Metrologic

ScanSelect™ Scanner Programming Guide

MLPN 2186

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Enter/Exit Program Mode

Load Defaults

Introduction

The scanner is shipped from the factory programmed to a set of default conditions noted in this guide by an asterisk that appears before the brief definition. Since each host system is unique, configure the scanner to match the specific host system requirements.

1. Connect the scanner to the host system. (Refer to the Installation and User's Guide)

2. Enter the program mode by scanning the ENTER/EXIT program mode bar code.

3. Scan the appropriate the bar code(s) that appear in this guide. (Reveal only one bar code to the scanner each time.)

4. Exit the program mode by scanning the ENTER/EXIT bar code again.

Enter/Exit Program Mode

Load Defaults

If the original factory settings are needed during the programming the scanner, scan the LOAD DEFAULTS bar code. Any settings selected during that session or any previous session will be lost. T **will return the scanner to the RS-232 communication protoc**

For other communications activate the protocol, i.e., OCIA, Keyboard Wedge, IBM. Then change all necessary parameters for the protocol. Verify that the scanner hardware is equipped/configured for the appropriate interface.

Note: The default settings for the non-RS232 protocols are differ ent when enabled via ScanSelect™ versus ScanSet™.

Cloning allows the configuration of a scanner by making its settings the same as another scanner. This is done by connecting the cloning cable between the two scanners.

1. Turn off both scanners.
2. Connect the cloning cable between the two scanners.
3. Turn both the scanners on by plugging in the transformers.
4. Once each scanner is ready, scan the cloning bar code with the scanner that has the settings that need to be transferred to the other scanner.

Cloning

0 12345 77777 6

Configuration

0 12345 66669 8

While in the Program Mode, scan the Configuration bar code to a
the scanner to transmit the current scanner configuration to an R
232 host. The scanner will transmit a sequential list of bar code d
that can be printed as UPC bar codes and used to configure ano
scanner to match the first scanner.

Section A

Code Types

This section provides various bar codes that can be enabled or disabled that are needed for a specific application.

E/D = Enable/Disable CD = Check Digit

***Enable UPC/EAN**

When this option is enabled, the scanner will scan UPC/EAN bar codes.

***Enable Code 128**

When this option is enabled, the scanner will scan Code 128 bar codes.

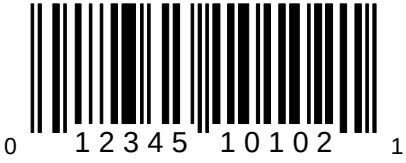
Disable UPC/EAN

When this option is disabled, the scanner will not scan UPC/EAN bar codes.

Disable Code 128

When this option is disabled, the scanner will not scan Code 128 bar codes.

***Enable Code 93**



When this option is enabled, the scanner will scan Code 93 bar codes.

***Enable Codabar**

When this option is enabled, the scanner will scan Codabar bar codes.

Disable Code 93

When this option is disabled, the scanner will not scan Code 93 bar codes.

Disable Codabar

When this option is disabled, the scanner will not scan Codabar bar codes.

***Enable Interleaved 2 of 5 (ITF)**

When this option is enabled, the scanner will scan Interleaved 2 of 5 (ITF) bar codes.

Disable Interleaved 2 of 5 (ITF)

When this option is disabled, the scanner will not scan Interleaved 2 of 5 (ITF) bar codes.

Enable MOD 10 Check on ITF

When this option is enabled, the scanne will scan Interleaved 2 of 5 (ITF) bar cod that have a Modulo 10 check digit.

***Disable MOD 10 Check on ITF**

When this option is disabled, the scanne will not scan ITF bar codes that have a Modulo 10 check digit.

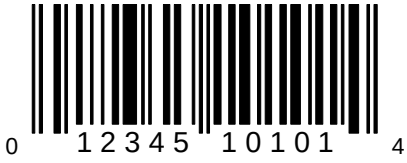
Enable Code 11

When this option is enabled, the scanner will scan Code 11 bar codes.

***Disable Code 11**

When this option is disabled, the scanner will not scan Code 11 bar codes.

***Enable Code 39**



When this option is enabled, the scanner will scan Code 39 bar codes.

Disable Code 39

When this option is disabled, the scanner will not scan Code 39 bar codes.

Enable Full ASCII Code 39

When this option is enabled, the scanner will scan Full ASCII Code 39 bar codes.

***Disable Full ASCII Code 39**

When this option is disabled, the scanner will not scan Full ASCII Code 39 bar codes.

Enable MOD 43 Check on Code 39

When this option is enabled, the scanner will scan Code 39 bar codes that have a Modulo 43 check digit.

***Disable MOD 43 Check on Code 39**

When this option is disabled, the scanner will not scan Code 39 bar codes that have a Modulo 43 check digit.

Enable MSI Plessey

When this option is enabled, the scanner will scan MSI Plessey bar codes.

Enable MSI Plessey 10/10 Check Digits

When this option is enabled, the scanner will scan MSI Plessey bar codes that have a double Modulo 10 check digit.

***Disable MSI Plessey**

When this option is disabled, the scanner will not scan MSI Plessey bar codes.

***Enable MSI Plessey MOD 10 Check Di**

When this option is enabled, the scanner will scan MSI Plessey bar codes that have a single Modulo 10 check digit.

Disable Both MSI Plessey Check Digits

When this option is chosen, the scanner will not scan MSI Plessey bar codes that have a single or double Modulo 10 check digit.

Enable UK Plessey

When this option is enabled, the scanner will scan UK Plessey bar codes.

***Disable UK Plessey**

When this option is disabled, the scanner will not scan UK Plessey bar codes.

Enable Airline 2 of 5

When this option is enabled, the scanner will scan Airline 2 of 5 bar codes.

***Disable Airline 2 of 5**

When this option is disabled, the scanner will not scan Airline 2 of 5 bar codes.

Enable Telepen

When this option is enabled, the scanner will scan Telepen bar codes.

***Disable Telepen**

When this option is disabled, the scanner will not scan Telepen bar codes.

Enable MECCA

When this option is enabled Metrologic Enhanced Code Correcting Algorithm (MECCA) will be activated. This feature allows for increased accuracy in reading poor quality bar codes, but may slightly. reduce the aggressiveness of the scanner.

***Disable MECCA**

When this option is chosen, MECCA will not be active.

Enable Paraf Support

When this option is enabled, the scanner will convert Code 39 bar codes to paraf format.

***Disable Paraf Support**

When this option is disabled, the scanner will not convert Code 39 bar codes to paraf format.

Enable Matrix 2 of 5

When this option is enabled, the scanner will scan Matrix 2 of 5 bar codes

***Disable Matrix 2 of 5**

When this option is disabled, the scanner will not scan Matrix 2 of 5 bar codes.

***Enable EAN-8**

When this option is enabled, the scanner will scan EAN-8 bar codes.

Disable EAN-8

When this option is chosen, the scanner will not scan EAN-8 bar codes.

***Enable EAN-13**

When this option is enabled, the scanner will scan EAN-13 bar codes.

***Enable UPC-E**

When this option is enabled, the scanner will scan UPC-E bar codes.

Disable EAN-13

When this option is chosen, the scanner will not scan EAN-13 bar codes.

Disable UPC-E

When this option is chosen, the scanner will not scan UPC-E bar codes.

***Enable UPC-A**

When this options enabled, the scanner will scan UPC-A bar codes.

Disable UPC-A

When this option is chosen, the scanner will not scan UPC-A bar codes.

ITF Symbol Length 1 (Byte 1)

To specify the number of ITF (Interleaved 2
digits in the bar codes that will be scanned,
the above bar code and the appropriate Cc
Byte bar code in Section I.

ITF Symbol Length 2 (Byte 2)

To specify a second number, scan the abo
bar code and the appropriate Code Byte ba
code in Section I. Only scan the above bar
when a second ITF number needs to be
specified.

Minimum Symbol Length (Byte)

To specify the minimum number of characters in the bar codes that will be scanned, scan the above bar code and the appropriate Code Byte bar code in Section I.

Symbol Length Lock (Byte)

When the scanner will always scan bar codes that are the same length, the length of the bar code can be locked into place by scanning the above bar code and the appropriate Code Byte bar code in Section I.

Section B

Communication Protocol

This section provides bar codes that can be enabled or disabled for the proper communication interface for a specific host device.

***Enable RS-232**

When this option is enabled, the scanner will work with RS-232 +-12V serial output.

Enable Parallel Communication

This option should be selected if the scanr will provide parallel output to various cash registers. This is not Centronics parallel an should not be connected to such an interfa For the most part, parallel registers allow ir of UPC/EAN bar codes only.

Enable IBM 4680 Communication

This option should be selected if communications with an IBM 46XX register is needed. This will enable RS-485 communications. Not all scanners support this interface as the correct interface board is required.

Enable Light Pen Emulation

This option should be selected if the scanr will be used in place of a light pen. It will pr light pen emulation of each bar code that is scanned.

Enable No Communication Mode

This option should be selected if the scanner will not interface with a host device.

Multi-drop Network

This option should be selected if the scanr will provide RS-422 type output for Nationa Semi-conductor/ICL cash registers. This is specific format which is only supported wh the proper interface board is being used.

OCIA Output

This option should be selected if the communications requirement is OCIA (Optically Coupled Interface Adaptor). This is a clocked (by the host) serial interface.

