

LS 3064MX
Product Reference Guide

INCLUDES

LS 3064MX User's Guide

LS 3064MX Programmer's Guide

LS 3064MX Operator's Guide

70-08321-01
Revision B - July 1994

© **1996 SYMBOL TECHNOLOGIES, INC.** All rights reserved.

No part of this publication may be reproduced or used in any form, or by any electrical or mechanical means, without permission in writing from Symbol. This includes electronic or mechanical means, such as photocopying, recording, or information storage and retrieval systems. The material in this manual is subject to change without notice.

Symbol reserves the right to make changes to any product to improve reliability, function, or design.

Symbol does not assume any product liability arising out of, or in connection with, the application or use of any product, circuit, or application described herein.

No license is granted, either expressly or by implication, estoppel, or otherwise under any patent right or patent, covering or relating to any combination, system, apparatus, machine, material, method, or process in which Symbol products might be used. An implied license only exists for equipment, circuits, and subsystems contained in Symbol products.

Symbol Technologies, Inc.
One Symbo Plaza
Holtsville, NY 11742-1300

FCC Information

This device complies with FCC Rules, Part 15. 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.

LS 3064MX MEMORY SCANNERS

LS 3064MX User's Guide

Table of Contents

Scanning Made Easy	1-2
Unpacking	3
Set Up	4-8
Aiming Tips	9
Ready, Test, Scan	10
Decode Zone	11
What If...	12
Maintenance	13
Factory Service	14
Symbol Support Center	15
Accessories	16
Scanner/Controller Interface	17-18
Scanner/RS-232 Interface	19-20
Technical Specifications	21-22
Scanner Labeling	23-25

Scanning Made Easy

The LS 3064MX hand-held scanner is based on Symbol's unique "MX" advanced mylar™ technology scan engine. This state-of-the-art technology gives the scanner excellent reliability and consistent outstanding scanning performance. This scanner reads most code symbologies, densities, and colors, produced by a wide range of printing techniques.

The LS 3064MX hand-held scanner incorporates our premium laser scanning performance with on-board decoding and interfacing, memory storage and battery operation to serve both portable and stationary scanning applications.

Scanning Made Easy

The **LS 3064MX** hand-held laser scanner operates in three data-handling modes: Store, Download, and Normal. Operating modes are selected by scanning the bar codes on pages OP4-OP5 in the ***Operating Guide***. An explanation of selectable parameters and all the bar codes necessary for programming are in the ***Programmer's Guide***.

Normal Mode - The LS 3064MX will decode and transmit data in one of two modes selected by the user:

- LS 3000 Emulation - Output emulates standard LS 3000 for connection to any Symbol controller.
- RS-232C - Standard RS-232C output.

Store Mode - When not connected to a Symbol controller or RS-232C device the LS 3064MX operates on rechargeable Nickel Cadmium batteries. Decoded data is stored in 30 kilobytes of memory. The scanner signals the user when memory is almost full, and when the battery power is low.

Download Mode - Stored data is downloaded via LS 3000 emulation to any Symbol controller, or via the RS-232C interface to an RS-232C device.

Unpacking

Remove the scanner from the packing and inspect it for physical damage. If the scanner was damaged in transit, call Symbol Support Center at the telephone number on page 15. Keep the packing; it is the approved shipping container and should be used if you ever need to return your equipment for servicing.

Save the label with a copy of the scanner serial number. If the scanner “loses” its pre-programmed serial number, this label can be scanned to reset the serial number.

No other scanning can be done until the serial number has been reset.

Set Up

Charging the LS 3064MX

Fully charged NiCads cannot be guaranteed on shipment, and it is recommended that scanners are fully charged before use. Scanners can be charged using either an interface controller or a power supply through the RS-232 cable. It is recommended that scanners are left to charge for at least 36 hours.

Charging Using a Symbol Interface Controller

If your system configuration includes a Symbol interface controller and a 12V power supply, plug the LS 3064MX into the **SCANNER** port. When powered up, the interface controller recharges the NiCad batteries.

If the host terminal cannot supply the 12 volts required to recharge the NiCads, you will need to connect an external power supply to the interface controller. Refer to interface controller user documentation for details.

Charging Via the Cable

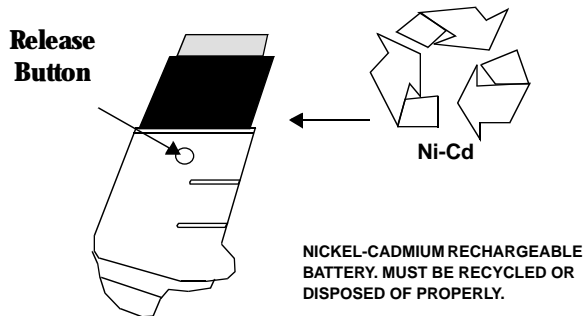
The battery can be charged directly through the cable connecting the scanner with the host terminal. The terminal, or an associated 12V power supply will provide a trickle charge that will re-charge a partially discharged battery. This procedure will generally take approximately 2 days.

Externally Charging the Battery Pack

You can charge battery packs on the Universal Four Slot Battery Charger so that a charged battery pack is available when needed. In this case, simply remove the depleted battery pack and replace it with a freshly charged one. User instructions are in the ***Universal Four-Slot Battery Charger User's Guide***. Time for a full charge is approximately 7-8 hours.

- Remove Lower Handle from Scanner.

Using a probe, press in the release button on the handle, as indicated below. With button pressed in below the outer housing's thickness, slide the battery pack out from the handle.



- Insert Charged Battery Pack in Handle.

With release button down, slide charged battery pack up into handle until it locks into place and the release button pops up into place as well.

Set Up

Normal Mode

When operating in normal mode, the LS 3064MX will decode and transmit data in one of two modes selected by the user.

LS 3000 Emulation - Standard laser output for connection to Symbol controllers. To set up the LS 3064MX for this type of operation:

1. Connect the cable between the LS 3064MX and the Symbol controller.
2. 12 volts must be available from the controller to support the LS 3064MX.
3. Scan the Normal Mode programming bar code on page OP4.
4. Select the appropriate transmission mode (Scanner Port) from pages P63-P64.
5. Be sure the symbology type is enabled for both the LS 3064MX and the Symbol controller.
6. Scan a bar code. The LS 3064MX will decode the symbol (the green decode LED will illuminate and the scanner will beep). The Symbol controller will also beep after the data has been successfully transmitted.

RS-232C - Serial RS-232C output for connection to any RS-232C device. To set up the LS 3064MX for this type of operation:

1. Connect the cable between the LS 3064MX and the RS-232C device.
2. Connect the power supply to the LS 3064MX.
3. Scan the Normal Mode programming bar code on page OP4.
4. Select the appropriate transmission mode (RS-232 Serial Port) from pages P63-P64.
5. Be sure the symbology type is enabled for the LS 3064MX.
6. Scan a bar code. The LS 3064MX will decode the symbol (the green decode LED will illuminate and the scanner will beep).

Download Mode

Stored data can be downloaded using either LS 3000 emulation or RS-232C format. With LS 3000 emulation, each stored bar code is downloaded in undecoded format. The Symbol controller decodes the information and transmits it to the host before retrieving the next stored bar code.

When using RS-232C output, data is transmitted in decoded ASCII format. This type of communication is typically faster than the laser output mode.

Download via LS 3000 Emulation - Standard laser output for connection to Symbol controllers. To set up the LS 3064MX for this type of operation:

1. Connect the cable between the LS 3064MX and the Symbol controller.
2. 12 volts must be available from the controller to support the LS 3064MX.
3. Select the Scanner Port transmission mode from pages P63-P64.
4. Scan the Download From Start programming bar code on page OP5.
5. The Symbol controller will beep for each stored bar code successfully downloaded.
6. The green decode LED on the rear of the LS 3064MX will blink until the download has been successfully completed.

To download through the RS-232C port:

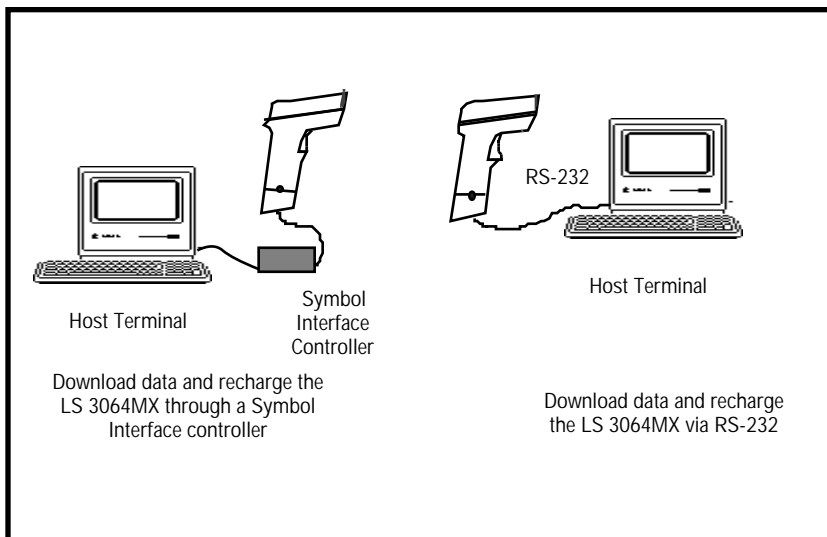
1. Connect the cable between the LS 3064MX and the host.
2. 12 volts must be available from the host to support the LS 3064MX.
3. Select the RS-232C Serial Port transmission mode from pages P63-P64.
4. Scan the Download From Start programming bar code on page OP5.
5. The green decode LED on the rear of the LS 3064MX will blink until the download has been successfully completed.

Set Up

Store Mode

To enter Memory Mode, follow these steps:

1. Disconnect the LS 3064MX from the cable by twisting the bayonet type locking nut.
2. Be sure that the LS 3064MX is programmed to read the bar code symbologies you wish to support.
3. Scan the Store From Start programming bar code on page OP4.
4. Scan a bar code. The LS 3064MX will beep and the green LED will light, indicating a successful read.
5. To start over, scan the Delete Buffer programming bar code followed by the Store From Start bar code.

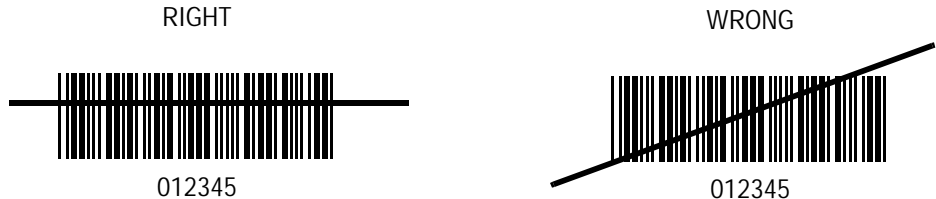


Typical System Configurations

Aiming Tips

Scan the Entire Symbol

- Your scan beam must cross every bar and space on the symbol.
- The larger the symbol, the farther away you should hold the scanner.
- Hold the scanner closer for symbols with bars that are close together.
- A short, high tone beep indicates a good decode



Hold at an Angle

Do not hold the scanner directly over the bar code. In this position, light can bounce back into the scanner's exit window and prevent a successful decode.

Problems

See *What If...* on page 12.

Beeper Definitions

The beeper in the unit provides a variety of messages. See *Beeper Definitions* on pages OP10-OP12 of the Operator's Guide .

Programming the System

An LS 3064MX is programmed by scanning sequences of bar codes; consult the Programmer's Guide .

Ready, Test, Scan

1. Ready

- Make sure the scanner is fully charged, or connected to the controller.

2. Test

- Aim the scanner away from you and press the trigger. This energizes the scan beam for approximately 3 seconds.

