



Magellan®



Programming Kit

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Table of Contents

About Programming	1
Scanner Programming	
(How it Works)	5
Programming Your Scanner	7
Programming Conventions	9
Special Labels	11
Increment Volume	12
Switch Label	13
RETURN TO FACTORY DEFAULT	14
PROGRAMMABLE SPEAKER FEATURES	15
Speaker Volume Programming	20
UPC/EAN PRICE/WEIGHT	
CHECK DIGIT SELECTIONS	24
Тімеоцтя	30
Setting Laser Timeout	31
Setting Motor Timeout	35
Setting Double Read Timeout	40
Peripheral Port	44
Handheld LED	52

CHANGING BARCODE TYPES	54
UPC/EAN Expansion	57
UPC CHECK DIGIT TRANSMISSION	63
Code 39	72
Code 128	82
Interleaved 2 of 5	88
INTERFACE SELECTIONS	130
RS-232 INTERFACE SPECIFICATIONS	130
Single Cable RS-232	132
OCIA INTERFACE SELECTION	154
Multidrop Scanner Addressing	162
Scale Features	167
Barcode Index	185
Switch Label	INSIDE BACK COVER

Magellan® Programming w/Barcodes

This programming guide contains the procedures and barcode programming labels necessary to set Magellan's programmable features.

About Programming

The following list shows an overview of this manual's organization.

- About Programming
- Special Labels (Switch label and Increment Volume)
- Return to Factory Default
- Operational Settings (Speaker, Laser & Motor Timeouts)
- RS-232 Parameters (Baud Rate, etc.)
- Symbology Selection
- Interleaved 2 of 5 Label Length

We have divided the contents into groups of features that are usually changed together. For example, all of the RS-232 parameters (baud rate, parity, stop bits, etc.) are grouped together. Check the Index for the location of specific programming labels.

This introduction describes the programming and configuration procedures for the Magellan scanner and scanner/scale.

- **Scanner Programming:** describes how to put the scanner in Programming Mode and how to use the programming barcodes to set the scanner's parameters.
- Special Labels: includes a set of labels which perform unique functions and cannot be duplicated by standard label definition and printing equipment.
 Each special label affects the scanner when in normal operating mode.
 These include:
- <u>Switch Label</u> puts the scanner in Programming Mode and exits from Programming Mode.

- <u>Increment Volume Label</u> changes the speaker volume setting in <u>volatile</u> (temporary) memory. If power to the scanner is interrupted, the volume will revert to the default setting.
- **Return to Factory Settings:** resets all scanner programmable options to the original factory settings. Any special features or options programmed prior to scanning this label in Programming Mode must be reselected.
- *User Features:* allow selection of On/Off Switch, Laser Timeout, Motor Timeout, Peripheral Port, Speaker Volume, Double Read Timeout interval, and Price/Weight Check Digit read and transmission.

When the speaker's volume is programmed with these labels, the setting is stored in default memory. If power to the scanner is interrupted, the volume setting is retained.

- **RS-232 Communication Format:** settings are used only with scanners which have an RS-232 interface. Options include Data Bits, Baud Rate, Parity, Handshake, Stop Bit, Prefixes and Host Echo.
- **OCIA Communication Format:** is used only with scanners that have an OCIA communication interface. The labels in this manual allow you to change OCIA interface types and enable or disable an Intercharacter Delay.
- *Symbology Selection:* allow selection of the types of barcode (symbologies) the scanner can read. These features also include UPC/EAN Expansion, control the calculation and transmission of check digits for Code 39. If Interleaved 2 of 5 symbologies is selected, label lengths settings are required.

Scanner Programming (How it Works)

Magellan features advanced programming capabilities which lets you change the scanner's configuration and functional behavior by using the EAN-13 programming labels contained in this manual.

The scanner's operating parameters are held in three different portions of memory.

- **RAM** (Random Access Memory) holds the current operational settings while the scanner is powered-up. These settings are lost when power to the scanner is removed. For example, the Increment Volume label changes the volume setting held in RAM, but is lost when power to the scanner is interrupted. RAM is temporary or 'volatile' memory.
- **Default Memory** is stored in the EEPROM (non-volitile memory) and holds the operational settings that are loaded to RAM each time the scanner is powered-up. This portion of memory is

preserved even if the scanner is powered down. All settings made through the Programming Mode are stored in default memory.

• **Permanent Memory** is also stored in the EEPROM and holds the factory programmed settings for all of the scanner's operational parameters. The contents of permanent memory are loaded into default memory when the Return to Factory Settings label is scanned. The contents of permanent memory can only be modified at the factory.

By entering the 'Programming Mode' the desired characteristics can be set in default memory by scanning programming barcode labels. These settings are saved even if the scanner is powered down.

PROGRAMMING YOUR SCANNER

To program your scanner:

- 1. Power-up the scanner to be programmed by plugging the power cord into the scanner and an electrical outlet of the appropriate voltage. Wait for the scanner to complete the selftest routine and emit a tone. The green lamp will light steadily, indicating that the scanner is in normal Operating Mode.
- 2. Put the scanner into Programming Mode by scanning the Switch Label (located on page 13 and on the inside of the back cover).