Enable Keyboard Wedge Emulation

This option should be selected if the scann will provide keyboard emulation by converti the scanned bar code data to the PC keyb scan code equivalent.

When using one of the following, this feature will work as indicated:

RS-232	-	Odd Parity
Parallel	-	IBM
Light Pen	-	Spaces High as Code 39
OCIA	-	DTS/SIEMENS

When using one of the following communications, this feature will work as indicated:

RS-232	=	*Space Parity
Parallel	-	*SWEDA
Light Pen	=	*Bars High as Code 39
OCIA	=	*DTS/NIXDORF

When using one of the following, this feature will work as indicated:

RS-232	=	Even Parity
Parallel	=	Fujitsu
Light Pen	=	Spaces High/ as Sca
OCIA	=	NCR F

When using one of the following communications, this feature will work as indicated:

RS-232	=	Mark Parity
Parallel	=	OMRON
Light Pen	=	Bars High/ as Scann
OCIA	=	NCR S

Poll Light Pen Source

When this option is chosen, the scanner will wait for an active source voltage before transmitting the data.

***Do Not Poll Light Pen Source**

When this option is chosen, the scanner will not wait for an active source voltage before transmitting the data.

Enable Light Pen Extra Transition Before Bar

When this option is enabled, the scanner will toggle the light pen data line prior to transmitting the bar code. This may be needed for certain decode devices.

***Disable Light Pen Extra Transition Before Ba**

When this option is disabled, the scanner will not toggle the light pen data line prior to transmitting the bar code.

Multi-drop Address

When using Multi-drop communication, scan the above bar code and the appropriate Code Byte in Section I to specify the address.

Enable Keyboard Wedge Emulation

This option should be selected if the scanner will provide keyboard emulation by converting the scanned bar code data to the PC keyboard scan code equivalent.

Section C

Scanner Operation

This section provides bar codes that can change the general operating characteristics of the scanner. These include beeper operation, time-out options, depth of field, and test modes.

E/D = Enable/Disable

***Normal Tone**

The following beeper tone options are available: Normal, Alt 1, Alt 2, and No Beep. When No Beep is chosen, the scanner will not emit an audible beep.

Alternate Tone 1

The following beeper tone options are available: Normal, Alt 1, Alt 2, and No Beep. When No Beep is chosen, the scanner will not emit an audible beep.

Alternate Tone 2

The following beeper tone options are available: Normal, Alt 1, Alt 2, and No Bee When No Beep is chosen, the scanner wi emit an audible beep.

No Beep

The following beeper tone options are available: Normal, Alt 1, Alt 2, and No Bee When No Beep is chosen, the scanner wi emit an audible beep.

Enable Fast Beep

When this option is selected, the scanner will use the selected tone but shorten the duration of the beep.

***Disable Fast Beep**

When this option is selected, the scanner will not shorten the beep duration.

***Loudest Volume Setting**

The following beeper volume options are available: Quietest (No Volume), Lowest, Medium, and Loudest. When Quietest is chosen, the scanner will not emit an audib beep.

Medium Volume Setting

The following beeper volume options are available: Quietest (No Volume), Lowest, Medium, and Loudest. When Quietest is chosen, the scanner will not emit an audib beep.

Lowest Volume Setting

The following beeper volume options are available: Quietest (No Volume), Lowest, Medium, and Loudest. When Quietest is chosen, the scanner will not emit an audible beep.

Quietest (No Volume)

The following beeper volume options are available: Quietest (No Volume), Lowest, Medium, and Loudest. When Quietest is chosen, the scanner will not emit an audible beep.

***Beep Before Transmit**

When this option is chosen, the scanner will beep before each label is transmitted.

Beep After Transmit

When this option is chosen, the scanner will beep after each label is transmitted.

Enable Communication Time-outs

When this option is enabled, the scanner will time-out if it does not transmit its data to the host after two seconds during communication. This is only valid in modes where some type of handshaking is involved.

***Disable Communication Time-outs**

When this option is disabled, the scanner will not time-out if it does not transmit its data to the host after two seconds during communication. This is only valid in modes where some type of handshaking is involved.

Razzberry Tone on Time-out

When this option is chosen, the scanner will produce an audible razzberry tone when communications have timed out.

No Razzberry Tone on Time-out

When this option is chosen, the scanner will not produce an audible razzberry tone when communications have timed out.

Three Beeps on Time-out

When this option is chosen, the scanner will beep three times when communications have timed out.

No Beeps on Time-out

When this option is chosen, the scanner will not beep when communications have timed out.

***10 Minutes Touchplate/IR Time-outs**

This time represents the duration of time inactivity from the last scan until the scann enters a “standby” mode. The scanner will return to scanning until either the scanner touchplate is pressed or an object is wave in front of the IR sensor.

Two Minutes Touchplate/IR Time-outs

This time represents the duration of time c inactivity from the last scan until the scann enters a “standby” mode. The scanner will return to scanning until either the scanner touchplate is pressed or an object is wave front of the IR sensor.

Thirty Minutes Touchplate/IR Time-outs

This time represents the duration of time of inactivity from the last scan until the scanner enters a “standby” mode. The scanner will not return to scanning until either the scanner’s touchplate is pressed or an object is waved in front of the IR sensor.

No Touchplate/IR Time-outs

When this option is chosen, the scanner will not enter a “standby” mode. When using a Tech scanner, select this option since these units do not have an IR sensor or a touchplate.

Enable No Same Symbol Time-out

When this option is enabled, the same bar code is scanned again without any time delay. When enabled, this option overrides any selected same symbol rescan time-out option.

***Disable No Same Symbol Time-out**

When this option is disabled, there is a same symbol rescan time-out.

Enable Infinite Same Symbol Time-out

When this option is enabled, the scanner never scans the same bar code repetitively during a scanning session. When enabled, this option overrides all of the same symbol rescan time-outs.

***Disable Infinite Same Symbol Time-out**

When this option is disabled, the same bar code can be scanned again after a rescan time-out.

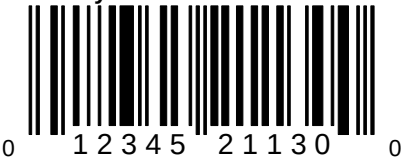
Enable Same Symbol Rescan Time-ou msec

The available same symbol time-outs are 100, 200, 500, 1250 and 2000 milliseconds. These numbers represent the amount of time that a bar code must be out of the scan field before that bar code can be scanned again.

***Disable Same Symbol Rescan Time-o 100 msec**

When this option is disabled, any other selected same symbol rescan time-out will be recognized. Note: If 100 mesc is enabled, the time-out will override all other rescan time-outs until the above bar code is scanned.

Same Symbol Rescan Time-out 200 msecs



The available same symbol time-outs are 200, 500, 1250 and 2000 milliseconds. These numbers represent the amount of time that a bar code must be out of the scan field before that bar code can be scanned again.

Same Symbol Rescan Time-out: 1250

The available same symbol time-outs are 200, 500, 1250 and 2000 milliseconds These numbers represent the amount of time that a bar code must be out of the scan field before that bar code can be scanned again.

***Same Symbol Rescan Time-out: 500 msecs**

The available same symbol time-outs are 200, 500, 1250 and 2000 milliseconds. These numbers represent the amount of time that a bar code must be out of the scan field before that bar code can be scanned again.

Same Symbol Rescan Time-out 2000 m

The available same symbol time-outs are 200, 500, 1250 and 2000 milliseconds These numbers represent the amount of time that a bar code must be out of the scan field before that bar code can be scanned again.

Scanability On

When this option is enabled, the scanner will enter scanability test mode. Do not enable this feature unless instructed to do so by a Metrologic representative.

***Scanability Off**

Do not enable this feature unless instructed to do so by a Metrologic representative.

Scan Count Mode On

When this option is enabled, the scanner will enter scan count test mode. The firmw number of the scanner will also be transm to the host device. Do not enable this feat unless instructed to do so by a Metrologic representative.

***Scan Count Mode Off**

Do not enable this feature unless instructe to do so by a Metrologic representative.

Extended Depth of Field

Do not change this setting unless instructed to do so by a Metrologic representative.

Close Depth of Field

Do not change this setting unless instructe to do so by a Metrologic representative.

***Normal Depth of Field**

Do not change this setting unless instructed to do so by a Metrologic representative.

Intercharacter Delay

If the host device does not require an intercharacter delay, choose this option.

RS-232 - None OCIA - None
Parallel - None KB Wedge - None

Intercharacter Delay

The time specified represents the interim of time in between transmission of characters.

RS-232 - *1 msec OCIA - *1 msec
Parallel - *1 msec KB Wedge - *1 msec

Intercharacter Delay

The time specified represents the interim of time in between transmission of charact

RS-232 - 5 mesc OCIA - 5 mesc
Parallel - 2 mesc KB Wedge - 10 me

Intercharacter Delay

The time specified represents the interim of time in between transmission of charact

RS-232 - 20 mesc OCIA - 20 mesc
Parallel - 5 mesc KB Wedge - 100 m

Intercharacter Delay

The time specified represents the interim of
time in between transmission of characters.

RS-232 - Reserved OCIA - Reserved
Parallel - Reserved KB Wedge - 5 mesc

Intercharacter Delay

The time specified represents the interim
time in between transmission of character

RS-232 - Reserved OCIA - Reserved
Parallel - Reserved KB Wedge - 50 me

Intercharacter Delay

The time specified represents the interim of
time in between transmission of characters.

