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Pause Duration	page 2-169
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Set Default Parameter

Scanning this bar code will return all parameters to the values listed in the *Default Table* beginning on page 2-5.

SET ALL DEFAULTS

Default Table

Table 2-1. Default Table

Host Types & Options		
Parameter	**Default**	**Page**
Baud Rate	9600	2-23
Parity	Even	2-26
Check Parity	Disable	2-30
Hardware Handshaking	None	2-34
Software Handshaking	None	2-39
Serial Response Time-out	2.0 seconds	2-44
Stop Bit Select	One	2-46
ASCII Format	8-Bit	2-47
Host Serial Line State	High	2-50
Beep on <BEL>	Disable	2-52

Table 2-1. Default Table

Code Types & Options		
Parameter	**Default**	**Page**
UPC-A	Enable	2-53
UPC-E	Enable	2-55
EAN-8	Enable	2-57
EAN-13	Enable	2-59
Decode UPC/EAN Supplementals	Ignore	2-61
Code 128	Enable	2-64
UCC/EAN-128	Enable	2-66
Lengths for Code 128	Any Length	2-68
Code 39	Enable	2-69
Set Length(s) for Code 39	5 to 55	2-74
Code 39 Check Digit Verification	Disable	2-79
Code 39 Full ASCII Conversion	Disable	2-73
Interleaved 2 of 5	Disable	2-81
Set Length(s) for I 2 of 5	14	2-82
Codabar	Disable	2-87
Set Lengths for Codabar	5-55	2-91
CLSI Editing	Disable	2-93
NOTIS Editing	Disable	2-95

Table 2-1. Default Table

Custom Tailoring		
Parameter	**Default**	**Page**
Scanning Range	Full	2-97
Internal Beeper	Enable	2-100
Host Port External Beeper	Disable	2-103
RS-232 Port External Beeper	Disable	2-105
Beeper Volume	High	2-108
Beeper Frequency	Medium	2-110
Time out between reads, same symbol	0.6 seconds	2-112
Time out between reads, different symbols	0.2 seconds	2-113
Decode Buffering	Disable	2-115
Time Delay to Sleep Mode	30 minutes	2-117
Primary Decode Session Time	2.0 seconds	2-120

Table 2-1. Default Table

Decode Options		
Parameter	**Default**	**Page**
Decode Security Measures: **- UPC/EAN Predecode block** **- UPC/EAN Security** **- Linear UPC/EAN Decode** **- Decode UPC/EAN Redundncy (only when autodiscriminate mode is enabled)**	 Reject Level 0 Disable 10	 2-121 2-123 2-128 2-129
UPC/EAN Decode Performance	Enable, Level 3	2-134
Linear Code Type Security	Level 2	2-136
Code 128 Decode Performance	Enable, Level 3	2-143
Code 39 Decode Performance	Enable, Level 3 (for fixed length only)	2-148

Table 2-1. Default Table

Data Transmission Formatting		
Parameter	**Default**	**Page**
Transmit UPC-A Check Digit	Enable	2-149
Transmit UPC-E Check Digit	Enable	2-151
UPC-A Preamble	System Character	2-154
UPC-E Preamble	System Character	2-157
Convert UPC-E to A	Disable	2-160
EAN-8 Zero Extend	Disable	2-162
Beep After Good Decode	Enable	2-163
Intercharacter Delay	0	2-165
Transmit Code ID Character	None	2-168
Pause Duration	0	2-169
Prefix/Suffix Values	7013 (<CR/LF> for serial)	2-170
Scan Data Transmission Format	Data as is	2-175
Serial Data Transmission Format	Data as is	2-180
Ignore Unknown Characters	Enable	2-184

Table 2-1. Default Table

RS-232 Port Auxiliary Options		
Parameter	**Default**	**Page**
Baud Rate	9600	2-194
Parity	Even	2-197
Check Parity	Disabled	2-201
Hardware Handshaking	None	2-205
Software Handshaking	None	2-207
Serial Response Time-out	2.0 seconds	2-209
Stop Bit Select	One	2-210
ASCII Format	8-Bit	2-213
Aux Serial Line State	Low	2-215

Host Types & Options

Select a Host Interface, and associated option(s) from the list below and on the following page. Then scan the corresponding bar code.

Host Interface & Option	**Page**
No Host	2-12
RS-232C	
Single Port	2-13
Nixdorf	2-14
ICL	2-15
Fujitsu	2-16

Host Types & Options

When this bar code is scanned, the scanner will decode a bar code but will not transmit the data to the host.

NO HOST

Host Types & Options

Single Port RS-232C Host Options

The **RS-232** port is used either as an output RS-232C host port or as an auxiliary RS-232C input port.

To use the **RS-232** port as a host port:

- Connect an RS-232C host device to this port.
- Scan the **Single Port RS-232 Host** bar code below, or one of the terminal specific RS-232 Host bar codes on the following pages.
- Use the programming bar codes on page 2-17to 2-52 to set the applicable parameters.

To use the **RS-232** port as an auxiliary input port, see page 2-187.

If you are using an RS-232C host (single or dual port) connected to the **Host** port with a Synapse Smart Cable, and you wish to change any of the host parameters, use the **Synapse** parameters provided with the cable instructions.

SINGLE PORT RS-232C HOST

Host Types & Options

Single Port RS-232C Host Options

Nixdorf RS-232C HOST

Host Types & Options

Single Port RS-232C Host Options

ICL RS-232C HOST

Host Types & Options

Single Port RS-232C Host Options

Fujitsu RS-232C HOST

Host Types & Options

Single Port RS-232C Host Options

Baud Rate

Baud rate is the number of bits of data transmitted per second. The scanner's baud rate setting should match the data rate setting of the host device. If not, data may not reach the host device or may reach it in distorted form. To select a baud rate of **110**, scan the bar code below.

BAUD RATE 110

Host Types & Options

Single Port RS-232C Host Options

Baud Rate

BAUD RATE 300

Host Types & Options

Single Port RS-232C Host Options

Baud Rate

BAUD RATE 600

Host Types & Options

Single Port RS-232C Host Options

Baud Rate

BAUD RATE 1200

Host Types & Options

Single Port RS-232C Host Options

Baud Rate

BAUD RATE 2400

Host Types & Options

Single Port RS-232C Host Options

Baud Rate

BAUD RATE 4800

Host Types & Options

Single Port RS-232C Host Options

Baud Rate

BAUD RATE 9600

Host Types & Options

Single Port RS-232C Host Options

Baud Rate

BAUD RATE 19,200

Host Types & Options

Single Port RS-232C Host Options

Parity

A parity check bit is the most significant bit of each ASCII coded character.

If you select **ODD** parity, the parity bit will have a value 0 or 1, based on data, to ensure than an odd number of 1 bits are contained in the coded character.

Select the parity type according to host device requirements.

ODD

Host Types & Options

Single Port RS-232C Host Options

Parity

A parity check bit is the most significant bit of each ASCII coded character.

If you select **EVEN** parity, the parity bit will have a value 0 or 1, based on data, to ensure than an even number of 1 bits are contained in the coded character.

Select the parity type according to host device requirements.

EVEN

Host Types & Options

Single Port RS-232C Host Options

Parity

A parity check bit is the most significant bit of each ASCII coded character.

Select **MARK** parity and the parity bit will always be 1.

Select the parity type according to host device requirements.