The green LED flashes continuously indicating that the scanner is in Programming Mode. Scan a programming label(s) for the feature you want to change. The scanner will emit a 'good read' tone to indicate that the label has been read and the setting has been stored in the scanner's memory. Scan the remaining programming labels as required. If a label scanned is not a valid

programming label, the scanner will emit a low rejection tone.

4. After all the desired programming labels have been successfully scanned, exit Programming Mode by pressing the Operator switch or scanning the Switch Label. The green lamp will light dimly, indicating that the scanner is ready for normal operation.

PROGRAMMING CONVENTIONS

- All options set while in Programming Mode are stored in default memory, and will be retained even if the scanner is powered-down.
- Settings are stored on a first-in, first-out basis. The last programming label scanned for a given option is the setting stored in memory. For example, if a programming label which sets the baud rate at 9600 is scanned, followed by a label which sets the baud rate at 19,200, the scanner will be programmed with a baud rate of 19,200.
- Only labels included in this manual will be accepted as valid programming labels. Labels which attempt to set features not implemented in a scanner's software revision will be rejected as invalid. Programming labels which are not printed in accordance with industry standards may also be rejected.

- If an invalid label is scanned when in Programming Mode, the scanner will emit a low tone to indicate that the label is either not a programming label or that it contains values outside of the acceptable programming range.
- After five minutes of inactivity in Programming Mode, the scanner will revert to normal Operating Mode. Any options set during the programming session will be stored and activated.
- If confusion arises as to which options have been set during a programming session, scanning the Return to Factory Settings label will reset the scanner to the original factory defaults for <u>all</u> options, regardless of interface type.

We recommend that you use the table provided in the back of this manual to record all changes that you make. This will help to ensure that you can record all modifications that you have made to the factory default configuration.

This will be very helpful if you must return Magellan to the factory default settings.

PROGRAMMABLE FEATURES

The remainder of this manual includes programming labels for all Magellan's scanner and scanner/ scale programmable features. Refer to the detailed features listing shown in the index at the back of this manual to find the individual features that you wish to change.

Special Labels

There are two programming labels in this manual that work differently from all the other labels included in this Programming Guide; the Increment Volume label and the Switch label.

- **Increment Volume** works without entering Programming Mode, but its volume selection is lost when power is removed from the scanner.
- The **Switch** label is the key that allows you to enter and exit Programming Mode.

INCREMENT VOLUME

The Increment Volume label affects the scanner when in normal Operating Mode. Each pass of the label increments the speaker volume to the next loudest available level. When the highest of the three available levels is reached, the sequence starts again at the quietest level. If speaker volume is set using this label, the scanner reverts to the default volume setting when power to the scanner is interrupted. To permanently store changes to the speaker's default volume use the labels titled, *Speaker Volume*, later in this manual.



Switch Label

Like the Increment Volume label, the Switch label affects the scanner when in normal Operating Mode. Scanning the Switch label in normal Operating Mode causes the scanner to enter Programming Mode. Scanning the Switch label while in Programming Mode instructs the scanner to save all changes made while in Programming Mode, exit Programming Mode, reset the scanner to implement the changes you made, and return to normal Operating Mode. All programming sessions must begin with the Switch label in order for the scanner to recognize them as programming labels and end with the Switch label for the scanner to store the changes you have made.

It is a good practice to cover the label on the opposite page to prevent Magellan from reading both labels when changing a feature.



RETURN TO FACTORY DEFAULT

Use this label to return the scanner or scanner/scale to the factory default settings.



PROGRAMMABLE SPEAKER FEATURES

The speaker has three programmable features:

- Good Read indicator can be turned on or off.
- Good Read volume can be set to one of three levels. The volume can either be changed temporarily using the switch on the top of the scanner, Increment Volume label, or its default can be reprogrammed using the programming labels on the following pages.

VOLUME SWITCH: DISABLE

Use this label to disable Magellan's volume selection switch.



VOLUME SWITCH: ENABLE

Use this label to enable Magellan's volume selection switch.



Speaker: On

Use this label to enable the speaker.



SPEAKER: OFF

Use this label to disable the speaker.



Speaker Volume Programming

The Magellan scanner and scanner/scale allows you to change the speaker's volume without entering Programming Mode or using programming labels. To change the speaker's volume press and release the speaker switch.

NOTE

Keeping the switch depressed for longer than three seconds will initiate a scanner reset.

The scanner sounds the next volume setting three times. There are three volume options available. Continue pressing and releasing the switch until the volume level you want is sounded.

If you wish to change the speaker's active default setting, use the labels on the following pages to change the speaker volume setting.

NOTE

If this feature appears not to work, the switch may be disabled. Follow the normal programming sequence and use the label on page 17 to enable the switch and try again.

Speaker Volume = Low

Use this label to set the speaker volume to low.



Speaker Volume = Medium

Use this label to set the speaker volume to medium.



Speaker Volume = High

Use this label to set the speaker volume to high.



UPC/EAN PRICE/WEIGHT CHECK DIGIT SELECTIONS

The Price/Weight Check Digit selections allow you to specify whether the scanner should calculate an extra check digit based on a four or five-digit price/weight block, and compare it with the price/weight check digit contained in the barcode.

If the calculated check digit does not match the value of the check digit contained in the barcode, the label will be rejected as invalid.

PRICE/WEIGHT CHECK DIGIT = 4 DIGIT

Use this label to enable the calculation and comparison of four digit Price/Weight Check Digit for UPC/EAN.