RS-232 - Reserved OCIA - Reserved
Parallel - Reserved KB Wedge - 25 mesc

Intercharacter Delay

The time specified represents the interim
time in between transmission of character

RS-232 - Reserved OCIA - Reserved
Parallel - Reserved KB Wedge - 75 me

***1 Scan Buffer**

When this option is enabled, the scanner will scan continuously if two different labels are in the scan field.

2 Scan Buffers

When this option is enabled, the scanner will scan two different labels in the scan field once. It will not scan the bar code again until the same symbol time-out has elapsed.

General Format Options

This section provides bar codes that can be chosen to select the output format for UPC/EAN bar codes and transmission formats for Non-UPC scanned data. Many of the formatting options are dependent upon which interface is being used.

DN/T = Do Not Transmit/Transmit

***Transmit UPC-A Check Digit**

When this option is chosen, the scanner will transmit the UPC-A check digit.

Transmit UPC-E Check Digit

When this option is chosen, the scanner will transmit the UPC-E check digit.

Do not Transmit UPC-A Check Digit

When this option is chosen, the scanner will not transmit the UPC-A check digit.

***Do not Transmit UPC-E Check Digit**

When this option is chosen, the scanner will not transmit the UPC-E check digit.

Expand UPC-E

When this option is chosen, the scanner will expand UPC-E to the 12 digit equivalent UPC-A.

***Do not Expand UPC-E**

When this option is chosen, the scanner will not expand UPC-E to the 12 digit equivalent UPC-A.

Convert UPC-A to EAN-13

When this option is chosen, the scanner will convert UPC-A to EAN-13 by transmitti a leading zero before the bar code.

***Do not Convert UPC-A to EAN-13**

When this option is chosen, the scanner will not convert UPC-A to EAN-13.

Transmit Lead Zero on UPC-E

When this option is chosen, the scanner will output a zero before each UPC-E bar code.

***Do not Transmit Lead Zero on UPC-E**

When this option is chosen, the scanner will not output a zero before each UPC-E bar code.

Convert EAN-8 to EAN-13

When this option is chosen, the scanner wi convert EAN-8 to EAN-13 by transmitting fi zeroes before the bar code.

***Do not Convert EAN-8 to EAN-13**

When this option is chosen, the scanner wi convert EAN-8 to EAN-13.

***Transmit EAN-13 Check Digit**

When this option is chosen, the scanner will transmit the EAN-13 check digit.

***Transmit EAN-8 Check Digit**

When this option is chosen, the scanner will transmit the EAN-8 check digit.

Do not Transmit EAN-13 Check Digit

When this option is chosen, the scanner will not transmit the EAN-13 check digit.

Do not Transmit EAN-8 Check Digit

When this option is chosen, the scanner will not transmit the EAN-8 check digit.

***Transmit UPC-A Number System**

When this option is chosen, the scanner will transmit the UPC-A number system character.

Transmit Codabar Start/Stop Character

When this option is chosen, the scanner wi transmit Codabar's start and stop characte before and after each bar code.

Do not Transmit UPC-A Number System

Metrologic strongly discourages the disabling of this feature because duplicate numbers may result in the database when the scanner is programmed not to transmit the UPC-A number system character.

***Do not Transmit Codabar Start/Stop Chara**

When this option is chosen, the scanner wi transmit Codabar's start and stop characte before and after each bar code.

Enable CLSI Editing

When this option is enabled, the scanner will perform CLSI library type editing before the information is transmitted to the host. This editing only works with 14 digit Codabar type labels.

***Do not Enable CLSI Editing**

When this option is chosen, the scanner will not perform CLSI library type editing before the information is transmitted to the host.

Transmit Mod 43 Check Digit on Code

When this option is chosen, the scanner wi transmit Code 39's Mod 43 check characte This feature works in conjunction with the M 43 Check on Code 39 option in Section A. must be enabled in order for this feature to

***Do not Transmit Mod 43 Check Digit o Code 39**

When this option is chosen, the scanner wi not transmit Code 39's Mod 43 check char

Transmit Code 39 Stop/Start Characters

When this option is chosen, the scanner will transmit Code 39's start and stop characters before and after each bar code.

***Do not Transmit Code 39 Start/Stop Characters**

When this option is chosen, the scanner will not transmit Code 39's start and stop characters before and after each bar code.

Transmit Mod 10/ITF

When this option is chosen, the scanner wi transmit the Interleaved 2 of 5 (ITF) mod 1(check character. This feature works in conjunction with the Mod 10 Check on ITF Section A. Both must be enabled in order f feature to work.

***Do not Transmit Mod 10/ITF**

When this option is chosen, the scanner wi not transmit the Interleaved 2 of 5 (ITF) mo check character.

Transmit Code 11 Check Digit

When this option is chosen, the scanner will transmit Code 11 check characters. This feature works in conjunction with the Enable Code 11 option in Section A. Both must be enabled in order for this feature to work.

***Do not Transmit Code 11 Check Digit**

When this option is chosen, the scanner will not transmit Code 11 check characters.

Transmit MSI Plessey Check Digits

When this option is chosen, the scanner wi
transmit MSI Plessey's check digit characte
This feature works in conjunction with the
Plessey options in Section A. This option a
one or both of the MSI Plessey Mod option
must be enabled in order for this feature to

***Do not Transmit MSI Plessey Check D**

When this option is chosen, the scanner wi
transmit MSI Plessey's check digit characte

Transmit UK Plessey Check Digits

When this option is chosen, the scanner will transmit UK Plessey's check digit characters. This feature works in conjunction with the UK Plessey option in Section A.

***Do not Transmit UK Plessey Check Digits**

When this option is chosen, the scanner will not transmit UK Plessey's check digit characters.

Section E

RS-232 Parameters

All of the options in this section are available with RS-232 communication. However, some of the data formatting options also apply for keyboard wedge mode.

E/D = Enable/Disable
DN/T = Do Not Transmit/Transmit

Odd Parity

Parity is an extra bit attached to the transmitted data byte which is used to catch potential single-bit data transmission errors. The scanner's parity must match the host's parity. Select odd to make the additional parity bit either a 0 or 1 to guarantee that an odd number of bits are ones.

***Space Parity**

Parity is an extra bit attached to the transmitted data byte which is used to catch potential single-bit data transmission errors. The scanner's parity must match the host's parity. Select space to make the parity bit always 0.

Even Parity

The scanner's parity must match the host' parity. Select even to make the additional parity bit either a 0 or 1 to guarantee that an even number of bits are ones.

Mark Parity

Parity is an extra bit attached to the transmitted data byte which is used to catch potential single-bit data transmission error The scanner's parity must match the host' parity. Select mark to make the parity bit always 1.

19200 Baud Rate

A baud rate is a unit that measures the speed with which information is transferred. The baud rate of the scanner must equal the baud rate of the host device. Select the rate that matches the host device's requirements.

4800 Baud Rate

A baud rate is a unit that measures the sp with which information is transferred. The rate of the scanner must equal the baud ra the host device. Select the rate that match the host device's requirements.

***9600 Baud Rate**

A baud rate is a unit that measures the speed with which information is transferred. The baud rate of the scanner must equal the baud rate of the host device. Select the rate that matches the host device's requirements.

2400 Baud Rate

A baud rate is a unit that measures the sp with which information is transferred. The rate of the scanner must equal the baud ra the host device. Select the rate that match the host device's requirements.

1200 Baud Rate

A baud rate is a unit that measures the speed with which information is transferred. The baud rate of the scanner must equal the baud rate of the host device. Select the rate that matches the host device's requirements.

300 Baud Rate

A baud rate is a unit that measures the sp with which information is transferred. The rate of the scanner must equal the baud ra the host device. Select the rate that match the host device's requirements.

600 Baud Rate

A baud rate is a unit that measures the speed with which information is transferred. The baud rate of the scanner must equal the baud rate of the host device. Select the rate that matches the host device's requirements.

38400 Baud Rate

A baud rate is a unit that measures the sp with which information is transferred. The rate of the scanner must equal the baud ra the host device. Select the rate that match the host device's requirements.

8 Data Bits

RS-232 serial communication requires ASCII data to be transmitted in either 7 or 8 data bits. In addition, one parity bit will be transmitted. If the host device requires 8 data bits, select this option.

***7 Data Bits**

RS-232 serial communication requires ASCII data to be transmitted in either 7 or 8 data bits. In addition, one parity bit will be transmitted.

Transmit Sanyo ID Characters

When this option is chosen, the scanner v
transmit code identifiers before each bar c
These identifiers are expected by many Sa
registers.

***Do not Transmit Sanyo ID Characters**

When this option is chosen, the scanner v
not transmit code identifiers before each b
code.

Enable Shell/Schulmberger Formatting

When this option is chosen, the scanner will output an LRC (check character) after the bar code. In addition, ETX suffix and STX prefix must be enabled while CR and LF must be disabled.

***Disable Shell/ Schulmberger Formatting**

When this option is chosen, the scanner will not output an LRC (check character) after the bar code.

Enable SNI Beetle Mode

When this option is enabled, the scanner will transmit the ID characters that SNI Bee cash register expects.

