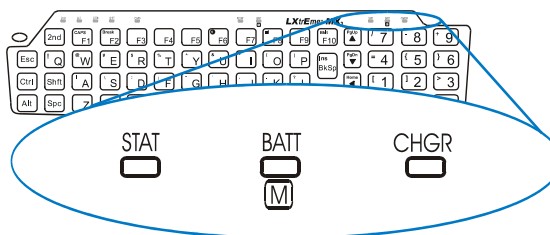
Figure 17 Power Status and the Status LED

The Status LED is located above the 7 key on the keypad. The LED changes color and state depending on power status.

Status LED	Condition
Off	MX3 is Off. *- or -* The MX3 is powered On and the display is On.
Steady Green	The MX3 is powered On and the display is Off. Press any key to turn the display On.
Blinking Green	The MX3 is in the Suspend state. Tap the Power key to exit the Suspend state. Hold the Power key down for 4 beeps to turn the MX3 off. There may be a brief wait while the MX3 synchronizes with the RF network.
Steady Red	Main Battery Low Warning or Low Main Battery. Replace the main battery or place the unit in a powered cradle.
Blinking Red	Main Battery Power Failure or the Main Battery is depleted. The MX3 is in Critical Suspend mode. The MX3 is drawing power from the backup battery. Replace the main battery or place the unit in a powered cradle. The MX3 will turn off in 5 minutes (default or the value selected in BIOS Setup for the Off Timer limit) if no action is taken.

Power Management and the Keypad

Status LED is Steady Green. When the MX3 is in the Display Off state, any keypress or screen touch (if touch screen is installed) returns the computer to the On state and the display activates. The key pressed is not sent to the Operating System or application.

If the 2nd, Ctrl, Shift, or Alt keys were active (and the LEDs are illuminated) when the MX3 entered Display Off or Suspend, the modifier keys and their LEDs are cleared when the MX3 wakes up.

Cradles

There are two types of cradles: a desktop cradle for table top charging/communication applications and a vehicle mount cradle for vehicle mounted charging/communication applications.

The cradles give the MX3 the ability to communicate with a host computer and other equipment. In addition, using wall AC adapters or DC/DC converters, the cradle transfers power to the internal charging circuitry of the MX3 and, in turn, the MX3 recharges the Main Battery.

The MX3 can be either on or off while in the cradle. The MX3 can be inserted and removed from the cradle with one hand.

Cables are available from LXE for connecting the cradle to a printer, a personal computer or a barcode printer. Tethered scanners (for RS-232 cradle connection) are also available from LXE.

Note: The "MX3 Cradle Reference Guide" contains cradle installation and technical information.

Desktop Cradle
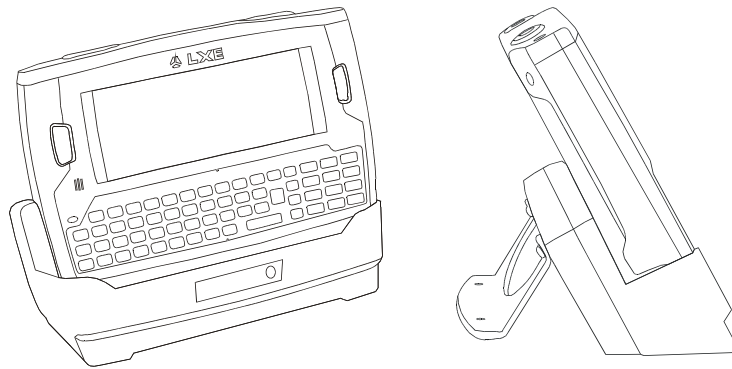
Figure 18 MX3 in the Desktop Cradle

> **How To:**

Lower the MX3 straight into the cradle, tilt it forwards and then let it rest backwards into the cradle. Ensure that the MX3 is properly seated on the charging contacts. The CHGR LED will illuminate green when the MX3 is correctly seated in the cradle. The CHGR LED will illuminate red when the MX3 main battery is being charged (in a cradle connected to an external power source).

To remove the MX3, tilt the MX3 forward and lift it straight up out of the cradle.

Note: Do not "slam" or slide the MX3 sideways into the cradle. Damage may result.

Status LED
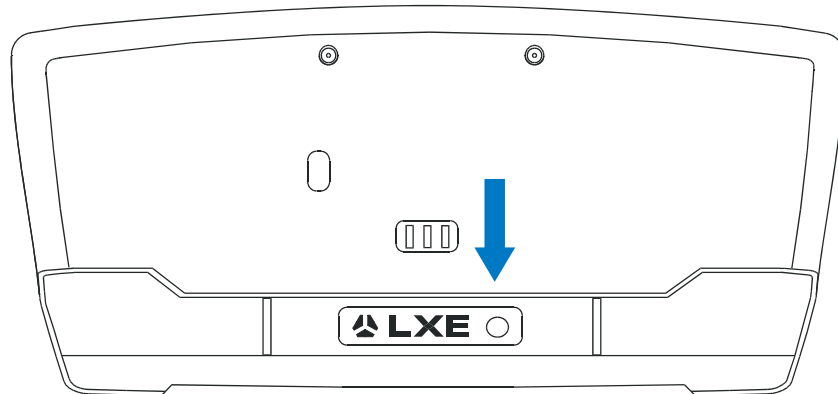
Figure 19 Desktop Cradle Status Indicator

An LED indicator shows the status of the cradle. When the indicator is not illuminated, there is no power applied to the cradle.

Cradle Power	**Orange**	Power applied to the cradle.
Docked	**Green**	Power applied to the cradle and connection made with the MX3.
IR Active	**Red**	IR communication is active.

Power Connector
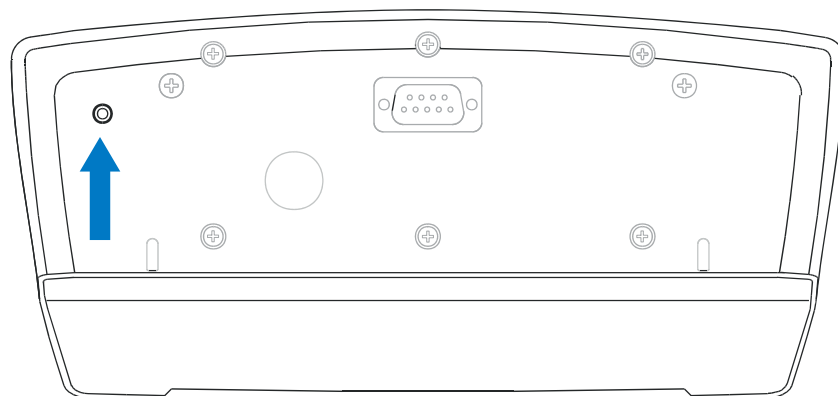
Figure 20 Desktop Cradle Power Connector

The Power connector is located on the back of the cradle. The cradle can be powered, if required, by an LXE US AC Adapter or an LXE International AC Adapter. When powered, the cradle transfers power to the internal charging circuitry of the MX3 allowing it to recharge the Main Battery. A powered cradle supports RS-232 and IR communications.

RS-232 Connector
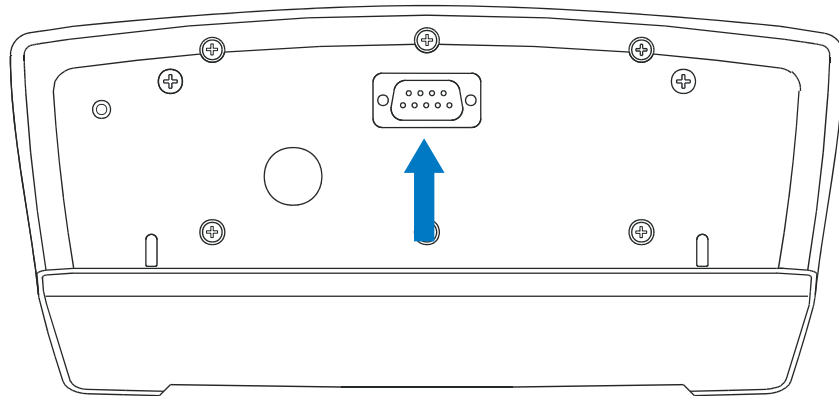
Figure 21 Desktop Cradle RS-232 Connector

The RS-232 connector is located on the back of the cradle. When the MX3 is properly docked, the bi-directional half-duplex transceivers in the MX3 and cradle are aligned through their IR windows. The half-duplex IR signals from the MX3 are converted to RS-232 signals in the cradle and available at this connector.