3. Scan

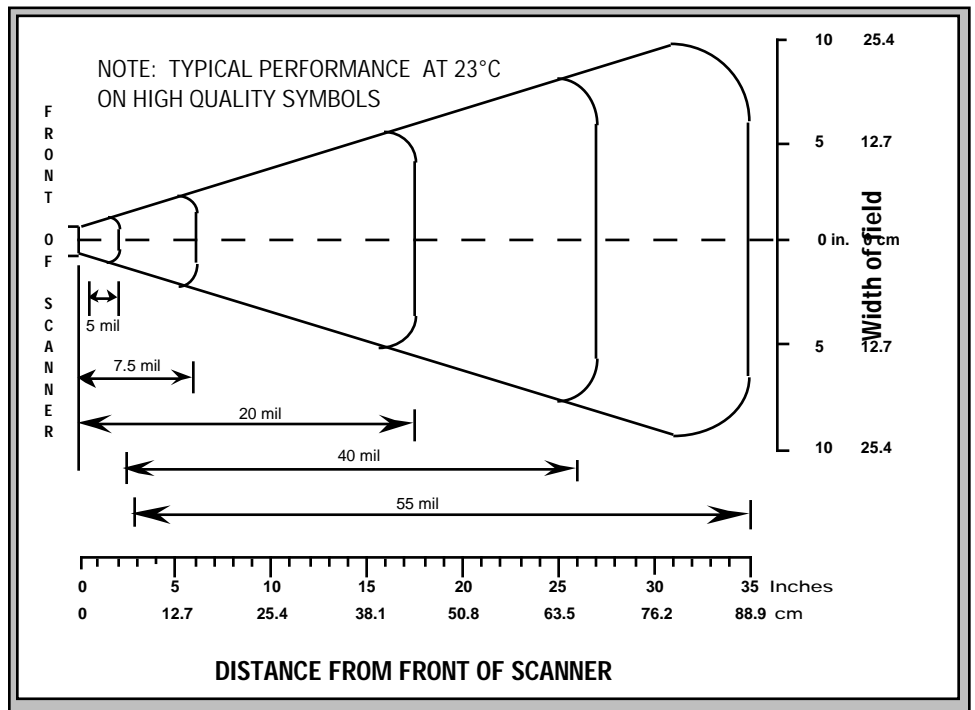
- Aim and press the trigger. The scan beam is energized for about 3 seconds, or until a successful decode; the Decode LED turns red.

The scanner has read the symbol when:

- You hear a short, high tone beep. (If an interface controller is attached, it will echo the beep on good decode.)
- The Decode LED turns green.

Performance may vary slightly from scanner to scanner.

Decode Zone



What If...

Nothing happens when you follow the operating instructions.

You should:

- Make sure the controller and the LS 3064MX are both programmed to read the type of bar code used in your application.
- Check that the symbol you are trying to read is not defaced; try scanning similar symbols of the same code type.
- If you are using the LS 3064MX scanner in memory mode, connect it to an interface controller.
- Check that the interface controller can supply the 12V necessary to recharge the NiCad batteries, or if an external power supply is required.
- If the scanner beeps five times when you pull the trigger it means it has “lost” its serial number. To re-establish the serial number, follow the instructions on page P18 of the ***Programmer's Guide***.

If after performing these checks operation is not confirmed, contact your distributor or call Symbol Support Center. See page 15 for the telephone number.

Maintenance

Cleaning the exit window and recharging the NiCad batteries is the only maintenance required.

- Do not allow any abrasive material to touch the window.
- Remove dirt particles with a damp cloth.
- Wipe the exit window using a tissue moistened with ammonia/water. A dirty window may affect scanning accuracy.
- Do not spray water or other cleaning liquids directly into the window.
- Recharge the NiCad batteries when the low battery detect beep (hi/hi/lo/lo) occurs 1 second after a decode attempt.

To ensure the maximum life of the NiCad batteries, we recommend that they are trickle charged for at least 15 hours.

- When the NiCad batteries fail to hold a charge, call Support. The telephone number is on page 15.

Factory Service

If you have a problem, contact the Symbol Support Center at the telephone number on page 15.

Before calling, have the model number and several of your bar code symbols at hand.

Call the Support Center from a phone near the scanning equipment so that the service person can try to talk you through your problem. If the equipment is found to be working properly and the problem is symbol readability, Support will request samples of your bar codes for analysis at our plant.

If your problem cannot be solved over the phone, you may need to return your equipment for servicing. If that is necessary, you will be given specific directions.

To determine the LS 3064MX software version, scan the bar code below



Note: Before scanning this symbol, check that the LS 3064MX is in normal mode and attached to a controller (i.e., PC, LL 701, etc.) or an RS-232 port, and that the appropriate transmit mode is selected.

Note: Symbol Technologies is not responsible for any damages incurred during shipment if the approved shipping container is not used. Shipping the units improperly can possibly void the warranty. If the original shipping container was not kept, contact Symbol to have another sent to you.

Symbol Support Center

**In the U.S.A., for service information,
warranty information or technical assistance call:**

SYMBOL SUPPORT CENTER

1-800-653-5350

**If you purchased your Symbol product from a Symbol Business
Partner, contact that Business Partner for service.**

Canada

Mississauga, Ontario
Canadian Headquarters
(905) 629-7226

Europe

Wokingham, England
European Headquarters
01734-771-222 (Inside UK)
+44-1734-771222 (Outside UK)

Asia

Singapore
Symbol Technologies Asia, Inc.
337-6588 (Inside Singapore)
+65 337-6588 (Outside Singapore)

Accessories

Required Accessories

LS 3064MX scanners are sent as a package with required accessories, listed in the ***Product Ordering Guide***. Optional accessories are available at extra cost.

Optional Accessories

Optional accessories, listed in the ***Product Ordering Guide***, include various stands and holders, which are supplied at extra cost. Additional units of standard accessories listed above may also be purchased at extra cost

Scanner/Controller Interface

Scanner Emulation Mode

The LS 3064MX intelligent scanner decodes symbols independent of an attached controller. The bar code data is then re-encoded and presented to the controller as scan data.

PIN	SIGNAL NAME	FUNCTION
1	Start of Scan	This output from the scan head is used to synchronize the decode logic with the scan head. A high output simulates sweeping in one direction, and low simulates sweeping in the opposite direction. This is an open collector output capable of sinking 50 mA. The frequency of scans is approximately 36 scans per second.
2	Digitized Bar Pattern	Output from the scanner is electrically identical to pin 1, providing a series of pulses with widths proportional to the elements of the simulated bar code being scanned. A low output represents a bar, and a high output represents a space. The frequency of the pulses depends on the density of the symbol being scanned.
3	Decode LED/Beeper	This TTL level input is used to determine when the symbol data has been successfully decoded by the controller.
4	Not Used	

Scanner/Controller Interface

PIN	SIGNAL NAME	FUNCTION
5	Trigger Switch	Electrically equivalent to pin 1, this output simulates trigger operation. (Low = pulled, Open = released)
6	Enable	This input, in response to the simulated trigger, serves to indicate to the LS 3064MX that the controller is requesting scan data.
7,8	Ground	This pin carries the current used by the scan head, and should be connected to a ground which can handle the full 170 mA load.
9	12 Volt Input	This input will provide power for scanner operation and battery trickle charging @ approximately 10 mA. It must be 9 to 14 volts at 130mA.

Scanner/RS-232 Interface

25-Pin D-Type Connectors*

PIN	SIGNAL NAME	FUNCTION
2	RxD	Serial data receive input. It will be driven by the serial data transmit output on the device communicating with the scanner.
3	TxD	Serial data transmit output. It will drive the serial data receive input on the device communicating with the scanner.
4	CTS	Clear-to-send handshaking input line. It may be optionally used by another device to signal the scanner that it may commence transmitting data. It can be used only in conjunction with the RTS line.
5	RTS	Request-to-send handshaking output line. It may be optionally used by the scanner to signal another device that data is available to send. It can only be used in conjunction with the CTS line.
6	DTR	Data Terminal Ready. This signal is normally high, but can be programmed low.
7	GROUND	Power supply input ground pin and reference for both output signals. It must be capable of sinking all return current.

*Available in both male and female configurations. Consult the **Product Ordering Guide** for part numbers.

Scanner/RS-232 Interface

25-Pin D-Type Connectors*

PIN	SIGNAL NAME	FUNCTION
2	TxD	Serial data transmit output. It will drive the serial data receive input on the device communicating with the scanner.
3	RxD	Serial data receive input. It will be driven by the serial data transmit output on the device communicating with the scanner.
4	RTS	Request-to-send handshaking output line. It may be optionally used by the scanner to signal another device that data is available to send. It can only be used in conjunction with the CTS line.
5	CTS	Clear-to-send handshaking input line. It may be optionally used by another device to signal the scanner that it may commence transmitting data. It can be used only in conjunction with the RTS line.
7	GROUND	Power supply input ground pin and reference for both output signals. It must be capable of sinking all return current.
20	DTR	Data Terminal Ready. This signal is normally high, but can be programmed low.

*Available in both male and female configurations. Consult the **Product Ordering Guide** for part numbers.

Technical Specifications

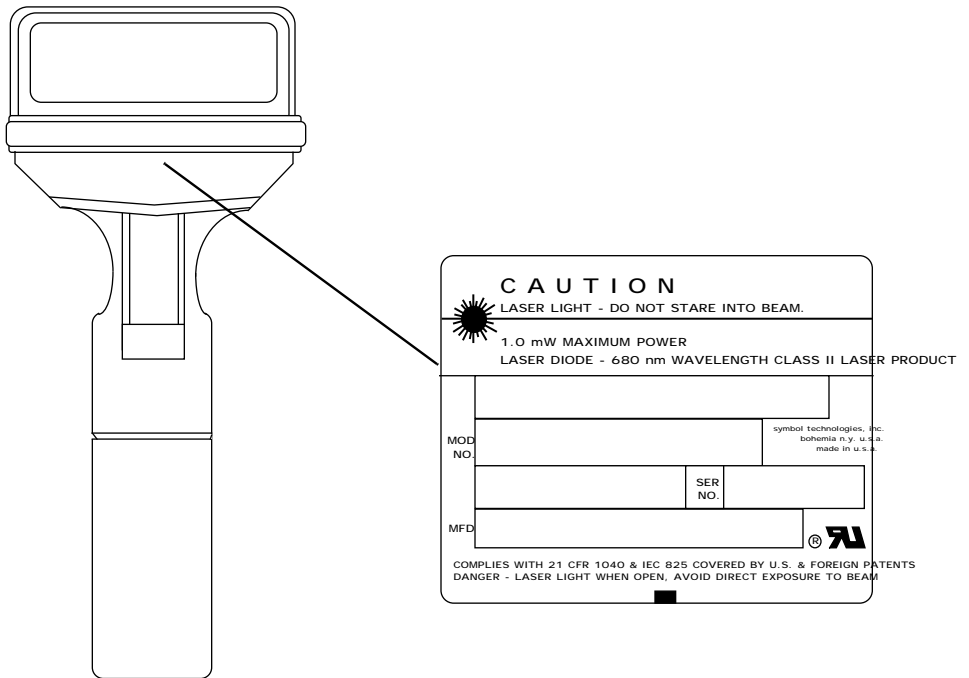
ITEM	DESCRIPTION
Power Requirements: External	
Supply Voltage	9 to 14 VDC, 12 VDC typical
Operating Current	130 mA typical scanning 60 mA typical transmitting or standby 12 mA typical idling with trickle charge
Trickle Charge Current	12 mA typical, 17 mA max @12 VDC
Power Requirements: Portable	
Battery Voltage	5.5 to 7.5 VDC (5 NiCad batteries)
Operating Current	120 mA typical scanning
Power Down Current:	5 μ A typical, 8 μ A max
NiCad Recharge Time	
Installed in Scanner	Half charge: 24 hrs; approx. 10,000 1/2 second scans Full charge: 48 hrs; approx. 20,000 1/2 second scans
When Removed	Half charge: 3 to 4 hrs; approx. 10,000 1/2 second scans Full charge: 7 to 8 hrs; approx. 20,000 1/2 second scans
NiCad Batteries	Under normal conditions, more than 1000 charge/discharge cycles can be expected.
On-Board Memory	32 Kilobytes
Memory Backup	Lithium Battery: 3.0V @ 250 mAh Life: typically 8 years
Scan Repetition Rate	Approximately 36 (\pm 3) scans/sec (bidirectional)
Skew Tolerance	\pm 10° for 7.5 mil symbol at 2 in.
Pitch Angle	\pm 65° for 20 mil symbol at 10 in.