***Disable SNI Beetle Mode**

When this option is disabled, the scanner will not transmit the ID characters that the SNI Beetle cash register expects.

Enable French PC Term

When this option is enabled, the scanner will transmit PC type make/break scan codes instead of ASCII data characters.

***Disable French PC Term**

When this option is disabled, the scanner will not transmit PC type make/break scan codes instead of ASCII data characters.

Transmit AIM ID Characters

When this option is chosen, the scanner will transmit AIM symbology identifiers. Currently, the scanners do not support thi feature.

***Do not Transmit AIM ID Characters**

When this option is chosen, the scanner will not transmit AIM symbology identifiers. Currently, the scanners do not support thi feature.

Enable Nixdorf ID

When this option is enabled, the scanner will transmit the code identifiers before each bar code. Many Siemens/Nixdorf registers require these code identifiers.

***Disable Nixdorf ID**

When this option is chosen, the scanner will not transmit the code identifiers before each bar code.

Programmable Prefix Characters, RS-2 (Byte1)

When this option is chosen, one programı prefix ID character can be assigned and a to the scanned data transmission. To spec the character, scan the above bar code ar appropriate Code Byte in Section I.

Programmable Prefix Characters, RS-2 (Byte 2)

When this option is chosen, a second programmable prefix ID character can be assigned and added to the scanned data transmission. To specify the second chara scan the above bar code and the appropri Code Byte in Section I.

Programmable Suffix Characters, RS-232 (Byte1)

When this option is chosen, one programmable suffix ID character can be assigned and added to the scanned data transmission. To specify the character, scan the above bar code and the appropriate Code Byte in Section I.

Programmable Suffix Characters, RS-232 (Byte2)

When this option is chosen, a second programmable suffix ID character can be assigned and added to the scanned data transmission. To specify the second character, scan the above bar code and the appropriate Code Byte in Section I.

Enable UPC Prefix

When this option is enabled, the scanner
transmit a prefix before any UPC/EAN bar
code. The prefixes are A (UPC-A), EO (U
E), F (EAN-13) and FF (EAN-8).

***Disable UPC Prefix**

When this option is chosen, the scanner
not transmit a prefix before any UPC/EAN
code.

Enable UPC Suffix

When this option is enabled, the scanner will transmit a suffix after any UPC/EAN bar code. The suffixes are A (UPC-A), EO (UPC-E), F (EAN-13) and FF (EAN-8).

***Disable UPC Suffix**

When this option is chosen, the scanner will not transmit a suffix after any UPC/EAN bar code.

Enable STX Prefix

When this option is enabled, the scanner w
transmit a Start of TeXt (ASCII 02H) befor
each bar code.

***Disable STX Prefix**

When this option is chosen the scanner w
transmit a Start of TeXt (ASCII 02H) befor
each bar code.

Enable ETX Suffix

When this option is enabled, the scanner will transmit an End of TeXt (ASCII 03H) after each bar code.

***Disable ETX Suffix**

When this option is chosen, the scanner will not transmit an End of TeXt (ASCII 03H) after each bar code.

***Enable Carriage Return (CR)**

When this option is enabled, the scanner v transmit a Carriage Return (CR) after eacl code.

Disable Carriage Return (CR)

When this option is chosen, the scanner v not transmit a Carriage Return (CR) after bar code.

***Enable Line Feed**

When this option is enabled, the scanner will transmit a Line Feed (LF) after each bar code.

Disable Line Feed

When this option is chosen, the scanner will not transmit a Line Feed (LF) after each bar code.

Enable Tab Prefix

When this option is enabled, the scanner v transmit a TAB (ASCII 09H) before each b code.

***Disable Tab Prefix**

When this option is chosen, the scanner v not transmit a TAB (ASCII 09H) before ea bar code.

Enable Tab Suffix

When this option is enabled, the scanner will transmit a TAB (ASCII 09H) after each bar code.

***Disable Tab Suffix**

When this option is chosen, the scanner will not transmit a TAB (ASCII 09H) after each bar code.

Enable "DE" Disable Command

When this option is enabled, the scanner
stop scanning when it receives an ASCII "
from the host device. Scanning will resum
when the scanner receives an ASCII "E". T
feature will only work with RS-232 commu
tion.

***Disable "DE" Disable Command**

When this option is chosen, the scanner w
not stop scanning when it receives an ASC
"D" from the host device.

Enable “FL” Laser Enable Command

When this option is enabled, the laser will turn off when the scanner receives an ASCII “F” from the host device. The laser will turn on when the scanner receives an ASCII “L”. This feature will only work with RS-232 communication.

***Disable “FL” Laser Enable Command**

When this option is chosen, the laser will not turn off when the scanner receives an ASCII “F” from the host device.

Enable DTR Handshaking Support

When this option is enabled, the scanner
stop scanning when the Data Terminal Re
(DTR) signal goes inactive.

***Disable DTR Handshaking Support**

When this option is chosen, the scanner
not stop scanning when the Data Termina
Ready (DTR) signal goes inactive.

Enable RTS/CTS Handshaking

When this option is enabled, the scanner will output a Request To Send (RTS) signal and wait for a Clear To Send (CTS) signal before any data is transmitted.

***Disable RTS/CTS Handshaking**

When this option is chosen, the scanner will not output a Request To Send (RTS) signal and wait for a Clear To Send (CTS) signal before any data is transmitted.

***Character RTS/CTS**

When this option is chosen, the scanner v activate and deactivate its RTS signal on each character that it transmits.

Message RTS/CTS

When this option is chosen, the scanner v activate and deactivate its RTS signal on e message that it transmits. This mode shou normally be enabled for Sanyo registers.

Enable XON/XOFF Handshaking

When this option is enabled, the scanner will stop transmission whenever an XOFF (ASCII 13H) is received. Transmission will resume after an XON (ASCII 11H) is received.

***Disable XON/XOFF Handshaking**

When this option is chosen, the scanner will not stop transmission whenever an XOFF (ASCII 13H) is received.

Enable ACK/NAK

When ACK/NAK is enabled, the scanner v not scan again unless an ACK (ASCII 06H received after transmission of a bar code. NAK (ASCII 15H) is received, the scanner retransmit the bar code.

***Disable ACK/NAK**

When this option is chosen, ACK/NAK handshaking will not occur.

Enable 5 Retries on ACK/NAK Time-out

When this option is enabled, the scanner will transmit five times when an ACK/NAK communication time-out is reached.

***Disable 5 Retries on ACK/NAK Time-out**

When this option is enabled, the scanner will transmit one time when an ACK/NAK communication time-out is reached.

Section F

Keyboard Wedge Parameters

This section provides bar codes that can be chosen for various options available with keyboard emulation. This protocol is only available with a version 17 scanner.

E/D = Enable/Disable

Enable Keyboard Wedge Emulation

This option should be selected if the scanner will provide keyboard emulation by converting the scanned bar code data to the PC keyboard scan code equivalent.

***USA Keyboard**

If keyboard emulation is enabled, scan this bar code to enable the keyboard type USA

Application Notes:

For most applications, it will be desirable to disable line feed transmission. (Pg. E - 11)

For non-USA keyboards, 10 mesc (Pg. C - 11) is probably the best intercharacter delay.

For network system installations, tuning of the intercharacter and inter scan code options may be required.

Spain Keyboard

If keyboard emulation is enabled, scan this bar code to enable the keyboard type Spa

Italy Keyboard

If keyboard emulation is enabled, scan this bar code to enable the keyboard type Italy.

France Keyboard

If keyboard emulation is enabled, scan this bar code to enable the keyboard type Fra

Germany Keyboard

If keyboard emulation is enabled, scan this bar code to enable the keyboard type Germany.

UK Keyboard

If keyboard emulation is enabled, scan this code to enable the keyboard type UK.

Belgium Keyboard (Swiss)*

If keyboard emulation is enabled, scan this bar code to enable the keyboard type Belgium. *(scan this code and enable extended country code table bar code pg. F-7 to activate Swiss Keyboard mode).

***AT Keyboard**

If using an AT computer, scan the above. (includes IBM® PS/2 and compatible models 55, 60, 80).

XT Keyboard

If using an XT computer, scan the above.

PS/2 Keyboard

If using a PS/2 computer, scan the above. (includes IBM® PC and compatible models 70, 8556).

IBM® 4700 Financial Keyboard

If using an IBM® 4700 Financial Keyboard, scan the above.

Reserved Keyboard

Enable Caps Lock

AT Mode	Automatically detects Ca Locks status
PS/2 or XT Mode	User-defined Caps Lock status

These modes may not work with all applications.

***Disable Caps Lock**

When this option is disabled, the Caps Lock feature is not supported.

Enable Alt Mode

When this option is enabled, the scanner will duplicate this keyboard sequence: Hold down the Alt key; Type the decimal number that corresponds to the appropriate character.

***Disable Alt Mode**

Caution: If the host software application uses the Alt key as a "Hot" key, make sure Alt mode is disabled.

Enable Reserved Wedge Function

***Disable Reserved Wedge Function**

Inter Scan Code Delay: None

If an inter scan code delay is not required, choose this option.

Inter Scan Code Delay: 7.5 msec

The time specified represents the amount of time between individual 9-bit scan codes. This parameter may need to be adjusted for operation with certain PC keyboard BIOS.