PRICE/WEIGHT CHECK DIGIT = 5 DIGITS

Use this label to enable the calculation and comparison of five digit Price/Weight Check Digit for UPC/EAN.



PRICE/WEIGHT CHECK DIGIT = 4 DIGITS (EUROPE)

Use this label to enable the calculation and comparison of four digit Price/Weight Check Digit for UPC/EAN.



PRICE/WEIGHT CHECK DIGIT = 5 DIGITS (EUROPE)

Use this label to enable the calculation and comparison of five digit Price/Weight Check Digit for UPC/EAN.



PRICE/WEIGHT CHECK DIGIT: DISABLE

Use this label to disable Price/ Weight Check Digit calculation and comparison.



TIMEOUTS

Timeouts allow you to shut off the scanner's laser and/or motor if the scanner isn't used for a predetermined period of time. This feature is included to prolong the life of the motor and Visible Laser Diode (VLD).

NOTE

Laser safety requires that the laser switch off before the motor. If you set the motor timeout shorter than the laser timeout, the motor will remain on until the laser shuts off.

If you want to maximize both productivity and scanner life, set laser to timeout in five minutes, but leave the motor on for fifteen minutes. The scanner will be ready to scan, and you will prolong the life of the VLD.

SETTING LASER TIMEOUT

The laser timeout programming labels set the time for switching the visible laser diode (VLD) off if the scanner isn't used. Using this feature can prolong the life of the VLD.

The selections are:

- Set timeout = 5 minutes
- Set timeout = 10 minutes
- Set timeout = 15 minutes

Laser Timeout = 5 Minutes

Use this label to set the laser timeout to 5 minutes.


LASER TIMEOUT = 10 MINUTES

Use this label to set the laser timeout to 10 minutes.



LASER TIMEOUT = 15 MINUTES

Use this label to set the laser timeout to 15 minutes.



SETTING MOTOR TIMEOUT

The Motor Timeout programming labels set the time for switching the motor off if the scanner isn't used. At no time will the motor timeout before the laser.

The selections are:

- Motor timeout = 5 minutes
- Motor timeout = 15 minutes
- Motor timeout = 30 minutes
- Motor timeout = 60 minutes

MOTOR TIMEOUT = 5 MINUTES

Use this label to set the motor timeout to 5 minutes.



MOTOR TIMEOUT = 15 MINUTES

Use this label to set the motor timeout to 15 minutes.



MOTOR TIMEOUT = 30 MINUTES

Use this label to set the motor timeout to 30 minutes.



MOTOR TIMEOUT = 60 MINUTES

Use this label to set the motor timeout to 60 minutes.



SETTING DOUBLE READ TIMEOUT

The double read timeout sets a time limit that determines how much time must pass before reading the same label again (e.g. two identical items in succession).

The selections are:

- Set timeout = 400 milliseconds
- Set timeout = 600 milliseconds
- Set timeout = 800 milliseconds
- Set timeout = 1 second

DOUBLE READ TIMEOUT = 400ms

Sets the time you must wait between reading the same label again to 400ms. This is the recommended setting.

NOTE

If the incidence of multiple reads is not acceptable, increase the Double Read Timeout setting to the next higher level.



40

DOUBLE READ TIMEOUT = 600ms

Sets the time you must wait between reading the same label again to 600ms.



DOUBLE READ TIMEOUT = 800ms

Sets the time you must wait between reading the same label again to 800ms.



DOUBLE READ TIMEOUT = 1 SECOND

Sets the time you must wait between reading the same label again to one second.



PERIPHERAL PORT

Magellan's peripheral port can be configured to accept input from an undecoded handheld scanner. The labels on the following pages allow you to enable/disable the port, change the communication speed and enable/disable the handheld scanner's LED.

HANDHELD PORT: ENABLE

Use this label to enable the peripheral port to accept input from a handheld (HHLC) scanner.



44

HANDHELD PORT: DISABLE

Use this label to disable the peripheral port to accept input from a handheld (HHLC) scanner.



Since the communication speed of handheld scanners vary greatly, it is necessary to select a speed that tells Magellan how long to wait to receive a complete barcode data. This selection process is rather unscientific (trial and error) since industry standards do not exist. We have included references for known and tested models of other manufacturers handheld scanners, but these should be considerer as guidelines since newer and older models from the same manufacturer may be different.

The selectable options are named speeds five through nine with five being used for scanners that communicate at a slow rate and nine for scanners that communicate at a faster rate.

This label sets the communication speed to five. Use Peripherial Port Speed settings to tell Magellan how long to wait to receive a complete barcode data. This setting works best when connecting a Symbol Technology undecoded scanner to the peripherial port.



This label sets the communication speed to six. Use Peripherial Port Speed settings to tell Magellan how long to wait to receive a complete barcode data.



This label sets the communication speed to seven. Use Peripherial Port Speed settings to tell Magellan how long to wait to receive a complete barcode data.

This is the default setting. Use this setting when connecting a SP400, Caere or PSC undecoded scanner.



This label sets the communication speed to eight. Use Peripherial Port Speed settings to tell Magellan how long to wait to receive a complete barcode data.



This label sets the communication speed to nine. Use Peripherial Port Speed settings to tell Magellan how long to wait to receive a complete barcode data.