Technical Specifications

ITEM	DESCRIPTION	
Decode Depth of Field	Max typical working distance is 35 in. (89 cm) for 55 mil symbols; minimum element width resolution is 5.0 mils	
Print Contrast Minimum	25% absolute dark/light reflectance differential, measured at 675 nm	
Ambient Light Immunity	Immune to direct exposure from office-level lighting and to direct exposure from sunlight	
Durability	6-ft. drop to concrete	
Operating Temperature	32° to 104°F	0° to 40°C
Storage Temperature	-40° to 140°F	-40° to 60°C
Coil Cable Length	8 ft.	244 cm
Height	6.9 in.	17.5 cm
Length	4.9 in.	12.4 cm
Width	2.8 in.	7.1 cm
Weight	.825 lb.	.377 kg

Scanner Labeling - CDRH Class 2

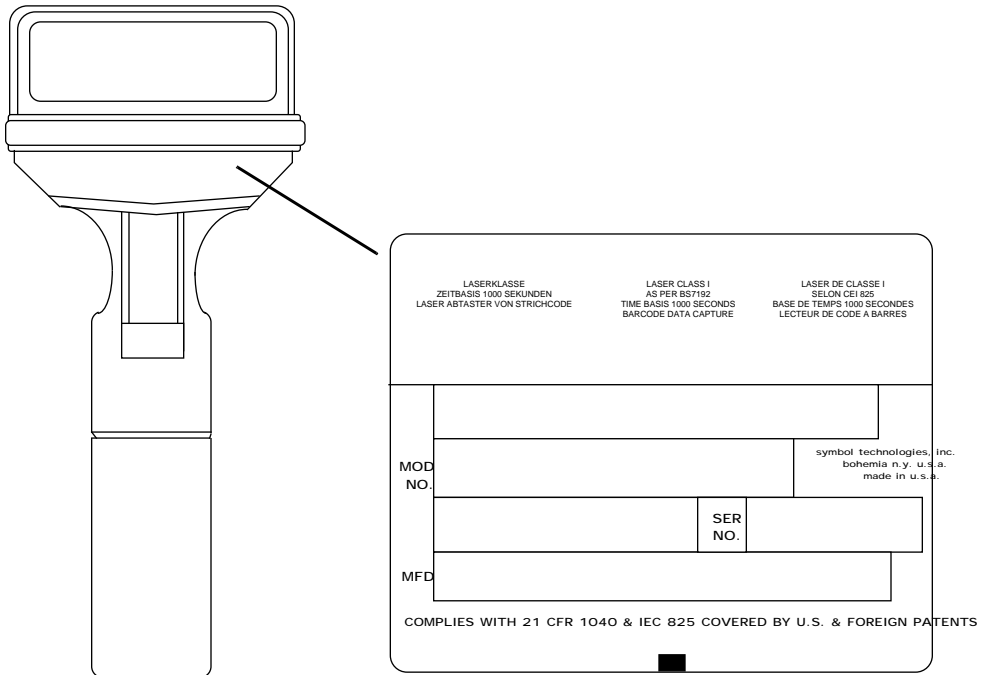
LS 3064MX scanners use a low-power, visible laser. As with any very bright light source, such as the sun, the user should avoid staring directly into the light beam. Momentary exposure to a CDRH Class II laser is not known to be harmful. Required safety label as it appears on the scanner.



CAUTION: Use of controls, adjustments, or performance of procedures other than those specified herein may result in hazardous visible light exposure.

Scanner Labeling - IEC 825 Class 1

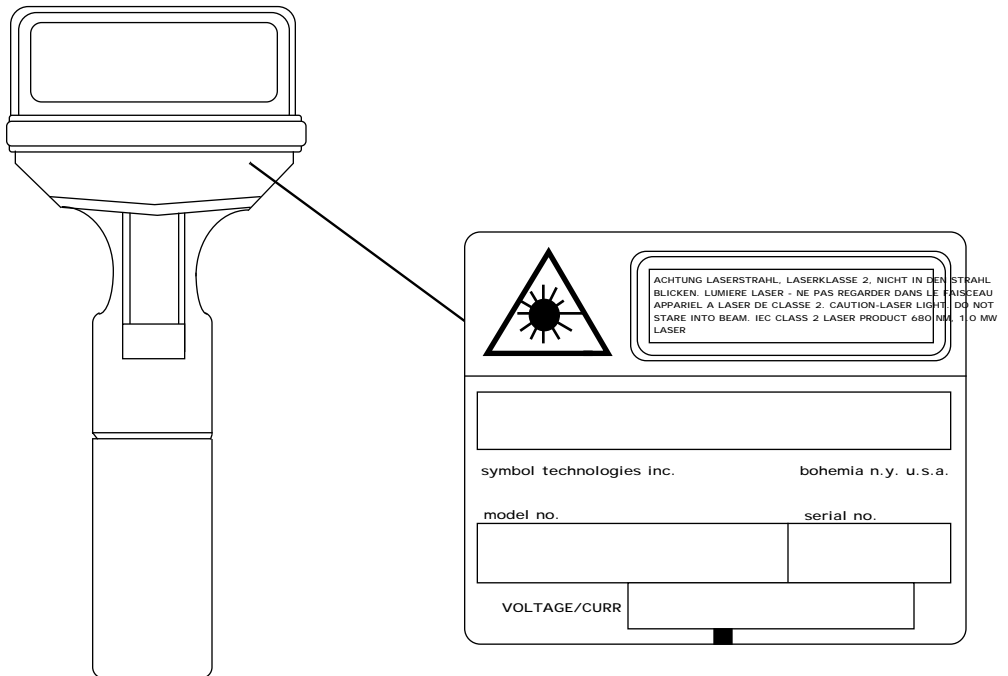
LS 3064MX scanners use a low-power visible laser. The scanner is designed for laser safety according to IEC 825 Class 1. Class 1 laser products are inherently safe. Exposure to the laser beam will cause no harm to your eyes or skin.



CAUTION: Use of controls, adjustments, or performance of procedures other than those specified herein may result in hazardous visible light exposure.

Scanner Labeling - IEC 825 Class 2

LS 3064MX scanners use a low-power, visible laser. As with any very bright light source, such as the sun, the user should avoid staring directly into the light beam. Momentary exposure to a IEC 825 Class II laser is not known to be harmful. Required safety label as it appears on the scanner.



CAUTION: Use of controls, adjustments, or performance of procedures other than those specified herein may result in hazardous visible light exposure.

LS 3064MX MEMORY SCANNERS

LS 3064MX Programmer's Guide

Table of Contents

Programming the LS 3064MX	P1-P2
Parameter Selections	P3-P6
Parameter Descriptions	P7-P22
Parameter Menus	P23-P94
ASCII Table	P95

Programming the LS 3064MX

This section of the **PRODUCT REFERENCE GUIDE** consists of a ***Programmer's Guide*** and an ***Operating Guide***. The ***Programmer's Guide*** has all the bar codes necessary for programming the scanner. The ***Operating Guide*** begins on page OP1, and contains the bar codes necessary to initiate Normal, Store, and Download modeIntelliStands.

Before programming, follow the Set Up instructions on page 4 of the **USER'S GUIDE**.

Consult the ***Parameter Descriptions*** section for explanations of parameter type; ***Parameter Menus*** contain all the bar codes necessary for programming. The ***Parameter Selections*** table on pages P3-P6 lists all selectable parameters and their default values.

Before programming the LS 3064MX, scan the **SET DEFAULT** bar code to re-establish the factory settings. If all the default values (including the data download mode) suit your requirements, no further programming is necessary. Program the scanner for parameters other than default values by scanning sequences of bar codes. A scanning sequence establishes a value for one parameter type; this value is retained in non-volatile memory. During a scanning sequence, you scan bar codes for a parameter type, a parameter value, and **ENTER**.

Programming the LS 3064MX

Scanning Sequence Example

Suppose you want to program the scanner for all default settings except for **BAUD RATE**. Since most of the default settings are suitable for your application, scan the **SET DEFAULT** bar code. The default for **BAUD RATE** is **9600** - you need it set for **4800**. Scan the three bar codes in the order listed below:

Scan	You will hear..
1. BAUD RATE	Short high tone
2. 4800	Short high tone
3. ENTER	Hi/Lo/Hi/Lo warble

After the last scan in a successful scanning sequence (**ENTER**), the warble sound (i.e., hi/lo/hi/lo) indicates that the LS 3064MX has been successfully programmed for the selected parameter. Other beeper indications are listed on pages OP10-OP12

Parameter Selections

Parameter	Options	Default
Code Types	Code 39, Discrete 2 of 5, Code 93, Codabar, UPC/EAN, Interleaved 2 of 5, Code 128, Code 39 Full ASCII, All codes	All Codes
(Note that code types must be compatible with the controller being used.)		
ScanStand Time-out	15 to 90 min in 15 min increments	60 min
Laser On Time	0.5 to 6 sec. in 0.5 sec. increments	3 sec.
First Length I 2 of 5	2 digit entry in range 01-50	10
Second Length I 2 of 5	2 digit entry in range 00-50	0
First Length D 2 of 5	2 digit entry in range 01-50	10
Second Length D 2 of 5	2 digit entry in range 00-50	0
Xmit UPC-E Check Digit	Enabled, Disabled	Enabled
Xmit UPC-A Check Digit	Enabled, Disabled	Enabled
Decode UPC/EAN Supplemental	With Supps, Without Supps, Autodiscriminate	Without Supps
Decode UPC only	Enabled, Disabled	Disabled
Convert UPC-E to A	Enabled, Disabled	Disabled
Convert all to C39 ^{2,3}	Enabled, Disabled	Disabled
Beep on good decode	Enabled, Disabled	Enabled
Percent Check	Enabled, Disabled	Enabled

Parameter Selections

Parameter	Options	Default
Xmit "No Decode" Character	Enabled, Disabled	Disabled
Xmit Code ID Character	Enabled, Disabled	Disabled
EAN Zero Extend	Enabled, Disabled	Disabled
CLSI Editing	Enabled, Disabled	Disabled
NOTIS Editing	Enabled, Disabled	Disabled
UPC-E Preamble	System Character, System Character & Country Code, None	System Character
UPC-A Preamble	System Character, System Character & Country Code, None	System Character
Baud Rate	300, 600, 1200, 2400, 4800, 9600, 19,200	9600
Data Bits	Seven, Eight	Seven
Parity	Even, Odd, Mark, Space, None	Even
Number of Stop Bits	One, Two	Two
DTR Polarity	High, Low	High
Check Parity of Received Data	Enabled, Disabled	Enabled