***Inter Scan Code Delay: 800 μsec (micro-seconds)**

The time specified represents the amount of time between individual 9-bit scan codes. This parameter may need to be adjusted for operation with certain PC keyboard BIOS.

Inter Scan Code Delay: 15 msec

The time specified represents the amount of time between individual 9-bit scan codes. This parameter may need to be adjusted for operation with certain PC keyboard BIOS.

Do Not Transmit F0H Break Code (AT and PS/2 keyboards)

When enabled, the scanner will not transmit the F0H in the break-code sequence.

***Transmit F0H Break Code (AT and PS/2 keyboards)**

When this option is chosen, the scanner will transmit the F0H in the break-code sequence.

Enable MS6720 Extended Country Code Table

When this option is enabled, the scanner wil access the extended country code table when used with a corresponding primary country code.

Disable MS6720 Extended Country Code Table

Enable MS700i/860i Extended Country Code Table

When this option is enabled, the scanner will access the extended country code table when used with a corresponding primary country code.

Disable MS700i/860i Extended Country Code Table

Stand Alone or Single Ended Wedge Mode*

Some installations require a keyboard wedge scanner to connect to a PC compatible keyboard port without an external keyboard. A cable that has only the male keyboard connector that plugs into the motherboard would be typically used. Enabling this mode allows the scanner to send keyboard diagnostic completion codes and maintain the status of variable keyboard functions such as num lock, caps lock and scroll lock.

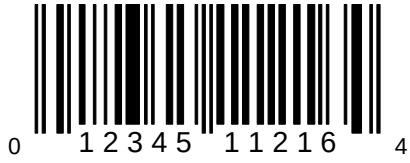
*****At this printing, this feature is not available for the MS6720.

This method was first developed to work through the auxiliary keyboard port of an IBM 4614 Sure One POS terminal. It can also be used with some, but not all notebook computers equipped with an external keyboard port.

Application Test Note:

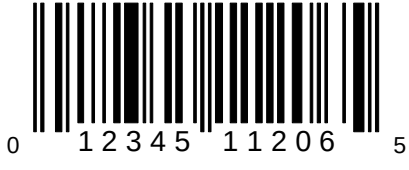
Due to variations in host systems, Metrologic cannot guarantee that a stand alone scanner in single ended mode will work with your system. A reliable test for compatibility would be to connect an external keyboard to the notebook and power up the unit. If the notebook accepts data from both the external keyboard and the built in keyboard, the notebook is likely to work with the scanner in single ended mode.

Enable Stand Alone



If keyboard emulation is enabled, scan this bar code to enable the Stand Alone mode.

Disable Stand Alone



Section G

Reserved Features

This section provides bar codes to select pre-encoded reserved functions. They execute a variety of special software features. However, they should not be selected without written instructions from Metrologic.

E/D = Enable/Disable

Enable Reserved Code 4

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 8

This option should not be enabled withou written instructions from Metrologic.

***Disable Reserved Code 4**

***Disable Reserved Code 8**

Enable Reserved Code 9

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 14

This option should not be enabled withou written instructions from Metrologic.

***Disable Reserved Code 9**

***Disable Reserved Code 14**

Enable Reserved Code 17

This option should not be enabled without written instructions from Metrologic.

***Enable Reserved Code 18**

This option should not be enabled without written instructions from Metrologic.

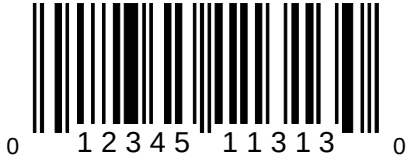
***Disable Reserved Code 17**

Disable Reserved Code 18

Enable Reserved Code 19

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 20



This option should not be enabled without written instructions from Metrologic.

***Disable Reserved Code 19**

***Disable Reserved Code 20**

Enable Reserved Code 21

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 22

This option should not be enabled without written instructions from Metrologic.

***Disable Reserved Code 21**

***Disable Reserved Code 22**

Enable Reserved Code 23

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 24

This option should not be enabled without written instructions from Metrologic.

***Disable Reserved Code 23**

***Disable Reserved Code 24**

Enable Reserved Code 25

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 26

This option should not be enabled without written instructions from Metrologic.

***Disable Reserved Code 25**

***Disable Reserved Code 26**

Enable Reserved Code 27

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 28

This option should not be enabled without written instructions from Metrologic.

***Disable Reserved Code 27**

***Disable Reserved Code 28**

Enable Reserved Code 29

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 30

This option should not be enabled without written instructions from Metrologic.

***Disable Reserved Code 29**

***Disable Reserved Code 30**

Enable Reserved Code 31

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 32

This option should not be enabled without written instructions from Metrologic.

***Disable Reserved Code 31**

***Disable Reserved Code 32**

Enable Reserved Code 33

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 34

This option should not be enabled without written instructions from Metrologic.

***Disable Reserved Code 33**

***Disable Reserved Code 34**

Enable Reserved Code 35

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 36

This option should not be enabled without written instructions from Metrologic.

***Disable Reserved Code 35**

***Disable Reserved Code 36**

Enable Reserved Code 37

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 38

This option should not be enabled withou written instructions from Metrologic.

***Disable Reserved Code 37**

***Disable Reserved Code 38**

Enable Reserved Code 39

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 40

This option should not be enabled withou written instructions from Metrologic.

***Disable Reserved Code 39**

***Disable Reserved Code 40**

Enable Reserved Code 41

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 42

This option should not be enabled withou written instructions from Metrologic.

***Disable Reserved Code 41**

***Disable Reserved Code 42**

Enable Reserved Code 43

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 44

This option should not be enabled withou written instructions from Metrologic.

***Disable Reserved Code 43**

***Disable Reserved Code 44**

Enable Reserved Code 45

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 46

This option should not be enabled withou written instructions from Metrologic.

***Disable Reserved Code 45**

***Disable Reserved Code 46**

Enable Reserved Code 47

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 48

This option should not be enabled without written instructions from Metrologic.

***Disable Reserved Code 47**

***Disable Reserved Code 48**

Enable Reserved Code 49

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 50

This option should not be enabled withou written instructions from Metrologic.

***Disable Reserved Code 49**

***Disable Reserved Code 50**

Enable Reserved Code 51

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 52

This option should not be enabled without written instructions from Metrologic.

***Disable Reserved Code 51**

***Disable Reserved Code 52**

Enable Reserved Code 53

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 54

This option should not be enabled withou written instructions from Metrologic.

***Disable Reserved Code 53**

***Disable Reserved Code 54**

Enable Reserved Code 55

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 56

This option should not be enabled withou written instructions from Metrologic.

***Disable Reserved Code 55**

***Disable Reserved Code 56**

Enable Reserved Code 57

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 58

This option should not be enabled withou written instructions from Metrologic.

***Disable Reserved Code 57**

***Disable Reserved Code 58**

Enable Reserved Code 59

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 60

This option should not be enabled withou written instructions from Metrologic.

***Disable Reserved Code 59**

***Disable Reserved Code 60**

Enable Reserved Code 61

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 62

This option should not be enabled withou written instructions from Metrologic.

***Disable Reserved Code 61**

***Disable Reserved Code 62**

Enable Reserved Code 63

This option should not be enabled without written instructions from Metrologic.

Enable Reserved Code 64

This option should not be enabled without written instructions from Metrologic.

***Disable Reserved Code 63**

***Disable Reserved Code 64**

Enable Reserved Code 65

This option should not be enabled without written instructions from Metrologic.

***Disable Reserved Code 65**

Supplemental/UCC Codes

This section provides bar codes to select the proper supplemental requirements for the system. Supplementals/add ons are the 2/5 digit bar codes attached to books, coupons, and magazines. UPC/EAN must be enabled in order for the scanner to recognize the supple-mental requirements chosen from this section. Furthermore, the scanner must contain special software to support these features.

E/D = Enable/Disable

Enable Two Digit Supplements

When this option is enabled, the scanner will scan 2 digit supplementals.

***Disable Two Digit Supplements**

When this option is chosen, the scanner will not scan 2 digit supplementals.

Enable Five Digit Supplements

When this option is enabled, the scanner will scan 5 digit supplementals.

***Disable Five Digit Supplements**

When this option is chosen, the scanner will not scan 5 digit supplementals.

Enable Bookland

When this option is enabled, the scanner will require that a 5 digit supplement be scanned whenever an EAN-13 code begins with 978.

***Disable Bookland**

When this option is chosen, the scanner will not require that a 5 digit supplement be scanned whenever an EAN-13 code begins with 978.

Enable 977 (2 digit) Supplemental Requirement

When this option is enabled, the scanner
require that a 2 digit supplement be scanr
whenever an EAN-13 code begins with 97

***Disable 977 (2 digit) Supplemental Requirement**

When this option is chosen, the scanner will not require that a 2 digit supplement be scanned whenever an EAN-13 code begins with 977.

Supplements are Required

When this option is chosen, all UPC/EAN labels that are scanned must have a supplement.

***Supplements are not Required**

When this option is chosen, all UPC/EAN labels that are scanned do not require a supplement.

***Enable Two Digit Redundancy**

When this option is enabled, the scanner will scan the bar code plus the 2 digit add on twice before accepting the data as vali information.

Disable Two Digit Redundancy

When this option is chosen, the scanner will not implement the two digit redundanc feature.

Enable Five Digit Redundancy

When this option is enabled, the scanner will scan the bar code plus the 5 digit add on twice before accepting the data as valid information.