MARK

Host Types & Options

Single Port RS-232C Host Options

Parity

A parity check bit is the most significant bit of each ASCII coded character.

Select **SPACE** parity and the parity bit will always be 0.

Select the parity type according to host device requirements.

SPACE

Host Types & Options

Single Port RS-232C Host Options

Parity

A parity check bit is the most significant bit of each ASCII coded character.

If no parity is required, select **NONE.**

Select the parity type according to host device requirements.

NONE

Host Types & Options

Single Port RS-232C Host Options

Check Parity

Select whether or not the parity of received characters is checked. The type of parity used is selectable through the **PARITY** parameter.

CHECK PARITY

Host Types & Options

Single Port RS-232C Host Options

Do Not Check Parity

DO NOT CHECK PARITY

Host Types & Options

Single Port RS-232C Host Options

Hardware Handshaking

The data interface consists of an RS-232C port. The port has been designed to operate either with or without the hardware handshaking lines, RTS, *Request to Send*, and CTS, *Clear to Send*.

If Standard RTS / CTS handshaking is selected, scan data is transmitted according to the following sequence:

- The controller reads the CTS line for activity. If CTS is asserted, the controller waits up to two seconds for the host to negate the CTS line. If, after two seconds the CTS line is still asserted, the scanner sounds a transmit error and any scanned data is lost.
- When the CTS line is negated, the controller asserts the RTS line and waits up to two seconds for the host to assert CTS. When the host asserts CTS, data is transmitted. If, after two seconds, the CTS line is not asserted, the scanner sounds a transmit error and discards the data.
- When data transmission is complete, the controller negates RTS 10 msec after sending the last character.
- The host should respond by negating CTS. The controller checks for a negated CTS upon the next transmission of data.

Host Types & Options

Single Port RS-232C Host Options

Hardware Handshaking

During the transmission of data, the CTS line should be asserted. If CTS is de-asserted for more than 50 ms between characters, the transmission is aborted, the scanner sounds a transmission error, and the data is discarded.

- If the above communications sequence fails, the scanner issues an error indication. In this case, the data is lost and must be rescanned.

Note: The DTR signal is jumpered active.

Host Types & Options

Single Port RS-232C Host Options

Hardware Handshaking

Scan the bar code below if no Hardware Handshaking is desired.

NONE

Host Types & Options

Single Port RS-232C Host Options

Hardware Handshaking

Scan the bar code below to select Standard RTS/CTS Hardware Handshaking.

STANDARD RTS/CTS

Host Types & Options

Single Port RS-232C Host Options

Hardware Handshaking

When RTS / CTS Option 1 is selected, the scanner asserts RTS before transmitting and ignores the state of CTS. The scanner de-asserts RTS when the transmission is complete.

RTS/CTS OPTION 1

Host Types & Options

Single Port RS-232C Host Options

Hardware Handshaking

When Option 2 is selected, RTS is always high or low (user-programmed logic level). However, the scanner waits for CTS to be asserted before transmitting data. If CTS is not asserted within two seconds, the scanner issues an error indication and discards the data.

RTS/CTS OPTION 2

Host Types & Options

Single Port RS-232C Host Options

Hardware Handshaking

When Option 3 is selected, the scanner asserts RTS prior to any data transmission, regardless of the state of CTS. The scanner waits up to two seconds for CTS to be asserted. If CTS is not asserted during this time, the scanner issues an error indication and discards the data. The scanner de-asserts RTS when transmission is complete.

RTS/CTS OPTION 3

Host Types & Options

Single Port RS-232C Host Options

Software Handshaking

This parameter offers control of the data transmission process in addition to, or instead of, that offered by hardware handshaking.

NONE

When this option is selected, data is transmitted immediately.

NONE

Host Types & Options

Single Port RS-232C Host Options

Software Handshaking

ACK/NAK

When this option is selected, after transmitting data, the scanner expects either an ACK or NAK response from the host. Whenever a NAK is received, the scanner transmits the same data again and waits for either an ACK or NAK. After three unsuccessful attempts to send data when NAKs are received, the scanner issues an error indication and discards the data.

The scanner waits up to the programmable Host Serial Response Time-out to receive an ACK or NAK. If the scanner does not get a response in this time, it issues an error indication and discards the data. There will be no retries when a time-out occurs.

ACK/NAK

Host Types & Options

Single Port RS-232C Host Options

Software Handshaking

ENQ

When this option is selected, the scanner waits for an ENQ character from the host before transmitting data. If an ENQ is not received within two seconds, the scanner issues an error indication and discards the data. The host must transmit an ENQ character at least every two seconds to prevent transmission errors.

ENQ

Host Types & Options

Single Port RS-232C Host Options

Software Handshaking

ACK/NAK with ENQ

This combines the two previous options.

ACK/NAK with ENQ

Host Types & Options

Single Port RS-232C Host Options

Software Handshaking

XON/XOFF

An XOFF character turns the scanner transmission off until the scanner receives an XON character. There are two situations for XON / XOFF:

- XOFF is received before the scanner has data to send. When the scanner has data to send, it then waits for an XON character before transmission. The scanner waits up to two seconds to receive the XON. If the XON is not received within this time, the scanner issues an error indication and discards the data.
- XOFF is received during a transmission. Data transmission then stops after sending the current byte. When the scanner receives an XON character, it sends the rest of the data message. The scanner waits indefinitely for the XON.

XON/XOFF

Host Types & Options

Single Port RS-232C Host Options

Serial Response Time-out

This parameter determines the maximum period allowed to elapse before the scanner assumes end of transmission. The delay period can range from 0.0 to 9.9 seconds in .1 second increments. After scanning the bar code below, scan two bar codes on page 2-217 to 2-226 to set the desired time-out.

SERIAL RESPONSE TIME-OUT

Host Types & Options

Single Port RS-232C Host Options

Stop Bit Select

The stop bit(s) at the end of each transmitted character marks the end of transmission of one character and prepares the receiving device for the next character in the serial data stream. The number of stop bits (one or two) selected depends on the number the receiving terminal is programmed to accommodate. Set the number of stop bits to match those device requirements.

1 STOP BIT

Host Types & Options

Single Port RS-232C Host Options

Stop Bit Select

2 STOP BITS

Host Types & Options

Single Port RS-232C Host Options

ASCII Format

Data is normally transmitted in 7-bit ASCII format. This parameter allows the scanner to interface with devices requiring an 8-bit ASCII protocol.

7-BIT

Host Types & Options

Single Port RS-232C Host Options

ASCII Format

8-BIT

Host Types & Options

Single Port RS-232C Host Options

Serial Host RTS Line State

This parameter is used to set the idle state of the Serial Host RTS line. To select **HIGH RTS** line state, scan the bar code below.

HOST: HIGH RTS

Host Types & Options

Single Port RS-232C Host Options

Serial Host RTS Line State

HOST: LOW RTS

Host Types & Options

Single Port RS-232C Host Options

Beep on <BEL>

When this parameter is enabled, the scanner will issue a beep when a <BEL> character is detected on the RS-232C serial line. <BEL> is issued to gain a user's attention to indicate an illegal entry or other important event.

BEEP ON <BEL> CHARACTER

Host Types & Options

Single Port RS-232C Host Options

Do Not Beep on <BEL> Character

DO NOT BEEP ON <BEL> CHARACTER

Code Types & Options

Enable UPC-A

To enable UPC-A scan the bar code below.