Vehicle Mount Cradle
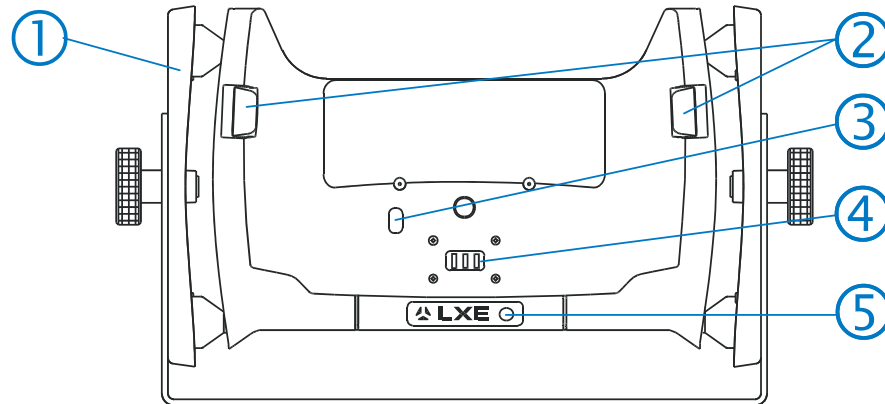
1. Vehicle Mount Bracket Assembly   4. Battery Power Connection
2. MX3 Release Mechanism   5. Vehicle Cradle Status LED
3. IR Port

Figure 22 Vehicle Mount Cradle - Front

This cradle is specifically designed for vehicle mount applications. The cradle restrains the MX3 and isolates the computer from shock and vibration. The MX3 is inserted into the cradle by placing the base of the unit in the pocket and then firmly pressing the unit backwards until the release mechanisms latch and hold the unit in the cradle. The MX3 is removed from the cradle by pressing the release mechanisms and pulling the MX3 up and away from the cradle.

Status LED

An LED indicator shows the status of the cradle. When the indicator is not illuminated, there is no external power source connected to the cradle.

Cradle Power	**Orange**	Power applied to the cradle.
Docked	**Green**	Power applied to the cradle and connection made with the MX3.
IR Active	**Red**	IR communication active.

Power Connector
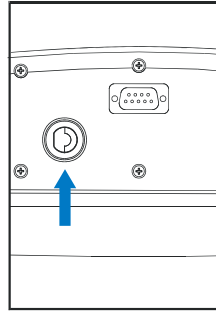
Figure 23 Vehicle Cradle Power Connector

The Power connector is located on the back of the cradle. The cradle is powered by either a vehicle's 12V battery or from an approved accessory for vehicles with higher voltage (24 to 60 VDC) batteries. When powered, the cradle transfers external power to the MX3, which in turn, recharges the main battery. A powered cradle allows RS-232 and IR communication.

RS-232 Connector
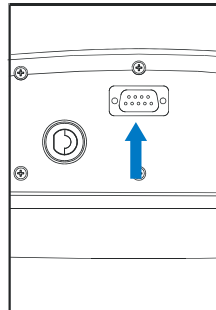
Figure 24 Vehicle Cradle RS-232 Connector

The RS-232 connector is located on the back of the cradle. When the MX3 is properly docked, the bi-directional half-duplex transceivers in the MX3 and cradle are aligned through their IR windows. The half-duplex IR signals from the MX3 are converted to RS-232 signals in the cradle and available at this connector.

Getting Help

All LXE manuals are now available on one CD and they can also be viewed/downloaded from the LXE website. Contact your LXE representative to obtain the LXE Manuals CD (Product No. 9000A426LXEMANUALS).

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 www.lxe.com.

Operation

Insert Main Battery

> *Note:* **New batteries must be charged prior to first use**. *This process takes up to four hours in an LXE Multi-Charger and eight hours with an external power source attached to the MX3.*

1. Front Side
2. Contacts, Main Battery
3. Contacts, Cradle Output
4. Retaining Clips
5. Top Side
6. Back Side
7. Contacts, Cradle Input
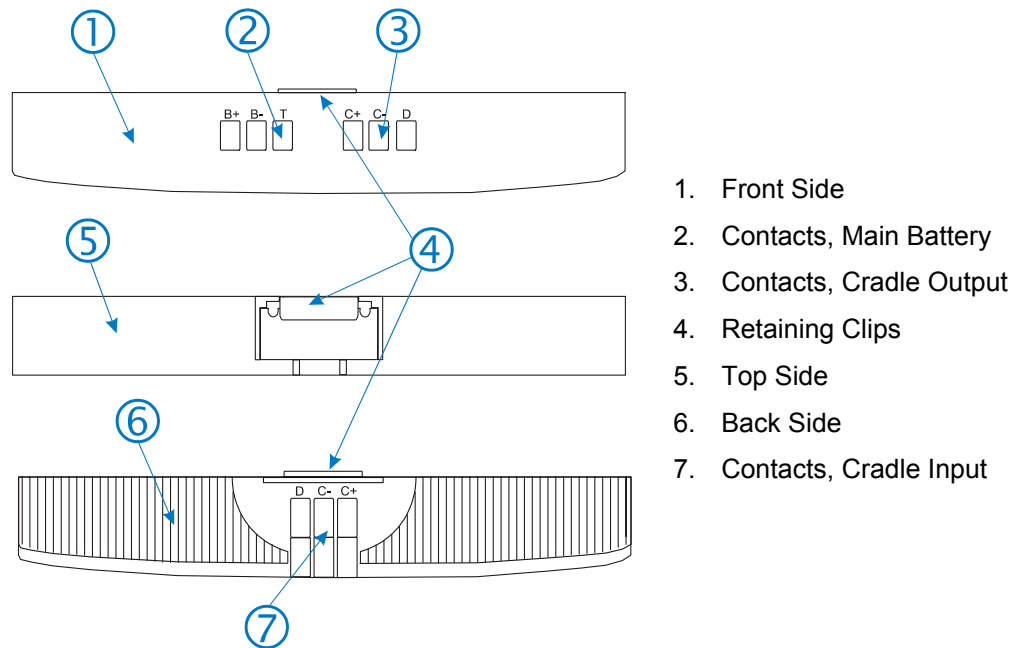
Figure 25 Main Battery
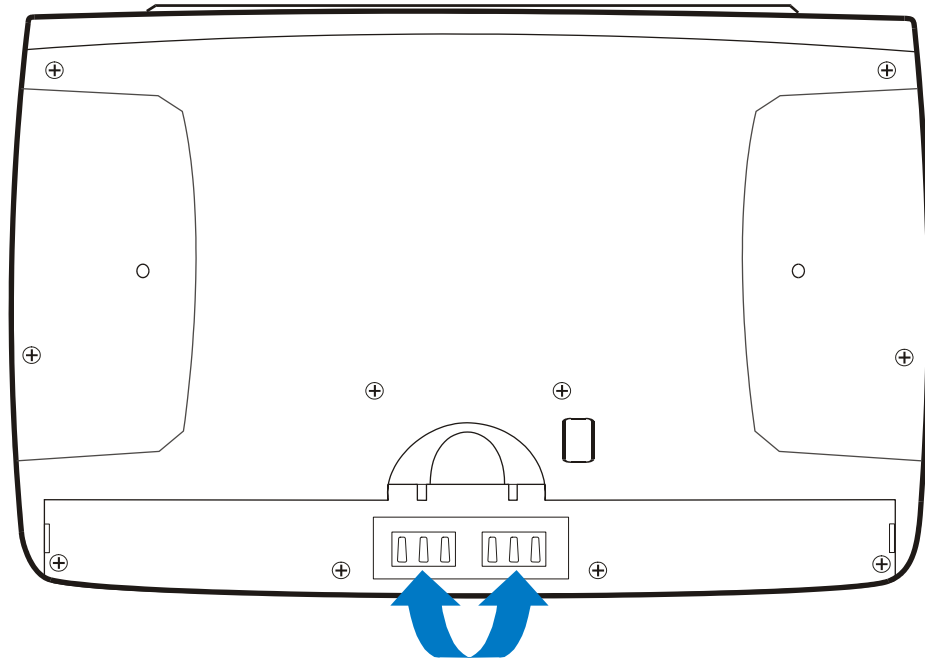
Figure 26 MX3 Battery Contacts