***Disable Five Digit Redundancy**

When this option is chosen, the scanner will not implement the five digit redundancy feature.

200 msec to Find Supplement

When this option is chosen, the scanner v
allot 200 milliseconds to “find” an add on a
a main UPC/EAN bar code has been scar

***100 msec to Find Supplement**

When this option is chosen, the scanner v
allot 100 milliseconds to “find” an add on a
a main UPC/EAN bar code has been scar

Enable Code 128 Coupon Extended Code

When this option is enabled, the scanner will scan the Code 128 coupon extended bar codes.

***Disable Code 128 Coupon Extended Code**

When this option is disabled, scanning of Code 128 coupon codes is not supported.

Enable Code 128]C1 Extended Code F

When this option is enabled, the scanner transmit an]C1 at the beginning of the Co 128 portion of the coupon code.

***Disable Code 128]C1 Extended Code Format**

When this option is disabled, the scanner will not transmit an]C1 at the beginning of the Code 128 portion of the coupon code

Enable ISBN Formatting

(Not available with all models)

Enable Bookland to ISBN Conversion

(Not available with all models)

Disable ISBN Formatting

Disable Bookland to ISBN Cover

Enable ISBN Check Digit

(Not available with all models)

Disable ISBN Check Digit

Code Bytes

This section contains a sequential list of code bytes. To enable an option, first scan the ITF Symbol Length, Minimum Symbol Length, Symbol Length Lock found in section A or Programmable Prefix/Suffix Character bar code found in section E and then scan a code byte from this section. Since each code byte has a different assigned function depending upon which option is chosen, use the key below to determine which option has been performed. Following the list of code bytes, will be Programmable Prefix/Suffix (1, 2) Extended Modes (Extended Key Codes and Function Keys) and code byte reference tables.

A = ITF symbol length	C = Symbol length lock
B = Minimum symbol length	D = Prefix/suffix character select

Code Byte 000 (000H)

A = ITF Variable length
B = Allow any length
C = Variable length
D = No prefix/suffix

Code Byte 001 (001H)

A = Not applicable for ITF symbol length
B = Scan 2 digit or > bar codes
C = Scan 1 character bar codes only
D = ASCII <Ctrl> - <A> (SOH) for prefix/suffix

Code Byte 002 (002H)

A = Scan 2 digit ITF
B = Scan 3 digit or > bar codes
C = Scan 2 digit only
D = ASCII <Ctrl> - <B> (STX) prefix/suffix

Code Byte 003 (003H)

A = Scan 3 digit ITF
B = Scan 4 digit or > bar codes
C = Scan 3 digit only
D = ASCII <Ctrl> - <C> (ETX) prefix/suffix

Code Byte 004 (004H)

A = Scan 4 digit ITF
B = Scan 5 digit or > bar codes
C = Scan 4 digit only
D = ASCII <Ctrl> - <D> (EOT) prefix/suffix

Code Byte 005 (005H)

A = Scan 5 digit ITF
B = Scan 6 digit or > bar codes
C = Scan 5 digit only
D = ASCII <Ctrl> - <E> (ENQ) for prefix/suffix

Code Byte 006 (006H)

A = Scan 6 digit ITF
B = Scan 7 digit or > bar codes
C = Scan 6 digit only
D = ASCII <Ctrl> - <F> (ACK) prefix/suffix

Code Byte 007 (007H)

A = Scan 7 digit ITF
B = Scan 8 digit or > bar codes
C = Scan 7 digit only
D = ASCII <Ctrl> - <G> (DEL) prefix/suffix

Code Byte 008 (008H)

A = Scan 8 digit ITF bar codes
B = Scan 9 digit or > bar codes
C = Scan only 8 digit bar codes
D = ASCII <Ctrl> - <H> (Backspace) prefix/suffix

Code Byte 009 (009H)

A = Scan 9 digit ITF bar codes
B = Scan 10 digit or > bar codes
C = Scan only 9 digit bar codes
D = ASCII <Ctrl> - <I> (Tab) prefix/suffix

Code Byte 010 (00AH)

A = Scan 10 digit ITF bar codes
B = Scan 11 digit or > bar codes
C = Scan only 10 digit bar codes
D = ASCII <Ctrl> - <J> (Line Feed) prefix/

Code Byte 011 (00BH)

A = Scan 11 digit ITF bar codes
B = Scan 12 digit or > bar codes
C = Scan only 11 digit bar codes
D = ASCII <Ctrl> - <K> (Vertical Tab) prefix/suffix

Code Byte 012 (00CH)

A = Scan 12 digit ITF bar codes
B = Scan 13 digit or > bar codes
C = Scan only 12 digit bar codes
D = ASCII <Ctrl> - <L> (Form Feed) prefix/suffix

Code Byte 013 (00DH)

A = Scan 13 digit ITF bar codes
B = Scan 14 digit or > bar codes
C = Scan only 13 digit bar codes
D = ASCII <Ctrl> - <M> (Carriage Return) prefix/suffix

Code Byte 014 (00EH)

A = Scan 14 digit ITF bar codes
B = Scan 15 digit or > bar codes
C = Scan only 14 digit bar codes
D = ASCII <Ctrl> - <N> (Shift Out) prefix/suf

Code Byte 015 (00FH)

A = Scan 15 digit ITF bar codes
B = Scan 16 digit or > bar codes
C = Scan only 15 digit bar codes
D = ASCII <Ctrl> - <O> (Shift In) prefix/suffi

Code Byte 016 (010H)

A = Scan 16 digit ITF bar codes
B = Scan 17 digit or > bar codes
C = Scan only 16 digit bar codes
D = ASCII <Ctrl> - <P> (DLE) prefix/suffix

Code Byte 017 (011H)

A = Scan 17 digit ITF bar codes
B = Scan 18 digit or > bar codes
C = Scan only 17 digit bar codes
D = ASCII <Ctrl> - <Q> (XON) prefix/suffix

Code Byte 018 (012H)

A = Scan 18 digit ITF bar codes
B = Scan 19 digit or > bar codes
C = Scan only 18 digit bar codes
D = ASCII <Ctrl> - <R> (Tape On) prefix/suf

Code Byte 019 (013H)

A = Scan 19 digit ITF bar codes
B = Scan 20 digit or > bar codes
C = Scan only 19 digit bar codes
D = ASCII <Ctrl> - <S> (XOFF) prefix/suffix

Code Byte 020 (014H)

A = Scan 20 digit ITF bar codes
B = Scan 21 digit or > bar codes
C = Scan only 20 digit bar codes
D = ASCII <Ctrl> - <T> (Tape Off) prefix/suffix

Code Byte 021 (015H)

A = Scan 21 digit ITF bar codes
B = Scan 22 digit or > bar codes
C = Scan only 21 digit bar codes
D = ASCII <Ctrl> - <U> (NAK) prefix/suffix

Code Byte 022 (016H)

A = Scan 22 digit ITF bar codes
B = Scan 23 digit or > bar codes
C = Scan only 22 digit bar codes
D = ASCII <Ctrl> - <V> (SYNC) prefix/suffix

Code Byte 023 (017H)

A = Scan 23 digit ITF bar codes
B = Scan 24 digit or > bar codes
C = Scan only 23 digit bar codes
D = ASCII <Ctrl> - <W> (ETB) prefix/suffix

Code Byte 024 (018H)

A = Scan 24 digit ITF bar codes
B = Scan 25 digit or > bar codes
C = Scan only 24 digit bar codes
D = ASCII <Ctrl> - <X> (CAN) prefix/suffix

Code Byte 025 (019H)

A = Scan 25 digit ITF bar codes
B = Scan 26 digit or > bar codes
C = Scan only 25 digit bar codes
D = ASCII <Ctrl> - <Y> (EOM) prefix/suffix

Code Byte 026 (01AH)

A = Scan 26 digit ITF bar codes
B = Scan 27 digit or > bar codes
C = Scan only 26 digit bar codes
D = ASCII <Ctrl> - <2> (SUB) prefix/suffix

Code Byte 027 (01BH)

A = Scan 27 digit ITF bar codes
B = Scan 28 digit or > bar codes
C = Scan only 27 digit bar codes
D = ASCII <ESC> prefix/suffix

Code Byte 028 (01CH)

A = Scan 28 digit ITF bar codes
B = Scan 29 digit or > bar codes
C = Scan only 28 digit bar codes
D = ASCII FS (File Separator) prefix/suffix

Code Byte 029 (01DH)

A = Scan 29 digit ITF bar codes
B = Scan 30 digit or > bar codes
C = Scan only 29 digit bar codes
D = ASCII GS (Group Separator) prefix/suffix

Code Byte 030 (01EH)

A = Scan 30 digit ITF bar codes
B = Scan 31 digit or > bar codes
C = Scan only 30 digit bar codes
D = ASCII RS (Record Separator) prefix/suf

Code Byte 031 (01FH)

A = Scan 31 digit ITF bar codes
B = Scan 32 digit or > bar codes
C = Scan only 31 digit bar codes
D = ASCII VS (Record Separator) prefix/suf

Code Byte 032 (020H)

A = Scan 32 digit ITF bar codes
B = Scan 33 digit or > bar codes
C = Scan only 32 digit bar codes
D = ASCII Space prefix/suffix

Code Byte 033 (021H)

