MetroSelect Programming Guide

MLPN 2407/December 1998

# **ENTER/EXIT PROGRAM MODE**



RECALL DEFAULTS

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#### 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.

- 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**





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

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.

**Single-code programming mode:** A single configuration bar code may be scanned at anytime and the change in the configuration will be stored in memory.

## Section A

# **Code Types and Lengths**

## E/D = Enable/Disable

E/D Double Border Required (A - 1)		d (A - 1)	E/D MOD 43 Check on Code 39	(A - 10)	ITF Symbol Length Lock 2	(A - 17)
	E/D Dual Field Codabar	(A - 1)	E/D EAN-8	(A - 10)	ITF Minimum Symbol Length	(A - 17)
	E/D Code 11	(A - 2)	E/D Paraf Support	(A - 11)	Minimum Symbol Length	(A - 17)
	E/D 15 Digit Airline 2 of 5	(A - 2)	E/D UPC-A	(A - 11)	Symbol Length Lock	(A - 18)
	E/D Matrix 2 of 5	(A - 3)	E/D Full ASCII Code 39	(A - 12)	Code Lock #1: Length	(A - 19)
	E/D ALPHA Telepen	(A - 3)	E/D MOD 10 Check on ITF	(A - 12)	Code Lock #1: Code Type	(A - 19)
	E/D Telepen	(A - 4)	E/D TRI-OPTIC Code	(A - 13)	Code Lock #2: Length	(A - 19)
	E/D Standard 2 of 5	(A - 4)	E/D Airline 2 of 5 13 Digit	(A - 13)	Code Lock #2: Code Type	(A - 19)
	E/D Code 39	(A - 5)	E/D EAN-128 ] C1 Conversion	(A - 14)	Code Lock #3: Length	(A - 20)
	E/D Code 93	(A - 5)	E/D Code 128 Coupon	(A - 14)	Code Lock #3: Code Type	(A - 20)
	E/D Code 128	(A - 6)	E/D Hong Kong 2 of 5	(A - 15)	Code Lock #4: Length	(A - 20)
	E/D Codabar	(A - 6)	UK Plessey A to X Convert Enabled	(A - 15)	Code Lock #4: Code Type	(A - 20)
	E/D Interleaved 2 of 5 (ITF)	(A - 7)	UK Plessey A to X Convert Disabled	(A - 16)	Code Lock #5: Length	(A - 21)
	E/D UPC/EAN	(A - 7)	E MSI Plessey MOD 10 Check Digit	(A - 16)	Code Lock #5: Code Type	(A - 21)
	E/D UK Plessey	(A - 8)	E MSI Plessey MOD 10/10 Check Digit	(A - 16)	Code Lock #6: Length	(A - 21)
	E/D UPC-E	(A - 8)	No MSI Plessey Check Digit	(A - 16)	Code Type #6: Code Type	(A - 21)
	E/D EAN-13	(A - 9)	Standard 2 of 5 Symbol Length Lock	(A - 16)	Code Lock #7: Length	(A - 22)
	E/D MSI Plessey	(A - 9)	ITF Symbol Length Lock 1	(A - 17)	Code Lock #7: Code Type	(A - 22)

**Enable Double Border Required** 



\*Disable Double Border Required



**Enable Dual Field Codabar** 



\*Disable Dual Field Codabar



#### **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 15 Digit Airline 2 0f 5



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

# \*Disable 15 Digit Airline 2 0f 5



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

#### **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 ALPHA Telepen**



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

# \*Disable ALPHA Telepen



When this option is disabled, the scanner will not scan ALPHA Telepen 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 Standard 2 of 5



\*Disable Standard 2 of 5



\*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 Code 93



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

#### Disable Code 93



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

\*Enable Code 128



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

## Disable Code 128



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

#### \*Enable Codabar



When this option is enabled, the scanner will scan Codabar 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 UPC/EAN



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

#### Disable UPC/EAN



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

#### **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 UPC-E



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

#### Disable UPC-E



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

#### \*Enable EAN-13



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

## **Disable EAN-13**



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

# **Enable MSI Plessey**



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

## \*Disable MSI Plessey



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

#### 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 10 Check on ITF**



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

#### \*Disable MOD 10 Check on ITF



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

**Enable TRI-OPTIC Code** 



\*Disable TRI-OPTIC Code



# **Enable Airline 2 of 5 13 Digit**



\*Disable Airline 2 of 5 13 Digit



Enable EAN-128 ] C1 Conversion



\*Disable EAN-128 ] C1 Conversion



**Enable Code 128 Coupon** 



\*Disable Code 128 Coupon



# Enable Hong Kong 2 of 5



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

\*Disable Hong Kong 2 of 5



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



\*UK Plessey A to X Convert Disabled



## \*Enable MSI Plessey MOD 10 Check Digit



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

## Enable MSI Plessey MOD 10/10 Check Digit



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

## \*No MSI Plessey Check Digit



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

## Standard 2 of 5 Symbol Length Lock



ITF Symbol Length Lock 1



To specify the number of ITF (Interleaved 2 of 5) digits in the bar codes that will be scanned, scan the above bar code and the appropriate Code Byte bar codes. **SEE SECTION M FOR CODE BYTES** 

ITF Symbol Length Lock 2



To specify a second number, scan the above bar code and the appropriate Code Byte bar codes. Only scan the above bar code when a second ITF number needs to be specified.

ITF Minimum Symbol Length



To specify the minimum number ITF digits in the bar codes that will be scanned, scan the above bar code and the appropriate Code Byte bar codes.

**Minimum Symbol Length** 



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 codes.

# Symbol Length Lock



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 codes. SEE SECTION M FOR CODE BYTES

#### PROGRAMMABLE CODE LENGTHS:

There are up to seven user selectable bar code lock lengths available. If desired, a specific code type can be assigned to a lock length. Start with Lock Length 1 and then go to 2 and 3 etc. While in "Program Mode", scan the Lock Length position and then 3 code byte codes in section M that represent the desired code length. Refer to section M for the code type tables and configure the code types the same way.

