



MagellanSL™

Scanner & Scanner/Scale



Level 1 Service Manual

Contents

Section 1- Introduction

About This Manual	1-1
Conventions	1-2
About the Magellan SL™	1-2
Nomenclature	1-4
Connectors	1-5
User Safety Information	1-6
Product Labeling	1-6
Agency Compliances	1-7
Electrical	1-7
Emissions	1-7
Laser Safety	1-7
Weights & Measures	1-7
Laser Safety	1-9
Electrical Specifications	1-10
Environmental Specifications	1-11

Section 2 - Theory of Operation

Scanning Terminology	2-2
Laser Scanning — Outgoing Beam Path	2-5
Laser Scanning — Return Beam Paths	2-6
Parallel Processing	2-7
Functional Overview	2-8
Diagnostics Mode	2-8
Entering Diagnostics Mode and Interpreting Messages	2-9
Using Diagnostics Mode for Scan Verification Testing	2-9
Exiting Diagnostics Mode	2-9
Controls and Indicators	2-10
Major Subassembly Descriptions	2-12

Section 3 - Problem Isolation

Troubleshooting the Magellan SL™ Scanner or Scanner/Scale	3-1
Using the Flowcharts and Troubleshooting Procedures	3-2
Pre-Troubleshooting Steps	3-2
Tools and Materials	3-3
Internal Diagnostics	3-4
Selftest	3-4
FRU Status Indicators	3-4
NO POWER	3-8
NO AUDIO	3-12
FAILS SELFTEST	3-14
NO MOTOR	3-16
NO LASER	3-18
POOR OR NO READING	3-20
SCALE FAILURE (Scanner/Scale only)	3-24
OPERATOR'S PANEL FAILURE	3-30
CALIBRATION SWITCH FAILURE (Magellan SL Scanner/Scale only) .	3-32
ERRATIC BEHAVIOR	3-34

Section 4 - Removal/Replacement

Overview	4-1
Section Contents	4-1
Service Precautions	4-1
Required Tools and Materials	4-5
Weight Sets (Scanner/Scale only)	4-5
Cleaning Equipment	4-6
ElectroStatic Discharge (ESD) Procedures	4-6
Why ESD?	4-6
ESD Materials	4-6
ESD Procedures	4-7
Removal and Replacement Procedures	4-8
4.0 Miscellaneous Service Procedures	4-8
4.1 The L-shaped Platter (L-Platter)	4-10
4.2 The Vertical Scan Window and Vertical Bezel	4-12
4.3 The Bonnet	4-13
4.4 The Operator's Panel	4-14
4.5 The Speaker	4-16

4.7 The Bottom Cover	4-18
4.8 The Operator's Panel Harness	4-20
4.9 The Left Analog Board	4-22
4.10 The Right Analog Board	4-24
4.11 The Motor/Facet Wheel Assembly	4-26
4.12 The VLDM Assembly	4-28
4.13 The Optics Assembly	4-31
4.14 The Mounts (Front and Back)	4-32
4.15 The Spider Assembly (Scanner/Scale Units ONLY)	4-33
4.16 The Scale Cover	4-37
4.17 The Scale Board	4-38
4.18 The Calibration Switch	4-40
4.19 The Load Cell Cover	4-42
4.20 The Load Cell	4-43
4.21 The Scale Mount	4-46

Section 5 - Calibration Procedures

Description of Calibration Sequence	5-2
Displaying Calibration and Rezeroing Information	5-3
Preparing the Scanner/Scale for Calibration	5-3
Calibrating the Scale (Pounds & Kilograms)	5-4
Calibration Verification (Weighing in Pounds)	5-6
Increasing-Load Test (Phase 1)	5-6
Shift Test	5-7
Increasing- Load Test (Phase 2)	5-7
Blanking Test	5-8
Decreasing-Load Test	5-8
Motion Test	5-8
Automatic Zero Setting Test	5-9
Return to Zero Test	5-9
Completing the Calibration Process	5-9
Calibration Verification (Weighing in Kilograms)	5-10
Increasing-Load Test (Phase 1)	5-11
Shift Test (U.S.)	5-12
Shift Test (Europe)	5-13
Increasing- Load Test (Phase 2)	5-14
Blanking Test	5-14

Decreasing-Load Test	5-14
Motion Test	5-15
Automatic Zero Setting Test	5-15
Return to Zero Test	5-15
Completing the Calibration Process	5-16

Appendix A - Replaceable Parts

Illustrated Parts Breakdown	A-3
-----------------------------------	-----

Appendix B - Cable Information

Introduction	B-1
General Specifications	B-1
Wire Requirements	B-1
RS-232	B-2
Connector Hardware (scanner)	B-2
Cable Pinouts	B-2
Connector Hardware (Scale)	B-2
Cable Pinouts	B-2
IBM 46xx	B-3
Connector Hardware (Scanner and Scale)	B-3
Cable Pinouts	B-3
OCIA	B-4
Connector Hardware (Scanner)	B-4
Cable Pinouts	B-4
Connector Hardware (Scale)	B-4
Cable Pinouts	B-4
Character Serial	B-5
Connector Hardware (Scale)	B-5
Cable Pinouts	B-5
Peripheral Port (Undecoded Handheld Scanner)	B-6
Connector Hardware	B-6
Cable Pinouts	B-6

Appendix C - Glossary of Terms

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

The full manual can be found at <http://the-checkout-tech.com/estore/catalog/>

We also offer free downloads, a free keyboard layout designer, cable diagrams, free help and support.

<http://the-checkout-tech.com> : the biggest supplier of cash register and scale manuals on the net