Parameter	Options	Default
Hardware Handshaking	None, RTS/CTS	None
Prefix to Decoded Data	None, Start-of-text <STX>, Users Choice (1 selection)	None
Suffix to Decoded Data	None, CR, LF, CR/LF, Users Choice (1 selection), Users Choice (2 selections), End-of-text <ETX>.	CR/LF
Intercharacter Delay	00-99 ms	None
Transmit Modes	Transmit using scanner port, Transmit via RS-232	Transmit using scanner port
Append Serial Number	Enabled, Disabled	Disabled
Append User ID	Enabled, Disabled	Disabled
Select User ID ²	Any alphanumeric string less than or equal to 20 characters	“xxxxxxxxx”
Abort Procedure	Abort download, Ignore communications error and skip to next symbol	Abort download
Quantity Field	Enabled, Disabled	Disabled
Xmit Quantity	Transmit bar code data n times, Transmit bar code data and a quantity, n	Transmit bar code data n times
Software Handshaking	None, ENQ, ACK/NAK, ACK/NAK with ENQ	None

Parameter Selections

Parameter	Options	Default
Select Terminating String	None, any alpha/numeric string less than 30 characters	None
Terminating String Delay ¹	No delay, delay in range 00-99 sec, in 1 sec increments	10 sec
Interdecode Delay ¹	No delay, delay in range 00-99 (in .25 sec increments; actual delay range 00-25 sec)	No delay
Transmit Retry Time-out		
Normal Mode	Time-out in range 03..30 seconds	3 sec
Download Mode	Time-out in range 03..30 seconds	3 sec
Low Battery Check	Enabled, Disabled	Enabled
Compress Mode	Enabled, Disabled	Disabled
Autodiscriminate Power Mode	Enabled, Disabled	Disabled
Symboless Scan Stand	Enabled, Disabled	Disabled
Append Date/Time	Append Date & Time, Append Date, Append Time, None	None
Stamp After First & Last Decode	Enabled, Disabled	Disabled

¹ Valid only when transmitting via scanner port or RS-232.

² When using Code I28, Code 39 Full ASCII must be enabled or non-Code 39 characters will be replaced by blanks.

³ Valid only when transmitting via scanner port.

Parameter Descriptions

• *Set Defaults*

Scanning the **SET DEFAULTS** bar code configures all parameters to the default values shown on pages P3-P6. You will hear a warble beep if the scanner was programmed successfully for the default values.

• *Code Types*

The LS 3064MX can decode any combination of the following code types:

- Code 39/Code 39 Full ASCII
- Discrete 2 of 5
- Code 93
- Codabar
- Interleaved 2 of 5
- Code 128
- UPC-A, UPC-E, EAN-8, EAN-13

The default for this parameter is that the scanner can decode all of the above code types. Note that Code 39 and Code 39 Full ASCII cannot be enabled simultaneously. (The default is Code 39.) If a 2 of 5 code type is enabled, an appropriate length must also be set.

• *Fixed Lengths For Code 2 of 5*

One or two lengths for Discrete and Interleaved 2 of 5 can be selected; default settings are 10 and 0 for each type. To decode a 2 of 5 symbol, the correct length for that symbol must be set. The range for length 1 is 01-50, and for length 2, 00-50.

• *Scanstand Time-out*

In ScanStand operation, if the scanner is not used for a pre-determined length of time, the operation of the scanner will change. For ScanStands using a codabar symbol, after the selected time-out, the scanner will turn off. For IntelliStands, after the selected time-out, the blinking will reduce to a 5% duty cycle. Scanning a new symbol will return the scanner to a 25% duty cycle. The time-out ranges from 15 to 90 minutes in 15 minute increments. The default is 60 minutes.

Parameter Descriptions

• *Laser On Time*

This parameter allows you to select a specific laser on time. Values range from 0.5 to 6 seconds in 0.5 second increments. The default is 3 seconds.

• *Decode Options*

Transmit UPC-E/UPC-A Check Digit

Select if decoded UPC-E or UPC-A symbols are transmitted with or without the check digit. **Note:** *This option is not valid when scanning or downloading through the **SCANNER** port of an interface controller, unless data is being sent as Code 39.*

Decode UPC/EAN Supplemental

Select whether UPC/EAN is decoded with or without supplemental characters, or whether the scanner will autodiscriminate between the two. Supplementals are additionally appended characters (2 or 5) according to specific code format conventions (e.g., UPC A+2, UPC E+2, EAN 8+2). If UPC/EAN with supplemental characters is selected, UPC/EAN symbols without supplemental characters won't be decoded. If UPC/EAN without supplemental characters is selected and the scanner is presented with a UPC/EAN plus supplemental symbol, the UPC/EAN will be decoded and the supplemental characters ignored. If autodiscrimination is chosen, the scanner will, after additional processing to ensure a good decode, transmit either. If you are downloading through the scanner port, make sure the set-up for the attached controller corresponds to the LS 3064MX set up (to decode or not decode supplementals).

Decode UPC Only (Not EAN)

If selected, this option limits LS 3064MX UPC/EAN decode capability to UPC versions only. It disables EAN decode capability.

• *Decode Options (Contd)*

Convert UPC-E to UPC-A

Use this parameter to convert UPC-E (zero suppressed) decoded data to UPC-A format before transmission. After conversion, data will follow UPC format and be affected by UPC programming selections (e.g., Preamble, Check Digit). **Note:** *This option is not valid when scanning or downloading through the **SCANNER** port of an interface controller, unless data is being sent as Code 39.*

Convert all to Code 39

Valid only when scanning or downloading via the scanner port of an interface controller. When enabled, all scan data is converted to Code 39 before being sent to the controller.

Beeper Enable/Disable

Determine if the unit beeper will sound during normal scanning. Usually it is desirable to operate the unit with the beeper enabled. In all cases, the beeper operates during parameter menu scanning and indicates error conditions. Beeper indications are on pages OP10-OP12.

Percent Check

In Store mode, with percent check enabled, the scanner sounds a hi/lo beep on good decode to signal that memory is 90% full. This beep replaces the normal short, high tone beep on good decode. If Percent Check is disabled, the normal high tone decode beep will sound regardless of memory status.

Xmit "No Decode" Character

This feature allows you to transmit "NR" when a symbol does not decode. This option is only valid when the scanner is in normal mode. Also, if the unit is transmitting via RS-232, any prefixes and suffixes enabled will be appended around this string. If the unit is transmitting via the scanner port, the "NR" will be sent as a Code 39 symbol.

Parameter Descriptions

• Decode Options (Contd)

Transmit Code ID Character

A code ID character identifies the code type of a scanned bar code. This may be useful when the scanner is decoding more than one code type. In addition to any single-character prefix already selected, the code ID character is appended as a prefix to the decode. Code ID characters are: A = UPC-A, UPC-E, EAN-13, or EAN-8; B = Code 39; C = Codabar; D = Code 128; E = Code 93; F = Interleaved 2 of 5; G = Discrete 2 of 5 or Discrete 2 of 5 IATA. **Note:** *This option is not valid when scanning or downloading through the **SCANNER** port of an interface controller.*

EAN Zero Extend

This parameter adds five leading zeros to decoded EAN-8 symbols to make them compatible in format to EAN-13 symbols. **Note:** *This option is not valid when scanning or downloading through the **SCANNER** port of an interface controller, unless data is being sent as Code 39.*

CLSI Editing

Use this parameter to insert a space after the 1st, 5th, and 10th characters of a 14-character Codabar symbol. The symbol length does not include start and stop characters. **Note:** *This option is not valid when scanning or downloading through the **SCANNER** port of an interface controller, unless data is being sent as Code 39.*

NOTIS Editing

This option strips the start and stop characters from decoded Codabar symbols. **Note:** *This option is not valid when scanning or downloading through the **SCANNER** port of an interface controller, unless data is being sent as Code 39.*

• **UPC A And UPC-E Preamble**

Three options are given for the lead-in characters of decoded UPC-A or UPC-E symbols transmitted to the host device. Select one preamble for UPC-A decodes and one for UPC-E decodes. These lead-in characters are considered part of the symbol itself. The three options are:

- a system character only
- the country code and system character
- no preamble

The system character is the digit printed to the extreme left of a UPC symbol. The country code for UPC is always zero, and it can not be transmitted without the system character. **Note:** *This option is not valid when scanning or downloading through the **SCANNER** port of an interface controller, unless data is being sent as Code 39.*

• **Baud Rate**

Baud rate is the number of bits of data transmitted per second. The unit's baud rate setting should match the data rate setting of the host device. If not, data may not reach the host device or may reach it in distorted form. **Note:** *This option is only valid when scanning or downloading to an RS-232C host.*

• **Data Bits**

This parameter allows you to send data in 7-bit or 8-bit format. **Note:** *This option is only valid when scanning or downloading to an RS-232C host.*

Parameter Descriptions

• **Parity**

A parity check bit is the most significant bit of each ASCII coded character. If you select **ODD** parity, the parity bit will have a value 0 or 1, based on data, to ensure that an odd number of 1 bits are contained in the coded character.

If you select **EVEN** parity, the parity bit will have a value 0 or 1 to ensure that an even number of 1 bits are contained in the coded character. Select **MARK** parity and the parity bit will always be 1. Select **SPACE** parity and the parity bit will always be 0. Select the parity type according to host device requirements. **Note:** *This option is only valid when scanning or downloading to an RS-232C host.*

• **Stop Bit Select**

The stop bit(s) at the end of each transmitted character marks the end of transmission of one character and prepares the receiving device for the next character in the serial data stream. The number of stop bits (one or two) selected depends on the number the receiving terminal is programmed to accommodate. Set the number of stop bits to match host device requirements. **Note:** *This option is only valid when scanning or downloading to an RS-232C host.*

• **DTR Polarity**

DTR polarity allows the user to set the DTR line polarity of the RS-232C port. The user selects a high or low polarity, depending on the host configuration.

• **Check Parity**

Select whether the parity of received characters is checked or a parity check is run on each character of received data. The type of parity used is selectable through the **PARITY** parameter. **Note:** *This option is only valid when scanning or downloading to an RS-232C host.*

• **Communications Protocol**

Hardware Handshaking

Hardware handshaking allows you to check the readiness of the receiving device before data is transmitted. If the receiving device is periodically occupied with other tasks, hardware handshaking is needed to prevent loss of transmitted data.

The data interface consists of an RS-232C port. See **Scanner/RS-232C Interface** on pages 19-20 in the **Users Guide**. The port has been designed to operate either with or without hardware handshaking lines, RTS (Request To Send), and CTS (Clear To Send).

If RTS/CTS handshaking has not been selected, scan data will be transmitted as it becomes available. If optional RTS/CTS handshaking has been selected, the unit proceeds as follows:

- Examine CTS. If CTS is not asserted by the host, RTS will be asserted by the scanner. If CTS is asserted by the host, the scanner will wait up to 1 second for CTS to be negated.
- When the host asserts CTS in response to, and within 1 second of, the scanner's RTS, data will be transmitted.
- When data transmission is complete, the scanner will negate RTS 10 ms after sending the last character.
- The host should respond by negating CTS. The scanner will not wait for this negation, but rather will check before the next transmission, as above.
- If the above communication attempt should fail for any reason, the scanner will issue an error beep to alert the operator that the data was not successfully transmitted. In this case, the data is lost and must be rescanned.

Parameter Descriptions

• Communications Protocol (Contd)

Software Handshaking

This parameter offers control of the data transmission process in addition to, or instead of, that offered by hardware handshaking. These options may be combined, for example ACK/NAK with ENQ. **Note:** *This option is only valid when scanning or downloading to an RS-232C host.*

1. No Software Handshaking

2. ACK/NAK Only

The **ACK/NAK** option checks the success or failure of transmission. The scanner expects one of the following host responses after a data transmission:

<**ACK**> - Acknowledges a valid and successful transmission.