Code Lock #1: Length



Code Lock #1: Code Type



Code Lock #2: Length



Code Lock #2: Code Type



Code Lock #3: Length



Code Lock #4: Length



Code Lock #3: Code Type



Code Lock #4: Code Type



Code Lock #5: Length



Code Lock #6: Length

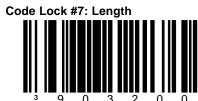


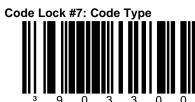
Code Lock #5: Code Type



Code Lock #6: Code Type







# Section B

# **Supplements**

# E/D = Enable/Disable

E/D Two Digit Supplements	(B - 1)	E/D 977 (2 digit) Supplemental Requirement	(B - 6)
E/D Five Digit Supplements	(B - 1)	E/D 378/379 French Supplement Requirement	(B - 6)
E/D #System 5 Requires Supps	(B - 2)	E/D 400 msec to find Supplemental	(B - 7)
E/D Code ID's with Supplements	(B - 2)	E/D 200 msec to find Supplemental	(B - 7)
Supplements are Required	(B - 3)	E/D 100 msec to Find Supplemental	(B - 7)
Supplements are not Required	(B - 3)	E/D Bookland (978) Supplement Requirement	(B - 8)
E/D Two Digit Redundancy	(B - 3)	E/D Remote Supplement Requirement	(B - 8)
E/D Five Digit Redundancy	(B - 4)	E/D 434/439 German Supplement Requirement	(B - 9)
E/D Bookland to ISBN Conversion	(B - 4)	E/D Group Separators	(B - 9)
E/D ISBN Formatting	(B - 5)	E/D #System 2 Requires Supps	(B - 10)
E/D ISBN Check Digit Transmission	(B - 5)	E/D Code 128 ] Extended Code Format	(B - 10)

## **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 #System 5 Requires Supps** 



\*Disable #System 5 Requires Supps



**Enable Code ID's with Supplements** 



\*Disable Code ID's with Supplements



## **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 valid information.

## Disable Two Digit Redundancy



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

#### **Enable Bookland to ISBN Conversion**



\*Disable Bookland to ISBN Conversion



## **Enable ISBN Formatting**



# \*Disable ISBN Formatting



# **Enable ISBN Check Digit Transmission**





# Enable 977 (2 digit) Supplemental Requirement



When this option is enabled, the scanner will require that a 2 digit supplement be scanned whenever an EAN-13 code begins with 977.

# \*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.

**Enable 378/379 French Supplemental Requirement** 



\*Disable 378/379 French Supplemental Requirement



#### 400 msec to Find Supplemental



When this option is chosen, the scanner will allot 400 milliseconds to "find" an add on after a main UPC/EAN bar code has been scanned.

## 200 msec to Find Supplemental



When this option is chosen, the scanner will allot 200 milliseconds to "find" an add on after a main UPC/EAN bar code has been scanned.

## \*100 msec to Find Supplemental



When this option is chosen, the scanner will allot 100 milliseconds to "find" an add on after a main UPC/EAN bar code has been scanned.

Enable Bookland (978) Supplement Requirement



\*Disable Bookland (978) Supplement Requirement



**Enable Remote Supp Requirement** 



\*Disable Remote Supp Requirement



Enable 434/439 German Supplemental Requirement



\*Disable 434/439 German Supplementa Requirement



# \*Enable Group Separators



"GS" (1DH) characters will be transmitted with Coupon Code 128 codes.

# **Disable Group Separators**



**Do Not Transmit** "GS" (1DH) characters with Coupon Code 128 codes.

**Enable #System 2 Requires Supps** 



# \*Disable #System 2 Requires Supps



# \*Enable Code 128 ] Extended Code Format



When this option is enabled, the scanner will transmit an JC1 at the beginning of the Code 128 portion of the coupon code.

# Disable Code 128 ] Extended Code Format



When this option is disabled, the scanner will not transmit an JC1 at the beginning of the Code 128 portion of the coupon code.

# Section C

# **Prefixes**

# E/D = Enable/Disable

Programmable Prefix Character #1	(C - 1)	Programmable EAN-8 ID	(C - 7)
Programmable Prefix Character #2	(C - 1)	Programmable EAN-13 ID	(C - 7)
Programmable Prefix Character #3	(C - 1)	Programmable Code 39 ID	(C - 7)
Programmable Prefix Character #4	(C - 1)	Programmable Code 128 ID	(C - 7)
Programmable Prefix Character #5	(C - 2)	Programmable Code 93 ID	(C - 8)
Programmable Prefix Character #6	(C - 2)	Programmable Code 11 ID	(C - 8)
Programmable Prefix Character #7	(C - 2)	Programmable Telepen ID	(C - 8)
Programmable Prefix Character #8	(C - 2)	Programmable TRI-OPTIC ID	(C - 8)
Programmable Prefix Character #9	(C - 3)	Programmable Standard 2 of 5 ID	(C - 9)
Programmable Prefix Character #10	(C - 3)	Programmable I 2 of 5 ID	(C - 9)
Clear Programmable Prefixes	(C - 3)	Programmable Matrix 2 of 5 ID	(C - 9)
E/D Manufacturer ID Prefix	(C - 4)	Programmable Airline 2 of 5 ID	(C - 9)
E/D "c" Prefix	(C - 4)	Programmable MSI Plessey ID	(C - 10)
E/D "\$" Prefix ID for UPC/EAN	(C - 5)	Programmable UK Plessey ID	(C - 10)
E/D Rochford-Thomson Mode	(C - 5)	Programmable Codabar ID	(C - 10)
Use Programmable Code ID Bytes as Prefixes	s (C - 6)	Clear Programmable Code IDs	(C - 10)
Use Programmable Code ID Bytes as Suffixes	s (C - 6)	E/D STX Prefix	(C - 11)
Programmable UPC A ID	(C - 6)	E/D Tab Prefix	(C - 11)
Programmable UPC E ID	(C - 6)	E/D UPC Prefix ID	(C - 12)

#### **Programmable Prefix Character #1**



When this option is chosen, one programmable prefix ID character can be assigned and added to the scanned data transmission. While in Program Mode, scan this bar code and then turn to section M and scan the 3 byte sequence that represents the desired character.

## **Programmable Prefix Character #2**



When this option is chosen, a second programmable prefix ID character can be assigned and added to the scanned data transmission.

## **Programmable Prefix Character #3**



When this option is chosen, a third programmable prefix ID character can be assigned and added to the scanned data transmission.

#### Programmable Prefix Character #4



When this option is chosen, a fourth programmable prefix ID character can be assigned and added to the scanned data transmission.

## **Programmable Prefix Character #5**



When this option is chosen, a fifth programmable prefix ID character can be assigned and added to the scanned data transmission.

## **Programmable Prefix Character #6**



When this option is chosen, a sixth programmable prefix ID character can be assigned and added to the scanned data transmission.

#### **Programmable Prefix Character #7**



When this option is chosen, a seventh programm -able prefix ID character can be assigned and added to the scanned data transmission.

#### **Programmable Prefix Character #8**



When this option is chosen, a ninth programmable prefix ID character can be assigned and added to the scanned data transmission.

# **Programmable Prefix Character #9**



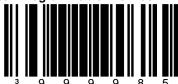
When this option is chosen, a ninth programmable prefix ID character can be assigned and added to the scanned data transmission.

# **Programmable Prefix Character #10**



When this option is chosen, a tenth programmable prefix ID character can be assigned and added to the scanned data transmission.

**Clear Programmable Prefixes** 



### **Enable Manufacturer ID Prefix**



When this option is enabled, it will allow the scanner to transmit a special string of characters before every bar code to identify the scanner as a Metrologic Scanner.