HANDHELD LED

When the scanner and POS system both indicate that a label has been read, it is helpful to disable the handheld devises good read indicator. The labels on the next two pages allow you to enable and disable the handheld's LED.

HANDHELD LED: ON

Scan this label and the handheld device LED will light when a label is successfully scanned.



HANDHELD LED: OFF

Scan this label to disable the handheld scanner's LED. This prevents the LED from lighting when a barcode label is scanned successfully.

Use this feature when the POS system sounds a tone to indicate that the label has been read.



CHANGING BARCODE TYPES

One of Magellan's features is the ability to autodiscriminate between the UPC/EAN symbology family and three industrial codes; Code 39, Interleaved 2 of 5 and Code 128. The following barcodes allow you to change the types of barcode symbologies that your scanner recognizes. Be sure that your POS terminal interface can recognize the barcodes you wish to enable **before** you change these settings.

To change symbologies:

- 1. Select the symbology you wish to enable. (e.g. Code 39)
- 2. Scan the appropriate programming barcode label that enables the selected symbology.
- 3. Enable all additional parameters that are required by your POS terminal (e.g. check digits, start/stop characters, etc).

All of the symbology selection features on the following pages can be used to customize the Magellan scanner or scanner/scale.

UPC-D: ENABLE

Scanning this barcode label adds UPC-D to other UPC/EAN symbologies that are enabled.



UPC-D: DISABLE

Scanning this barcode label disable UPC-D only while leaving other UPC/EAN symbologies uneffected.



UPC/EAN EXPANSION

The labels on the following pages allow you to change the UPC/EAN label transmission format.

UPC-E TO UPC-A EXPANSION - ENABLE

Use this label to <u>enable</u> the expansion of UPC-E labels to UPC-A format before transmission to the host terminal. Enabling this feature will automatically disable the 'Expand UPC-E to EAN-13' feature. The scanner will now translate UPC-E label data into UPC-A format before sending it to the host.



UPC-E TO **UPC-A** EXPANSION – **D**ISABLE

Use this label to <u>disable</u> the expansion of UPC-E labels to UPC-A format before transmission to the host terminal. The scanner now sends UPC-E label data to the host.



UPC-E TO EAN-13 EXPANSION - ENABLE

Use this label to <u>enable</u> the expansion of UPC-E labels to EAN-13 format before transmission to the host terminal. Enabling this feature will automatically disable the 'Expand UPC-E to UPC-A' feature.

The scanner will now translate UPC-E label data into EAN-13 format before sending it to the host.



UPC-E TO EAN-13 EXPANSION - DISABLE

Use this label to disable the expansion of UPC-E labels to EAN-13 format before transmission to the host terminal. The scanner will now send UPC-E label data to the host.



UPC-A TO EAN-13 EXPANSION - ENABLE

Use this label to enable the expansion of UPC-A labels to EAN-13 format before transmission to the host terminal.

The scanner will now translate UPC-A label data into EAN-13 format before sending it to the host.



UPC-A TO EAN-13 EXPANSION - DISABLE

Use this label to disable the expansion of UPC-A labels to EAN-13 format before transmission to the host terminal. The scanner will now send UPC-A label data to the host.



UPC CHECK DIGIT TRANSMISSION

The following pages contain the programming labels for enabling and disabling the transmission of UPC and EAN check digits.

They are:

- UPC-A Check Digit Transmission
- UPC-E Check Digit Transmission
- EAN-8 Check Digit Transmission
- EAN-13 Check Digit Transmission

UPC-A CHECK DIGIT TRANSMISSION: ENABLE

Use this label to enable sending the UPC-A check digit to the host.



UPC-A CHECK DIGIT TRANSMISSION: DISABLE

Use this label to disable sending the UPC-A check digit to the host.



UPC-E CHECK DIGIT TRANSMISSION: ENABLE

Use this label to enable sending the UPC-E check digit to the host.



UPC-E CHECK DIGIT TRANSMISSION: DISABLE

Use this label to disable sending the UPC-E check digit to the host.



EAN-8 CHECK DIGIT TRANSMISSION: ENABLE

Use this label to enable sending the EAN-8 check digit to the host.


EAN-8 CHECK DIGIT TRANSMISSION: DISABLE

Use this label to disable sending the EAN-8 check digit to the host.



EAN-13 CHECK DIGIT TRANSMISSION: ENABLE

Use this label to enable sending the EAN-13 check digit to the host.



EAN-13 CHECK DIGIT TRANSMISSION: DISABLE

Use this label to disable sending the EAN-13 check digit to the host.



CODE 39

The labels on the following pages allow you to enable or disable Code 39, select barcode content verification, choose whether or not to send the check digit to the host and set the minimum number of good reads required before the label data is sent to the host.

CODE 39: ENABLE

Use this barcode to select Code 39 as an active symbology.



CODE 39: DISABLE

Use this barcode to disable Code 39 as an active symbology.



CODE 39: CHECK DIGIT - VERIFY

Use this barcode to enable Verify Code 39 check digit. Scanning this label tells the scanner to calculate the check digit and verify that it matches the barcodes internal check digit. The check digit will not be sent to the host unless you also enable *Code 39: Check Digit -Send.*

Check your system interface communications requirements before changing this setting.



74

CODE 39: CHECK DIGIT - DON'T VERIFY

Using this barcode disables verification of the Code 39 check digit. If you disable this feature, you should also scan the label that disables sending the Code 39 Check Digit.