ENABLE UPC-A

Code Types & Options

Disable UPC-A

To disable UPC-A scan the bar code below.

DISABLE UPC-A

Code Types & Options

Enable UPC-E

To enable UPC-E scan the bar code below.

ENABLE UPC-E

Code Types & Options

Disable UPC-E

To disable UPC-E scan the bar code below.

DISABLE UPC-E

Code Types & Options

Enable EAN-8

To enable EAN-8 scan the bar code below.

ENABLE EAN-8

Code Types & Options

Disable EAN-8

To disable EAN-8 scan the bar code below.

DISABLE EAN-8

Code Types & Options

Enable EAN-13

To enable EAN-13 scan the bar code below.

ENABLE EAN-13

Code Types & Options

Disable EAN-13

To disable EAN-13 scan the bar code below.

DISABLE EAN-13

Code Types & Options

Decode UPC/EAN Supplementals

Supplementals are additionally appended characters (2 or 5) according to specific code format conventions (e.g., UPC A+2, UPC E+2, EAN 8+2). Three options are available.

- If UPC/EAN with supplemental characters is selected, UPC/EAN symbols without supplemental characters will not be decoded.
- If UPC/EAN without supplemental characters is selected, and the LS 5300 is presented with a UPC/EAN plus supplemental symbol, the UPC/EAN will be decoded and the supplemental characters ignored.
- An autodiscriminate option is also available.

Note: In order to minimize the risk of invalid data transmission, it is recommended that you select whether to read or ignore supplemental characters.

DECODE UPC/EAN WITH SUPPLEMENTALS

Code Types & Options

Ignore UPC/EAN With Supplementals

Supplementals are additionally appended characters (2 or 5) according to specific code format conventions (e.g., UPC A+2, UPC E+2, EAN 8+2). Three options are available.

- If UPC/EAN with supplemental characters is selected, UPC/EAN symbols without supplemental characters will not be decoded.
- If UPC/EAN without supplemental characters is selected, and the LS 5300 is presented with a UPC/EAN plus supplemental symbol, the UPC/EAN will be decoded and the supplemental characters ignored.
- An autodiscriminate option is also available.

Note: In order to minimize the risk of invalid data transmission, it is recommended that you select whether to read or ignore supplemental characters.

IGNORE UPC/EAN WITH SUPPLEMENTALS

Code Types & Options

Autodiscriminate UPC/EAN With Supplementals

Supplementals are additionally appended characters (2 or 5) according to specific code format conventions (e.g., UPC A+2, UPC E+2, EAN 8+2). Three options are available.

- If UPC/EAN with supplemental characters is selected, UPC/EAN symbols without supplemental characters will not be decoded.
- If UPC/EAN without supplemental characters is selected, and the LS 5300 is presented with a UPC/EAN plus supplemental symbol, the UPC/EAN will be decoded and the supplemental characters ignored.
- An autodiscriminate option is also available.

Note: In order to minimize the risk of invalid data transmission, it is recommended that you select whether to read or ignore supplemental characters.

AUTODISCRIMINATE UPC/EAN WITH SUPPLEMENTALS

Code Types & Options

Enable Code 128

To enable Code 128, scan the bar code below.

ENABLE CODE 128

Code Types & Options

Disable Code 128

To disable Code 128, scan the bar code below.

DISABLE CODE 128

Code Types & Options

Enable UCC/EAN-128

To enable UCC/EAN-128, scan the bar code below.

ENABLE UCC/EAN-128

Code Types & Options

Disable UCC/EAN-128

To disable UCC/EAN-128, scan the bar code below.

DISABLE UCC/EAN-128

Code Types & Options

Lengths for Code 128

No length setting is required for Code 128. The default setting is Any Length.

Code Types & Options

Enable Code 39

To enable Code 39 scan the bar code below.

ENABLE CODE 39

Code Types & Options

Disable Code 39

To disable Code 39 scan the bar code below.

DISABLE CODE 39

Code Types & Options

Enable/Disable Code 39 Full ASCII

To enable or disable Code 39 Full ASCII, scan the appropriate bar code on the following pages.

When enabled, the ASCII character set assigns a code to letters, punctuation marks, numerals, and most control keystrokes on the keyboard.

The first 32 codes are non-printable and are assigned to keyboard control characters such as BACKSPACE and RETURN. The other 96 are called printable codes because all but SPACE and DELETE produce visible characters.

Code 39 Full ASCII interprets the bar code special character ($ + % /) preceding a Code 39 character and assigns an ASCII character value to the pair. For example, when Code 39 Full ASCII is enabled and a **+B** is scanned, it will be interpreted as **b**, **%J** as **?**, and **$H** emulates the keystroke **BACKSPACE**. Scanning **ABC$M** will output the keystroke equivalent of **ABC ENTER**. Refer to the ASCII table in the Appendix to this guide.

The scanner will not autodiscriminate between Code 39 and Code 39 Full ASCII.

Code Types & Options

Enable Code 39 Full ASCII

ENABLE CODE 39 FULL ASCII

Code Types & Options

Disable Code 39 Full ASCII

DISABLE CODE 39 FULL ASCII

Code Types & Options

Set Lengths for Code 39

Lengths for Code 39 may be set for any length, one or two discrete lengths, or lengths within a specific range. The length of a code refers to the number of characters (i.e., human readable characters) the code contains.

One Discrete Length - This option will allow you to decode only those codes containing a selected length. For example, if you select **Code 39 One Discrete Length**, then scan **1**, **4**, only Code 39 symbols containing 14 characters will be decoded. Numeric bar codes are on page 2-217to 2-226. If you make a mistake, scan **CANCEL** on page 2-227.

CODE 39 - ONE DISCRETE LENGTH

Code Types & Options

Set Lengths for Code 39

Lengths for Code 39 may be set for any length, one or two discrete lengths, or lengths within a specific range. The length of a code refers to the number of characters (i.e., human readable characters) the code contains.

Two Discrete Lengths - This option will allow you to decode only those codes containing two selected lengths. For example, if you select **Code 39 Two Discrete Lengths**, then scan **0**, **2**, **1**, **4**, only Code 39 symbols containing 2 or 14 characters will be decoded. Numeric bar codes are on page 2-217 to 2-226. If you make a mistake, scan **CANCEL** on page 2-227.

Note: Selecting this option disables Code 39 Decode Performance.

CODE 39 - TWO DISCRETE LENGTHS

Code Types & Options

Set Lengths for Code 39

Lengths for Code 39 may be set for any length, one or two discrete lengths, or lengths within a specific range. The length of a code refers to the number of characters (i.e., human readable characters) the code contains.

Length Within Range - This option allows you to decode a code type within a specified range. For example to decode Code 39 symbols containing between 4 and 12 characters, first scan **Code 39 Length Within Range**. Then scan **0**, **4**, **1** and **2** (single digit numbers must always be preceded by a leading zero). Numeric bar codes are on page 2-217 to 2-226. If you make a mistake, scan **CANCEL** on page 2-227.

Note: Selecting this option disables Code 39 Decode Performance.

CODE 39 - LENGTH WITHIN RANGE

Code Types & Options

Set Lengths for Code 39

Lengths for Code 39 may be set for any length, one or two discrete lengths, or lengths within a specific range. The length of a code refers to the number of characters (i.e., human readable characters) the code contains.

Any Length - Scanning this option allows you to decode Code 39 symbols containing any number of characters.