### \*Disable Manufacturer ID Prefix



When this option is chosen, the scanner will not transmit a special string of characters before every bar code to identify the scanner as a Metrologic Scanner.

## Enable "c" Prefix



## \*Disable "c" Prefix



C-4

Enable "\$" Prefix ID for UPC/EAN







# \*Use Programmable Code ID Bytes as Prefixes



User configured, code specific ID Bytes are transmitted before the data.

# Use Programmable Code ID Bytes as Suffixes



User configured, code specific ID Bytes are transmitted after the data.

## Programmable UPC A ID



While in "Program Mode" scan this bar code followed by the 3 code byte bar codes in section M that represent a unique IDcharacter to be associated with this bar code type.

# Programmable UPC E ID



Programmable EAN-8 ID



Programmable Code 39 ID



Programmable EAN-13 ID



Programmable Code 128 ID



Programmable Code 93 ID





**Programmable Code 11 ID** 



Programmable TRI-OPTIC ID



Programmable Standard 2 of 5 ID



Programmable Matrix 2 of 5 ID



Programmable I 2 of 5 ID



Programmable Airline 2 of 5 ID



**Programmable MSI Plessey ID** 



Programmable Codabar ID



Programmable UK Plessey ID



**Clear Programmable Code IDs** 



#### **Enable STX Prefix**



When this option is enabled, the scanner will transmit a <u>Start of TeXt</u> (ASCII 02H) before each bar code.

# \*Disable STX Prefix



When this option is chosen the scanner will not transmit a <u>Start of TeXt</u> (ASCII 02H) before each bar code.

## **Enable Tab Prefix**



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

## Disable Tab Prefix



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

C-11

## **Enable UPC Prefix ID**



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

\*Disable UPC Prefix ID



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

# Section D

# Suffixes

# E/D = Enable/Disable

Programmable Suffix Character #1	(D - 1)	Programmable Suffix Character #9	(D - 3)
Programmable Suffix Character #2	(D - 1)	Programmable Suffix Character #10	(D - 3)
Programmable Suffix Character #3	(D - 1)	Clear Programmable Suffixes	(D - 3)
Programmable Suffix Character #4	(D - 1)	E/D CR Suffix	(D - 4)
Programmable Suffix Character #5	(D - 2)	E/D LF Suffix	(D - 4)
Programmable Suffix Character #6	(D - 2)	E/D Tab Suffix	(D - 5)
Programmable Suffix Character #7	(D - 2)	E/D ETX Suffix	(D - 5)
Programmable Suffix Character #8	(D - 2)	E/D UPC Suffix ID	(D - 6)

#### **Programmable Suffix Character #1**



When this option is chosen, one programmable suffix ID character can be assigned and added to the scanned data transmission. While in "Program Mode" scan this bar code followed by the 3 byte sequence that represents the desired character in section M.

# **Programmable Suffix Character #2**



When this option is chosen, a second programmable suffix ID character can be assigned and added to the scanned data transmission.

#### **Programmable Suffix Character #3**



When this option is chosen, a third programm -able suffix ID character can be assigned and added to the scanned data transmission.

#### Programmable Suffix Character #4



When this option is chosen, a fourth programm -able suffix ID character can be assigned and added to the scanned data transmission.

#### **Programmable Suffix Character #5**



When this option is chosen, a fifth programmable suffix ID character can be assigned and added to the scanned data transmission.

# **Programmable Suffix Character #6**



When this option is chosen, a sixth programmable suffix ID character can be assigned and added to the scanned data transmission.

## **Programmable Suffix Character #7**



When this option is chosen, a seventh programm -able suffix ID character can be assigned and added to the scanned data transmission.

## Programmable Suffix Character #8



When this option is chosen, a eight programm -able suffix ID character can be assigned and added to the scanned data transmission.

# **Programmable Suffix Character #9**



When this option is chosen, a ninth programmable suffix ID character can be assigned and added to the scanned data transmission.

# **Programmable Suffix Character #10**



When this option is chosen, a tenth programmable suffix ID character can be assigned and added to the scanned data transmission.

**Clear Programmable Suffixes** 



## \*Enable CR Suffix



When this option is enabled, the scanner will transmit a  $\underline{C}$ arriage  $\underline{R}$ eturn (CR) after each bar code.

# Disable CR Suffix



When this option is chosen, the scanner will not transmit a  $\underline{C}$ arriage  $\underline{R}$ eturn (CR) after each bar code.

## \*Enable LF Suffix



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

## Disable LF Suffix



When this option is chosen, the scanner will not transmit a  $\underline{\mathsf{L}}$ ine  $\underline{\mathsf{F}}$ eed (LF) after each bar code.

D-4

#### **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 ETX Suffix**



When this option is enabled, the scanner will transmit an  $\underline{E}$ nd of  $\underline{T}$ e $\underline{X}$ t (ASCII 03H) after each bar code.

#### \*Disable ETX Suffix



When this option is chosen, the scanner will not transmit an  $\underline{E}$ nd of  $\underline{T}$ e $\underline{X}$ t (ASCII 03H) after each bar code.

## **Enable UPC Suffix ID**



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 ID



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

# Section E

# **Code Formatting**

E/D = Enable/Disable	T/DNT = Transmit/Do Not Transmit		EX/DNEX = Expand/Do Not Expand
C/DNC = Convert/Do Not Convert	E/DNE = EN	able/Do Not Enable	
T/DNT UPC-A Check Digit	(E - 1)	E/D UK Plessey Special Format	(E - 9)
T/DNT UPC-E Check Digit	(E - 1)	C/DNC Telepen ^L to E	(E - 10)
EX/DNEX UPC-E to 12 Digits	(E - 2)	T/DNT Matrix 2 of 5 Check Digit	(E - 10)
C/DNC UPC-A to EAN-13	(E - 2)	E/D Transmit of LRC Calculation	(E - 11)
T/DNT Lead Zero on UPC-E	(E - 3)	Start LRC on Second Byte	(E - 11)
C/DNC EAN-8 to EAN-13	(E - 3)	Start LRC on First Byte	(E - 12)
T/DNT UPC-A Number System	(E - 4)	E/D Nixdorf ID Characters	(E - 12)
T/DNT UPC-A MFR#	(E - 4)	E/D SANYO ID Characters	(E - 12)
T/DNT UPC-A ITEM#	(E - 5)	E/D AIM ID Characters	(E - 13)
T/DNT Codabar Start/Stop Characters	(E - 5)	E/D SINEKO Mode	(E - 13)
E/DNE CLSI Editing	(E - 6)	T/DNT EAN-13 Check Digit	(E - 14)
T/DNT Mod 43 Check Digit on Code 39	(E - 6)	T/DNT NCR Non UPC Characters	(E - 14)
T/DNT Mod 10 Check Digit on ITF	(E - 7)	T/DNT EAN-8 Check Digit	(E - 15)
T/DNT Code 11 Check Digit	(E - 7)	E/D SNI Beetle Mode	(E - 15)
T/DNT MSI Plessey Check Digit	(E - 8)	E/D Cipher Lab 1021 IDs	(E - 16)
T/DNT Code 39 Stop/Start Characters	(E - 8)	E/D Newcode Formatting Mode A	(E - 16)
T/DNT UK Plessey Check Digit	(E - 9)	E/D Newcode Formatting Mode B	(E - 17)

\*Transmit UPC-A Check Digit



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

# Do not Transmit UPC-A Check Digit



When this option is chosen, the scanner will not 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-E Check Digit



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

# **Expand UPC-E to 12 Digits**



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

# \*Do not Transmit Expand UPC-E to 12 Digits



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 transmitting 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 will convert EAN-8 to EAN-13 by transmitting five zeroes before the bar code.