The MX3 Battery Compartment is located at the bottom of the back of the computer. The arrows in the figure above point to the battery and cradle contacts in the computer.
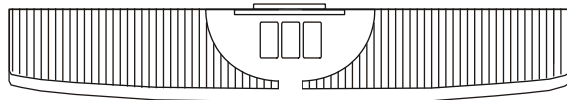
Figure 27 Main Battery

Place the battery in the compartment, making sure the side of the battery with six contacts match up with the battery contacts in the computer battery compartment. Do not slide the battery sideways into the compartment.

Firmly press the battery into the compartment until the Retaining Clip on the battery clicks. The battery is now securely fastened to the MX3.

Attach Hand Strap (Optional)

An elastic handstrap is available for the MX3. Once installed, the handstrap provides a means for the user to secure the computer to their hand. It is adjustable to fit practically any size hand and does not interfere with battery charging when the MX3 is in a cradle.
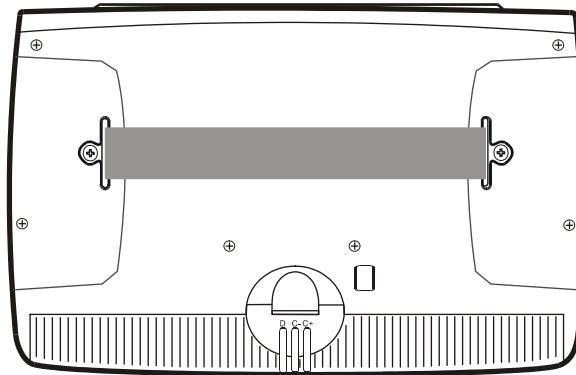
Figure 28 MX3 With Handstrap Installed

Tool Required: #1 Phillips Screwdriver

Installation

1. Remove the MX3 from the docking station.

2. Put the unit in Suspend mode or turn the unit off to prevent accidental key presses when you are attaching the handstrap.

3. Place the MX3, with the screen facing down, on a flat stable surface.

4. Attach the hand strap to the MX3 with the screws and washers provided.

5. Test the strap's connection making sure the MX3 is securely connected to each end of the strap.

Power Supplies (Optional)

> *Note: When an external power supply is used to power these products, the external power*
> *supply should be UL Listed, with LPS or Class 2 outputs rated 12V, minimum 1Amp.*

The MX3 DC power jack is located on the endcap. The cradle power jack is located on the back
of the cradle. The MX3 (and the Desktop Cradle) connect to any of the following power supplies
through the DC Power Jack.

Figure 29 US AC/DC 12V Power Supply
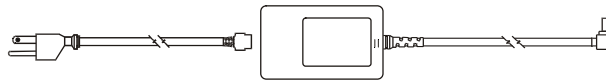
Figure 30 International AC/DC 12V Power Supply

1.   Insert the barrel connector into the MX3 power jack and push in firmly.

2.   The CHGR LED above the keypad illuminates when the MX3 is receiving power
through the power jack. The Main Battery recharges when the MX3 is connected to an
external power source.

> *Note: When the MX3 is receiving external power through a cradle, the cradle Status LED and*
> *the CHGR LED on the MX3 are illuminated.*

Power On and Off

Turn On the MX3

Press the Power button until the display turns on. The power button is located above the ESC key on the keypad.
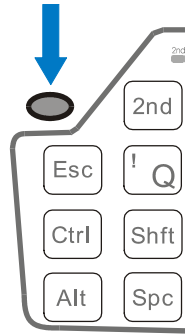
Figure 31 Location of the Power Button

When the MX3 is powered on, the display will begin scrolling power-on information as software and drivers are loaded. When a DOS C: prompt is displayed or an application begins, the power on sequence is complete.

Turn Off the MX3

Hold the Power button down. The unit will emit three short beeps and one long beep. After the long beep the MX3 will power down. The Power button and the display will turn off. The Power key function is configured in the BIOS Setup (See the "MX3 Reference Guide".)

Note: Quickly tapping the Power button will place the MX3 in Suspend mode.

Adjust Display and Volume

Set The Display Contrast

Adjusting screen contrast lightens or darkens the characters to make them visible at a comfortable level. The contrast is incremented or decremented one step each time the contrast key is pressed.

◑   To adjust screen contrast, locate the <F6> key at the top of the keypad. Adjust the display contrast by pressing the:

- 2nd key, then the <F6> key

- Use the Up Arrow and Down Arrow keys to adjust contrast until the display lightens or darkens to your satisfaction.

- Press the Enter key to exit this mode.

Set The Beeper Volume

Note: An application may override the control of the beeper volume.

The audible alert or "beeper" volume can be adjusted to a comfortable level for the operator. The volume is increased or decreased one step each time the volume key is pressed.

◄   To adjust beeper volume, locate the <F8> key at the top of the keypad. Adjust the beeper volume by pressing the:

- 2nd key, then the <F8> key to enter Volume change mode.

- Use the Up Arrow and Down Arrow keys to adjust volume until the beeper volume is satisfactory.

- Press the Enter key to exit this mode.

Enter Data

You can enter data into the MX3 through several different methods. The Scanner window provides barcode data entry, the RS-232 or the IR port are used to input/output data, and the keypad provides manual entry.

Keypad Entry

Refer to "Appendix A - Key Maps" sections titled "IBM 3270 Specific Maps" and the "IBM 5250 Specific Maps" for 3270 and 5250 specific keypresses.

The keypad 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 MX3 keypad 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 will produce the 2nd character. 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 keypad functions.

Scanner Entry

Read all cautions, warnings and labels **before** using the laser scanner.

To scan with the laser barcode reader, point the laser window towards a barcode and press the Scan key on the keypad. You will see a red laser beam strike the barcode.

Correct Scan   Incorrect Scan   Incorrect Scan

Figure 32 Scan Beam

Align the red beam so that the barcode is centered within the beam. The laser beam must cross the entire barcode. Move the MX3 towards or away from the barcode so that the barcode takes up approximately two-thirds the width of the beam.
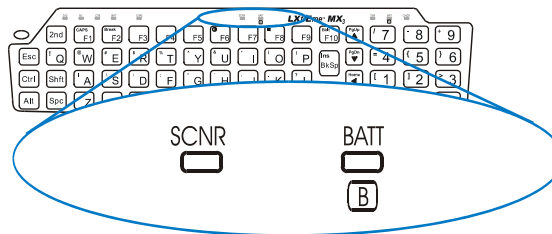
Figure 33 Scanner LED Location

The SCNR LED turns red when the laser beam is on. Following a good read, the LED turns green, indicating a successful scan. Beeps may be heard after a good read, depending on the application running on the MX3.

The laser and SCNR LED automatically turn off after a successful or unsuccessful read. The scanner is ready to scan again when the Scan key is pressed.

Batteries

Note: New batteries must be charged prior to use.

The MX3 computer is designed to work with a Lithium-Ion (Li-ion) battery from LXE. Under normal conditions it should last approximately eight to ten hours before requiring a recharge. The more you use the scanner or the RF transmitter, the shorter the time required between battery recharges. The MX3 keeps date and time valid for a minimum of four days using a fully charged Backup Battery and a Main Battery that has reached the Low Warning point.