Note: Selecting this option disables Code 39 Decode Performance.

CODE 39 - ANY LENGTH

Code Types & Options

Code 39 Check Digit Verification

When enabled, this parameter checks the integrity of a Code 39 symbol to ensure it complies with specified algorithms.

Only those code 39 symbols which include a modulo 43 check digit will be decoded when this parameter is enabled.

ENABLE CODE 39 CHECK DIGIT

Code Types & Options

Code 39 Check Digit Verification

DISABLE CODE 39 CHECK DIGIT

Code Types & Options

Enable Interleaved 2 of 5

To enable Interleaved 2 of 5, scan the bar code below.

ENABLE I 2 OF 5

Code Types & Options

Disable Interleaved 2 of 5

To disable Interleaved 2 of 5, scan the bar code below.

DISABLE I 2 OF 5

Code Types & Options

Set Lengths for Interleaved 2 of 5

Lengths for I 2 of 5 may be set for any length, one or two discrete lengths, or lengths within a specific range. The length of a code refers to the number of characters (i.e., human readable characters) the code contains.

One Discrete Length - This option will allow you to decode only those codes containing a selected length. For example, if you select **I 2 of 5 One Discrete Length**, then scan **1**, **4**, only I 2 of 5 symbols containing 14 characters will be decoded. Numeric bar codes are on page 2-217 to 2-226. If you make a mistake, scan **CANCEL** on page 2-227.

I 2 of 5 - ONE DISCRETE LENGTH

Code Types & Options

Set Lengths for Interleaved 2 of 5

Lengths for I 2 of 5 may be set for any length, one or two discrete lengths, or lengths within a specific range. The length of a code refers to the number of characters (i.e., human readable characters) the code contains.

Two Discrete Lengths - This option will allow you to decode only those codes containing two selected lengths. For example, if you select **I 2 of 5 Two Discrete Lengths**, then scan **0**, **2**, **1**, **4**, only I 2 of 5 symbols containing 2 or 14 characters will be decoded. Numeric bar codes are on page 2-217 to 2-226. If you make a mistake, scan **CANCEL** on page 2-227.

I 2 of 5 - TWO DISCRETE LENGTHS

Code Types & Options

Set Lengths for Interleaved 2 of 5

Lengths for I 2 of 5 may be set for any length, one or two discrete lengths, or lengths within a specific range. The length of a code refers to the number of characters (i.e., human readable characters) the code contains.

Length Within Range - This option allows you to decode a code type within a specified range. For example to decode I 2 of 5 symbols containing between 4 and 12 characters, first scan **I 2 of 5 Length Within Range**. Then scan **0**, **4**, **1** and **2** (single digit numbers must always be preceded by a leading zero). Numeric bar codes are on page 2-217 to 2-226. If you make a mistake, scan **CANCEL** on page 2-227.

I 2 of 5 - LENGTH WITHIN RANGE

Code Types & Options

Set Lengths for Interleaved 2 of 5

Lengths for I 2 of 5 may be set for any length, one or two discrete lengths, or lengths within a specific range. The length of a code refers to the number of characters (i.e., human readable characters) the code contains.

Any Length - Scanning this option allows you to decode I 2 of 5 symbols containing any number of characters.

I 2 of 5 ANY LENGTH

Code Types & Options

Enable Codabar

To enable Codabar, scan the bar code below.

ENABLE CODABAR

Code Types & Options

Disable Codabar

To disable Codabar, scan the bar code below.

DISABLE CODABAR

Code Types & Options

Set Lengths for Codabar

Lengths for Codabar may be set for any length, one or two discrete lengths, or lengths within a specific range. The length of a code refers to the number of characters (i.e., human readable characters) the code contains.

One Discrete Length - This option will allow you to decode only those codes containing a selected length. For example, if you select **Codabar One Discrete Length**, then scan **1**, **4**, only Codabar symbols containing 14 characters will be decoded. Numeric bar codes are on page 2-217 to 2-226. If you make a mistake, scan **CANCEL** on page 2-227.

CODABAR - ONE DISCRETE LENGTH

Code Types & Options

Set Lengths for Codabar

Lengths for Codabar may be set for any length, one or two discrete lengths, or lengths within a specific range. The length of a code refers to the number of characters (i.e., human readable characters) the code contains.

Two Discrete Lengths - This option will allow you to decode only those codes containing two selected lengths. For example, if you select **Codabar Two Discrete Lengths**, then scan **0**, **2**, **1**, **4**, only Codabar symbols containing 2 or 14 characters will be decoded. Numeric bar codes are on page 2-217 to 2-226. If you make a mistake, scan **CANCEL** on page 2-227.

CODABAR - TWO DISCRETE LENGTHS

Code Types & Options

Set Lengths for Codabar

Lengths for Codabar may be set for any length, one or two discrete lengths, or lengths within a specific range. The length of a code refers to the number of characters (i.e., human readable characters) the code contains.

Length Within Range - This option allows you to decode a code type within a specified range. For example to decode Codabar symbols containing between 4 and 12 characters, first scan **Codabar Length Within Range**. Then scan **0**, **4**, **1** and **2** (single digit numbers must always be preceded by a leading zero). Numeric bar codes are on page 2-217 to 2-226. If you make a mistake, scan **CANCEL** on page 2-227.

CODABAR - LENGTH WITHIN RANGE

Code Types & Options

Set Lengths for Codabar

Lengths for Codabar may be set for any length, one or two discrete lengths, or lengths within a specific range. The length of a code refers to the number of characters (i.e., human readable characters) the code contains.

Any Length - Scanning this option allows you to decode Codabar symbols containing any number of characters.

CODABAR - ANY LENGTH

Code Types & Options

Enable CLSI Editing

If enabled, this parameter strips the start and stop characters and inserts a space after the first, fifth, and tenth characters of a 14-character Codabar symbol. Note that symbol length does not include start and stop characters.

ENABLE CLSI EDITING

Code Types & Options

Disable CLSI Editing

DISABLE CLSI EDITING

Code Types & Options

Enable NOTIS Editing

If enabled, this parameter strips the start and stop characters from decoded Codabar symbol.

ENABLE NOTIS EDITING

Code Types & Options

Disable NOTIS Editing

DISABLE NOTIS EDITING

Code Types & Options

Custom Tailoring

Scanning Range

Select the decode range that best suits your scanning needs. **FULL RANGE** covers the maximum scanning range, and is recommended for in-counter applications and installations where there is no opportunity for inadvertent reads.

FULL RANGE

Custom Tailoring

Scanning Range

Select the decode range that best suits your scanning needs. **MEDIUM RANGE** is recommended for on-counter applications and installations where full range may allow inadvertent reads.

MEDIUM RANGE

Custom Tailoring

Scanning Range

Select the decode range that best suits your scanning needs. **SHORT RANGE** is recommended for on-counter applications where counter space is at a minimum.

SHORT RANGE

Custom Tailoring

Enable Internal Beeper

This parameter connects the beeper signal to the internal beeper.

ENABLE INTERNAL BEEPER

Custom Tailoring

Disable Internal Beeper

This parameter disconnects the beeper signal to the internal beeper.

DISABLE INTERNAL BEEPER

Custom Tailoring

Enable Host Port External Beeper

This parameter connects the beeper signal to the Host Port.

ENABLE HOST PORT EXTERNAL BEEPER

Custom Tailoring

Disable Host Port External Beeper

This parameter disconnects the beeper signal to the Host Port.