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



When this option is chosen, the scanner will not convert EAN-8 to EAN-13.

# \*Transmit UPC-A Number System



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

# 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.

#### \*Transmit UPC-A MFR#



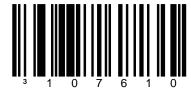
When this option is chosen, the scanner will transmit a UPC-A manufacturer number.

#### \*Do not Transmit UPC-A MFR#



When this option is chosen, the scanner will not transmit a UPC-A manufacturer number.

#### \*Transmit UPC-A ITEM#



When this option is chosen, the scanner will transmit a UPC-A Item number.

## Do Not Transmit UPC-A ITEM#



When this option is chosen, the scanner will not transmit a UPC-A Item number.

## **Transmit Codabar Start/Stop Characters**



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

# \*Do Not Transmit Codabar Start/Stop



When this option is chosen, the scanner will not transmit Codabar's start and stop characters 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 39



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

# \*Do Not Transmit Mod 43 Check Digit on Code 39



When this option is chosen, the scanner will not transmit Code 39's Mod 43 check character.

## Transmit Mod 10 Check Digit on ITF



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

## \*Do Not Transmit Mod 10 Check Digit on ITF



When this option is chosen, the scanner will not transmit the Interleaved 2 of 5 (ITF) mod 10 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 Digit**



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

## \*Do Not Transmit MSI Plessey Check Digit



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

## **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 UK Plessey Check Digit** 



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.

\*Do not Transmit UK Plessey Check Digit



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

Enable UK Plessey Special Format

**Disable UK Plessey Special Format** 



Convert Telepen ^L to E



\*Do not Convert Telepen ^L to E



Transmit Matrix 2 of 5 Check Digit



\*Do not Transmit Matrix 2 of 5 Check Digit



#### **Enable Transmit of LRC Calculation**



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 Transmit of LRC Calculation



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

## Start LRC on Second Byte



The Scanner will calculate LRC (check digit) from the second character onwards.

# \*Start LRC on First Byte



The Scanner will calculate LRC (check digit) from the first character onwards.

#### **Enable Nixdorf ID Characters**



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 Characters



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

#### **Enable SANYO ID Characters**



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

## \*Disable Enable SANYO ID Characters



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

#### **Enable AIM ID Characters**



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

## \*Disable AIM ID Characters



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

### **Enable SINEKO Mode**



### \*Disable SINEKO Mode



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## \*Transmit EAN-13 Check Digit



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

# Do Not Transmit EAN-13 Check Digit



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

**Transmit NCR non UPC Characters** 



\*Do Not Transmit NCR non UPC Characters



# \*Transmit EAN-8 Check Digit



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

# Do Not Transmit EAN-8 Check Digit



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

#### **Enable SNI Beetle Mode**



When this option is enabled, the scanner will transmit the ID characters that SNI Beetle 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 Cipher Lab 1021 IDs** 



Disable Cipher Lab 1021 IDs



**Enable Newcode Formatting Mode A** 



\*Disable Newcode Formatting Mode A



**Enable Newcode Formatting Mode B** 



\*Disable Enable Newcode Formatting Mode B



# Section F

## Communications

(F - 1)	Enable Light Pen Communication	(F - 2)
(F - 1)	OCIA Output	(F - 3)
(F - 1)	Multi-Drop Network	(F - 3)
(F - 1)	Multi-Drop Address (Byte)	(F - 3)
(F - 2)	Load Keyboard Wedge Defaults	(F - 3)
(F - 2)	Load IBM Defaults	(F - 4)
(F - 2)	Load OCIA Defaults	(F - 4)
	(F - 1) (F - 1) (F - 1) (F - 2) (F - 2)	(F - 1) OCIA Output (F - 1) Multi-Drop Network (F - 1) Multi-Drop Address (Byte) (F - 2) Load Keyboard Wedge Defaults (F - 2) Load IBM Defaults

### **Enter/Exit Program Mode**



This bar code should be scanned to enter the program mode. Scan the bar code(s) needed then exit the program mode by scanning bar code again.

## **Recall Defaults**



This bar code should be scanned to go back to the original factory settings when programming the scanner. This bar code will return the scanner to the RS-232 communication protocol.

#### **Enable No Communication Mode**



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

### \*Enable RS-232



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

#### **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. The correct interface board is required.

# **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.

## **Enable Stand-Alone Keyboard Scanner**



Allows the scanner to be used without an external keyboard present.

## **Enable Light Pen Communication**



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

# **OCIA Output**



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

## **Multi-Drop Network**



This option should be selected if the scanner will provide RS-422 type output for National Semiconductor/CL cash registers. This is a specific format that is only supported when the proper interface is being used.

### Multi-Drop Address (Byte)



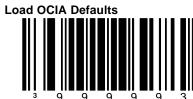
## **Load Keyboard Wedge Defaults**



Scan this first, then select Normal or Stand Alone Mode.