Code 39: Check Digit - Send

Use this barcode to instruct the scanner to send the Code 39 check digit (if present). This feature should not be set unless *Code 39: Check Digit - Verify* is also enabled.



CODE 39: CHECK DIGIT - DON'T SEND

Use this barcode to disable Send Code 39 check digit.



Minimum read settings are useful when poorly printed barcodes causes the scanner to misread labels and send incorrect data to the host.

Scanning this label sets the number of times the barcode must be read to one. Use this setting when you do not experience misreads.



Minimum read settings are useful when poorly printed barcodes causes the scanner to misread labels and send incorrect data to the host.

Scanning this label sets the number of times the barcode must be read to two. Use this setting when you occasionally experience misreads.



79

Minimum read settings are useful when poorly printed barcodes causes the scanner to misread labels and send incorrect data to the host.

Scanning this label sets the number of times the barcode must be read to three. Use this setting when you regularly experience misreads.

If you must use this setting, you should examine your barcode production methods.



Minimum read settings are useful when poorly printed barcodes causes the scanner to misread labels and send incorrect data to the host.

Scanning this label sets the number of times the barcode must be read to four. Use this setting when misreads are a common problem.

If you must use this setting, you should examine your barcode production methods.



CODE **128**

The labels on the following pages allow you to enable or disable Code 128 and set the minimum number of good reads required before the label data is sent to the host.

CODE 128: ENABLE

Use this barcode to select Code 128 as an active symbology.



CODE 128: DISABLE

Use this barcode to select Code 128 as an active symbology.



CODE 128: MINIMUM READ = 1

Minimum read settings are useful when poorly printed barcodes causes the scanner to misread labels and send incorrect data to the host.

Scanning this label sets the number of times the barcode must be read to one. Use this setting when you do not experience misreads.



CODE 128: MINIMUM READ = 2

Minimum read settings are useful when poorly printed barcodes causes the scanner to misread labels and send incorrect data to the host.

Scanning this label sets the number of times the barcode must be read to two. Use this setting when you occasionally experience misreads.



Code 128: Minimum Read = 3

Minimum read settings are useful when poorly printed barcodes causes the scanner to misread labels and send incorrect data to the host.

Scanning this label sets the number of times the barcode must be read to three. Use this setting when you regularly experience misreads.

If you must use this setting, you should examine your barcode production methods.



CODE 128: MINIMUM READ = 4

Minimum read settings are useful when poorly printed barcodes causes the scanner to misread labels and send incorrect data to the host.

Scanning this label sets the number of times the barcode must be read to two. Use this setting when you regularly experience misreads.

If you must use this setting, you should examine your barcode production methods.



INTERLEAVED 2 OF 5

If you select Interleaved 2 of 5 (I 2of 5) as an active symbology, you must select fixed label length(s) using the programming labels on the following pages.

You have the option of selecting either one or two lengths. If you only wish to enable one fixed label length, select that length using the first set of label length programming labels and then use the label on page 114 to set the second label length to none. This instructs the scanner to only recognize the first label length.

I 2 OF 5: ENABLE

Use this barcode to select Interleaved 2 of 5 as an active symbology.



I 2 OF 5: DISABLE

Use this barcode to disable Interleaved 2 of 5 as an active symbology.



I 2 OF 5: CHECK DIGIT - VERIFY

Use this barcode to enable Verify Interleaved 2 of 5 check digit. Scanning this label tells the scanner to calculate the check digit and verify that it matches the barcodes internal check digit. The check digit will not be sent to the host unless you also enable *Interleaved 2 of 5: Check Digit -Send.*

Check your system interface communications requirements before changing this setting.



91

I 2 OF 5: CHECK DIGIT - DON'T VERIFY

Using this barcode disables verification of the Interleaved 2 of 5 check digit. If you disable this feature, you should also scan the label that disables sending the Interleaved 2 of 5 Check Digit.



I 2 of 5: Check Digit – Send

Use this barcode to instruct the scanner to send the Interleaved 2 of 5 check digit (if present). This feature should not be set unless *Interleaved 2 of 5: Check Digit - Verify* is also enabled.



I 2 OF 5: CHECK DIGIT - DON'T SEND

Use this barcode to disable sending the Interleaved 2 of 5 check digit to the host. This feature is only required for some host interfaces. Check your system interface communications requirements before changing this setting.



I 2 OF 5: MINIMUM READ = 1

Minimum read settings are useful when poorly printed barcodes causes the scanner to misread labels and send incorrect data to the host.

Scanning this label sets the number of times the barcode must be read to one. Use this setting when you do not experience misreads.



I 2 of 5: Minimum Read = 2

Minimum read settings are useful when poorly printed barcodes causes the scanner to misread labels and send incorrect data to the host.

Scanning this label sets the number of times the barcode must be read to two. Use this setting when you occasionally experience misreads.



I 2 of 5: Minimum Read = 3

Minimum read settings are useful when poorly printed barcodes causes the scanner to misread labels and send incorrect data to the host.

Scanning this label sets the number of times the barcode must be read to three. Use this setting when you regularly experience misreads.

If you must use this setting, you should examine your barcode production methods.



I 2 of 5: MINIMUM READ = 4

Minimum read settings are useful when poorly printed barcodes causes the scanner to misread labels and send incorrect data to the host.