DISABLE HOST PORT EXTERNAL BEEPER

Custom Tailoring

Enable RS-232 Port External Beeper

This parameter connects the beeper signal to the RS-232 Port.

ENABLE RS-232 PORT EXTERNAL BEEPER

Custom Tailoring

Disable RS-232 Port External Beeper

This parameter disconnects the beeper signal to the RS-232 Port.

DISABLE RS-232 PORT EXTERNAL BEEPER

Custom Tailoring

Beeper Volume

Select the beeper volume that best suits your operation.

LOW VOLUME

Custom Tailoring

Beeper Volume

Select the beeper volume that best suits your operation.

MEDIUM VOLUME

Custom Tailoring

Beeper Volume

Select the beeper volume that best suits your operation.

HIGH VOLUME

Custom Tailoring

Beeper Frequency

To select a decode beep frequency (tone), scan the **LOW FREQUENCY, MEDIUM FREQUENCY**, or **HIGH FREQUENCY** bar code.

LOW FREQUENCY

Custom Tailoring

Beeper Frequency

MEDIUM FREQUENCY

Custom Tailoring

Beeper Frequency

HIGH FREQUENCY

Custom Tailoring

Time-out Between Decodes, Same Symbol

This parameter sets the minimum time between decodes of the same symbol. It is programmable in 0.1 second increments from 0.0 to 9.9 seconds. (Setting this above 0.4 seconds is recommended.)

Scan the bar code below to select a new time-out. Next scan two numeric bar codes on page 2-217 to 2-226, the first representing seconds, the second tenths of seconds. If you make an error, or wish to change your selection, scan **CANCEL** on page 2-227.

TIME-OUT BETWEEN SAME SYMBOL

Custom Tailoring

Time-out Between Decodes, Different Symbols

This parameter sets the minimum time between decodes of different symbols. It is programmable in 0.1 second increments from 0.0 to 9.9 seconds.

Scan the bar code below to select a new time-out. Next scan two numeric bar codes on page 2-217 to 2-226, the first representing seconds, the second tenths of seconds. If you make an error, or wish to change your selection, scan **CANCEL** on page 2-227.

TIME-OUT BETWEEN DIFFERENT SYMBOLS

Custom Tailoring

Enable Decode Buffering

When enabled, successive decodes are buffered by the scanner. This is useful when the host takes a long time to receive and / or process a symbol.

ENABLE DECODE BUFFERING

Custom Tailoring

Disable Decode Buffering

When disabled, successive decodes are no longer buffered by the scanner. The scanner waits until a decoded symbol is transmitted to the host device before processing another symbol.

DISABLE DECODE BUFFERING

Custom Tailoring

Time Delay to Sleep Mode

This parameter sets the time the scanner will remain active after any scanning activity. Scan one of the four options. Depending on the selection, the scanner will enter a sleep mode 15, 30, 60 or 90 minutes after the last attempted decode. To awaken the scanner, present the bar code you wish to scan to the scan window.

If you make a mistake, scan **CANCEL** on page 2-227.

15 MINUTES

Custom Tailoring

Time Delay to Sleep Mode

This parameter sets the time the scanner will remain active after any scanning activity. Scan one of the four options. Depending on the selection, the scanner will enter a sleep mode 15, 30, 60 or 90 minutes after the last attempted decode. To awaken the scanner, present the bar code you wish to scan to the scan window.

If you make a mistake, scan **CANCEL** on page 2-227.

30 MINUTES

Custom Tailoring

Time Delay to Sleep Mode

This parameter sets the time the scanner will remain active after any scanning activity. Scan one of the four options. Depending on the selection, the scanner will enter a sleep mode 15, 30, 60 or 90 minutes after the last attempted decode. To awaken the scanner, present the bar code you wish to scan to the scan window.

If you make a mistake, scan **CANCEL** on page 2-227.

60 MINUTES

Custom Tailoring

Time Delay to Sleep Mode

This parameter sets the time the scanner will remain active after any scanning activity. Scan one of the four options. Depending on the selection, the scanner will enter a sleep mode 15, 30, 60 or 90 minutes after the last attempted decode. To awaken the scanner, present the bar code you wish to scan to the scan window.

If you make a mistake, scan **CANCEL** on page 2-227.

90 MINUTES

Custom Tailoring

Primary Decode Session Time

This parameter sets the maximum time decode processing will continue during a scan attempt. It is programmable in 0.1 second increments from 0.1 to 9.9 seconds. (Setting this between 1.0 and 3.0 seconds is recommended.)

Scan the bar code below to select a new time-out. Next scan two numeric bar codes on page 2-217 to 2-226, the first representing seconds, the second tenths of seconds. If you make an error, or wish to change your selection, scan **CANCEL** on page 2-227.

DECODE ATTEMPT DURATION

Decode Options

UPC/EAN Predecode Block

UPC/EAN bar codes are made up of two blocks representing “left” and “right” halves. For example, bar code1234567890 is divided into left block “12345”, and right block “67890”. To maximize its aggressiveness, the LS 5300 is capable of decoding a UPC/EAN symbol by “splicing” together a left block read by one of the 20 scan lines, and a right block read by another.

Reject Predecode Block

This option provides additional protection (beyond the embedded check digit) against mis-splicing a UPC/EAN block from a symbol that has just been decoded (but has not completely exited the scanner’s field of view), with a block from a new symbol that has just been presented to the scanner. This option requires the scanner to compare the new symbol against the symbol just decoded to see if there are common blocks. If either the left or right blocks match between symbols, the scanner will reject the common block for the period of time dictated by the **TIME OUT BETWEEN DECODES - SAME SYMBOL** parameter.

REJECT PREDECODE BLOCK

Decode Options

Accept Predecode Block

This option allows immediate decode of a new UPC/EAN bar code regardless of the previously decoded UPC/EAN bar code's block content.

ACCEPT PREDECODE BLOCK

Decode Options

UPC/EAN Security Level

The LS 5300 offers four levels of decode security for UPC/EAN bar codes. Increasing levels of security are provided for decreasing levels of bar code quality. There is an inverse relationship between security and scanner aggressiveness, so be sure to choose only that level of security necessary for any given application.

Level 0

This is the default setting which allows the scanner to operate in its most aggressive state, while providing sufficient security in decoding “in-spec” UPC/EAN bar codes.

UPC/EAN SECURITY LEVEL 0

Decode Options

UPC/EAN Security Level

Level 1

As bar code quality levels diminish, certain characters become prone to mis-decodes before others (i.e., 1, 2, 7, 8). If you are experiencing mis-decodes of poorly printed bar codes, and the mis-decodes are limited to these characters, select this security level.

UPC/EAN SECURITY LEVEL 1

Decode Options

UPC/EAN Security Level

Level 2

If you are experiencing mis-decodes of poorly printed bar codes, and the mis-decodes are not limited to characters 1, 2, 7, and 8, select this security level.

UPC/EAN SECURITY LEVEL 2

Decode Options

UPC/EAN Security Level

Level 3

If you have tried Security Level 2, and are still experiencing misdecodes, select this security level. Be advised, selecting this option is an extreme measure against mis-decoding severely out of spec bar codes. Selection of this level will significantly impair the decoding ability of the scanner. If this level of security is necessary, you should try to improve the quality of your bar codes.