Load IBM Defaults





# Section G

# **Scanner Operation**

E/D = Enable/Disable A/DNA = Activate/Do Not Activate			T/DNT = Transmit/Do Not Transmit F/DNF = Flash/Do Not Flash			
	Scanability ON	(G - 1)	5 Redundant Scans	(G - 7)	Beep Before Transmit	(G - 15)
	Scanability OFF	(G - 1)	6 Redundant Scans	(G - 7)	Beep After Transmit	(G - 15)
	Scan Count Mode ON	(G - 1)	7 Redundant Scans	(G - 7)	E/D Communications Time Outs	(G - 16)
	Scan Count Mode OFF	(G - 1)	E/D MAJIC	(G - 8)	Razzberry Tone on Time Out	(G - 16)
	Allw Prg Mode on Pwr up	(G - 2)	E/D DTR Scan Disable	(G - 8)	No Razzberry Tone on Time Out	(G - 16)
	Allw Prg Mode on Pwr Anytime	(G - 2)	Extra Same Symbol Check	(G - 9)	Three Beeps on Time Out	(G - 17)
	Allw Prg Lbls on Pwr up	(G - 2)	Normal Same Symbol Check	(G - 9)	No Beeps on Time Out	(G - 17)
	Allw Prg Lbls Anytime	(G - 2)	E/D Japan Mode	(G - 9)	Normal Tone	(G - 17)
	E/D "DE" Disable Cmmnd	(G - 3)	T/DNT NO READ if DC2 Activation	(G - 10)	Alternate Tone 1	(G - 17)
	E/D "FL" Laser Enable Cmmnd	(G - 3)	A/DNA on DC2 Character	(G - 10)	Alternate Tone 2	(G - 18)
	1 Scan Buffers	(G - 4)	Motor on/off using M/O Commands	(G - 11)	Alternate Tone 3	(G - 18)
	2 Scan Buffers	(G - 4)	Enable ZR Type DE Simulation	(G - 11)	Alternate Tone 4	(G - 18)
	3 Scan Buffers	(G - 4)	No ZR Type DE Simulation	(G - 11)	Alternate Tone 5	(G - 18)
	4 Scan Buffers	(G - 4)	F/DNF Green LED if Rescan Allowed	(G - 12)	Alternate Tone 6	(G - 19)
	5 Scan Buffers	(G - 5)	Reverse LED Functions	(G - 12)	No Beep	(G - 19)
	6 Scan Buffers	(G - 5)	Normal LED Functions	(G - 12)	Always Power Save Mode	(G - 19)
	7 Scan Buffers	(G - 5)	No Green LED During NO READ Xmit	(G - 13)	Power Save in 1 Minute	(G - 19)
	8 Scan Buffers	(G - 5)	Green LED During NO READ Xmit	(G - 13)	Power Save in 2 Minutes	(G - 20)
	0 Redundant Scans	(G - 6)	Beep on BEL Command	(G - 14)	Power Save in 5 Minutes	(G - 20)
	1 Redundant Scans	(G - 6)	Ignore BEL Command	(G - 14)	Power Save in 10 Minutes	(G - 20)
	2 Redundant Scans	(G - 6)	Beep Twice on Supps	(G - 14)	Power Save in 20 Minutes	(G - 20)
	3 Redundant Scans	(G - 6)	Single Beep on Supps	(G - 14)	Power Save in 30 Minutes	(G - 21)
	4 Redundant Scans	(G - 7)	E/D Fast Beep	(G - 15)	No Power Save Mode	(G - 21)
			•			

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Far Depth of Field	(G - 21)	,
Normal Depth of Field	(G - 21)	)
Close Depth of Field	(G - 22)	)
Ultra Depth of Field	(G - 22)	,
Optimal Depth of Field	(G - 22)	,
No Intercharacter Delay	(G - 22)	)
1 msec Intercharacter Delay	(G - 23)	,
10 msec Intercharacter Delay	(G - 23)	,
25 msec Intercharacter Delay	(G - 23)	,
Variable Intercharacter Delay	(G - 23)	,
Infinite Same Symbol Time Out	(G - 24)	)
Same Symbol Time Out 100 msecs	(G - 24)	)
Same Symbol Time Out 200 msecs	(G - 24)	)
Same Symbol Time Out 500 msecs	(G - 24)	)
Same Symbol Time Out 1200 msecs	(G - 25)	)
Same Symbol Time Out 2000 msecs	(G - 25)	)
No Same Symbol Time Out	(G - 25)	)
Variable Same Symbol Time Out	(G - 25)	)
Variable Inter-Record Delay	(G - 26)	)
Turn Off Laser During Inter-Record Delay	(G - 26)	)
Leave Laser on During Inter-Record Delay	(G - 26)	)
Variable Communications Time Out	(G - 27)	)
Default Communications Time Out (2 secs)	(G - 27)	)
Short Comms Time Out (1 sec)	(G - 27)	)
Long Comms Time Out (4 secs)	(G - 27)	)
Variable Laser Time Out	(G - 28)	
Default Laser Time Out (2 secs)	(G - 28)	)
Short Laser Time Out (1 sec)	(G - 28)	
Long Laser Time Out (4 secs)	(G - 28)	

## 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 firmware number of the scanner will also be transmitted to the host device. Do not enable this feature unless instructed to do so by a Metrologic representative.

#### \*Scan Count Mode OFF



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

# Allow Program Mode on Power up

Will allow the scanner to enter program mode before any bar codes are scanned.

\*Allow Program Mode on Power Anytime



## Allow Program Labels on Power up



Only allows the scanner to be configured if the configuration bar codes are the first bar codes scanned after power up.

\*Allow Program Labels Anytime



Allows scanning of configration bar codes anytime.

#### **Enable "DE" Disable Command**



When this option is enabled, the scanner will stop scanning when it receives an ASCII "D" from the host device. Scanning will resume when the scanner receives an ASCII "E". This feature will only work with RS-232 communication.

#### \*Disable "DE" Disable Command



When this option is chosen, the scanner will not stop scanning when it receives an ASCII "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.

#### \*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 at once. It will not scan the bar code again until the same symbol time out has elapsed.

#### 3 Scan Buffers



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

#### 4 Scan Buffers



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

#### 5 Scan Buffers



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

### 6 Scan Buffers



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

#### 7 Scan Buffers



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

#### 8 Scan Buffers



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

### \*0 Redundant Scans



# 1 Redundant Scans



## 2 Redundant Scans



# 3 Redundant Scans



## **4 Redundant Scans**



# 5 Redundant Scans



## **6 Redundant Scans**



# 7 Redundant Scans



\*Enable MAJIC



Metrologic Algorithim for Joining Incomplete bar Codes will allow the scanner to read bar codes that are torn or incontinuous.

Disable MAJIC



**Enable DTR Scan Disable** 



\*Disable DTR Scan Disable



**Extra Same Symbol Check** 



Forces the scanner to require 2 characters to be different between the bar codes before it recognizes them as different bar codes.

\*Normal Same Symbol Check



Forces the scanner to require 2 characters to be different between the bar codes before it recognizes them as different bar codes.

## **Enable Japan Mode**



\*Disable Japan Mode



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**Transmit NO READ if DC2 Activation** 



\*Do Not Transmit NO READ if DC2



# **Activate on DC2 Character**



\*Do Not Activate on DC2 Character



Motor on/off Using M/O Commands



\*Ignore M/O Commands



**Enable ZR Type DE Simulation** 



\*No ZR Type DE Simulation



Flash Green LED if Rescan Allowed



**Reverse LED Functions** 

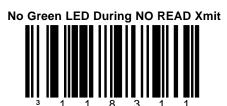


\*Do Not Flash Green LED if Rescan Allowed



## \*Normal LED Functions







## Beep on BEL Command



When enabled, the scanner will respond to a BEL character sent from the host by beeping. If a number is sent before the BEL character, within 200 ms of the BEL, the scanner will beep that many times. ie if the host sends '4' 'BEL' the scanner will beep 4 times.

## \*Ignore BEL Command



# **Beep Twice on Supps**



The scanner will beep 2 times when a supple ment is scanned.