Scanning this label sets the number of times the barcode must be read to four. Use this setting when misreads are a common problem.

If you must use this setting, you should examine your barcode production methods.



Set Interleaved 2 of 5 length equals 4 digits. The scanner will only read this length and a second label length you select using the Second Label Length barcodes that follow.



Set Interleaved 2 of 5 length equals 6 digits. The scanner will only read this length and a second label length you select using the Second Label Length barcodes that follow.



Set Interleaved 2 of 5 length equals 8 digits. The scanner will only read this length and a second label length you select using the Second Label Length barcodes that follow.



Set Interleaved 2 of 5 length equals 10 digits. The scanner will only read this length and a second label length you select using the Second Label Length barcodes that follow.



Set Interleaved 2 of 5 length equals 12 digits. The scanner will only read this length and a second label length you select using the Second Label Length barcodes that follow.



Set Interleaved 2 of 5 length equals 14 digits. The scanner will only read this length and a second label length you select using the Second Label Length barcodes that follow.


Set Interleaved 2 of 5 length equals 16 digits. The scanner will only read this length and a second label length you select using the Second Label Length barcodes that follow.



Set Interleaved 2 of 5 length equals 18 digits. The scanner will only read this length and a second label length you select using the Second Label Length barcodes that follow.



Set Interleaved 2 of 5 length equals 20 digits. The scanner will only read this length and a second label length you select using the Second Label Length barcodes that follow.



Set Interleaved 2 of 5 length equals 22 digits. The scanner will only read this length and a second label length you select using the Second Label Length barcodes that follow.



Set Interleaved 2 of 5 length equals 24 digits. The scanner will only read this length and a second label length you select using the Second Label Length barcodes that follow.



Set Interleaved 2 of 5 length equals 26 digits. The scanner will only read this length and a second label length you select using the Second Label Length barcodes that follow.



Set Interleaved 2 of 5 length equals 28 digits. The scanner will only read this length and a second label length you select using the Second Label Length barcodes that follow.



Set Interleaved 2 of 5 length equals 30 digits. The scanner will only read this length and a second label length you select using the Second Label Length barcodes that follow.



Set Interleaved 2 of 5 length equals 32 digits. The scanner will only read this length and a second label length you select using the Second Label Length barcodes that follow.



Use this label to instruct the scanner to only recognize the one label length set using the preceding labels.



Set second Interleaved 2 of 5 length equals 4 digits. The scanner will only read this length and a first label length you select using the First Label Length barcodes.



Set second Interleaved 2 of 5 length equals 6 digits. The scanner will only read this length and a first label length you select using the First Label Length barcodes.



Set second Interleaved 2 of 5 length equals 8 digits. The scanner will only read this length and a first label length you select using the First Label Length barcodes.



Set second Interleaved 2 of 5 length equals 10 digits. The scanner will only read this length and a first label length you select using the First Label Length barcodes.



Set second Interleaved 2 of 5 length equals 12 digits. The scanner will only read this length and a first label length you select using the First Label Length barcodes.



Set second Interleaved 2 of 5 length equals 14 digits. The scanner will only read this length and a first label length you select using the First Label Length barcodes.



Set second Interleaved 2 of 5 length equals 16 digits. The scanner will only read this length and a first label length you select using the First Label Length barcodes.



Set second Interleaved 2 of 5 length equals 18 digits. The scanner will only read this length and a first label length you select using the First Label Length barcodes.



Set second Interleaved 2 of 5 length equals 20 digits. The scanner will only read this length and a first label length you select using the First Label Length barcodes.



Set second Interleaved 2 of 5 length equals 22 digits. The scanner will only read this length and a first label length you select using the First Label Length barcodes.



Set second Interleaved 2 of 5 length equals 24 digits. The scanner will only read this length and a first label length you select using the First Label Length barcodes.



Set second Interleaved 2 of 5 length equals 26 digits. The scanner will only read this length and a first label length you select using the First Label Length barcodes.



Set second Interleaved 2 of 5 length equals 28 digits. The scanner will only read this length and a first label length you select using the First Label Length barcodes.



Set second Interleaved 2 of 5 length equals 30 digits. The scanner will only read this length and a first label length you select using the First Label Length barcodes.



Set second Interleaved 2 of 5 length equals 32 digits. The scanner will only read this length and a first label length you select using the First Label Length barcodes.



INTERFACE SELECTIONS

Magellan's RS-232, OCIA and Multidrop interfaces have user programmable features that may need to be set or changed to match your specific interface requirements. To ensure compatibility consult with your technical support personnel before changing these settings.

RS-232 Interface Specifications

The following labels pertain only to POS terminals with an RS-232 communication interface. In order for the POS terminal and scanner to communicate the scanner's configuration must match the communication settings of the POS terminal. Typically, the scanner's factory default configuration has been set to match your POS terminal requirements.

The RS-232 interface communication options are:

- Baud Rate
- Stop Bits
- Clear to Send (CTS)
- Parity
- Xon/Xoff
- Data Bits
- Label IDs

130

RESTRICTIONS

The RS-232 interface hardware and software data flow control features that are mutually exclusive and both should not be enabled at the same time.