UPC/EAN SECURITY LEVEL 3

Decode Options

Enable Linear UPC/EAN Decode

This option applies to code types containing two adjacent blocks (e.g. UPC-A, EAN-8, EAN-13). When enabled, a bar code will be transmitted only when both the left and right blocks are successfully decoded within one laser scan. This option should be enabled when bar codes are in proximity to each other.

ENABLE LINEAR UPC/EAN DECODE

Decode Options

Disable Linear UPC/EAN Decode

This option applies to code types containing two adjacent blocks (e.g. UPC-A, EAN-8, EAN-13). When enabled, a bar code will be transmitted only when both the left and right blocks are successfully decoded within one laser scan. This option should be enabled when bar codes are in proximity to each other.

DISABLE LINEAR UPC/EAN DECODE

Decode Options

Decode Redundancy for UPC/EAN (only in Autodiscriminate Mode)

With Autodiscriminate UPC/EAN Supplementals selected, this option adjusts the number of times a symbol will be decoded before transmission. The range is from two to 30 times. Ten or above is recommended when decoding a mix of UPC/EAN symbols with and without supplementals.

Scan the bar code below to select a decode redundancy value. Next scan two numeric bar codes on page 2-217 to 2-226 that represent the desired number of times. For single digit numbers, include a leading zero. If you make an error, or wish to change your selection, scan **CANCEL** on page 2-227.

DECODE REDUNDANCY for UPC/EAN

Decode Options

Enable UPC/EAN Decode Performance

This option offers three levels of decode performance or "aggressiveness" for UPC/EAN symbols without supplementals. Increasing the performance level reduces the amount of required bar code orientation, which is useful if you are scanning very long and/or truncated bar codes. Increased levels reduce decode security.

If you enable this option, you may select a Decode Performance level from the following pages to suit your performance needs.

ENABLE UPC/EAN DECODE PERFORMANCE

Decode Options

Disable UPC/EAN Decode Performance

DISABLE UPC/EAN DECODE PERFORMANCE

Decode Options

UPC/EAN Decode Performance

Level 1

UPC/EAN DECODE PERFORMANCE LEVEL 1

Decode Options

UPC/EAN Decode Performance

Level 2

UPC/EAN DECODE PERFORMANCE LEVEL 2

Decode Options

UPC/EAN Decode Performance

Level 3

UPC/EAN DECODE PERFORMANCE LEVEL 3

Decode Options

Linear Code Type Security

Level 1

The LS 5300 offers four levels of decode security for linear code types (e.g. Code 39, Interleaved 2 of 5). Higher security levels are selected for decreasing levels of bar code quality. As security levels increase, the scanner's aggressiveness decreases.

Select the security level appropriate for your bar code quality.

LINEAR SECURITY LEVEL 1

Decode Options

Linear Code Type Security

Level 2

LINEAR SECURITY LEVEL 2

Decode Options

Linear Code Type Security

Level 3

LINEAR SECURITY LEVEL 3

Decode Options

Linear Code Type Security

Level 4

LINEAR SECURITY LEVEL 4

Decode Options

Enable Code 128 Decode Performance

This option offers three levels of decode performance or “aggressiveness” for Code 128 symbols. Increasing the performance level reduces the amount of required bar code orientation, which is useful if you are scanning very long and / or truncated bar codes. Increased levels reduce decode security.

If you enable this option, you may select a Decode Performance level from the following pages to suit your performance needs.

ENABLE CODE 128 DECODE PERFORMANCE

Decode Options

Disable Code 128 Decode Performance

DISABLE CODE 128 DECODE PERFORMANCE

Decode Options

Code 128 Decode Performance

Level 1

CODE 128 DECODE PERFORMANCE LEVEL 1

Decode Options

Code 128 Decode Performance

Level 2

CODE 128 DECODE PERFORMANCE LEVEL 2

Decode Options

Code 128 Decode Performance

Level 3

CODE 128 DECODE PERFORMANCE LEVEL 3

Decode Options

Enable Code 39 Decode Performance

This option offers three levels of decode performance or “aggressiveness” for Code 39 symbols. Increasing the performance level reduces the amount of required bar code orientation, which is useful if you are scanning very long and / or truncated bar codes. Increased levels reduce decode security.

If you enable this option, you may select a Decode Performance level from the following pages to suit your performance needs.

Note: This option only works with Code 39 One Discrete Length.

ENABLE CODE 39 DECODE PERFORMANCE

Decode Options

Disable Code 39 Decode Performance

DISABLE CODE 39 DECODE PERFORMANCE

Decode Options

Code 39 Decode Performance

Level 1

CODE 39 DECODE PERFORMANCE LEVEL 1

Decode Options

Code 39 Decode Performance

Level 2

CODE 39 DECODE PERFORMANCE LEVEL 2

Decode Options

Code 39 Decode Performance

Level 3

CODE 39 DECODE PERFORMANCE LEVEL 3

Data Transmission Format

Transmit UPC-A Check Digit

Scan this bar code to transmit the symbol with the UPC-A check digit.

TRANSMIT
UPC-A CHECK DIGIT

Data Transmission Format

Do Not Transmit UPC-A Check Digit

Scan this bar code to transmit the symbol without the UPC-A check digit.

DO NOT TRANSMIT
UPC-A CHECK DIGIT

Data Transmission Format

Transmit UPC-E Check Digit

Scan this bar code to transmit the symbol with the UPC-E check digit.

TRANSMIT
UPC-E CHECK DIGIT

Data Transmission Format

Do Not Transmit UPC-E Check Digit

Scan this bar code to transmit the symbol without the UPC-E check digit.

DO NOT TRANSMIT
UPC-E CHECK DIGIT

Data Transmission Format

UPC-A Preamble

Three options are given for lead-in characters for UPC-A symbols transmitted to the host device: transmit system character only, transmit system character and country code (“0” for USA), and no preamble transmitted. The lead-in characters are considered part of the symbol.

NO PREAMBLE
(<DATA>)

Data Transmission Format

UPC-A Preamble

Scan this bar code if you want to transmit the symbol with the System Character.

SYSTEM CHARACTER
(<SYSTEM CHARACTER> <DATA>)

Data Transmission Format

UPC-A Preamble

Scan this bar code if you want to transmit the symbol with the System Character and Country Code.

SYSTEM CHARACTER & COUNTRY CODE
(<COUNTRY CODE> <SYSTEM CHARACTER> <DATA>)

Data Transmission Format

UPC-E Preamble

Three options are given for lead-in characters for UPC-E symbols transmitted to the host device: transmit system character only, transmit system character and country code (“0” for USA), and no preamble transmitted. The lead-in characters are considered part of the symbol.

NO PREAMBLE
(<DATA>)

Data Transmission Format

UPC-E Preamble

Scan this bar code if you want to transmit the symbol with the System Character.

SYSTEM CHARACTER
(<SYSTEM CHARACTER> <DATA>)

Data Transmission Format

UPC-E Preamble

Scan this bar code if you want to transmit the symbol with the System Character and Country Code.

SYSTEM CHARACTER & COUNTRY CODE
(<COUNTRY CODE> <SYSTEM CHARACTER> <DATA>)

Data Transmission Format

Convert UPC-E to UPC-A

This parameter converts UPC-E (zero suppressed) decoded data to UPC-A format before transmission. After conversion, data will follow UPC-A format and be affected by UPC-A programming selections (e.g., Preamble, Check Digit).