# \*Single Beep on Supps



# **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.

# \*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 Communications 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 Communications Time outs



When this option is enabled, the scanner will not time out if it does not transmit its data to the host after two seconds during communica tion. 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 three times when communications have timed out.

#### \*Normal Tone



The following beeper tone options are available: Normal, Alt 1, Alt 2, Alt 3, Alt 4, Alt 5, Alt 6 and No Beep. When no 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, Alt 3, Alt 4, Alt 5, Alt 6 and No Beep. When no No Beep is chosen, the scanner will not emit an audible beep.

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#### **Alternate Tone 2**



The following beeper tone options are available: Normal, Alt 1, Alt 2, Alt 3, Alt 4, Alt 5, Alt 6 and No Beep. When no No Beep is chosen, the scanner will not emit an audible beep.

### **Alternate Tone 3**



The following beeper tone options are available: Normal, Alt 1, Alt 2, Alt 3, Alt 4, Alt 5, Alt 6 and No Beep. When no No Beep is chosen, the scanner will not emit an audible beep.

#### **Alternate Tone 4**



The following beeper tone options are available: Normal, Alt 1, Alt 2, Alt 3, Alt 4, Alt 5, Alt 6 and No Beep. When no No Beep is chosen, the scanner will not emit an audible beep.

#### Alternate Tone 5



The following beeper tone options are available: Normal, Alt 1, Alt 2, Alt 3, Alt 4, Alt 5, Alt 6 and No Beep. When no No Beep is chosen, the scanner will not emit an audible beep.

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#### **Alternate Tone 6**



The following beeper tone options are available: Normal, Alt 1, Alt 2, Alt 3, Alt 4, Alt 5, Alt 6 and No Beep. When no No Beep is chosen, the scanner will not emit an audible beep.

## No Beep



The following beeper tone options are available: Normal, Alt 1, Alt 2, Alt 3, Alt 4, Alt 5, Alt 6 and No Beep. When no No Beep is chosen, the scanner will not emit an audible beep.

# **Always Power Save Mode**



The scanner will enter power save mode immediately after scanning a bar code.

### **Power Save in 1 Minute**



The scanner will enter power save mode 1 minute after scanning a bar code.

#### **Power Save in 2 Minutes**



The scanner will enter power save mode 2 minutes after scanning a bar code.

## **Power Save in 5 Minutes**



The scanner will enter power save mode 5 minutes after scanning a bar code.

#### \*Power Save in 10 Minutes



The scanner will enter power save mode 10 minutes after scanning a bar code.

### Power Save in 20 Minutes



The scanner will enter power save mode 20 minutes after scanning a bar code.

#### **Power Save in 30 Minutes**



The scanner will enter power save mode 30 minutes after scanning a bar code.

# No Power Save Mode



The scanner will never enter power save mode (power save mode disabled).

### Far Depth of Field



Do not change this setting unless instructed 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.

# **Close Depth of Field**



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

# **Optimal High Density Depth of Field**



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

## \*Optimal Low Density Depth of Field



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

## No Intercharacter Delay



## \*1 msec Intercharacter Delay



## 10 msec Intercharacter Delay



## 25 msec Intercharacter Delay



# Variable Intercharacter Delay



The delay between characters being sent out of the scanner can be set in 1 millisecond increments by scanning this bar code and followed by the sequence of code bytes in section M that range from 001 to 255 milliseconds.

#### **Infinite Same Symbol Time Out**



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

# Same Symbol Time Out 100 msecs



The available same symbol time outs are 100, 200, 500, 1200 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 Time Out 200 msecs



The available same symbol time outs are 100, 200, 500, 1200 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 Time Out 500 msecs



The available same symbol time outs are 100, 200, 500, 1200 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 Time Out 1200 msecs



The available same symbol time outs are 100, 200, 500, 1200 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 Time Out 2000 msecs



The available same symbol time outs are 100, 200, 500, 1200 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.

### No Same Symbol Time Out



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

### **Variable Same Symbol Timeout**



(refer to Intercharcter Delay) The time the scanner will wait for a response from the host; mutiple of 50 msecs.

Variable Inter-Record Delay



\*Leave Laser on During Inter-Record Delay



Turn Off Laser During Inter-Record Delay



**Variable Communications Time Out** 



**Short Comms Time Out (1 sec)** 



**Default Communications Time Out (2 secs)** 



Long Comms Time Out (4 secs)



**Variable Laser Time Out** 





**Default Laser Time Out (2 secs)** 



Long Laser Time Out (4 secs)



# Section H

# RS-232

### E/D = Enable/Disable

Enable RS-232 Mode	(H - 1)	300 Baud Rate	(H - 5)
No Parity	(H - 1)	8 Data Bits	(H - 5)
Odd Parity	(H - 1)	7 Data Bits	(H - 5)
Space Parity	(H - 1)	1 Stop Bit	(H - 5)
Even Parity	(H - 2)	2 Stop Bits	(H - 6)
Mark Parity	(H - 2)	E/D DTR Support	(H - 6)
115200 Baud Rate	(H - 2)	E/D RTS/CTS Handshaking	(H - 7)
57600 Baud Rate	(H - 2)	Character RTS/CTS	(H - 7)
38400 Baud Rate	(H - 3)	Message RTS/CTS	(H - 7)
19200 Baud Rate	(H - 3)	E/D RTS Counter Toggle	(H - 8)
14400 Baud Rate	(H - 3)	E/D XON/XOFF Handshaking	(H - 8)
9600 Baud Rate	(H - 3)	E/D ACK/NACK	(H - 9)
4800 Baud Rate	(H - 4)	Support BEL/CAN in ACK/NAK	(H - 9)
2400 Baud Rate	(H - 4)	Ignore BEL/CAN in ACK/NAK	(H - 9)
1200 Baud Rate	(H - 4)	E/D 5 Retires on ACK/NACK Time Out	(H - 10)
600 Baud Rate	(H - 4)	E/D French PC Term	(H - 10)

### \*Enable RS-232 Mode



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

### No Parity



### **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's 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 errors. The scanner's parity must match the host's parity. Select mark to make the parity bit always 1.

### 115200 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.

### 57600 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 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.

### 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.

### 14400 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.

### \*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.

### 4800 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 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.

### 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.

### 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.

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### 300 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.

### 8 Data Bits



Number of data bits transmitted for each character.

### \*7 Data Bits



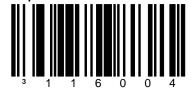
Number of data bits transmitted for each character.

# \*1 Stop Bit



Number of stop bits transmitted with each character.

# \*2 Stop Bits



Number of stop bits transmitted with each character.

# **Enable DTR Support**



When this option is enabled, the scanner will stop scanning when the  $\underline{D}$ ata  $\underline{T}$ erminal  $\underline{R}$ eady (DTR) signal goes inactive.