<**NAK**> - Indicates a problem with the transmission.

Whenever a <NAK> is received, the unit retransmits the same data and awaits an ACK/NAK response. After three unsuccessful attempts to transmit the same data, the scanner aborts any further communication attempts on that message. Transmission error is indicated by the unit sounding 4 long beeps.

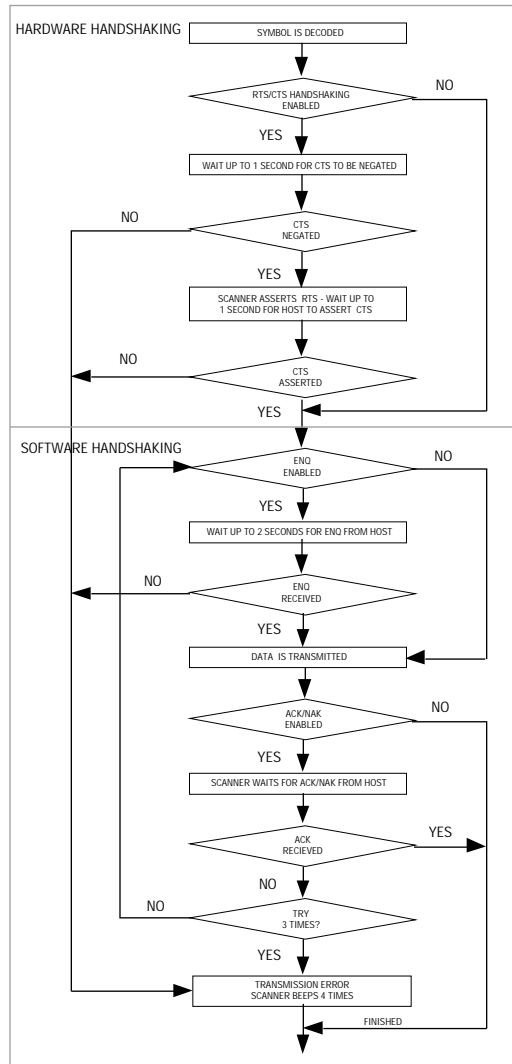
3. ENQ ONLY

The ENQ option needs the host to request data before it is transmitted to the host. This ensures that data transmission occurs only when the host is ready to receive.

When you select the wait for ENQ option, the scanner waits for an ENQ, Enquire, character from the host before it transmits data; otherwise, the unit transmits data without waiting for an ENQ character from the host. With ENQ enabled, the scanner must receive an ENQ from the host within a 2-second period after the last activity or 4 long beeps are sounded to indicate a transmission error; the unit is now ready to scan again.

4. ACK/NAK with ENQ

This combines both handshaking options.



LS 3064MX Hardware and Software Handshaking Sequence

Parameter Descriptions

• **Prefix**

The scanner will add one of the following start-of-text characters to transmitted data:

- None
- Start-of-text <STX>
- One user-defined prefix (can be any ASCII character).

Note: *This option is only valid when scanning or downloading to an RS-232C host.*

• **Suffix**

Select one or two end-of-text characters to be added to transmitted data:

- None
- CR (Carriage Return) - Returns the cursor to the same position on the line after each decode.
- LF (Line Feed) - Moves the cursor down a line after each decode.
- CR & LF - Selecting both CR & LF returns the cursor to the first position on successive lines after each decode.
- One or two characters, user-defined.

Note: *This option is only valid when scanning or downloading to an RS-232C host.*

• **Communications Delays And Time-outs (Intercharacter Delay)**

Select the intercharacter delay option matching host device requirements. The intercharacter delay gives the host system time to service its receiver and perform other tasks between characters. Select from no delay to a 99 msec delay between the transmission of each character. **Note:** *This option is only valid when scanning or downloading to an RS-232C host.*

• *Transmission Mode*

Data can be transmitted in normal mode using either RS-232C, or by attaching the LS 3064MX to the **SCANNER** port of an interface controller.

When downloading, stored data can be transmitted via scanner emulation to the attached interface controller.

• *Format Options*

Note that Append Serial Number/Append User ID options are downloaded as Code 39 when downloading via scanner port. The interface controller must have Code 39 decode capability.

Append Serial Number

This parameter relates each scanner to a specific batch of downloaded data. When enabled, a string in the form:

SOD#YYMMDDHHMMSS#XXXXXXXX precedes the data block, and a string in the form EOD#XXXXXXXX follows the data block.

If download of data is interrupted, scanning **DOWNLOAD FROM CURRENT POINT** (see menu on page OP5) appends a string in the form COD#YYMMDDHHMMSS#XXXXXXXX.

where: SOD = start of data

EOD = end of data

COD = continuation of data

YYMMDDHHMMSS (Real-time clock time/date stamping) are year, month, day, hour, minute, and second.

Output will be determined by Time/Date options enabled.

XXXXXXXX is the scanner serial number

= space

If the scanner beeps 5 times on decoding any symbol, the serial number must be set. See the following page for details of how to reset the serial number.

Parameter Descriptions

• *Format Options (Contd)*

Append User ID

When enabled, this parameter allows data being downloaded to be preceded by a user-selectable header relating data to a user or specific location. The ID is in the form:

H#XXXXXX...

where: XXXX... is selected User ID up to 20 characters

= space

The User ID is sent at the start of data and after a terminating string (if used). To select to send a User ID, scan **APPEND USER ID** , **ENABLE** , and **ENTER** .

Select User ID

To select a User ID, scan **SELECT USER ID** then the selected symbol. If a User ID is not selected after **APPEND USER ID** is enabled, then a string consisting of eight X's will be sent as the User ID. If **APPEND SERIAL NUMBER** is also enabled, this string will be sent after the start of data string.

• *Set Serial Number*

Five long low beeps on scanning any symbol indicates that the scanner has “lost” its pre-programmed serial number. Reset the serial number by scanning **SET SERIAL NUMBER** , and then the copy of the serial number enclosed in the scanner's packing box, or by scanning **ENTER SERIAL NUMBER** , then scanning one by one the digits or characters of the serial number shown on the label of the scanner's handle, and then the **END SERIAL NUMBER** bar code.

• *Abort Procedure*

In the event of a communications error, the LS 3064MX will either:

- Abort download or
- Ignore the communications error and skip to next symbol stored in memory.

When download is aborted, the scanner will give a double beep every 2 seconds. On the next trigger pull a hi/hi/lo/lo beep is issued. If you are using the abort download option, recover by scanning the **SKIP TO NEXT BAR CODE** followed by the **DOWNLOAD FROM CURRENT POINT** symbol.

• *Quantity Field*

The buffer must be empty before programming the scanner for this parameter. When enabled, the LS 3064MX looks back through the last 100 decodes for a match. If an identical item is found, the associated quantity is increased by one.

This parameter also allows the user to scan in a quantity. The quantity field may range from 0 to 9999. After scanning a bar code, scan up to 4 bar codes to represent the quantity. You will hear a short, low-high tone after scanning each symbol.

• *Transmit Quantity*

Two format options are available:

Option 1 The LS 3064MX downloads a decode n times, where n is a quantity.

Option 2 The quantity is transmitted in the form Data Qn where: n is a 4-digit quantity in the range 0-9999, and data is the value of the decode.

Note: If **Option 2** is selected and data is being sent via the scanner port, the data is sent as Code 39.

Parameter Descriptions

- ***Terminating String***

This parameter allows selection of a bar code that will indicate the end of a block of data. To establish a terminating string, scan the select terminating string symbol and then scan the bar code to be used as the terminating string.

- ***Terminating String Delay***

When data has been downloaded, a user-selectable terminating string delay will occur after the selected terminating string has been sent, i.e., before the next block of data is sent. The delay can be in the range of 00-99 seconds.

- ***Interdecode Delay***

This parameter is used to select the delay inserted between each decode in download mode. It does not affect other modes of operation. The user selects a value in the range 00-99, where each increment is a .25 second delay (i.e., delay ranges from 00~25 seconds).

- ***Transmit Retry Time-out (Normal Mode/Download Mode)***

This parameter indicates how long the LS3064 will try to send data if no response is received from the attached console. It allows you to change the time-out delay in normal or download mode when data is being transmitted via scanner emulation.

The delay can range from 03-30 seconds. If you scan 00, 01, or 02 seconds, the unit defaults to 03 seconds.

- ***Low Battery Check***

If this parameter is enabled, the scanner will indicate when the battery is low by the Low Battery Check beep sequence (hi hi hi lo). When this sequence sounds, the battery should be recharged.

• **Data Compression**

If Compress Mode is enabled, numeric data is stored in approximately half the space needed for non-compressed data. Data from alphanumeric bar codes will be stored in ASCII as is. Compressed data will be sent as Code 39 when downloading via the **SCANNER** port.

• **Autodiscriminate Power Mode**

When Autodiscriminate Power Mode is enabled, upon power-up the scanner will enter one of the following modes:

- **Storage Mode** if no external power is detected;
- **Normal Mode** if external power is connected and the storage buffer is empty (there is no data to download);
- **Download Mode** if external power is connected and there is data in the buffer. (The user must pull the trigger to begin download.)

If this parameter is disabled, the user must program the scanner by scanning the bar codes on pages OP4-OP5.

• **IntelliStand Options**

This option prevents the scanner from switching to battery if power to the host is turned off, thereby conserving battery power. When disabled, you cannot enter IntelliStand mode while using battery power. Enable this option to use the IntelliStand while the scanner is operating using battery power, and in the Storage Mode.

• **Date And Time Options**

When enabled, date and time are appended to all scan data while the LS 3064MX is in store or normal modes. The default for this parameter is no date/time stamping. **Note:** *Buffered data subsequently downloaded via the controller **SCANNER** port is sent as Code 39.*

Parameter Descriptions

• Set Date And Time

Set Time

To set the time, scan the **SET TIME** symbol. Next, scan six bar codes in two digit sequences using the symbols 0 to 9 to set the time in the form HHMMSS where H is the hour in range 00-23, M is minutes in range 00-59, and S is seconds in range 00-59. The sequence includes an error check; invalid entries are indicated by 2 beeps and the sequence aborted. If the time has been correctly established, the scanner will issue a warble beep on the 6th bar code.

Set Date

To set the date scan the **SET DATE** symbol. Now scan six bar codes in two digit sequences using the symbols 0 to 9 to set the date in the form YYMMDD, where Y is the year in the range 00-99, M is month in the range 01-12, and D is day in the range 01- XX dependant on month. The sequence includes an error check and invalid entries are signalled by two beeps and the sequence aborted. A warble beep will be issued on the 6th bar code if the date has been correctly established.