Main Battery

The main battery has a rugged plastic enclosure that is designed to withstand the ordinary rigors of an industrial environment. Exercise care when transporting the battery making sure it does not come in contact with excessive heat or any power source other than an LXE MultiCharger or MX3 unit.

About Lithium-Ion Batteries

Li-Ion batteries (like all batteries) gradually lose their capacity over time (in a linear fashion) and never just stop working. Use the following chart to determine when to replace the battery:

>   100% capacity   1400 mAh
>   80% capacity   1120 mAh

Deciding when to replace a Main Battery pack in the MX3 is difficult to quantify because it is very application specific. 1000 mAh may be the cutoff for one customer who uses the computer frequently, while 300 mAh may be perfectly fine for a customer who occasionally uses the computer. You need to determine the point at which battery life becomes unacceptable for your business practices and replace the main battery pack before that point.

Backup Battery

The internal Nickel Cadmium (NiCd) backup battery provides power to the unit for a short amount of time when the main battery has been depleted, removed or has failed. The backup battery requires no user intervention. Replacement is performed by LXE.

Battery Hot-Swapping

Note: Unless you are hot-swapping the battery, make sure the MX3 is turned OFF before removing the battery.

When the battery power level is low, the MX3 will signal the operator with a continuous, one-second beep. Beeping will continue until the battery is replaced or the battery completely depletes. You can replace the main battery without shutting the unit off. Simply replace the discharged battery with a fully-charged battery. The backup battery will retain data during a main battery hot-swap for at least five minutes.

Critical Suspend State

The Critical Suspend state can only be entered because of a Main Battery Power failure. A Main Battery Power failure can occur because the battery's energy has been depleted or the battery has been removed.

When the MX3 is in the Critical Suspend state the main battery LED illuminates, the System LED blinks red, all peripherals are shut down, the CPU clock is stopped, power is removed from the PCMCIA card(s) and the MX3 may beep. The MX3 is saving the state prior to the main battery failing and cannot be used.

If a new fully charged main battery is installed before the Off Timer expires the MX3 will transition to the Suspend state. To resume operation tap the Power key for one beep.

If the Off Timer expires the MX3 will turn itself off and all unsaved information is lost. Insert a fully charged main battery and press the Power button to turn the MX3 back on.

Note: *The Off Timer can be configured in the BIOS Setup (see the "MX3 Reference Guide".)*

Battery Chargers

Optional LXE Multi-Charger
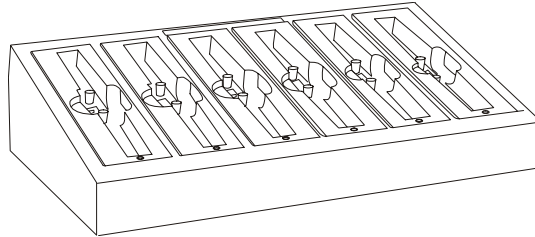
Figure 34 MX3 Charger Analyzer

The Main Battery can be charged in the LXE Multi-Charger. The Main Battery charges the Backup Battery.
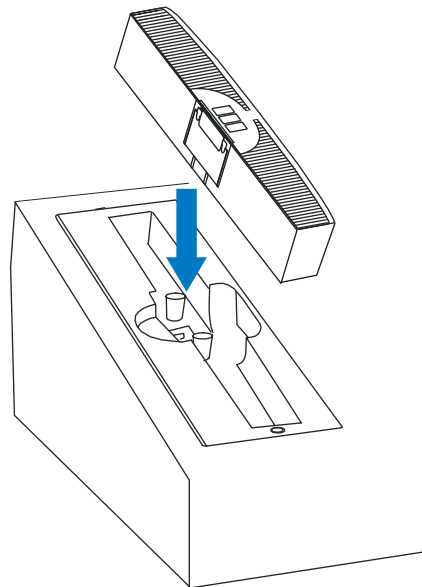
Figure 35 Insert Main Battery in Charger

Insert the Main Battery into the Multi-Charger as shown above. The retaining clip will snap the battery into place in the charging cup.

Do not "slam" or slide the battery into the charging cup.

Failure to follow these instructions can result in damage to the main battery or the Multi-Charger.

Scanner Warnings and Labels

- 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 MX3.

- Do not connect the laser barcode window to any other device. The laser barcode window is certified for use with the MX3 only.

> **Caution:** *Laser radiation when open. Please read the caution labels.*
>
> *Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.*
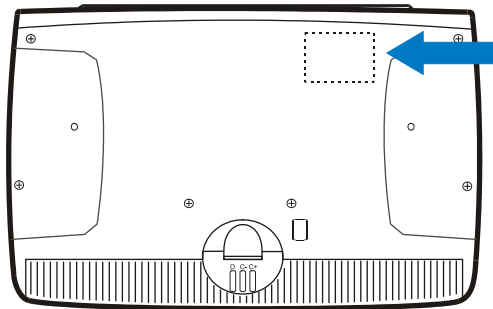
Figure 36 CDRH / IEC 825 Caution Label Location - MX3, Back

US

AVOID EXPOSURE - LASER RADIATION IS EMITTED FROM THIS APERTURE.

EN60825-1:1994 IEC825-1:1993
COMPLIES WITH 21 CFR 1040.10 AND 1040.11

LASER LIGHT- DO NOT STARE INTO BEAM
CLASS 2 LASER PRODUCT
1.0mW -   640 - 660nm
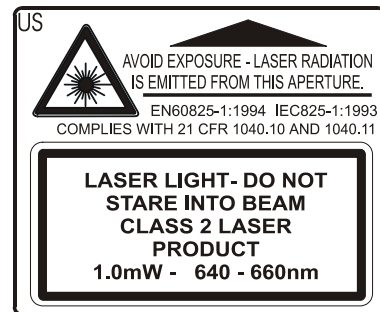
Figure 37 Caution Labels - Scanner

Cleaning the Scan Aperture

Keep fingers and rough or sharp objects away from the scan aperture and 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.

Appendix A
Key Maps

Keypads
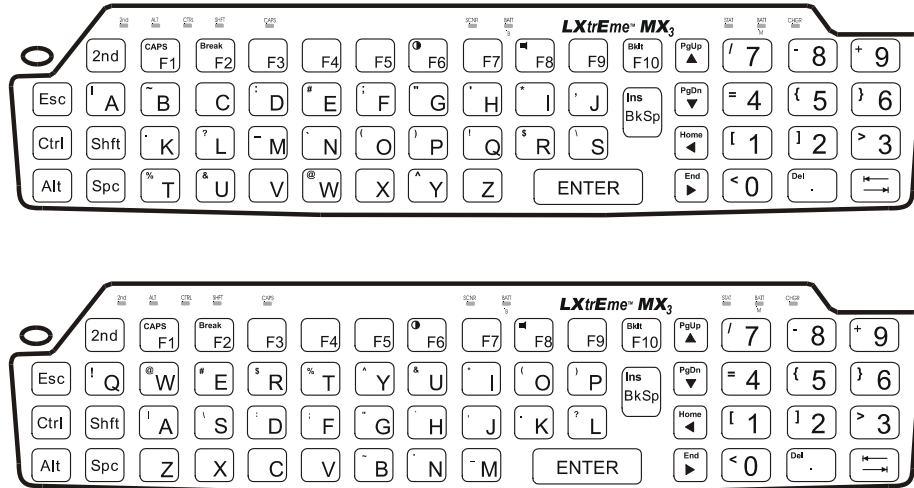
Figure 38 ABCD Keypad and QWERTY Keypad

The key maps that follow represent the commands used with batch units and when running LXE's ANSI Plus (with either 900MHz or 2.4GHz radios) or LDS Plus (with 900MHz radios) Terminal Emulation (TE) programs. When running these programs on the MX3, please refer to the following terminal emulation reference guides for equivalent keys and keypress sequences:

- ANSI Plus Reference Guide
- LDS Plus Reference Guide

Key Map 101-Key Equivalencies for Batch Units

> *Note:* *The batch unit key mapping is used on hand held computers that are NOT running an LXE Terminal Emulator.*

When using a sequence of keys that includes the 2nd key, press the 2nd key first then the rest of the key sequence. Set the On/Off condition of NumLock before pressing a key sequence. There is no visual indication of the condition of NumLock.