CONVERT UPC-E TO UPC-A

Data Transmission Format

Do Not Convert UPC-E to UPC-A

Scanning **DO NOT CONVERT UPC-E TO UPC-A** allows you to transmit UPC-E (zero suppressed) decoded data.

DO NOT CONVERT UPC-E TO UPC-A

Data Transmission Format

EAN Zero Extend

If this parameter is enabled, five leading zeros are added to decoded EAN-8 symbols to make them compatible in format to EAN-13 symbols.

ENABLE EAN ZERO EXTEND

Data Transmission Format

Disable EAN Zero Extend

Disabling this parameter returns EAN-8 symbols to their normal format.

DISABLE EAN EXTEND

Data Transmission Format

Beep After Good Decode

Scan this symbol if you want the unit to beep after a good decode.

BEEP AFTER GOOD DECODE

Data Transmission Format

Do Not Beep After Good Decode

Scan this symbol if you want the unit not to beep after a good decode. The beeper will still operate during parameter menu scanning and indicate error conditions.

DO NOT BEEP AFTER GOOD DECODE

Data Transmission Format

Intercharacter Delay

Select the intercharacter delay option matching host requirements. The intercharacter delay gives the host system time to service its receiver and perform other tasks between characters. The delay period can range from no delay to 99 msec in 1 msec increments. After scanning the bar code below, scan two bar codes on page 2-217 to 2-226 to set the desired time-out.

INTERCHARACTER DELAY

Data Transmission Format

Transmit Code ID Character

A code ID character identifies the code type of a scanned bar code. This may be useful when the scanner is decoding more than one code type. In addition to any single character prefix already selected, the code ID character is inserted between the prefix and the decoded symbol.

The user may select no code ID character, a Symbol Code ID character, or an AIM Code ID character. The Symbol Code ID characters are listed below; see *Appendix* for AIM Identifiers.

A = UPC-A, UPC-E, EAN-8 or EAN-13
B = Code 39
C = Codabar
D = Code 128
E = Code 93
F = Interleaved 2 of 5
G = Discrete 2 of 5, or Discrete 2 of 5 IATA
K = UCC/EAN-128

SYMBOL CODE ID CHARACTER

Data Transmission Format

Transmit AIM Code ID Character

TRANSMIT AIM CODE ID CHARACTER

Data Transmission Format

Transmit No Code ID Character

NONE

Data Transmission Format

Pause Duration

This parameter allows a pause to be inserted at any point in the data transmission. Pauses are set by scanning a two digit number (i.e. two bar codes), and are measured in 1/10 second intervals. For example, scanning bar codes “0” and “1” will insert a 1/10 second pause; “0” and “5” will give you a 1/2 second delay. Numeric bar codes are found on page 2-217 to 2-226. If you make a mistake, scan **DATA FORMAT CANCEL** on page 2-186.

PAUSE DURATION

Data Transmission Format

Prefix/Suffix Values

A prefix / suffix may be appended to scan or serial data for use in data editing. These values are set by scanning a four digit number (i.e. four bar codes) that corresponds to key codes for various terminals. See *Appendix* for conversion tables. Numeric bar codes are on page 2-217 to 2-226. If you make a mistake, scan the **DATA FORMAT CANCEL** bar code on page 2-186, and start over.

SCAN PREFIX

Data Transmission Format

Prefix/Suffix Values

A prefix / suffix may be appended to scan or serial data for use in data editing. These values are set by scanning a four digit number (i.e. four bar codes) that corresponds to key codes for various terminals. See *Appendix* for conversion tables. Numeric bar codes are on page 2-217 to 2-226. If you make a mistake, scan the **DATA FORMAT CANCEL** bar code on page 2-186, and start over.

SCAN SUFFIX

Data Transmission Format

Prefix/Suffix Values

A prefix / suffix may be appended to scan or serial data for use in data editing. These values are set by scanning a four digit number (i.e. four bar codes) that corresponds to key codes for various terminals. See *Appendix* for conversion tables. Numeric bar codes are on page 2-217 to 2-226. If you make a mistake, scan the **DATA FORMAT CANCEL** bar code on page 2-186, and start over.

SERIAL PREFIX

Data Transmission Format

Prefix/Suffix Values

A prefix / suffix may be appended to scan or serial data for use in data editing. These values are set by scanning a four digit number (i.e. four bar codes) that corresponds to key codes for various terminals. See *Appendix* for conversion tables. Numeric bar codes are on page 2-217 to 2-226. If you make a mistake, scan the **DATA FORMAT CANCEL** bar code on page 2-186, and start over.

SERIAL SUFFIX

Data Transmission Format

Scan Data Transmission Format

A prefix/suffix may be appended to scan or serial data for use in data editing. These values are set by scanning a four digit number (i.e. four bar codes) that corresponds to key codes for various terminals. See *Appendix* for conversion tables. Numeric bar codes are on page 2-217 to 2-226. If you make a mistake, scan the **DATA FORMAT CANCEL** bar code on page 2-186, and start over.

SCAN OPTIONS

Data Transmission Format

Scan Data Transmission Format

DATA AS IS

Data Transmission Formats

Scan Data Transmission Format

<DATA> <CR (1013)>

Data Transmission Formats

Scan Data Transmission Format

<PREFIX> <DATA>

Data Transmission Formats

Scan Data Transmission Format

<PREFIX> <DATA> <SUFFIX>

Data Transmission Formats

Serial Data Transmission Format

To change the Serial Data Transmission Format, scan the bar code below. Then select one of four options. When you have made your selection, scan the **ENTER** bar code on page 2-228. If you make a mistake, scan the **DATA FORMAT CANCEL** bar code on page 2-186, and start over.

SERIAL OPTIONS

Data Transmission Formats

Serial Data Transmission Format

DATA AS IS

Data Transmission Formats

Serial Data Transmission Format

<DATA> <SUFFIX>

Data Transmission Formats

Serial Data Transmission Format

<PREFIX > <DATA>

Data Transmission Formats

Serial Data Transmission Format

<PREFIX > <DATA> <SUFFIX>

Data Transmission Format

Ignore Unknown Characters

When enabled, all data is sent except for unknown characters, and no error beeps are sounded. Unknown characters are those characters the selected terminal does not recognize.

ENABLE
IGNORE UNKNOWN CHARACTERS

Data Transmission Format

Disable Ignore Unknown Characters

When disabled, bar codes with unknown characters are decoded, but not transmitted to the host. A decode beep will be followed by a communications error beep indication.

DISABLE
IGNORE UNKNOWN CHARACTERS

Data Transmission Formats

Data Format Cancel

If you make an error while entering scan, or serial data transmission formats, or wish to change your selection, scan the bar code below.

DATA FORMAT CANCEL

RS-232 Port Auxiliary Options

The **RS-232** port is used either as an output RS-232C host port or as an input auxiliary RS-232C port.

To use the **RS-232** port as an auxiliary RS-232C input port:

- Connect the auxiliary device (scale, magstripe reader, etc.) to this port.
- Use the programming bar codes on page 2-188 to 2-215 to set the applicable RS-232C auxiliary parameters
- To use the **Host** port and **RS-232** port:
- Connect a host device such as an OCIA terminal to the **Host** port and an RS-232C device, such as a portable terminal or scale to the **RS-232** port.
- Use the programming bar codes on page 2-188 to 2-215 to set the applicable RS-232C auxiliary parameters

Connecting to two RS-232C devices:

- Connect an RS-232C device to the **Host** port using a Synapse™ Smart Cable, and another RS-232C device, requiring different parameters (baud rate, parity, etc.,) to the **RS-232** port. In this case, the device connected to the **Host** port would use the **Synapse** parameters provided with the cable instructions. The device connected to the **RS-232** port would use the **RS-232 Port** parameters on page 2-188 to 2-215.