Date and time are appended in the form:

YYMMDDHHMMSS#Data

If date only: YYMMDD#Data

If time only: HHMMSS#Data

where:

YY = year

MM = month

DD = day

= space

HH - hour

MM = minute

SS = second

Parameter Menus

• *Set Date And Time (Contd)*

Note: Data is sent out of the scanner port as Code 39 if one or more of the following conditions are true:

- Data compression is enabled in Storage Mode
- Convert All to Code 39 is enabled
- Time and/or Date is appended to data
- Quantity Field is enabled and sent as Qxxxx

Parameter Menus

Set Defaults	P25
Code Types	P26-P27
ScanStand Time-out	P28-P29
Laser On Time	P30-P32
Fixed Length for Code 2 of 5	P33-P34
Decode Options	P35-P36
Decode UPC/EAN Supplementals	P37-P38
UPC-E/UPC-A Preamble	P39-P40
Baud Rate	P41-P42
Data Format	P43-P44
Parity	P45-P46
Stop Bits	P47-P48
DTR Polarity	P49-P50
Check Parity	P51-P52
Hardware Handshaking	P53-P54
Software Handshaking	P55-P56
Prefix	P57-P58
Suffix	P59-P60
Intercharacter Delay	P61-P62
Transmission Mode	P63-P64
Select Format Options	P65-P67
Set Serial Number	P68-P71
Abort Procedure	P72-P73
Quantity Field	P74-P75
Transmit Quantity	P76-P77
Terminating String	P78
Interdecode/Terminating String Delay	P79-P80
Transmit Retry Time-out	P81-P82
Low Battery Check	P83-P84
Compress Mode	P85-P86
Autodiscriminate Power Mode	P87-P88
IntelliStand Options	P89-P90
Date and Time Options	P91-P92
Set Date and Time	P93-P94

Set Defaults

Scanning the **SET DEFAULTS** bar code configures all parameters to the default values shown on pages P3-P6. You will hear a warble beep if the scanner was programmed successfully for the default values.



SET DEFAULTS

Note: Two long beeps will be heard if the **SET DEFAULTS** symbol is scanned and there is data in the storage buffer. Buffered data must be downloaded or deleted before configuring parameters to the default values.

Parameter Menus

Code Types

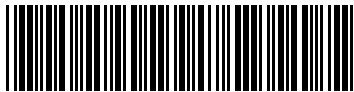
These two options either add or delete a code type.

To add a code:

1. Scan the **ENABLED** bar code.
2. Scan the bar code corresponding to the code type to be added.
3. Scan **ENTER**.

To delete a code:

1. Scan the **DISABLED** bar code.
2. Scan the bar code corresponding to the code type to be deleted.
3. Scan **ENTER**.



ENABLED



DISABLED



CODE 39



CODE 39 FULL ASCII

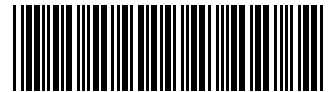


CODE 93

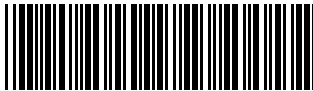
Code Types



UPC/EAN



I 2 OF 5



D 2 OF 5



CODE 128



ALL CODES



CODABAR

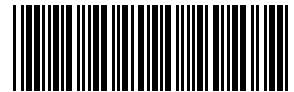
BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Parameter Menus

Scanstand Time-out

To select a ScanStand time-out:

1. Scan the **SCANSTAND TIME-OUT** bar code.
2. Scan the bar code corresponding to the desired time-out.
3. Scan **ENTER**.



SCANSTAND TIME-OUT

Scanstand Time-out (Continued)



15 MINUTES



60 MINUTES



30 MINUTES



75 MINUTES



45 MINUTES

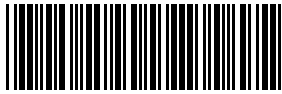


90 MINUTES

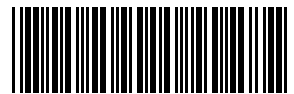
BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes the entire change and returns the user to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Parameter Menus

Laser On Time

To select a laser on time:

1. Scan the **LASER ON TIME** bar code.
2. Scan the bar code corresponding to the desired value.
3. Scan **ENTER**.



LASER ON TIME

Laser On Time



0.5 SEC.



2.0 SEC.



1.0 SEC.



2.5 SEC.



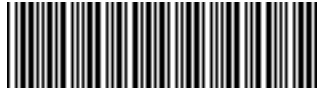
1.5 SEC.



3.0 SEC.

Parameter Menus

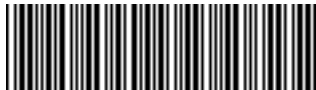
Laser On Time



3.5 SEC.



5.0 SEC.



4.0 SEC.



5.5 SEC.



4.5 SEC.



6.0 SEC.

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes the entire change and returns the user to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Fixed Lengths For a Code 2 of 5

To set the fixed lengths for a Code 2 of 5:

1. Scan the **FIXED LENGTH** bar code corresponding to the length to be changed.
2. To enter the length, scan two bar codes from the next page; the first bar code scanned should signify the most significant digit.
3. Scan **ENTER**.



DISCRETE 2 OF 5
LENGTH 1 (Range 01-31)



DISCRETE 2 OF 5
LENGTH 2 (Range 00-31)



INTERLEAVED 2 OF 5
LENGTH 1 (Range 01-31)



INTERLEAVED 2 OF 5
LENGTH 2 (Range 00-31)

Parameter Menus

Fixed Length For a Length 2 of 5



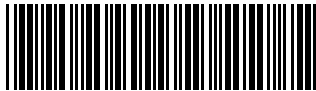
0



1



2



3



4



5



6



7



8

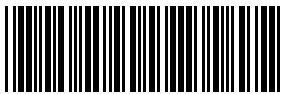


9

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

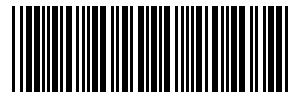
ENTER - stores and enters the new change.



BACKSPACE



CANCEL



ENTER

Decode Options

To select one of the decode options:

1. Scan the desired **DECODE OPTION** bar code.
2. Scan the **ENABLE** or **DISABLE** option bar code.
3. Scan **ENTER**.



TRANSMIT UPC-E CHECK DIGIT



TRANSMIT UPC-A CHECK DIGIT



CONVERT UPC-E TO UPC-A



DECODE UPC ONLY



BEEP AFTER GOOD DECODE



CONVERT ALL TO CODE 39



EAN ZERO EXTEND



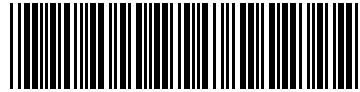
PERCENT CHECK

Parameter Menus

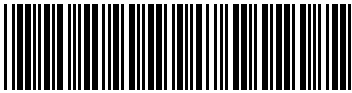
Decode Options



TRANSMIT "NR"



TRANSMIT CODE ID CHARACTER



CLSI EDITING



NOTIS EDITING



ENABLED

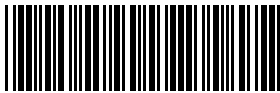


DISABLED

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Decode UPC/EAN Supplementals

To select a UPC/EAN Supplementals option:

1. Scan the **UPC/EAN SUPPLEMENTALS** bar code.
2. Scan the option bar code corresponding to the desired option.
3. Scan **ENTER**.



DECODE UPC/EAN SUPPLEMENTALS

Parameter Menus

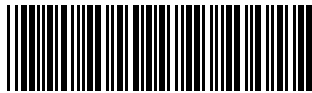
Decode UPC/EAN Supplementals



DECODE UPC/EAN
WITH SUPPLEMENTALS



DECODE UPC/EAN
WITHOUT SUPPLEMENTALS



AUTODISCRIMINATE UPC/EAN
WITH SUPPLEMENTALS

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

UPC-E/UPC-A Preamble

To select one of the preamble options:

1. Scan the bar code corresponding to the **PREAMBLE** option desired.
2. Scan a bar code to enable or disable the decode option.
3. Scan **ENTER**.



UPC-A PREAMBLE



UPC-E PREAMBLE

Parameter Menus

UPC-E/UPC-A Preamble



SYSTEM CHARACTER



SYSTEM CHARACTER
AND COUNTRY CODE



NONE

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

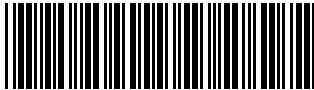
Baud Rate

To select a baud rate:

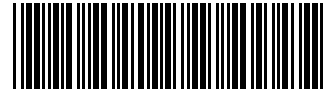
1. Scan the **BAUD RATE** bar code.
2. Scan the bar code corresponding to the baud rate desired.
3. Scan **ENTER** on the next page



BAUD RATE



300



600



1200



2400



4800



9600



19,200

Parameter Menus

Baud Rate

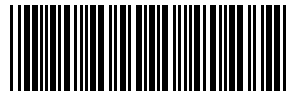
BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Data Format

To select an RS-232C transmission protocol:

1. Scan the **DATA FORMAT** bar code.
2. Scan the bar code that corresponds to the desired option.
3. Scan **ENTER**.



DATA FORMAT

Parameter Menus

Data Format



7 DATA BITS

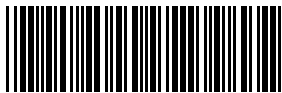


8 DATA BITS

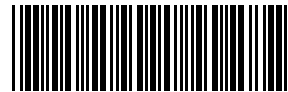
BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Parity

To enter parity:

1. Scan the **PARITY** bar code.
2. Scan the option bar code corresponding to the type of parity desired.
3. Scan **ENTER**.



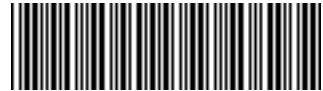
PARITY

Parameter Menus

Parity



ODD



EVEN



MARK



SPACE



NONE

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Stop Bit Select

To select the number of communications stop bits:

1. Scan the **STOP BIT SELECT** bar code.
2. Scan the option bar code corresponding to the required value.
3. Scan **ENTER**.



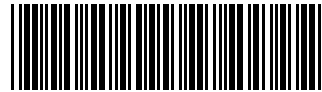
STOP BIT SELECT

Parameter Menus

Stop Bit Select



1 STOP BIT



2 STOP BITS

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

DTR Polarity

To select the DTR polarity:

1. Scan the **DTR POLARITY** bar code.
2. Scan **LOW** or **HIGH**.
3. Scan **ENTER**.



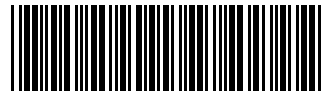
DTR POLARITY

Parameter Menus

DTR Polarity



LOW



HIGH

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Check Parity

To select check parity option:

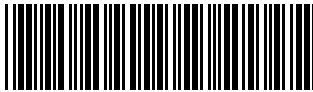
1. Scan the **CHECK PARITY** bar code.
2. Scan the **ENABLED** or **DISABLED** bar code to enable or disable the option.
3. Scan **ENTER**.



CHECK PARITY

Parameter Menus

Check Parity



ENABLED



DISABLED

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Hardware Handshaking

To select a hardware handshaking protocol:

1. Scan the **HARDWARE HANDSHAKING** bar code.
2. Scan the option bar code corresponding to the protocol desired.
3. Scan **ENTER**.



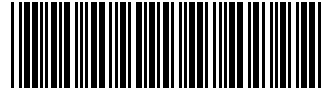
HARDWARE HANDSHAKING

Parameter Menus

Hardware Handshaking



NONE



RTS/CTS

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Software Handshaking

To select a software handshaking protocol:

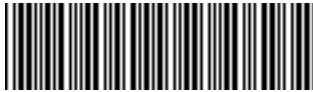
1. Scan the **SOFTWARE HANDSHAKING** bar code.
2. Scan the option bar code corresponding to the protocol desired.
3. Scan **ENTER**.



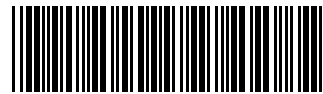
SOFTWARE HANDSHAKING

Parameter Menus

Software Handshaking



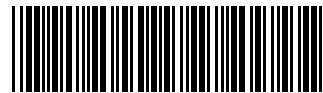
NONE



ACK/NAK WITH ENQ



ACK/NAK ONLY



ENQ ONLY

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Prefix

To enter a prefix:

1. Scan the **PREFIX** bar code.
2. Scan the option bar code that corresponds to the option desired.
3. Scan **ENTER**.

If **USER'S CHOICE** is scanned, then scan the appropriate 3 digit (leading zeros are required) decimal of the ASCII character(s) to be entered, using the bar codes on the next page.