- **CTS/RTS** hardware flow control. If this feature is enabled, Xon/Off (software flow control) should be disabled. The result of enabling both flow controls is unpredictable.
- **Xon/Xoff** software flow control. If this feature is enabled, CTS/RTS (hardware flow control) should be disabled. The result of enabling both flow controls is unpredictable.

SINGLE CABLE RS-232

If you are connecting a Magellan scanner/scale to your POS system using a single cable for both scanner and scale data, some restrictions apply. These restrictions are:

- **Baud Rate** Single cable interfaces cannot communicate at 38400. Baud rate selections are 300, 1200, 2400, 4800, 9600 and 19200.
- **Parity** Mark and Space Parity cannot be used with single cable RS-232 scanner/scales. Parity options are None, Odd and Even.
- If your **configuration** is 7 Data Bits, No Parity, **Stop Bits must be set to 2**.
- If your **configuration** is 8 Data Bits, Odd or Even Parity, **Stop Bits must be set to 1**.

Use this label to set the RS-232 Baud Rate to 300.



Use this label to set the RS-232 Baud Rate to 1200.



Use this label to set the RS-232 Baud Rate to 2400.



Use this label to set the RS-232 Baud Rate to 4800.



Use this label to set the RS-232 Baud Rate to 9600.



Use this label to set the RS-232 Baud Rate to 19200.



RS-232: STOP BITS = 1

Use this label to set the number of Stop Bits to one.



RS-232: STOP **B**ITS = 2

Use this label to set the number of Stop Bits to two.


RS-232: CLEAR TO SEND - ENABLE

Use this label to enable CTS/RTS hardware flow control.



RS-232: CLEAR TO SEND - DISABLE

Use this label to disable CTS/RTS hardware flow control.



RS-232: PARITY = SPACE

Use this label to set Parity to Space.

NOTE

This setting cannot be used with a single cable RS-232 scanner/scale.



RS-232: PARITY = EVEN

Use this label to set Parity to Even.



144

RS-232: PARITY = MARK

Use this label to set Parity to Mark.

NOTE

This setting cannot be used with a single cable RS-232 scanner/scale.



RS-232: PARITY = ODD

Use this label to set Parity to Odd.



RS-232: PARITY = NONE

Use this label to set Parity to None.



RS-232: XON/XOFF - ENABLE

Use this label to enable Xon/Xoff for data flow control.



RS-232: XON/XOFF - DISABLE

Use this label to disable Xon/Xoff for no data flow control.



RS-232: DATA BITS = 7

Use this label to set RS-232 data format equals seven bits.



RS-232: DATA BITS = 8

Use this label to set RS-232 data format equals eight data bits.



RS-232: LABEL IDS — SEND

Enables sending a label identifier which tells the host the barcode label's symbology. For example, here are the industry standard default label identifiers for some common symbologies:

Code 39	!*!
UPC-A	'A'
UPC-E	'E0'
EAN-8	'FF'
EAN-13	'F'



RS-232: LABEL IDS - DON'T SEND

Disables sending of label identifier.



OCIA INTERFACE SELECTION

The labels on the following pages allow you to select one of five OCIA interfaces. The options available are:

- S-P OCIA
- NCR 8 Bit
- NCR 9 Bit
- NCR 7870
- NCR 7824

Following the OCIA interface selection labels are programming labels for enabling and disabling OCIA intercharacter delay.

OCIA INTERFACE = S-P OCIA

Scan this label to set the OCIA interface to a match the standard Spectra-Physics OCIA interface configuration.



OCIA INTERFACE = NCR 8 BIT

Scan this label to set the OCIA interface to a communicate with an NCR 8 bit POS system.



OCIA INTERFACE = NCR 9 BIT

Scan this label to set the OCIA interface to a communicate with an NCR 9 bit POS system.



157

OCIA INTERFACE = NCR 7870

Scan this label to set the OCIA interface to emulate a single cable NCR 7870 scanner.



OCIA INTERFACE = NCR 7824

Scan this label to set the OCIA interface to emulate a single cable NCR 7824 scanner.



OCIA INTERCHARACTER DELAY – ENABLE

Scan this label to enable OCIA intercharacter delay.



OCIA INTERCHARACTER DELAY - DISABLE

Scan this label to disable OCIA intercharacter delay.



Multidrop Scanner Addressing

The labels on the next four pages allow you to set the scanner address for scanners connected to a multidrop system.

These settings are determined by your system's requirements. Check with your system support personnel before changing these settings.

Multidrop Scanner Address = p

Scan this label to set the scanner identifier to 'p' (70hex).



Multidrop Scanner Address = q

Scan this label to set the scanner identifier to 'q' (71hex).



Multidrop Scanner Address = r

Scan this label to set the scanner identifier to 'r' (72hex).



165

Multidrop Scanner Address = s

Scan this label to set the scanner identifier to 's' (73hex).



Scale Features

The following labels apply to the weighing functions of the scale and have no effect on the scanner. These labels will be rejected if scanned by the Magellan without a scale.

The features contained in this section are:

- Scale Country of use selection
- Motion Filter options
- Enforced zero return
- Scale Warm-up time
- Remote Display settings

REMOTE DISPLAY: ENABLE

Scanning this label requires that a Remote Display is connected. If this feature is enabled, but a Remote Display is not connected, the scanner/scale will sound a series of tones indicating an error was found. Either connect a display or disable this feature to correct the error.