> *Note:* *When the computer boots, the default condition of NumLock is On. NumLock can be set using BIOS Setup.*

> *Note:* *When the computer boots, the default condition of Caps (or CapsLock) is Off. The Caps (or CapsLock) condition can be set using BIOS Setup or 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	
Contrast	x					F6
Volume	x					F8
Backlight	x					F10
2nd						2nd
Shift						Shft
Alt						Alt
Ctrl						Ctrl
Scan[2]						Scan
Esc						Esc
Space						Spc
Enter						Enter
Enter (numeric)	x		x			Enter
CapsLock (Toggle)	x					F1
Back Space						BkSp
Tab						Tab
BackTab	x					Tab
Break	x					F2
Pause	x	x				F3
Up Arrow						Up Arrow
Down Arrow						Down Arrow
Right Arrow						Right Arrow
Left Arrow						Left Arrow
Insert	x					BkSp
Delete	x					DOT

---

[2] Left Scan key default value is Numeric Enter.
Right Scan key default value is Scan.

To get this key	Press These Keys and Then					Press this key
	2nd	Shift	Ctrl	Alt	CapsLock	
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
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					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
s					x	S
t					x	T

To get this key	Press These Keys and Then					Press this key
	2nd	Shift	Ctrl	Alt	CapsLock	
u					x	U
v					x	V
w					x	W
x					x	X
y					x	Y
z					x	Z
A						A
B						B
C						C
D						D
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
1 (alpha)	x	x				1
2 (alpha)	x	x				2
3 (alpha)	x	x				3
4 (alpha)	x	x				4
5 (alpha)	x	x				5
6 (alpha)	x	x				6
7 (alpha)	x	x				7
8 (alpha)	x	x				8

To get this key	Press These Keys and Then					Press this key
	2nd	Shift	Ctrl	Alt	CapsLock	
9 (alpha)	x	x				9
0 (alpha)	x	x				0
DOT (alpha)	x					K
1 (numeric)						1
2 (numeric)						2
3 (numeric)						3
4 (numeric)						4
5 (numeric)						5
6 (numeric)						6
7 (numeric)						7
8 (numeric)						8
9 (numeric)						9
0 (numeric)						0
DOT (numeric)						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
- (numeric)	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
' (apostrophe)	x					H
~ (tilde)	x					B
\	x					S
		x					A

To get this key	Press These Keys and Then					Press this key
	2nd	Shift	Ctrl	Alt	CapsLock	
"	x					G
!	x					Q
@	x					W
#	x					E
$	x					R
%	x					T
^	x					Y
&	x					U
(	x					O
)	x					P

IBM 3270 and TN3270 Terminal Emulator Keypad
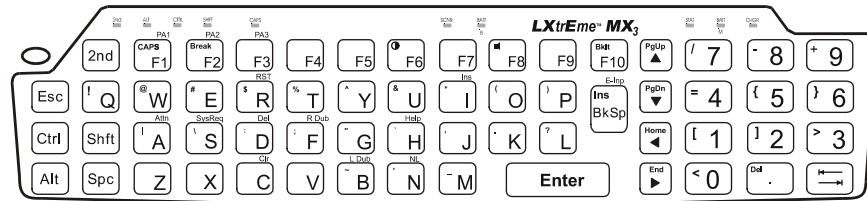
Figure 39 IBM 3270 Specific Keypad

This keypad is designed to allow the user to enter terminal emulator commands when running LXE's IBM 3270 and TN3270 Terminal Emulation (TE) programs.

When running these programs on the MX3, please refer to the following terminal emulation reference guides for equivalent keys and keypress sequences:

- 3270 Terminal Reference Guide (3270 DOS TE)
- 3270 Programmer's Reference Guide
- TN3270 Terminal Reference Guide

IBM 5250 and TN5250 Terminal Emulator Keypad
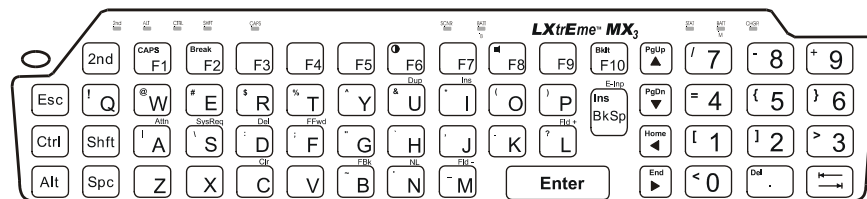
Figure 40 IBM 5250 Specific Keypad

This keypad is designed to allow the user to enter terminal emulator commands when running LXE's IBM 5250 and TN5250 Terminal Emulation (TE) programs.

When running these programs on the MX3, please refer to the following terminal emulation reference guides for equivalent keys and keypress sequences:

- 5250 Terminal Reference Guide (5250 DOS TE)
- 5250 Programmer's Reference Guide
- TN5250 Terminal Reference Guide

Appendix B
Manuals and Accessories

Manuals

The following manuals are available on the LXE Manuals CD (Product No. 9000A426LXEMANUALS):

- MX3 Reference Guide

- MX3 Cradle Reference Guide

- ANSI Plus Reference Guide

- LDS Plus Reference Guide

- 3270 Terminal Reference Guide (3270 DOS TE)

- 3270 Programmer's Reference Guide

- 5250 Terminal Reference Guide (5250 DOS TE)

- 5250 Programmer's Reference Guide

- 6200 Network Management Guide

- TN3270 Terminal Reference Guide

- TN5250 Terminal Reference Guide

Software Options

Contact LXE for the Product Order Number for MX3 Software.

MX3 SW Configured Without Radio
MX3 SW Configured with 900MHz Radio
MX3 SW Configured With 2.4GHz Radio (Type II or III)
MX3 SW Configured With 2.4GHz Radio and TCP/IP (Type II or III)

Terminal Emulation Software Packages:

ANSI Plus for MX3 with 900MHz Radio
ANSI Plus for MX3 with 2.4GHz Radio
LDS Plus for MX3 with 900MHz Radio
LDS Plus for MX3 with 2.4GHz Radio
3270 DOS TE for MX3 with 900MHz Radio
5250 DOS TE for MX3 with 900MHz Radio
TN3270 DOS TE for MX3 with 2.4GHz Radio
TN5250 DOS TE for MX3 with 2.4GHz Radio

Accessories

Scanners

Scanner, LS3603, Std, 8' Cbl, EC	8010LS3603STC08DEC
Scanner, LS3603, Std, 8' Cbl, US	8010LS3603STC08DUS
Scanner, LS3603, Std, 20' Cbl, US	8010LS3603STC20DUS
Scanner, LS3203, Ext Rng, 8' Cbl, EC	8011LS3203ERC08DEC
Scanner, LS3203, Ext Rng, 8' Cbl, US	8011LS3203ERC08DUS
Scanner, LS3203, Ext Rng, 20' Cbl, US	8011LS3203ERC20DUS
Scanner, 5312IP, 7' Cbl, WW	8101IP5312XXC07DWW
Scanner, 530052IP, 7' Cbl, WW	8104IP530052C07DWW
Scanner, 530072IP, 7' Cbl, WW	8105IP530072C07DWW
Scanner, 530092IP, 7' Cbl, WW	8110IP530092C07DWW
Scanner, 5312IP, 15' Cbl, US	8101IP5312XXC15DUS
Scanner, 530052IP, 15' Cbl, US	8104IP530052C15DUS
Scanner, 530072IP, 15' Cbl, US	8105IP530072C15DUS
Scanner, 530092IP, 15' Cbl, US	8110IP530092C15DUS

PCMCIA Cards

SRAM Card, 2 MB	9000A102PCC2SRAM
SRAM Card, 4 MB	9000A103PCC4SRAM
SRAM Card, 2 MB, Low Temp	9000A104PCC2SRAMLO
SRAM Card, 4 MB, Low Temp	9000A105PCC4SRAMLO

