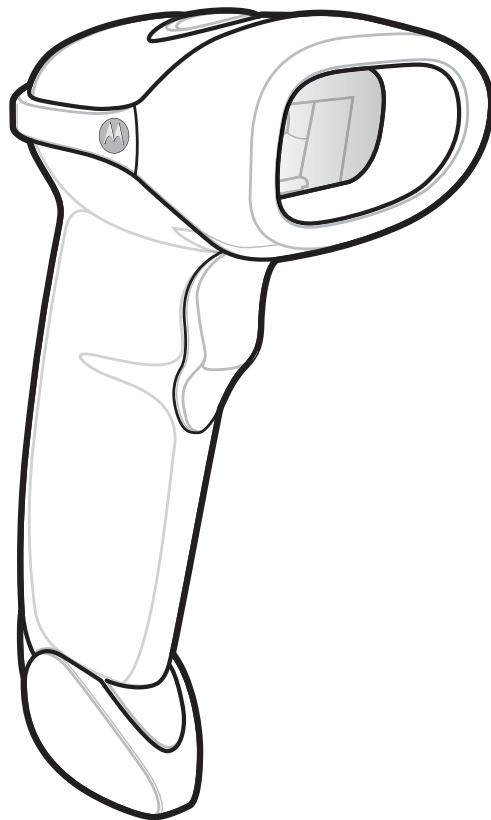




# Symbol LS2208

## Product Reference Guide



# Table of Contents

## About This Guide

Introduction .....	xiii
Chapter Descriptions .....	xiii
Notational Conventions.....	xiv
Related Documents .....	xv
Service Information.....	xv

## Chapter 1: Getting Started

Introduction .....	1-1
Unpacking Your Scanner .....	1-2
Setting Up the Scanner .....	1-3
Installing the Interface Cable .....	1-3
Connecting Power (if required) .....	1-4
Configuring Your Scanner .....	1-4
Connecting a Synapse Cable Interface .....	1-5
Removing the Interface Cable .....	1-5

## Chapter 2: Scanning

Introduction .....	2-1
Beeper Definitions .....	2-2
LED Definitions .....	2-3
Scanning in Hand-Held Mode .....	2-4
Aiming .....	2-5
Decode Zone .....	2-6
Scanning in Hands-Free Mode .....	2-7
Assembling the Stand .....	2-7
Mounting the Stand (optional) .....	2-8
Scanning in Hands-Free Mode .....	2-9
Scanning in the Hands-Free Mode .....	2-9

**Chapter 3: Maintenance and Technical Specifications**

Introduction .....	3-1
Maintenance .....	3-1
Troubleshooting .....	3-2
Technical Specifications .....	3-4
Scanner Signal Descriptions .....	3-6

**Chapter 4: User Preferences**

Introduction .....	4-1
Scanning Sequence Examples .....	4-1
Errors While Scanning .....	4-2
User Preferences Default Parameters .....	4-2
User Preferences .....	4-3
Set Default Parameter .....	4-3
Beeper Tone .....	4-4
Beeper Volume .....	4-5
Power Mode .....	4-6
Laser On Time .....	4-7
Beep After Good Decode .....	4-8
Timeout Between Decodes .....	4-9

**Chapter 5: Keyboard Wedge Interface**

Introduction .....	5-1
Connecting a Keyboard Wedge Interface .....	5-2
Keyboard Wedge Default Parameters .....	5-3
Keyboard Wedge Host Types .....	5-4
Keyboard Wedge Host Types .....	5-4
Keyboard Wedge Country Types (Country Codes) .....	5-5
Ignore Unknown Characters .....	5-7
Keystroke Delay .....	5-8
Intra-Keystroke Delay .....	5-9
Alternate Numeric Keypad Emulation .....	5-9
Caps Lock On .....	5-10
Caps Lock Override .....	5-10
Convert Wedge Data .....	5-11
Function Key Mapping .....	5-12
FN1 Substitution .....	5-13
Send Make and Break .....	5-13
Keyboard Maps .....	5-14
ASCII Character Set .....	5-16

**Chapter 6: RS-232 Interface**

Introduction .....	6-1
Connecting an RS-232 Interface .....	6-2
RS-232 Default Parameters .....	6-3
RS-232 Host Parameters .....	6-4
RS-232 Host Types .....	6-6

Baud Rate .....	6-8
Parity .....	6-10
Stop Bit Select .....	6-12
Data Bits .....	6-12
Check Receive Errors .....	6-13
Hardware Handshaking .....	6-14
Software Handshaking .....	6-16
Host Serial Response Time-out .....	6-18
RTS Line State .....	6-19
Beep on <BEL> .....	6-19
Intercharacter Delay .....	6-20
Nixdorf Beep/LED Options .....	6-21
Ignore Unknown Characters .....	6-21
ASCII Character Set .....	6-22