REMOTE DISPLAY: DISABLE

Scan this label if your POS system contains a built-in weight display and does not require a Remote Display.



SCALE: COUNTRY SELECTION = NORTH AMERICA

Scan this programming label if this scanner/scale is installed in a North American country.



Scale: Country Selection = United Kingdom

Scan this programming label if this scanner/scale is installed in the United Kingdom.



This page intentionally **B**lank

SCALE: COUNTRY SELECTION = RESERVED

This feature is reserved for future applications that require unique weight data reporting and handling. Call your dealer, distributor or PSC service office nearest you for more details regarding the use of this label.



SCALE: MOTION FILTER SELECTION = 1

Scan this label if there is little or no vibration from other equipment mounted in your checkstand (e.g. conveyor belts, electric motors, etc.).

If the Zero indicator lamp flashes off and on while the scanner/scale is idle, select the next highest setting.



SCALE: MOTION FILTER SELECTION = 2

Scan this label if there is a small amount of vibration from other equipment mounted in your checkstand (e.g. conveyor belts, electric motors, etc.).

If the Zero indicator lamp flashes off and on while the scanner/scale is idle, select the next highest setting.



SCALE: MOTION FILTER SELECTION = 3

Scan this label if there is significant vibration from other equipment mounted in your checkstand (e.g. conveyor belts, electric motors, etc.).

If the Zero indicator lamp flashes off and on while the scanner/scale is idle, select the next highest setting.


SCALE: MOTION FILTER SELECTION = 4

This setting is not recommended unless the scale to experience difficulty maintaining zero and/or weighing products. If you must choose this setting, installation and operating conditions for accurate weighing may not be adequate.

NOTE

If, after selecting this setting, the Zero indicator lamp flashes off and on while the scanner/scale is idle, your installation is not stable enough for accurate weighing operation. Modifications to your installation is required to either stabilize the scanner/scale mounting or remove excess vibration from the weighing environment.



Scale Enforced Zero Return – Disable

Scan this label to disable the scale's Enforced Zero Return feature.



Scale Enforced Zero Return - Enable

Scan this label to enable the Enforce Zero Return feature. This feature monitors the scale to ensure that it returns to zero within four minutes after the last weighing transaction was completed. If the scale fails to return to zero within the allotted time, the scale will be rendered inoperable until rezeroed.

If the display shows a negative weight prior to a transaction, weighing operations will not be allowed until the scale is rezeroed.

NOTE

In some cases local regulatory agencies will require the scale to be recalibrated. Check to ensure your actions are in compliance with these requirements.



Scale Address (IBM 4683) = 6A

If Magellan is connected to an IBM 4683 POS system Port 17, scan this barcode to change the scale address to 6A.



SCALE ADDRESS (IBM 4683) = 6B

If Magellan is connected to an IBM 4683 POS system Port 17, scan this barcode to change the scale address to 6B.



SCALE ADDRESS (IBM 4683) = 6E

If Magellan is connected to an IBM 4683 POS system Port 17, scan this barcode to change the scale address to 6E.

6E is the default address.



Scale: Beep after Weighing - Enable

Scan this label to instruct Magellan to sound a tone when the weight data has been sent to the host.



Scale: Beep after Weighing – Disable

After scanning this barcode, Magellan will not sound a tone after a weight has been sent to the host. This is the normal default setting for this feature.



Barcode Index

C

83
• 82 01 07
04-07
73
74–77
78–81
41–43
70–71 68–69
52–53
90
89
91–94
99–113
95–98

R

Remote Display – Disable	169
Remote Display - Enable	168
Return to Factory Default	14
RS-232: Baud Rate	133 –138
RS-232: Clear to Send	141–142
RS-232: Data Bits	150–151
RS232: Label IDs	152–153
RS-232: Parity	143–147
RS-232: Stop Bits	139 - 140
RS-232: Xon/Xoff	148–149

S

Scale Address (IBM 4683) = 6A	180
Scale Address (IBM 4683) = 6B	181
Scale Address (IBM 4683) = 6E	182
Scale Enforced Zero Return – Disable	178
Scale Enforced Zero Return – Enable	179
Scale: Beep after Weighing – Enable	183
Scale: Beep after Weighing = Disable	184
Scale: Country Selection	170–173
Scale: Motion Filter Selection	174–177
Speaker Off	19
Speaker On	18
Speaker Volume	21–23
Switch Label	13 and back cover

U

UPC-A Check Digit Transmission	64–65
UPC-A to EAN-13 Expansion	61-62
UPC-D – Disable	56
UPC-D - Enable	55
UPC-E Check Digit Transmission	66-67
UPC-E to EAN-13 Expansion	59-60
UPC-E to UPC-A Expansion	57–58
V	

Volume Switch	isable	· ·	16
Volume Switch	nable	· ·	17

Feature	CHANGED	CHANGED
Name	From	To

Feature	CHANGED	CHANGED
Name	From	Το

SWITCH LABEL

All programming sessions must begin by scanning the Switch label in order for the scanner to recognize them as programming labels and end with the Switch label for the scanner to store the changes you have made. A duplicate of this label and instructions for its use are found on page 13.

When changing (programming) a feature, it is a good practice to cover the label on the opposite page to prevent the scanner from reading both labels since it reads both the leading and trailing edges of all items that are scanned.





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Printed in USA 12/98