A = Scan 33 digit ITF bar codes
B = Scan 34 digit or > bar codes
C = Scan only 33 digit bar codes
D = ASCII ! prefix/suffix

Code Byte 034 (022H)

A = Scan 34 digit ITF bar codes
B = Scan 35 digit or > bar codes
C = Scan only 34 digit bar codes
D = ASCII " prefix/suffix

Code Byte 035 (023H)

A = Scan 35 digit ITF bar codes
B = Scan 36 digit or > bar codes
C = Scan only 35 digit bar codes
D = ASCII # prefix/suffix

Code Byte 036 (024H)

A = Scan 36 digit ITF bar codes
B = Scan 37 digit or > bar codes
C = Scan only 36 digit bar codes
D = ASCII $ prefix/suffix

Code Byte 037 (025H)

A = Scan 37 digit ITF bar codes
B = Scan 38 digit or > bar codes
C = Scan only 37 digit bar codes
D = ASCII % prefix/suffix

Code Byte 038 (026H)

A = Scan 38 digit ITF bar codes
B = Scan 39 digit or > bar codes
C = Scan only 38 digit bar codes
D = ASCII & prefix/suffix

Code Byte 039 (027H)

A = Scan 39 digit ITF bar codes
B = Scan 40 digit or > bar codes
C = Scan only 39 digit bar codes
D = ASCII ' (apostrophe) prefix/suffix

Code Byte 040 (028H)

A = Scan 40 digit ITF bar codes
B = Scan 41 digit or > bar codes
C = Scan only 40 digit bar codes
D = ASCII (prefix/suffix

Code Byte 041 (029H)

A = Scan 41 digit ITF bar codes
B = Scan 42 digit or > bar codes
C = Scan only 41 digit bar codes
D = ASCII) prefix/suffix

Code Byte 042 (02AH)

A = Scan 42 digit ITF bar codes
B = Scan 43 digit or > bar codes
C = Scan only 42 digit bar codes
D = ASCII * prefix/suffix

Code Byte 043 (02BH)

A = Scan 43 digit ITF bar codes
B = Scan 44 digit or > bar codes
C = Scan only 43 digit bar codes
D = ASCII + prefix/suffix

Code Byte 044 (02CH)

A = Scan 44 digit ITF bar codes
B = Scan 45 digit or > bar codes
C = Scan only 44 digit bar codes
D = ASCII , (comma) prefix/suffix

Code Byte 045 (02DH)

A = Scan 45 digit ITF bar codes
B = Scan 46 digit or > bar codes
C = Scan only 45 digit bar codes
D = ASCII - (minus) prefix/suffix

Code Byte 046 (02EH)

A = Scan 46 digit ITF bar codes
B = Scan 47 digit or > bar codes
C = Scan only 46 digit bar codes
D = ASCII . (period) prefix/suffix

Code Byte 047 (02FH)

D = ASCII / prefix/suffix

Code Byte 048 (030H)

D = ASCII 0 (zero) prefix/suffix

Code Byte 049 (031H)

D = ASCII 1 (one) prefix/suffix

Code Byte 050 (032H)

D = ASCII 2 prefix/suffix

Code Byte 051 (033H)

D = ASCII 3 prefix/suffix

Code Byte 052 (034H)

D = ASCII 4 prefix/suffix

Code Byte 053 (035H)

D = ASCII 5 prefix/suffix

Code Byte 054 (036H)

D = ASCII 6 prefix/suffix

Code Byte 055 (037H)

D = ASCII 7 prefix/suffix

Code Byte 056 (038H)

D = ASCII 8 prefix/suffix

Code Byte 058 (03AH)

D = ASCII : (colon) prefix/suffix

Code Byte 057 (039H)

D = ASCII 9 prefix/suffix

Code Byte 059 (03BH)

D = ASCII ; (semicolon) prefix/suffix

Code Byte 060 (03CH)

D = ASCII < prefix/suffix

Code Byte 062 (03EH)

D = ASCII > prefix/suffix

Code Byte 061 (03DH)

D = ASCII = prefix/suffix

Code Byte 063 (03FH)

D = ASCII ? prefix/suffix

Code Byte 064 (040H)

D = ASCII @ prefix/suffix

Code Byte 065 (041H)

D = ASCII A prefix/suffix

Code Byte 066 (042H)

D = ASCII B prefix/suffix

Code Byte 067 (043H)

D = ASCII C prefix/suffix

Code Byte 068 (044H)

D = ASCII D prefix/suffix

Code Byte 069 (045H)

D = ASCII E prefix/suffix

Code Byte 070 (046H)

D = ASCII F prefix/suffix

Code Byte 071 (047H)

D = ASCII G prefix/suffix

Code Byte 072 (048H)

D = ASCII H prefix/suffix

Code Byte 073 (049H)

D = ASCII I prefix/suffix

Code Byte 074 (04AH)

D = ASCII J prefix/suffix

Code Byte 075 (04BH)

D = ASCII K prefix/suffix

Code Byte 076 (04CH)

D = ASCII L prefix/suffix

Code Byte 078 (04EH)

D = ASCII N prefix/suffix

Code Byte 077 (04DH)

D = ASCII M prefix/suffix

Code Byte 079 (04FH)

D = ASCII O prefix/suffix

Code Byte 080 (050H)

D = ASCII P prefix/suffix

Code Byte 081 (051H)

D = ASCII Q prefix/suffix

Code Byte 082 (052H)

D = ASCII R prefix/suffix

Code Byte 083 (053H)

D = ASCII S prefix/suffix

Code Byte 084 (054H)

D = ASCII T prefix/suffix

Code Byte 085 (055H)

D = ASCII U prefix/suffix

Code Byte 086 (056H)

D = ASCII V prefix/suffix

Code Byte 087 (057H)

D = ASCII W prefix/suffix

Code Byte 088 (058H)

D = ASCII X prefix/suffix

Code Byte 089 (059H)

D = ASCII Y prefix/suffix

Code Byte 090 (05AH)

D = ASCII Z prefix/suffix

Code Byte 091 (05BH)

D = ASCII [prefix/suffix

Code Byte 092 (05CH)

D = ASCII \ prefix/suffix

Code Byte 094 (05EH)

D = ASCII ^ prefix/suffix

Code Byte 093 (05DH)

D = ASCII] prefix/suffix

Code Byte 095 (05FH)

D = ASCII _ (underscore) prefix/suffix

Code Byte 096 (060H)

D = ASCII ` (accent grave) prefix/suffix

Code Byte 097 (061H)

D = ASCII a prefix/suffix

Code Byte 098 (062H)

D = ASCII b prefix/suffix

Code Byte 099 (063H)

D = ASCII c prefix/suffix

Code Byte 100 (064H)

D = ASCII d prefix/suffix

Code Byte 101 (065H)

D = ASCII e prefix/suffix

Code Byte 102 (066H)

D = ASCII f prefix/suffix

Code Byte 103 (067H)

D = ASCII g prefix/suffix

Code Byte 104 (068H)

D = ASCII h prefix/suffix

Code Byte 105 (069H)

D = ASCII i prefix/suffix

Code Byte 106 (06AH)

D = ASCII j prefix/suffix

Code Byte 107 (06BH)

D = ASCII k prefix/suffix

Code Byte 108 (06CH)

D = ASCII l prefix/suffix

Code Byte 110 (06EH)

D = ASCII n prefix/suffix

Code Byte 109 (06DH)

D = ASCII m prefix/suffix

Code Byte 111 (06FH)

D = ASCII o prefix/suffix

Code Byte 112 (070H)

D = ASCII p prefix/suffix

Code Byte 113 (071H)

D = ASCII q prefix/suffix

Code Byte 114 (072H)

D = ASCII r prefix/suffix

Code Byte 115 (073H)

D = ASCII s prefix/suffix

Code Byte 116 (074H)

D = ASCII t prefix/suffix

Code Byte 117 (075H)

D = ASCII u prefix/suffix

Code Byte 118 (076H)

D = ASCII v prefix/suffix

Code Byte 119 (077H)

D = ASCII w prefix/suffix

Code Byte 120 (078H)

D = ASCII x prefix/suffix

Code Byte 121 (079H)

D = ASCII y prefix/suffix

Code Byte 122 (07AH)

D = ASCII z prefix/suffix

Code Byte 123 (07BH)

D = ASCII { prefix/suffix

Code Byte 124 (07CH)

D = ASCII | prefix/suffix

Code Byte 125 (07DH)

D = ASCII } prefix/suffix

Code Byte 126 (07EH)

D = ASCII ~ prefix/suffix

Code Byte 127 (07FH)

D = ASCII Delete prefix/suffix

PC Keyboard Wedge Programmable Prefix/ Suffix (1, 2) Extended Modes (Extended Key Codes and Function Keys)

Reference the Extended Key Code and Function Key Tables in this section, to locate the desired code byte value. While in program mode, scan the code byte value listed in the far right column into the desired Programmable Prefix/Suffix. Then scan the corresponding Prefix/ Suffix Extended Mode Code. Exit program mode.

Example: The desired prefix is the 'F4' Key. Scan the following sequence of codes:

Enter/Exit
Programmable Prefix 1 (section E)
Code Byte 19 (this section)
Programmable Prefix 1 Extended Mode (this section)
Enter/Exit

See the following pages for the bar codes.