Holding Accessories

Strap, Hand, Nylon	2381A407HANDSTRAP
Nylon Holster for use with Belt	2381A401HOLSTER
Nylon Hip Flip	2381A403HIPFLIP
Nylon Case with Shoulder Strap	2381A402CASE1

Miscellaneous

Pen, Stylus, Black, 2335	2335A501PASSIVEPEN

Battery Chargers and Battery

6 Unit Charger	2381A377CHGR6
Battery, Li-Ion	2381A376BATT1600

Cradles and Power Supplies

Desktop Cradle[3]	2381A001DESKCRADLE
Vehicle Mount Cradle[3]	2381A003VMCRADLE
AC Power Supply, US	9000A301PSACUS
AC Power Supply, International, No power cord	9000A302PSACWW
Power Cord, AC, US	9000A066CBLPWRAC
Power Adapter, Bare Wire 12 VDC	1300A053CBL12ML3
Power Adapter, 24-72 VDC, 20 Watts	1300A301PS24WW
Power Adapter, 110-240 VAC	1300A303PSACWW

Cables for Cradle and MX3 Serial Ports

Cable, Printer/PC, DA-9F to DB-25M, 6 ft.	9000A053CBL6D9D25
Cable, PC, DA-9F to DA-9F, 6 ft.	9000A054CBL6D9D9

---

[3] Power Adapter Required.

Appendix C
Regulatory Notices and Safety Information

FCC Information:

This device complies with FCC Rules, part 15. Operation is subject to the following conditions:

1. This device may not cause harmful interference

   and

2. This device must accept any interference that may be received, including interference that may cause undesired operation.

Note: 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.

Warning: Changes or modifications to this device not expressly approved by LXE, Inc., could void the user's authority to operate this equipment.

EMC Directive Requirements:

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Industry Canada:

This Class A digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. 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.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouiller du Canada. Le present appareil numérique n'emet pas de bruits radioélectriques dépassant les limites applicables aux appareils numeriques de le Classe A préscrites dans le Reglement sur le brouillage radioélectrique édits par le ministere des Communications du Canada.

RF Safety Notice

Caution ⚠	*This device is intended to transmit RF energy. In accordance with FCC and Industry Canada radio-frequency safety regulations, when operating this device with the Hip-Flip accessory, it should be used in accordance with the user's instructions. Additionally, the user should take care to ensure that a minimum separation distance of 15cm (6 in.) is maintained from the antenna to nearby persons. Use of this device in a manner not consistent with these instructions can increase the risk of RF exposure. This device is not to be co-located with other transmitters.*

Notice:

The long term characteristics or the possible physiological effects of radio frequency electromagnetic fields have not been investigated by UL.

Li-Ion Battery

When disposing of the MX3 Main Battery, the following precautions should be observed: The battery should be disposed of promptly. The battery should not be disassembled or crushed. The battery should not be heated above 212°F (100°C) or incinerated.

R&TTE Directive Requirements (Applies only to equipment operated within the EU/EFTA)

Information to User
A label on the exterior of the device should resemble one of the labels shown below (the label contains the LXE part number of the installed radio card). The labels shown below and affixed to the device, identify where the device may be used and where its use is restricted. Use of a device is prohibited in countries not listed below or otherwise identified by the label. (May or may not include the 0560 Notifed Body No.)

CE 0560 (!)   LXE Part Number
Use of this device is permitted in EU/EFTA.

CE 0560 (!)   LXE Part Number
Use of this device is permitted in EU/EFTA except for France.

Permitted for use in: Austria, Belgium, Denmark, Finland, Germany, Greece, Iceland, Italy, Ireland, Liechtenstein, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom

Permitted for use in France.

MX3 Computer Approvals:

Product	EMI / EMC Standards	Safety Standards
MX3	FCC Part 15 Subpart B, Class A EN 55022:1998, (CISPR 22:1997) Class A EN 55024:1998 Industry Canada Class A	UL 1950; CSA C22.2 No. 950 CDRH: 21 CFR 1040.10 and 1040.11 EN 60950 IEC 60825-1 IEC 950

Cradle Approvals:

Product	EMI / EMC Standards	Safety Standards
MX3 Table MX3 Vehicle Mount	FCC Part 15 Subpart B, Class A EN 55022:1998, (CISPR 22:1997) Class A EN 55024:1998 Industry Canada Class A	UL 1950; CSA C22.2 No. 950 EN 60950 IEC 950

Transceiver

Transceiver	RF Standards	Notes
480824-3300 (LXE Part No.) LXE 6400 System 2.4GHz Type II PCMCIA Card	FCC Part 15, Subpart C FCC Part 2 ETS 300 328 ETS 300 826 IC-RSS 210 IC-RSS 102	Unlicensed Operation Unlicensed Operation Requires License for Outdoor Use
480628-4096 (LXE Part No.) LXE 6500 System 2.4GHz Type II PCMCIA Card	FCC Part 15, Subpart C FCC Part 2 ETS 300 328 ETS 300 826 IC-RSS 139 IC-RSS 102	Unlicensed Operation Unlicensed Operation Requires License for Outdoor Use
6726 (LXE Model No.) LXE 6700 System 2.4GHz Type II PCMCIA Card	FCC Part 15, Subpart C FCC Part 2 EN 300 328 EN 300 826 IC-RSS 139 IC-RSS 102	Unlicensed Operation Unlicensed Operation Requires License for Outdoor Use
6816 (LXE Model No.) LXE 2.4GHz Type II PCMCIA Card	FCC Part 15, Subpart C FCC Part 2 EN 300 328 EN 300 826 IC-RSS 139 IC-RSS 102	Unlicensed Operation Unlicensed Operation Requires License for Outdoor Use
4810P3S01 (LXE Part No.) LXE 6200 System 900MHz Type III PCMCIA Card	FCC Part 15, Subpart C IC-RSS 210	Unlicensed Operation Unlicensed Operation

LXE Transceiver 480628-4096 Declaration of Conformity

△ LXE
An EMS Technologies Company

DECLARATION OF CONFORMITY
according to Directives:

1999/5/EC	**Radio Equipment and Telecommunications Terminal Equipment and the mutual recognition of their conformity**
93/68/EEC	**CE Marking Directive**

Type of Equipment:	Direct Sequence 2.4 GHz Wireless LAN Card
Brand Name or Trademark:	LXE
Type Designation:	480628-4096
Manufacturer:	LXE Inc.
Address:	125 Technology Parkway Norcross, GA 30092-2993 USA
Year of Manufacturer:	2000

The following harmonized European Standards, technical specifications, or other normative documents have been applied:

EMI / EMC Standards:

EN 55022 : 1995	Limits and methods of measurement of radio disturbance characteristics of information technology equipment
ETS 300 826 : 1997	Electromagnetic compatibility - Generic immunity standard, Part 1: Residential, commercial and light industrial
EN 61000-4-2 : 1995	Electrostatic discharge immunity test
EN 61000-4-3 : 1997	Radiated radio frequency electromagnetic field immunity test
EN 61000-4-6 : 1996	RF conducted immunity test

Radio Frequency Standards:

ETS 300 328 : 1996	Radio Equipment and Systems (RES);
	Wideband transmission systems;
	Technical characteristics and test conditions for data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques

Safety Standards:

IEC 950-2: 1991 + Amendments A1..A4	Safety of information technology equipment, including electrical business equipment

We, LXE Inc., declare that the equipment specified above complies with all Essential Health and Safety Requirements of the above Directives and Standards, as amended.