## Chapter 7: USB Interface

Introduction .....	7-1
Connecting a USB Interface .....	7-1
USB Default Parameters .....	7-3
USB Host Parameters .....	7-4
USB Device Type .....	7-4
USB Country Keyboard Types (Country Codes) .....	7-6
USB Keystroke Delay .....	7-9
USB CAPS Lock Override .....	7-10
USB Ignore Unknown Characters .....	7-11
Emulate Keypad .....	7-12
USB Keyboard FN 1 Substitution .....	7-12
Function Key Mapping .....	7-13
Simulated Caps Lock .....	7-13
Convert Case .....	7-14
ASCII Character Set .....	7-15

## Chapter 8: IBM 468X/469X Interface

Introduction .....	8-1
Connecting to an IBM 468X/469X Host .....	8-2
IBM Default Parameters .....	8-3
IBM 468X/469X Host Parameters .....	8-4
Port Address .....	8-4
Convert Unknown to Code 39 .....	8-5

## Chapter 9: Wand Emulation Interface

Introduction .....	9-1
Connecting Using Wand Emulation .....	9-2
Wand Emulation Default Parameters .....	9-3
Wand Emulation Host Parameters .....	9-4
Wand Emulation Host Types .....	9-4
Leading Margin (Quiet Zone) .....	9-5

Polarity .....	9-6
Ignore Unknown Characters .....	9-6
Convert All Bar Codes to Code 39 .....	9-7
Convert Code 39 to Full ASCII .....	9-7

## Chapter 10: Undecoded Scanner Emulation Interface

Introduction .....	10-1
Connecting Using Undecoded Scanner Emulation .....	10-2
Undecoded Scanner Emulation Default Parameters .....	10-3
Undecoded Scanner Emulation Host .....	10-4
Undecoded Scanner Emulation Host Parameters .....	10-5
Beep Style .....	10-5
Parameter Pass-Through .....	10-6
Convert Newer Code Types .....	10-7
Module Width .....	10-7
Convert All Bar Codes to Code 39 .....	10-8
Code 39 Full ASCII Conversion .....	10-8
Transmission Timeout .....	10-9
Ignore Unknown Characters .....	10-10
Leading Margin .....	10-11
Check For Decode LED .....	10-12

## Chapter 11: 123Scan

Introduction .....	11-1
Communication With the 123Scan PC Based Configuration Tool .....	11-1
123Scan Parameter .....	11-2

## Chapter 12: Symbologies

Introduction .....	12-1
Scanning Sequence Examples .....	12-1
Errors While Scanning .....	12-1
Symbology Default Parameters .....	12-2
UPC/EAN .....	12-5
Enable/Disable UPC-A/UPC-E .....	12-5
Enable/Disable UPC-E1 .....	12-6
Enable/Disable EAN-13/EAN-8 .....	12-7
Enable/Disable Bookland EAN .....	12-8
Decode UPC/EAN/JAN Supplementals .....	12-9
User-Programmable Supplementals .....	12-12
UPC/EAN/JAN Supplemental Redundancy .....	12-12
Transmit UPC-A/UPC-E/UPC-E1 Check Digit .....	12-13
UPC-A Preamble .....	12-14
UPC-E Preamble .....	12-15
UPC-E1 Preamble .....	12-16
Convert UPC-E to UPC-A .....	12-17
Convert UPC-E1 to UPC-A .....	12-18
EAN-8/JAN-8 Extend .....	12-18

Bookland ISBN Format .....	12-19
UPC/EAN Security Level .....	12-20
UCC Coupon Extended Code .....	12-21
Code 128 .....	12-22
Enable/Disable Code 128 .....	12-22
Enable/Disable UCC/EAN-128 .....	12-22
Enable/Disable ISBT 128 .....	12-23
Code 39 .....	12-24
Enable/Disable Code 39 .....	12-24
Enable/Disable Trioptic Code 39 .....	12-24
Convert Code 39 to Code 32 .....	12-25
Code 32 Prefix .....	12-25
Set Lengths for Code 39 .....	12-26
Code 39 Check Digit Verification .....	12-27
Transmit Code 39 Check Digit .....	12-27
Code 39 Full ASCII Conversion .....	12-28
Code 39 Buffering (Scan & Store) .....	12-29
Code 93 .....	12-32
Enable/Disable Code 93 .....	12-32
Set Lengths for Code 93 .....	12-33
Code 11 .....	12-34
Code 11 .....	12-34
Set Lengths for Code 11 .....	12-35
Code 11 Check Digit Verification .....	12-36
Transmit Code 11 Check Digits .....	12-37
Interleaved 2 of 5 (ITF) .....	12-38
Enable/Disable Interleaved 2 of 5 .....	12-38
Set Lengths for Interleaved 2 of 5 .....	12-39
I 2 of 5 Check Digit Verification .....	12-40
Transmit I 2 of 5 Check Digit .....	12-41
Convert I 2 of 5 to EAN-13 .....	12-41
Discrete 2 of 5 (DTF) .....	12-42
Enable/Disable Discrete 2 of 5 .....	12-42
Set Lengths for Discrete 2 of 5 .....	12-43
Chinese 2 of 5 .....	12-44
Enable/Disable Chinese 2 of 5 .....	12-44
Codabar (NW - 7) .....	12-45
Enable/Disable Codabar .....	12-45
Set Lengths for Codabar .....	12-46
CLSI Editing .....	12-47
NOTIS Editing .....	12-47
MSI .....	12-48
Enable/Disable MSI .....	12-48
Set Lengths for MSI .....	12-49
MSI Check Digits .....	12-50
Transmit MSI Check Digit(s) .....	12-50
MSI Check Digit Algorithm .....	12-51
GS1 DataBar (Formerly RSS, Reduced Space Symbology) .....	12-52
GS1 DataBar .....	12-52
Convert GS1 DataBar to UPC/EAN .....	12-53