PREFIX



NONE



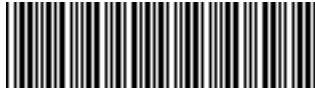
STX



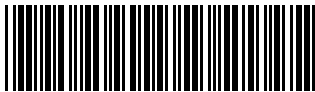
USER'S CHOICE
1 CHARACTER

Parameter Menus

Prefix



0



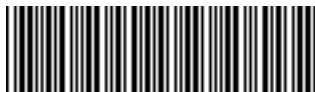
1



2



3



4



5



6



7



8



9

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Suffix

To enter a suffix:

1. Scan the **SUFFIX** bar code.
2. Scan the option bar code that corresponds to the option desired.
3. Scan **ENTER**.

If **USER'S CHOICE** is scanned, then scan the appropriate 3 digit (leading zeros are required) decimal of the ASCII character(s) to be entered, using the bar codes on the next page.



SUFFIX



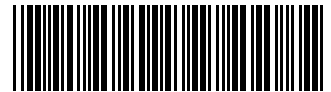
NONE



CR



LF



CR, LF



ETX



USER'S CHOICE
1 CHARACTER



USER'S CHOICE
2 CHARACTERS

Parameter Menus

Suffix



0



1



2



3



4



5



6



7



8

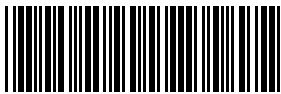


9

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Intercharacter Delay

To enter an intercharacter delay:

1. Scan the **INTERCHARACTER DELAY** bar code.
2. Enter the new value by scanning two bar codes. The first bar code scanned corresponds to the most significant digit; the second bar code corresponds to the least significant digit. The value entered must be within the 00-99 msec. range.
3. Scan **ENTER**.



INTERCHARACTER DELAY
(Range = 00-99 msec)

Parameter Menus

Intercharacter Delay



0



1



2



3



4



5



6



7



8

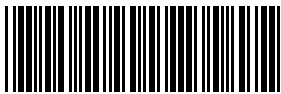


9

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Parameter Menus

Transmission Mode

To select a transmission mode:

1. Scan **TRANSMIT MODE** .
2. Scan the **SCANNER PORT** or **RS-232 SERIAL PORT** symbol.
3. Scan **ENTER**



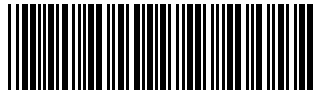
TRANSMIT MODE

Parameter Menus

Transmission Mode



SCANNER PORT

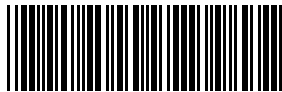


RS-232 SERIAL PORT

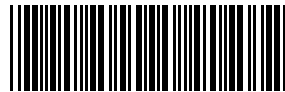
BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Select Format Options

To enable or disable a format option:

1. Scan the option required.
2. Scan **ENABLE** or **DISABLE**.
3. Scan **ENTER**.



APPEND USER ID



APPEND SERIAL NUMBER

Parameter Menus

Select Format Options

Append User ID/ Append Serial ID



ENABLED



DISABLED

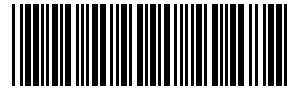
BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Select Format Options

Select User ID

To select a User ID:

1. Scan the **SELECT USER ID** bar code.
2. Scan the symbol to be used as User ID.



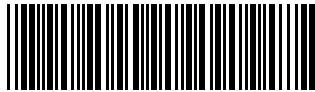
SELECT USER ID

Parameter Menus

Set Serial Number

Follow the sequence below to re-establish the serial number:

- | Scan | You will hear..... |
|--|---------------------------|
| 1. Scan SET SERIAL NUMBER . | warble beep |
| 2. Scan the copy of the serial number enclosed in the packing box. | warble beep |



SET SERIAL NUMBER

Note: Five long, low beeps indicate that an illegal serial number was scanned. Return to step 1 in the programming sequence.

Set Serial Number

Follow the sequence below to re-establish the serial number without using the copy of the serial number in the packing box:

Scan

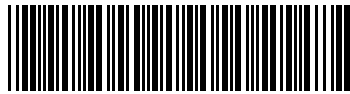
1. Scan **ENTER DISCRETE SERIAL NUMBER**.
2. Scan the digits or characters below and on the following two pages as they appear on the scanner's handle label.
3. Entry of the serial number is complete when eight characters are scanned or when the **END SERIAL NUMBER** bar code is scanned (for serial numbers with less than 8 characters).

You will hear.....

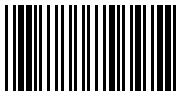
warble beep

hi/lo beep

warble beep



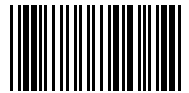
ENTER DISCRETE SERIAL NUMBER



A



C



E



B



D



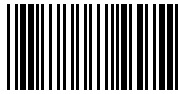
F

Parameter Menus

Set Serial Number (Continued)



G



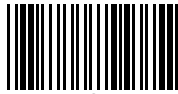
N



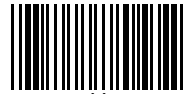
U



H



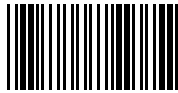
O



V



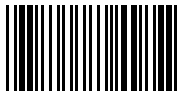
I



P



W



J



Q



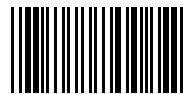
X



K



R



Y



L



S



Z

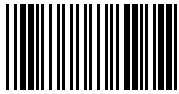


M

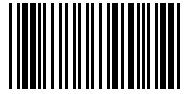


T

Set Serial Number (Continued)



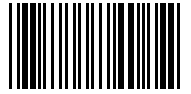
0



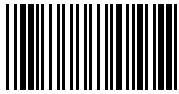
5



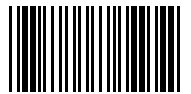
1



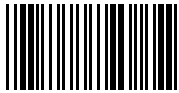
6



2



7



3



8



4



9



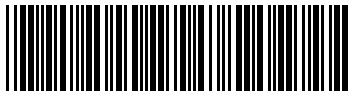
END SERIAL NUMBER

Parameter Menus

Abort Procedure

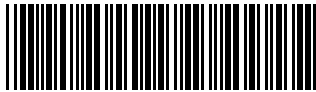
To select an abort procedure on communications failure:

1. Scan the bar code representing the abort procedure required.
2. Scan **ENABLE** or **DISABLE** .
3. Scan **ENTER** .



ABORT PROCEDURE

Abort Procedure



ENABLE
(ABORT DOWNLOAD)



DISABLE
(IGNORE COMMS ERROR;
SKIP TO NEXT SYMBOL)

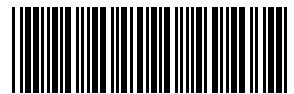
BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Parameter Menus

Quantity Field

When this parameter is enabled, use the bar codes on page OP6 to enter a quantity.

To enable or disable this parameter:

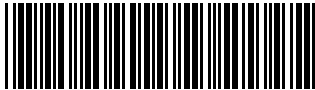
1. Scan the **QUANTITY FIELD** bar code.
2. Scan **ENABLE** or **DISABLE** .
3. Scan **ENTER** .

Note: This parameter can only be set when the buffer is empty.

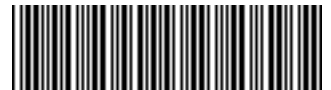


QUANTITY FIELD

Quantity Field



ENABLE



DISABLE

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Parameter Menus

Transmit Quantity

To enable or disable this parameter:

1. Scan the **TRANSMIT QUANTITY** bar code.
2. Scan **ENABLE** or **DISABLE** .
3. Scan **ENTER** .



TRANSMIT QUANTITY

Transmit Quantity



OPTION 1
(Transmit bar code data *n* times)



OPTION 2
(Transmit bar code data
and a quantity, *n*)

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Parameter Menus

Terminating String

To establish a terminating string, scan the symbol below and then scan the bar code to be used as the terminating string.



SELECT TERMINATING STRING

Note: The above parameter is valid only when downloading via scanner port.

Interdecode/Terminating String Delay

To set an Interdecode or Terminating String Delay:

1. Scan a Delay bar code.
2. Scan two bar codes from the following page in the range 00-99.
3. Scan **ENTER**.

Note: The Delay parameters are valid only when downloading via scanner port.



INTERDECODE DELAY



TERMINATING STRING DELAY

Parameter Menus

Interdecode/Terminating String Delay



0



1



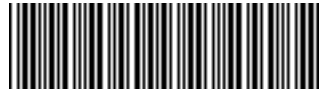
2



3



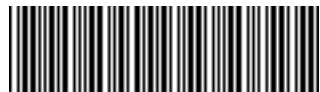
4



5



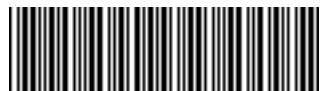
6



7



8



9

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

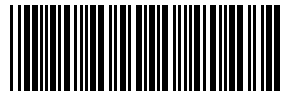
ENTER - stores and enters the new change.



BACKSPACE



CANCEL

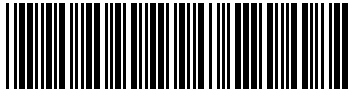


ENTER

Transmit Retry Time-out (Normal Mode/Download Mode)

To select the time-out in Normal or Download Mode:

1. Scan the appropriate **TRANSMIT RETRY TIME-OUT** bar code.
2. Scan two bar codes from below or on the following page which represent a delay in range 03..30 seconds.
3. Scan **ENTER**.



TRANSMIT RETRY TIME-OUT
(NORMAL MODE)



TRANSMIT RETRY TIME-OUT
(DOWNLOAD MODE)

Parameter Menus

Transmit Retry Time-out (Normal Mode/Download Mode)



0



5



1



6



2



7



3



8



4

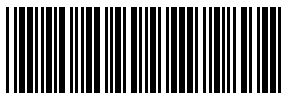


9

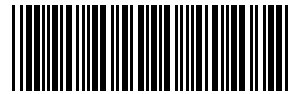
BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Low Battery Check

To select Low Battery Check:

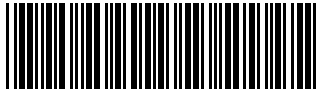
1. Scan **LOW BATTERY CHECK** bar code.
2. Scan **ENABLE** or **DISABLE** .
3. Scan **ENTER** .



LOW BATTERY CHECK

Parameter Menus

Low Battery Check



ENABLE



DISABLE

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Compress Mode

To select data compression:

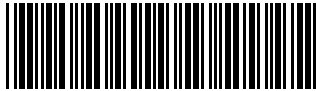
1. Scan **COMPRESS MODE** bar code.
2. Scan **ENABLE** or **DISABLE** .
3. Scan **ENTER**.



COMPRESS MODE

Parameter Menus

Compress Mode



ENABLE



DISABLE

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Autodiscriminate Power Mode

To enable/disable autodiscriminate power mode:

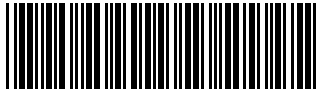
1. Scan the **AUTODISCRIMINATE POWER MODE** bar code.
2. Scan **ENABLE** or **DISABLE** .
3. Scan **ENTER**.



AUTODISCRIMINATE POWER MODE

Parameter Menus

Autodiscriminate Power Mode



ENABLE



DISABLE

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

IntelliStand Options

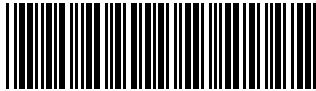
1. Scan the **INTELLISTAND** bar code.
2. Scan **ENABLE** or **DISABLE** .
3. Scan **ENTER**.