Place:	LXE Inc., Norcross GA USA	Signed:	*R. Sam Wismer*
Date of issue:	1 March, 2000		R. Sam Wismer, Lead Approvals Engineer

LXE Inc. 125 Technology Parkway Norcross, GA 30092-2993 USA
ph. 770/447-4224   fax 770/447-6928

LXE Transceiver 480824-3300 Declaration of Conformity

LXE
An EMS Technologies Company

DECLARATION OF CONFORMITY
according to Directives:

1999/5/EC	**Radio Equipment and Telecommunications Terminal Equipment and the mutual recognition of their conformity**
93/68/EEC	**CE Marking Directive**

Type of Equipment:	Frequency Hopping 2.4 GHz Wireless LAN Card
Brand Name or Trademark:	LXE
Type Designation:	480824-3300
Manufacturer:	LXE Inc.
Address:	125 Technology Parkway
	Norcross, GA 30092-2993 USA
Year of Manufacturer:	2000

The following harmonized European Standards, technical specifications, or other normative documents have been applied:

EMI / EMC Standards:

EN 55022 : 1995	Limits and methods of measurement of radio disturbance characteristics of information technology equipment
ETS 300 826 : 1997	Electromagnetic compatibility - Generic immunity standard, Part 1: Residential, commercial and light industrial
EN 61000-4-2 : 1995	Electrostatic discharge immunity test
EN 61000-4-3 : 1997	Radiated radio frequency electromagnetic field immunity test
EN 61000-4-6 : 1996	RF conducted immunity test

Radio Frequency Standards:

ETS 300 328 : 1996	Radio Equipment and Systems (RES);
	Wideband transmission systems;
	Technical characteristics and test conditions for data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques

Safety Standards:

IEC 950-2: 1991 + Amendments A1..A4	Safety of information technology equipment, including electrical business equipment

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We, LXE Inc., declare that the equipment specified above complies with all Essential Health and Safety Requirements of the above Directives and Standards, as amended.

Place: LXE Inc., Norcross GA USA   Signed: *R. Sam Wismer*

R. Sam Wismer,
Lead Approvals Engineer

LXE Inc. 125 Technology Parkway Norcross, GA 30092-2993 USA
ph. 770/447-4224   fax 770/447-6928

LXE Transceiver LXE 6726 Declaration of Conformity

△ LXE
An EMS Technologies Company

	DECLARATION OF CONFORMITY
	according to Directives:
1999/5/EC	**Radio Equipment and Telecommunications Terminal Equipment and the mutual recognition of their conformity**
93/68/EEC	**CE Marking Directive**
Type of Equipment:	Direct Sequence 2.4 GHz Wireless LAN Card
Brand Name or Trademark:	LXE
Type Designation:	LXE 6726
Manufacturer:	LXE Inc.
Address:	125 Technology Parkway Norcross, GA 30092-2993 USA
Year of Manufacturer:	2001

The following harmonized European Standards, technical specifications, or other normative documents have been applied:

EMC:

EN 300 826 : 1997	Electromagnetic compatibility and radio spectrum matters (ERM); Electromagnetic compatibility (EMC) standard for 2,4 GHz wideband transmission systems and high performance radio local area network (Hiperlan) equipment

Radio:

EN 300 328-1 and -2: 2000-7	Radio Equipment and Systems (RES); Wideband transmission systems; Technical characteristics and test conditions for data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques

Safety:

EN 60950-2: 1992 + A1..A4	Safety of information technology equipment, including electrical business equipment

We, LXE Inc., declare that the equipment specified above complies with all Essential Health and Safety Requirements of the above Directives and Standards, as amended.

Place	LXE Inc., Norcross GA USA
Date of issue	20 November, 2001

D. C. Massey
Lead Regulatory Engineer

LXE Inc. 125 Technology Parkway   Norcross, GA 30092-2993 USA
ph. 770/447-4224   fax 770/447-6928

Annex to DoC for LXE 6726
With regard to the use of external antennas

The LXE 6726 can be equipped with external antennas. The antennas listed have been evaluated with the LXE 6726 pursuant to ETSI EN 300 328, and therefore meet the definition of 'dedicated antenna' per ERC/REC 70-03 Appendix 1 Table 3; thus the requirement set forth in ERC/REC 70-03 , Annex 3 are met by the LXE model 6726 transceiver.

Dedicated Antennas for use with LXE 6726

LXE P/N	Antenna Gain	Radio Power Level	Antenna Description
153180-0001	0 dBi	17 dBm	Omni, for LXE VX-series computers
155522-0001	0 dBi	17 dBm	Omni, for LXE MX1-series computers
155814-0001	0 dBi	17 dBm	Patch, for LXE MX1-series computers
157368-0001	0 dBi	17 dBm	Patch, for LXE MX3-series computers
99004-0027	1.8 dBi	17 dBm	3 dB Omni, for LXE model 2325 computer
DAC2450CT1 (Toko P/N)	2.15 dBi	17 dBm	Omni, for LXE MX2-series computers
153179-0001	0 dBi	17 dBm	Omni, Access Point Antenna
153325-0001	0 dBi	17 dBm	Omni, Access Point Antenna
480424-0400	0 dBi	17 dBm	Omni, Access Point Antenna
153599-0001	3 dBi	17 dBm	Omni, Access Point Antenna
153600-0001	3 dBi	17 dBm	Omni, Access Point Antenna
480424-3404	3 dBi	17 dBm	Omni, Access Point Antenna
155846-0001	3 dBi	17 dBm	Spire® Access Point Antenna
155845-0001	6 dBi	13 dBm	Spire® Access Point Antenna
155311-0001	6 dBi	13 dBm	Patch, Access Point Antenna
480424-3411	6 dBi	13 dBm	Patch, Access Point Antenna
480424-3402	6 dBi	13 dBm	Patch, Access Point Antenna
481246-2400	6 dBi	13 dBm	Patch, Access Point Antenna
480424-1702	6 dBi	13 dBm	180° Directional, Access Point Antenna
480424-0411	9 dBi	7 dBm	Omni, Access Point Antenna
480429-2703	12 dBi	7 dBm	90° Directional, Access Point Antenna
480429-0411	12 dBi	7 dBm	Omni, Access Point Antenna
460601-3020	15 dBi	3 dBm	YAGI, Access Point Antenna
460602-3020	15 dBi	3 dBm	YAGI, Access Point Antenna
480429-0415	15 dBi	3 dBm	Omni, Access Point Antenna

D. C. Massey
Lead Regulatory Engineer

20 November 2001

LXE Inc. 125 Technology Parkway   Norcross, GA 30092-2993 USA
ph. 770/447-4224   fax 770/447-6928

LXE Transceiver LXE 6816 Declaration of Conformity

LXE
An EMS Technologies Company

DECLARATION OF CONFORMITY
according to:

the R&TTE Directive;	**99/5/EEC**
The EMC Directive;	**89/336/EEC**
The Low Voltage Directive;	**73/23/EEC**
and the Marking Directive;	**93/68/EEC**

Type of Equipment:	DSSS 2.4GHz WLAN Radio Card
Brand Name or Trademark:	LXE
Type Designation:	6816
Manufacturer:	LXE Inc.
Address:	125 Technology Parkway Norcross, GA 30092 USA

The following harmonized European Norms have been applied:

EMC Standards:

EN 301 489-1: 07-2000	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements
EN 301 489-17:07-2000	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Wideband data and HIPERLAN equipment
EN 55022: 1998	Limits and methods of measurement of radio disturbance characteristics of information technology equipment

Radio Standards:

EN 300 328-1 and -2: 2000-7	Radio Equipment and Systems (RES); Wideband transmission systems; Technical characteristics and test conditions for data transmission equipment operating in the 2.4 GHz ISM band and using spread spectrum modulation techniques

Safety Standard:

EN60950-1: 2001	Safety of information technology equipment, including electrical business equipment

The product carries the CE Mark:

$C \epsilon$ ⊕

We, LXE Inc., declare that the equipment specified above complies with all Essential Health and Safety Requirements of the above Directives and Standards, as amended.

Date of issue: June 18, 2003

Cyril A. Binnom Jr.
Regulatory Engineer

LXE Inc. 125 Technology Parkway   Norcross, GA 30092-2993 USA

ph. 770/447-4224   fax 770/447-6928

Annex to DoC for LXE 6816

With regard to the use of external antennas

The LXE 6816 can be equipped with external antennas. The antennas listed have been assessed with the LXE 6816 pursuant to EN 300 328, and therefore meet the definition of 'dedicated antenna'. The table below lists the maximum output power setting for the radio module in order to result in a total EIRP of 100mW or less. Any combination of output power and a specific type of antenna resulting in an EIRP greater than 100mW is illegal for use throughout the Community and is outside the scope of this DoC. Antennas not listed below are also outside the scope of this DoC.