# \*Disable DTR Support



When this option is chosen, the scanner will not stop scanning when the  $\underline{D}$ ata  $\underline{T}$ erminal  $\underline{R}$ eady (DTR) signal goes inactive.

### **Enable RTS/CTS Handshaking**



When this option is enabled, the scanner will output a  $\underline{R}$ equest  $\underline{T}$ o  $\underline{S}$ end (RTS) signal and wait for a  $\underline{C}$ lear  $\underline{T}$ o  $\underline{S}$ end (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 will activate and deactivate its RTS signal on each character that it transmits.

### Message RTS/CTS



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

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### **Enable RTS Counter Toggle**



On a good decode, the scanner will toggle the RTS line.

# \*Disable RTS Counter Toggle



### **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/NACK**



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

### \*Disable ACK/NACK



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

# Support BEL/CAN in ACK/NAK

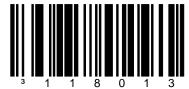


The scanner will support BEL/CAN commands while using ACK/NAK handshaking (ACK/NAK handshaking must also be enabled).

### \*Ignore BEL/CAN in ACK/NAK



**Enable 5 Retires on ACK/NACK Time Out** 



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

### \*Disable 5 Retires on ACK/NACK Time Out



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

### **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.

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# Section I

# Keyboard

E/D = Enable/Disable		T/DNT = Transmit/Do Not Transmit	
Load Keyboard Wedge Defaults	(I - 1)	PS/2 Keyboard	(I - 5)
Enable Keyboard Wedge Emulation	(I - 1)	Enable Auto Detect Mode (AT Only)	(I - 5)
Enable Stand-Alone Keyboard Emulation	(I - 1)	Disable French PC Term	(I - 5)
Switzerland Keyboard	(I - 1)	E/D Caps Lock (PS/2 or XT)	(I - 6)
IBM 4700 Financial Keyboard	(I - 2)	Inter Scan Code Delay 800 Microseconds	(I - 6)
USA Keyboard	(I - 2)	Inter Scan Code Delay 7.5 msec	(I - 6)
Spain Keyboard	(I - 2)	Inter Scan Code Delay 15 msec	(1 - 7)
Italy Keyboard	(I - 2)	Variable Inter Scan Code Delay	(1 - 7)
Germany Keyboard	(I - 3)	Send Numbers as Keypad Data	(1 - 7)
France Keyboard	(I - 3)	Send Numbers as Normal Data	(1 - 7)
UK Keyboard	(I - 3)	T/DNT Cleanup Bit	(I - 8)
Belgium Keyboard	(I - 4)	Transmit Make Code Only	(I - 8)
E/D Alt Mode	(I - 4)	Transmit Make/Break Code	(I - 8)
XT Keyboard	(I - 4)	T/DNT F0H Break Code (AT and PS/2)	(I - 9)
AT Keyboard	(I - 4)	E/D Function/Control Key Support	(I - 9)

### **Load Keyboard Wedge Defaults**



Scan this first, then select Normal or Stand Alone Mode.

### **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.

### **Enable Stand-Alone Keyboard Emulation**



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

### Switzerland Keyboard



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

### IBM 4700 Financial Keyboard



If keyboard emulation is enabled, scan this bar code to enable the keyboard type IBM 4700 Financial.

# \*USA Keyboard



<sup>3</sup> 4 1 6 2 6 0 If keyboard emulation is enabled, scan this bar code to enable the keyboard type USA.

# Spain Keyboard



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

# Italy Keyboard



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

### **Germany Keyboard**



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

# France Keyboard



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

# **UK Keyboard**



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

# **Belgium Keyboard**



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

### **Enable Alt Mode**



When the 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.

### XT Keyboard



If using an XT computer, scan the above.

# \*AT Keyboard



If using an AT computer, scan the above. (includes IBM PS/2 and compatible models 50, 55, 60, 80).

# PS/2 Keyboard



If using a PS/2 computer, scan the above. (includes IBM PC and compatible models 30, 70, 8556)

# **Enable Auto Detect Mode (AT Only)**



Automatically detects Caps Lock status.

# \*Disable Auto Detect Mode (AT Only)



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

Enable Caps Lock (PS/2 or XT)



User-defined Caps Lock status.

\*Disable Caps Lock (PS/2 or XT)



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

### \*Inter Scan Code Delay 800 Microseconds



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 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 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.

# Variable Inter Scan Code Delay



# Send Numbers as Keypad Data



When this option is enabled, all numeric data is sent as if it had been enabled on a keypad.

### \*Send Numbers as Normal Data



# **Transmit Cleanup Bit**



# \*Do Not Transmit Cleanup Bit



# **Transmit Make Code Only**



3 1 1 6 3 1 1

Do not change unless instructed to do so by a Metrologic represenative.

### \*Transmit Make/Break Code



Do not change unless instructed to do so by a Metrologic represenative.

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



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

# **Enable Function/Control Key Support**



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



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

\*Disable Function/Control Key Support



# Section J

# OCIA

(J - 1)
(J - 1)
(J - 1)
(J - 1)
(J - 2)
(J - 2)

### **Enable OCIA Mode**



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

\*Enable DTS/Nixdorf



### **Enable DTS/Siemens**

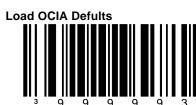


### **Enable NCR F**



**Enable NCR-S** 





# Section K

# Light Pen

E/D = Enable/	Disable	P/DNP = Poll/Do Not Poll		
Enable Light Pen Mode	(K - 1)	50x Narrow Element Border	(K - 3)	
Spaces High	(K - 1)	E/D Light Pen Extra Toggle	(K - 4)	
Bars High	(K - 1)	1 ms Minimum Element Width	(K - 4)	
Transmit as Code 39	(K - 2)	500 us Minimum Element Width	(K - 4)	
Transmit as Scanned	(K - 2)	100 us Minimum Element Width	(K - 5)	
P/DNP Light Pen Source	(K - 2)	60 us Minimum Element Width	(K - 5)	
E/D Light Pen Toggle on Decode	(K - 3)	Variable Minimum Element Width	(K - 5)	
10x Narrow Element Border	(K - 3)			

# **Enable Light Pen Mode**



3 4 1 5 5 2 4
This option should be selected if the scanner will be used in place of a light pen. It will provide light pen emulation of each bar code that is scanned.

# \*Bars High



### Transmit as Code 39



All bar codes will be decoded then transmitted as a code 39 bar code.

### \*Transmit as Scanned



All bar codes will be decoded in their orginial format.

### **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 Toggle on Decode**



When enabled, the scanner will toggle the light pen data line on a successful decode.

# \*Disable Light Pen Toggle on Decode



### 10x Narrow Element Border



This bar code allows the transmission of Light Pen/Wand emulation using a 10x border.

### \*50x Narrow Element Border



This bar code allows the transmission of Light Pen/Wand emulation using a 50x border.