INTELLISTAND

Parameter Menus

IntelliStand Options



ENABLE



DISABLE

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

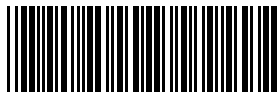
ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Date And Time Options

To select a Date/Time option:

Scan the **APPEND DATE/TIME** bar code.

Scan the option required.

Scan **ENTER**.



APPEND DATE AND/OR TIME

Parameter Menus

Date And Time Options



NO TIME STAMPING



APPEND DATE ONLY



APPEND TIME ONLY

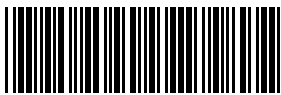


APPEND DATE AND TIME

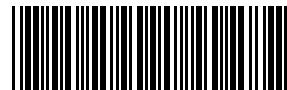
BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Set Date And Time

To set the date and time:

Scan the **SET DATE** or **SET TIME** bar code.

Scan a sequence of six bar codes from the following page for each option in the form of YYMMDD for date and HHMMSS for time.



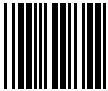
SET DATE



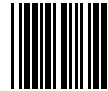
SET TIME

Parameter Menus

Set Date And Time



0



5



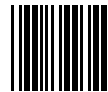
1



6



2



7



3



8



4



9

ASCII Table

ASCII	VALUE	ASCII	VALUE	ASCII	VALUE	ASCII	VALUE
NUL	000	SP	032	@	064	'	096
SOH	001	!	033	A	065	a	097
STX	002	"	034	B	066	b	098
ETX	003	#	035	C	067	c	099
EOT	004	\$	036	D	068	d	100
ENQ	005	%	037	E	069	e	101
ACK	006	&	038	F	070	f	102
BELL	007	'	039	G	071	g	103
BACK SPACE	008	(	040	H	072	h	104
HORIZ TAB	009	)	041	I	073	i	105
LF/NEW LINE	010	*	042	J	074	j	106
VT	011	+	043	K	075	k	107
FF	012	,	044	L	076	l	108
CR/ENTER	013	-	045	M	077	m	109
SO	014	.	046	N	078	n	110
SI	015	/	047	O	079	o	111
DLE	016	0	048	P	080	p	112
DC1	017	1	049	Q	081	q	113
DC2	018	2	050	R	082	r	114
DC3	019	3	051	S	083	s	115
DC4	020	4	052	T	084	t	116
NAK	021	5	053	U	085	u	117
SYN	022	6	054	V	086	v	118
ETB	023	7	055	W	087	w	119
CAN	024	8	056	X	088	x	120
EM	025	9	057	Y	089	y	121
SUB	026	:	058	Z	090	z	122
ESC	027	;	059	[	091	{	123
FS	028	<	060	\	092	:	124
GS	029	=	061	]	093	}	125
RS	030	>	062	^	094	~	126
US	031	?	063	--	095	DEL	127

LS 3064MX MEMORY SCANNERS

LS 3064MX Operating Guide

Table of Contents

Operating Guide	OP1-OP3
Operating Modes Menus	OP4-OP6
Date/Time Stamping Options	OP7-OP9
Beeper Definitions	OP10-OP12

Operating Guide

Operating Modes

The LS 3064MX operates in three data handling modes: normal, store (inventory), and download. If the scanner was successfully programmed for an operating mode, it will give a warble beep. If other beeps are heard, refer to the table of **Beeper Definitions** on pages OP10-OP12.

• *Normal Mode*

In normal mode, the scanner is attached to the scanner port of any Symbol interface controller, or to an RS-232 port. To program the scanner for normal mode, attach the scanner to the interface controller or RS-232 port, and scan the **NORMAL MODE** symbol. After programming, data is passed through to the attached controller or RS-232 port. Most controllers will echo the scanner's short, high tone beep (if beep on good decode parameter is enabled) when a symbol is successfully decoded.

• *Store Mode*

In this mode the LS 3064MX buffers up to 30K of scanned data until a download symbol is scanned. Store mode options are selected by scanning sequences of bar codes. Options include store from the start of the buffer, or, if data was stored previously, from the current point in the buffer. If storing from the start of the buffer, the buffer must be empty, i.e., either all previous data was downloaded or buffered decodes deleted. The **DELETE BUFFER** option deletes data up to the start of buffer. When **PERCENT CHECK** is enabled, the scanner will give a hi/lo beep on good decode after RAM is 90% full. When RAM is full, a correct scan in full condition will be indicated by a repeated hi/lo/hi/lo sequence.

Operating Guide

• *Download Mode*

On entering download mode, the LS 3064MX DECODE LED will blink every 1 second while waiting to download, and every 1/4 second while downloading is in process. When downloading is complete, the LED turns off.

When the **APPEND SERIAL NUMBER** parameter is enabled, this number will precede and follow each batch of data.

Downloading Using Scanner Coil Cable on Scanner Port of Symbol Controller (Default download method.)

Check that the controller is powered up, 12V power supply attached, and that the scanner's cable is connected to the controller. To enter download mode, scan the **DOWNLOAD FROM START** symbol.

Downloading Using RS-232 Coil Cable on RS-232 Port

When downloading using RS-232, connect the RS-232 connector at the end of the coil cord to your RS-232 port. Make sure that power is applied to the receptacle at the RS-232 connector. Make sure your receiving station is ready for download and all handshaking necessary is enabled in the scanner. Then scan the **DOWNLOAD FROM START** symbol. If the connector is not attached to the serial port when this symbol is scanned, you have 30 seconds to make the connection.

Interrupting Download

Downloading can be interrupted by pulling the scanner's trigger. An interrupted download can be continued either from the point where downloading stopped (scan **DOWNLOAD FROM CURRENT POINT**) or, if no new data was collected, from the start of buffer (scan **DOWNLOAD FROM START**). If the download process was interrupted, four hi/hi/lo/lo beeps are repeated on the next trigger pull until the trigger is released.

• *Repeat Last Beep*

Scan this bar code to repeat the last sequence of beeps.

- ***Skip to Next Symbol***

In normal or download mode, scan this bar code to skip over a symbol that is causing a communications error (indicated by 2 beeps every 2 seconds).

- ***Memory Check***

Scan this bar code to determine the percentage of memory used. The scanner will beep the number of times proportional to this percentage (1 beep for 10%, 2 beeps for 20%, ...9 beeps for 90%) at a rate of 1 beep per second. Before and after this beep sequence, there is also a warble beep.

- ***Enter Quantity***

Use this parameter to enter a quantity in the range 0-9999 after you have scanned a bar code. If the quantity featured is enabled, quantities can be entered by scanning 1 to 4 of the special quantity bar codes. For each quantity bar code scanned, you will hear a low-high beep sequence. The next non-quantity bar code scanned ends the entering of the quantity.

- ***Manual Stamping***

In normal mode, scanning this bar code will download the time and date. In store mode, it will store the time and date in the buffer. The time/date stamp will be sent or stored as a normal bar code data block in Code 39. The format is as follows:

HH.MM.SS

YY/MM/DD

- ***Stamp After First and Last Decode***

Enable this parameter to append the date/time after the first and last decode when storing and downloading. The format is as follows:

HH.MM.SS

YY/MM/DD

Operating Modes Menus

Normal Mode

Normal Decode

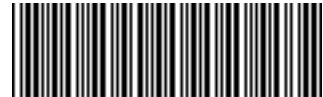
When this symbol is scanned, data is decoded and transmitted immediately.



Store Mode

Store From Start

Scan this symbol to store data from the start of memory.



Store From Current Point

Allows you to continue storing data from the current point in memory. Use if Store Mode operation was interrupted.



Delete Last Transaction

Deletes last transaction, for example, the last bar code scanned and any associated quantity



Delete Buffer

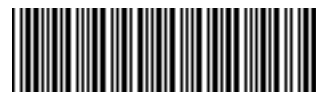
Scan this symbol to delete all data stored in memory.



Download Mode

Download From Start

Scan this symbol to download data from the start of memory. Downloading can be stopped by pulling the trigger.



Download From Current Point

Allows downloading to continue from point where it was previously stopped.



Repeat Last Beep

Scan this symbol to repeat the last sequence of beeps.



Skip to Next Symbol

In normal or download mode, use this bar code to skip over a symbol that is causing a communications error (indicated by 2 beeps repeated every 2 seconds).



Memory Check

When this is scanned, the scanner beeps the number of times proportional to the percentage of memory used (1 beep for 10%, 2 beeps for 20%, ...9 beeps for 90%).



Operating Modes Menu

Enter Quantity

Scan 1 to 4 of the bar codes below to enter a quantity (from 0 to 9999) after you have scanned a bar code. For example, to enter a quantity of 956, first scan the **9** bar code, then the **5** bar code, and then the **6** bar code.



Time/Date Stamping Options

Manual Stamping

To manually stamp the time and date, scan the bar code below:



MANUAL STAMPING

Time/Date Stamping Options

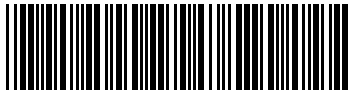
Stamp After First And Last Decode

To enable/disable this parameter:

Scan the **STAMP AFTER FIRST AND LAST DECODE** bar code.

Scan **ENABLE** or **DISABLE** .

Scan **ENTER** .



STAMP AFTER FIRST
AND LAST DECODE

Stamp After First And Last Decode



ENABLE



DISABLE

BACKSPACE - deletes the last bar code scanned.

CANCEL - deletes entire change and returns you to the decode mode.

ENTER - stores and enters the new change.



BACKSPACE



ENTER



CANCEL

Beeper Definitions

Standard Use

Beeper Sequence	Indication
1 beep - short high tone	Symbol was successfully scanned.
2 beeps - long high tone	Scanned STORE FROM START and memory is not empty. Scanned NORMAL MODE symbol and controller not attached. Scanned DOWNLOAD symbol to download into scanner port mode and controller is not attached. Scanned DOWNLOAD symbol and no data is in the buffer. DOWNLOAD mode and not programmed for correct download protocol. Scanned DELETE LAST ENTRY and either at start of buffer or not in store mode.

Need to hear the beep sequence again? Scan the **Repeat Last Beep** bar code on page OP5 to repeat the last beep sequence.

Standard Use (Continued)

Beeper Sequence	Indication
2 beeps - long high tone	Scanned DELETE LAST ENTRY twice in the same sequence.
4 beeps - hi/hi/lo/lo	Repeated every 2 seconds on download transmission error. Operator aborted download by pulling the trigger. Some data incorrectly transmitted. Scanner not placed in Datawell within 30 seconds of scanning download symbol.
2 beeps repeated every 2 seconds	Download aborted due to transmission error.
4 beeps - long high tone	Bad communications into scanner port in either normal or download mode. Check connection; check scanner, controller.
hi/lo/hi/lo/hi/lo/hi/lo	Memory is full.
lo-hi	Entering quantity or serial number.

Need to hear the beep sequence again? Scan the **Repeat Last Beep** bar code on page OP5 to repeat the last beep sequence.

Beeper Definitions

Standard Use (Continued)

Beeper Sequence	Indication
1 beep - hi/lo tone	When percent check is enabled, beep occurs after every successful decode when memory is more than 90% successful decode full.
5 beeps - long low tone	No serial number. Reset using SET SERIAL NUMBER symbol.
3 beeps - long low tone	Problem storing last symbol scanned. Rescan last symbol.
6 beeps - long high tone	Memory is corrupted. Call Symbol Support Center for advice.
lo/hi/lo beep	Indicates motor failure. Call Symbol Support Center for advice.
lo/hi beep	Scanned a discrete serial number character or quantity symbol.
hi/hi/hi/lo beep	Low battery detect. Charge NiCad battery.

Need to hear the beep sequence again? Scan the **Repeat Last Beep** bar code on page OP5 to repeat the last beep sequence.