Dedicated Antennas for use with LXE 6816

LXE Antenna Part Number	LXE Model Number	Antenna Gain	Max Radio Power Level	Antenna Description
153180-0001	N/A	2.2 dBi	17 dBm	Cushcraft Omni Antenna
155846-0001	6000A279ANT3SPIREL 6000A280ANT3SPIRER 6000A283ANT3INDSPR	3 dBi	17 dBm	Spire® Omni Antenna
155845-0001	6000A277ANT6SPIREL 6000A278ANT6SPIRER 6000A282ANT3INDSPR	6 dBi	13 dBm	Spire® Omni Antenna
480424-0411	N/A	9 dBi	11 dbm	Mobile Mark Omni Antenna
155104-0001	N/A	0 dbi	20 dbm	LXE Omni
154591-0001	N/A	0 dbi	20 dbm	LXE Patch
Toko DAC2450CT1	N/A	0 dbi	20 dbm	LXE Omni
157368-0001	N/A	0 dbi	20 dbm	LXE Omni
158586-0001	N/A	0 dbi	20 dbm	LXE Omni
158399-0001	N/A	0 dbi	20 dbm	LXE Omni

Cyril A. Binnom Jr.
Regulatory Engineer
18 June 2003

A/C Power Supply Safety Statement – MX3
Output Rated 12 VDC, 1 A.

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)

Alimentation c.a. optionnelle:
Hors de l'Amérique du Nord, cette unité est conçue pour être utilisée avec une alimentation ITE certifiée CEI de sortie nominale indiquée au haut de cette page. (FR)

Valgfrit vekselstrømforsygning
Udenfor Nord Amerika er denne enhed udstattet med en IEC (international elektronisk Kommission) udfærdiget med en ITE strømforsygning med strømudgang som fastslået på denne sides begyndelse. (DK)

Vaihtoehtoinen vaihtovirran syöttölaite:
Pohjois-Amerikan ulkopuolella tämä laite on tarkoitettu käytettäväksi sellaisen IEC:n sertifioiman ITE-tehonsyöttölaitteen kanssa, jonka antoteho on tämän sivun yläosassa esitetyn mukainen. (FI)

Optionales Netzteil (Wechselstrom)
Außerhalb Nordamerikas sollte diese Einheit über ein der IEC-Norm entsprechendes ITE-Netzteil gespeist werden, und zwar mit einer wie oben auf dieser Seite genannten Ausspeisung. (DE)

Προαιρετική Τροφοδοσία Συνεχούς Ρεύματος
Εκτός Β. Αμερικής, η μονάδα αυτή προορίζεται για χρήση με ένα τροφοδοτικό ITE πιστοποιημένο κατά IEC με ονομαστική ισχύ όπως δηλώνεται στην αρχή της σελίδας. (GR)

Alimentazione opzionale a corrente alternata:
Al di fuori dei paesi dell'America del nord, l'unità deve essere impiegata con un dispositivo d'alimentazione per attrezzature informatiche approvato dalla IEC la cui potenza nominale sia pari a quella indicata all'inizio della pagina. (IT)

Vekselstrømforsyning (ekstrautstyr):
Utenfor Nord-Amerika skal dette produktet brukes med en IEC-sertifisert ITE-strømforsyning med klassifisert effekt som angitt øverst på denne siden. (NO)

Fornecimento opcional de CA:
Fora dos EUA, esta unidade destina-se a ser usada com dispositivos de fornecimento de corrente ITE com certificação IEC, com a capacidade indicada no topo desta página. (PT)

Suministro optativo de corriente alterna
Fuera de América del Norte, esta unidad se debe utilizar con un alimentador ITE homologado por la IEC (comisión electrotécnica internacional) con una salida que tenga la calificación que figura en la parte superior de esta página. (ES)

Valfri A/C Strömförsörjning
Utanför Nordamerika är det meningen att denna enheten används med en IEC-certifierad ITE-strömförsörjare med den uteffekt som anges längst uppe på den här sidan. (SE)

İsteğe Bağlı A/C Güç Kaynağı:
Kuzey Amerika dışında, bu ünite, çıkış sınıflandırması bu sayfanın başında belirtilen IEC sertifikalı bir ITE güç kaynağı ile birlikte kullanılmak üzere tasarlanmıştır. (TR)
Updated 10/01/2001

Legend: Danish – DK; English – US; Finnish – FI; French- - FR; German – DE; Greek – GR; Italian – IT; Norwegian – NO; Portuguese – PT; Spanish – ES; Swedish – SE; Turkish – TR.

⚠️ **Laser Light Safety Statement** ⚠️

Warning:

This product uses laser light. One of the following labels is provided on the scanner. Please read the Caution statement. (US)

Mise én garde:
Ce produit utilise un rayon laser. L'une des étiquettes suivantes est apposée sur le scanneur. Veuillez lire l'avertissement qu'elle contient. (FR)

Advertência:
Este produto usa luz de laser. O scanner contém um dos seguintes avisos. Favor ler o Aviso. (PT)

Varning:
Denna produkt använder laserljus. En av de nedanstående etiketterna sitter på scannern. Var god läs varningstexten. (SE)

Advarsel:
Dette produkt anvender laserlys. En af følgende mærkater anvendes på scanneren. Læs venligst sikkerhedsforanstaltningen. (DK)

Varoitus:
Tämä tuote käyttää laservaloa. Skannerissa on jokin seuraavista tarroista. Lue Huomio-kohta. (FI)

Warnung:
Dieses Produkt verwendet Laserlicht. Eines der folgenden Etiketten befindet sich auf dem Scanner. Bitte lesen Sie den Gefahrenhinweis. (DE)

Attenzione:
Questo prodotto utilizza luce laser. Una delle etichette seguenti c' ubicata sullo scanner. Si raccomanda di leggere con attenzione le avvertenze riportate. (IT)

Advarsel:
Dette utstyret bruker laserlys. En av følgende etiketter er plassert på scanneren. Les advarselen på etiketten. (NO)

Advertencia:
Este producto usa luz de láser. Las etiquetas se proveen en la máquina exploradora. Por favor, lea detenidamente la explicación para las precauciones. (ES)

Waarschuwing:
Dit product gebruikt laserlicht. Een van de volgende labels is op de scanner aangebracht. Lees a.u.b. de waarschuwing onder Oppassen. (NL)

⚠   **Laser Light Safety Statement**   ⚠

Uyarý:	Προειδοποίηση:
Bu ürün lazer ýþýðý kullanýr. Aþaðýdaki etiketlerden bir tanesi tarayýcýnýn üstünde saðlanýr. Lütfen Dikkat ifadesini okuyun. (TR)	Αυτό το προϊόν χρησιμοποιεί λέιζερ φως. Υπάρχει μία από τις ακόλουθες ετικέτες στο σαρωτή. Παρακαλούμε διαβάστε τη δήλωση με τίτλο Προσοχή. (GR)
경고: 본 제품은 레이저 광선을 사용합니다. 다음 라벨 중 하나가 스캐너에 제공됩니다. 주의 사항을 읽어 주십시오. (KR)	警告: この製品はレーザー光線を使用します。 次のラベルのうち1つがスキャナーに貼られています。 注意事項をお読みください。(JP)
警告: 本产品使用激光。 下列一个标签将随扫描仪一道提供。 请阅读"当心"一栏的内容。(CN)	Legend: Chinese-CN; Danish-DK; Dutch-NL; English-US; Finnish-FI; French-FR; German-DE; Greek-GR; Italian-IT; Japanese-JP; Korean-KR; Norwegian-NO; Portuguese-PT; Spanish-ES; Swedish-SE; Turkish-TR

Labels - MX3 Hand Held Computer

LXE

An EMS Technologies Company

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