### **Enable Light Pen Extra Toggle**



When enabled, the scanner will toggle the light pen data line on a successful decode.

# \*Disable Light Pen Extra Toggle



### \*1 ms Minimum Element Width



This bar code allows the transmission of Light Pen/Wand emulation using a 1 ms minimum element width.

### 500 us Minimum Element Width



This bar code allows the transmission of Light Pen/Wand emulation using a 500 us minimum element width.

### 100 us Minimum Element Width



This bar code allows the transmission of Light Pen/Wand emulation using a 100 us minimum element width.

### 60 us Minimum Element Width



This bar code allows the transmission of Light Pen/Wand emulation using a 60 us minimum element width.

### **Variable Minimum Element Width**



Requires code byte. Multiple of 6 us.

# Section L

# **Reserved Codes**

E/D = Enable/Disable

E/D Reserved Code (L - 1)

# **Enable Reserved Code**



this feature.

# **Disable Reserved Code**



## Section M

# Code Bytes

Code Byte Table	(M - 1)	Code Byte 5	(M - 3)
Code Byte 0	(M - 2)	Code Byte 6	(M - 3)
Code Byte 1	(M - 2)	Code Byte 7	(M - 3)
Code Byte 2	(M - 2)	Code Byte 8	(M - 4)
Code Byte 3	(M - 2)	Code Byte 9	(M - 4)
Code Byte 4	(M - 3)	ASCII Reference Table	(M - 5 - M - 9)

### **Code Byte Usage**

#### !!!NOTE!!!

User Programmable Prefixes, Symbol Length and other features that use these Code Bytes for configuration, require that the scanner be in Program Mode. Scan the Enter/Eit Program Mode bar code before staring the configuration cycle. Single Code Programming Mode does not work for these multi-code sequences.

#### !!!END!!!

User selectable prefix/suffix characters (sections C and D) can be programmed into the scanner by scanning the 3 digit decimal equivalent of the ASCII character into the appropriate character location with the Code Byte bar codes. For example, scan Programmable Prefix Character 1, Code Byte 0, Code Byte 0, Code Byte 7 (007 = decimal equivalent of an ASCII "BEL" character) and the scanner will transmit an ASCII "BEL" character before each bar code. See the ASCII Reference Table on pages M-4 through M-9.

## **Code Type Table**

CODE BYTE	CODE TYPES
004	UPC-A
002	UPC-E
003	EAN-8
005	EAN-13
080	Code 39
081	Codabar
082	Interleaved 2 of 5
083	Code 128
084	Code 93
091	MSI Plessey
092	Code 11
093	Airline 2 of 5 (15 digits)
094	Matrix 2 of 5
095	Telepen
096	UK Plessey
099	TRI-OPTIC
098	Standard 2 of 5
097	Airline 2 of 5 (13 digits)

Code Byte 0

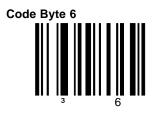
Code Byte 1



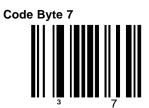




Code Byte 4







Code Byte 8



### **ASCII Reference Table**

HEX VALUE	DECIMAL VALUE	CHARACTER	CONTROL KEYBOARD EQV
00	000	NUL	@
01	001	SOH	A
02	002	STX	В
03	003	ETX	С
04	004	EOT	D
05	005	ENQ	E
06	006	ACK	F
07	007	BEL	G
08	008	BS	H
09	009	HT	
0A	010	LF	J
0B	011	VT	K
0C	012	FF	L
0D	013	CR	M
0E	014	SO	N
0F	015	SI	0
10	016	DLE	P
11	017	DC1	Q
12	018	DC2	R
13	019	DC3	S
14	020	DC4	T
15	021	NAK	U
16	022	SYN	
17	023	ETB	W
18	024	CAN	X
19	025	EM	

HEX VALUE	DECIMAL VALUE	CHARACTER	CONTROL/ALTERNATE KEYBOARD EQV
1A	026	SUB	Z
1B	027	ESC	
1C	028	FS	
1D	029	GS	]
1E	030	RS	
1F	031	US	
20	032	SP	space, blank
21	033	!	<u> </u>
22	034	11	
23	035	#	
24	036	\$	_
25	037	%	_
26	038		_
27	039	· ·	apostrophe
28	040	(	<del>-</del>
29	041	)	_
2A	042	*	_
2B	043	+	_
2C	044	,	comma
2D	045	<u>-</u>	minus
2E	046		period
2F	047		<u> </u>
30	048	0	number zero
31	049	1	number one
32	050	2	_
33	051	3	_

HEX VALUE	DECIMAL VALUE	CHARACTER	ALTERNATE KEYBOARD EQV
34	052	4	
35	053	5	
36	054	6	<del></del>
37	055	7	<del></del>
38	056	8	<del></del>
39	057	9	<del>-</del>
3A	058	:	
3B	059	· ;	<del>-</del>
3C	060	<	less than
3D	061	=	<del>-</del>
3E	062	>	greater than
3F	063	?	
40	064	@	shift P
41	065	A	<del>-</del>
42	066	В	<del>-</del>
43	067	С	_
44	068	D	
45	069	E	<del>-</del>
46	070	F	<del>-</del>
47	071	G	<del>-</del>
48	072	Н	_
49	073	1	letter I
4A	074	J	_
4B	075	K	_
4C	076	L	_
4D	077	M	

HEX VALUE	DECIMAL VALUE	CHARACTER	ALTERNATE KEYBOAR EQV
4E	078	N	
4F	079	0	letter O
50	080	Р	<del>-</del>
51	081	Q	
52	082	R	<del>-</del>
53	083	S	<del>-</del>
54	084	Т	<del>-</del>
55	085	U	<del>-</del>
56	086	V	<del>-</del>
57	087	W	<del>-</del>
58	088	X	<del>-</del>
59	089	Υ	<del>-</del>
5A	090	Z	<del>-</del>
5B	091		shift K
5C	092		shift L
5D	093	]	shift M
5E	094	٨	1, shift N
5F	095		←, shift O, underscore
60	096		accent grave
61	097	а	
62	098	b	<del>-</del>
63	099	С	
64	100	d	
65	101	е	
66	102	f	
67	103	g	_

HEX VALUE	DECIMAL VALUE	CHARACTER	ALTERNATE KEYBO EQV
68	104	h	_
69	105	i	_
6A	106	j	
6B	107	k	
6C	108		
6D	109	m	
6E	110	n	
6F	111	0	
70	112	р	
71	113	q	
72	114	r	
73	115	S	
74	116	t	
75	117	u	
76	118	V	
77	119	W	
78	120	X	
79	121	у	
7A	122	Z	
7B	123	{	
7C	124		vertical slash
7D	125	}	alt mode
7	126	~	(alt mode)
7F	127	DEL	delete, rubout

## **ENTER/EXIT PROGRAM MODE**



RECALL DEFAULTS