Set Programmable Prefix 1 Extended Mode

Set Programmable Suffix 1 Extended M

Set Programmable Prefix 2 Extended Mode

Set Programmable Suffix 2 Extended M

Code Byte Tables

While in program mode, scan the code byte value listed in the far right column into the desired Programmable Prefix/Suffix. Then scan the corresponding Prefix/Suffix Extended Mode Code. Exit program mode.

Extended Reference Key Code Table

KEY	AT SCAN CODE	XT/PS2 SCAN CODE	PREFIX/SUFFIX VALUE **HEX DECIMAL**	CODE BYTE
UP ARROW	75H	48H	80H = 128	000
DOWN ARROW	72H	50H	81H = 129	001
RIGHT ARROW	74H	4DH	82H = 130	002
LEFT ARROW	6BH	4BH	83H = 131	003
INSERT KEY	70H	52H	84H = 132	004
DELETE KEY	71H	53H	85H = 133	005
HOME KEY	6CH	47H	86H = 134	006
END KEY	69H	4FH	87H = 135	007
PAGE UP KEY	7DH	49H	88H = 136	008
PAGE DOWN KEY	7AH	51H	89H = 137	009
RIGHT ALT KEY	11H	38H	8AH = 138	010
RIGHT CTRL KEY	14H	1DH	8BH = 139	011
RESERVED	00H	00H	8CH = 140	012
RESERVED	00H	00H	8DH = 141	013
NUMERIC <ENTER>	5AH	1CH	8EH = 142	014
NUMERIC /	4AH	35H	8FH = 143	015

Function keys F1 - F12 and other keys (No E0H required)

KEY	AT SCAN CODE	XT/PS2 SCAN CODE	PREFIX/SUFFIX VALUE **HEX DECIMAL**	CODE BYTE
F1	05H	3BH	90H = 144	016
F2	06H	3CH	91H = 145	017
F3	04H	3DH	92H = 146	018
F4	0CH	3EH	93H = 147	019
F5	03H	3FH	94H = 148	020
F6	0BH	40H	95H = 149	021
F7	83H	41H	96H = 150	022
F8	0AH	42H	97H = 151	023
F9	01H	43H	98H = 152	024
F10	09H	44H	99H = 153	025
F11	78H	57H	9AH = 154	026
F12	07H	58H	9BH = 155	027
NUMERIC +	79H	4EH	9CH = 156	028
NUMERIC -	7BH	4AH	9DH = 157	029
NUMERIC *	7CH	37H	9EH = 158	030
CAPS LOCK	58H	3AH	9FH = 159	031
NUM LOCK	77H	45H	A0H = 160	032
LEFT ALT KEY	11H	38H	A1H = 161	033
LEFT CTRL KEY	14H	1DH	A2H = 162	034
LEFT SHIFT	12H	2AH	A3H = 163	035
RIGHT SHIFT	59H	36H	A4H = 164	036

6720 Specific Codes

All of the options in this section are available with the 6720 scanner.

DOF = Depth of Field

Projection vs Hand Held Scanner - Modes and IR Sensor

When the Projection Scanner (default) Mode bar code is chosen the scanner will behave like an MS700. The IR sensor is used to “wake” the scanner up for an extended period of time. These bar codes have the following features:

Bar Code	Laser Off/Motor Off
10 min IR Timeout	10 mins
2 min IR Timeout	2 mins
30 min IR Timeout	30 mins
No IR Timeout	Always On

When the Hand Held Scanner Operation Mode bar code is chosen, the scanner will behave like an MS951. It will look for data only after the IR sensor has been activated. These bar codes have the following features:

Bar Code	Laser Off
10 min IR Timeout	5 secs
2 min IR Timeout	2 secs
30 min IR Timeout	10 secs
No IR Timeout	Always On

Hand Held Scanner Operation Mode

When this option is chosen, the scanner will behave like an MS951. It will look for data in response to an IR sensor activation.

***Scanner Projection Mode**

When this option is chosen, the scanner will behave like an MS700. It will look for bar code data as long as the scanner is awake, regardless of the IR sensor status.

***10 Minutes IR Time-outs - Projection**
5 Second Laser Off - Hand Held

This time represents the duration of time of tivity from the last scan until the scanner ent “standby” mode. The scanner will not return scanning until an object is waved in front of IR sensor.

2 Minutes IR Time-outs - Projection
2 Second Laser Off - Hand Held

This time represents the duration of time of inactivity from the last scan until the scanner enters a “standby” mode. The scanner will r return to scanning until an object is waved i front of the IR sensor.

30 Minutes IR Time-outs - Projection
10 Second Laser Off - Hand held

This time represents the duration of time of inactivity from the last scan until the scanner enters a “standby” mode. The scanner will not return to scanning an object is waved in front of the IR sensor.

No IR Time-outs - Projection and Hand Held

When this option is chosen, the scanner will not enter a “standby” mode. When using a Tech scanner, select this option since these units do not have an IR sensor or a touchplate.

Depth of Field/IR Range Sensor Switch

The scanning process can be initiated by ar infrared (IR) device that is below the output window. The depth of field for the scanner is 8". The following bar codes are 8 combinati of the Depth of Field/IR Activation operation currently available. With these bar codes, th scanner can:

a.) sense when it is in or out of the stand
b.) adjust the scanning depth of field
c.) adjust the depth of field in which the IR sensor activates

***Normal Depth of Field in the Stand IR Long Range**

When this option is selected, the scanner w configured for Normal Depth of Field and Lo Range IR when operated in the stand.

Extended Depth of Field in the Stand IR Long Range

When this option is selected, the scanner will be configured for Extended Depth of Field and Long Range IR when operated in the stand.

Optional Depth of Field in the Stand IR Long Range

Do not scan this bar code unless instructe to do so by a Metrologic representative.

Close Depth of Field in the Stand IR Short Range

When this option is selected, the scanner will be configured for Close Range Depth of Field and Short Range IR when operated in the stand.

***Normal Depth of Field out of Stand IR Long Range**

When this option is selected, the scanner be configured for Normal Depth of Field a Long Range IR when operated out of the stand.

Extended Depth of Field out of Stand IR Long Range

When this option is selected, the scanner will be configured for Extended Depth of Field and Long Range IR when operated out of the stand.

Close Depth of Field out of Stand IR Short Range

When this option is selected, the scanner will be configured for Close Depth of Field and Short Range IR when operated out of the stand.

Optional Depth of Field out of Stand IR Range

Do not scan this bar code unless instructe do so by a Metrologic representative.

MS6720 with 4680 IO Processor

This unit converts decoded bar code data to an IBM 468X/469X operating system compatible data format. It supports IBM 1520/Port 5b, IBM 4500/Port 9b CCD, and IBM 3687-2/Port 17 emulations.

To implement this mode, power the terminal down and then up between scanner configuration sequences to make sure the auto-sensing device drivers for some IBM 468X and 469X SIOC platforms are correctly initialized.

Configure the unit for 4680 communications by scanning Enter/Exit Program Mode, Load Defaults, Enable IBM 4680 Communication, select the emulation mode from page J-7 and Enter/Exit Program Mode bar codes. **Reference page B-1 of this guide to find the Enable IBM 4680 Communication bar code.**

NOTE: IBM 468X/469X systems will look for the UPC-E version “0" number system digit and check digit being transmitted. These digits are automatically turned on when the 4680 interface is enabled. These differ from standard defaults.

IBM 468x RS-485 SIOC Scanner Emulations

These bar codes allow the user to select various IBM serial input/output channel (SIOC) scanner/part emulation modes
for scanners equipped with the IBM RS-485 interface.

IBM 4500 CCD Emulation

Scan this bar code to select IBM 4500 CCD emulation for scanners equipped with the IBM RS-485 interface.

IBM 1520 Emulation

Scan this bar code to select IBM 1520 emulation for scanners equipped with the IBM RS-485 interface.

IBM 3687-2 Emulation

Scan this bar code to select IBM 3687-2 emulation for scanners equipped with the IBM RS-485 interface.

Reserved

This option should not be enabled without written instructions from Metrologic.

Reserved

This option should not be enabled without written instructions from Metrologic.

MS6720 - Light Pen/Wand Emulation Unit

Beginning with the MS6720 revision D scann
the speed at which Light Pen/Wand data car
transmitted is user selectable. The user can f
set the border size to 10x or 50x then select
specific “x” or narrow element size used by th
scanner to send data. Refer to the bar codes
the following pages for selection options.

10x Border

This bar code allows the transmission of Ligh
Pen/Wand emulation using a 10x border. Fo
a specific scalable narrow element, select a
bar code from page J - 9 or J - 10.

***50x Border**

This bar code allows the transmission of Light Pen/Wand emulation using a 50x border. For a specific scalable narrow element, select a bar code from this page or the following page.

0.3ms Narrow Element

This bar code allows the transmission of Ligh Pen/Wand emulation using a 0.3ms narrow element “x” dimension.

.15ms Narrow Element

This bar code allows the transmission of Light Pen/Wand emulation using a .15ms narrow element “x” dimension.

0.5ms Narrow Element

This bar code allows the transmission of Light Pen/Wand emulation using a 0.5ms narrow element “x” dimension.

1.0ms Narrow Element

This bar code allows the transmission of Light Pen/Wand emulation using a 1.0ms narrow element “x” dimension.

Enter/Exit Program Mode

Load Defaults