Redundancy Level .....	12-54
Redundancy Level 1 .....	12-54
Redundancy Level 2 .....	12-54
Redundancy Level 3 .....	12-55
Redundancy Level 4 .....	12-55
Security Level .....	12-56
Security Level 0 .....	12-56
Security Level 1 .....	12-56
Security Level 2 .....	12-56
Security Level 3 .....	12-57
Bi-directional Redundancy .....	12-58
Intercharacter Gap Size .....	12-58
Report Version .....	12-59
Report MIMIC Version .....	12-59
Report Synapse Cable .....	12-59

### Chapter 13: Miscellaneous Scanner Options

Introduction .....	13-1
Scanning Sequence Examples .....	13-2
Errors While Scanning .....	13-2
Miscellaneous Default Parameters .....	13-2
Miscellaneous Scanner Parameters .....	13-3
Transmit Code ID Character .....	13-3
Prefix/Suffix Values .....	13-4
Scan Data Transmission Format .....	13-4
FN1 Substitution Values .....	13-6
Transmit "No Read" Message .....	13-6
Synapse Interface .....	13-7

### Chapter 14: Advanced Data Formatting

Introduction .....	14-1
Rules: Criteria Linked to Actions .....	14-1
Using ADF Bar Codes .....	14-2
ADF Bar Code Menu Example .....	14-2
Rule 1: The Code 128 Scanning Rule .....	14-3
Rule 2: The UPC Scanning Rule .....	14-3
Alternate Rule Sets .....	14-3
Rules Hierarchy (in Bar Codes) .....	14-4
Default Rules .....	14-5
Special Commands .....	14-6
Pause Duration .....	14-6
Begin New Rule .....	14-6
Save Rule .....	14-6
Erase .....	14-7
Quit Entering Rules .....	14-7
Disable Rule Set .....	14-8
Criteria .....	14-9
Code Types .....	14-9

Code Lengths .....	14-12
Message Containing A Specific Data String .....	14-17
Actions .....	14-20
Send Data .....	14-20
Setup Field(s) .....	14-23
Modify Data .....	14-28
Pad Data with Spaces .....	14-29
Pad Data with Zeros .....	14-33
Beeps .....	14-37
Send Keystroke (Control Characters and Keyboard Characters) .....	14-38
Send Right Control Key .....	14-66
Send Graphic User Interface (GUI) Characters .....	14-67
Turn On/Off Rule Sets .....	14-72
Alphanumeric Keyboard .....	14-73

## Appendix A: Standard Default Parameters

## Appendix B: Programming Reference

Symbol Code Identifiers .....	B-1
AIM Code Identifiers .....	B-2

## Appendix C: Sample Bar Codes

Code 39 .....	C-1
UPC/EAN .....	C-1
UPC-A, 100 % .....	C-1
EAN-13, 100 % .....	C-2
Code 128 .....	C-2
Interleaved 2 of 5 .....	C-2
GS1 DataBar-14 .....	C-2

## Appendix D: Numeric Bar Codes

Numeric Bar Codes .....	D-1
0, 1, 2 .....	D-1
3, 4, 5, 6 .....	D-2
7, 8, 9 .....	D-3
Cancel .....	D-3

## Glossary

## Index

## Tell Us What You Think...



This is a “Table of Contents preview” for quality assurance

The full manual can be purchased from our store:

<https://the-checkout-tech.com/manuals/Symbol/LS2208> product reference manual.html

And our free Online Keysheet maker:

<https://the-checkout-tech.com/Cash-Register-Keysheet-Creator/>

[HTTPS://THE-CHECKOUT-TECH.COM](https://THE-CHECKOUT-TECH.COM)