To use the **RS-232** port as an output host port, see page 2-13.

RS-232 Port Auxiliary Options

Baud Rate

Baud rate is the number of bits of data transmitted per second. The scanner's baud rate setting should match the data rate setting of the host device. If not, data may not reach the host device or may reach it in distorted form. To select a baud rate of **110**, scan the bar code below.

BAUD RATE 110

RS-232 Port Auxiliary Options

Baud Rate

BAUD RATE 300

RS-232 Port Auxiliary Options

Baud Rate

BAUD RATE 600

RS-232 Port Auxiliary Options

Baud Rate

BAUD RATE 1200

RS-232 Port Auxiliary Options

Baud Rate

BAUD RATE 2400

RS-232 Port Auxiliary Options

Baud Rate

BAUD RATE 4800

RS-232 Port Auxiliary Options

Baud Rate

BAUD RATE 9600

RS-232 Port Auxiliary Options

Baud Rate

BAUD RATE 19,200

RS-232 Port Auxiliary Options

Parity

A parity check bit is the most significant bit of each ASCII coded character.

If you select **ODD** parity, the parity bit will have a value 0 or 1, based on data, to ensure than an odd number of 1 bits are contained in the coded character.

Select the parity type according to host device requirements.

ODD

RS-232 Port Auxiliary Options

Parity

A parity check bit is the most significant bit of each ASCII coded character.

If you select **EVEN** parity, the parity bit will have a value 0 or 1, based on data, to ensure than an even number of 1 bits are contained in the coded character.

Select the parity type according to host device requirements.

EVEN

RS-232 Port Auxiliary Options

Parity

A parity check bit is the most significant bit of each ASCII coded character.

Select **MARK** parity and the parity bit will always be 1.

Select the parity type according to host device requirements.

MARK

RS-232 Port Auxiliary Options

Parity

A parity check bit is the most significant bit of each ASCII coded character.

Select **SPACE** parity and the parity bit will always be 0.

Select the parity type according to host device requirements.

SPACE

RS-232 Port Auxiliary Options

Parity

A parity check bit is the most significant bit of each ASCII coded character.

If no parity is required, select **NONE.**

Select the parity type according to host device requirements.

NONE

RS-232 Port Auxiliary Options

Check Parity

Select whether or not the parity of received characters is checked. The type of parity used is selectable through the **PARITY** parameter.

CHECK PARITY

RS-232 Port Auxiliary Options

Do Not Check Parity

DO NOT CHECK PARITY

RS-232 Port Auxiliary Options

Hardware Handshaking

The data interface consists of an RS-232C port. The port has been designed to operate either with or without the hardware handshaking lines, RTS, *Request to Send*, and CTS, *Clear to Send.*

If Standard RTS / CTS handshaking is selected, scan data is transmitted according to the following sequence:

- The controller reads the CTS line for activity. If CTS is asserted, the controller waits up to two seconds for the host to negate the CTS line. If, after two seconds the CTS line is still asserted, the scanner sounds a transmit error and any scanned data is lost.
- When the CTS line is negated, the controller asserts the RTS line and waits up to two seconds for the host to assert CTS. When the host asserts CTS, data is transmitted. If, after two seconds, the CTS line is not asserted, the scanner sounds a transmit error and discards the data.
- When data transmission is complete, the controller negates RTS 10 msec after sending the last character.
- The host should respond by negating CTS. The controller checks for a negated CTS upon the next transmission of data.

RS-232 Port Auxiliary Options

Hardware Handshaking

During the transmission of data, the CTS line should be asserted. If CTS is de-asserted for more than 50 ms between characters, the transmission is aborted, the scanner sounds a transmission error, and the data is discarded.

- If the above communications sequence fails, the scanner issues an error indication. In this case, the data is lost and must be rescanned.

Note: The DTR signal is jumpered active.

RS-232 Port Auxiliary Options

Hardware Handshaking

Scan the bar code below if no Hardware Handshaking is desired.

NONE

RS-232 Port Auxiliary Options

Hardware Handshaking

Scan the bar code below to select Standard RTS/CTS Hardware Handshaking.

STANDARD RTS/CTS

RS-232 Port Auxiliary Options

Software Handshaking

This parameter offers control of the data transmission process in addition to, or instead of, that offered by hardware handshaking.

NONE

When this option is selected, data is transmitted immediately.

NONE

RS-232 Port Auxiliary Options

Software Handshaking

XON/XOFF

An XOFF character turns the scanner transmission off until the scanner receives an XON character. There are two situations for XON / XOFF:

- XOFF is received before the scanner has data to send. When the scanner has data to send, it then waits for an XON character before transmission. The scanner waits up to two seconds to receive the XON. If the XON is not received within this time, the scanner issues an error indication and discards the data.
- XOFF is received during a transmission. Data transmission then stops after sending the current byte. When the scanner receives an XON character, it sends the rest of the data message. The scanner waits indefinitely for the XON.

XON/XOFF

RS-232 Port Auxiliary Options

Serial Response Time-out

This parameter determines the maximum period allowed to elapse before the scanner assumes end of transmission. The delay period can range from 0.0 to 9.9 seconds in .1 second increments. After scanning the bar code below, scan two bar codes on page 2-217 to 2-226 to set the desired time-out.

SERIAL RESPONSE TIME-OUT

RS-232 Port Auxiliary Options

Stop Bit Select

The stop bit(s) at the end of each transmitted character marks the end of transmission of one character and prepares the receiving device for the next character in the serial data stream. The number of stop bits (one or two) selected depends on the number the receiving terminal is programmed to accommodate. Set the number of stop bits to match hose device requirements.

1 STOP BIT

RS-232 Port Auxiliary Options

Stop Bit Select

2 STOP BITS

RS-232 Port Auxiliary Options

ASCII Format

Data is normally transmitted in 7-bit ASCII format. This parameter allows the scanner to interface with devices requiring an 8-bit ASCII protocol.

7-BIT

RS-232 Port Auxiliary Options

ASCII Format

8-BIT

RS-232 Port Auxiliary Options

Auxiliary RTS Line State

This parameter is used to set the idle state of the Auxiliary Serial RTS line. To select **HIGH RTS** line state, scan the bar code below.

AUXILIARY: HIGH RTS

RS-232 Port Auxiliary Options

Auxiliary RTS Line State

AUXILIARY: LOW RTS

RS-232 Port Auxiliary Options

Programming Utilities

Numeric Bar Codes

For parameters requiring specific numeric values, scan the appropriately numbered bar code(s).

0

Programming Utilities

Numeric Bar Codes

1

Programming Utilities

Numeric Bar Codes

2

Programming Utilities

Numeric Bar Codes

3

Programming Utilities

Numeric Bar Codes

4

Programming Utilities

Numeric Bar Codes

5

Programming Utilities

Numeric Bar Codes

6

Programming Utilities

Numeric Bar Codes

7

Programming Utilities

Numeric Bar Codes

8

Programming Utilities

Numeric Bar Codes

9

Programming Utilities

Cancel

If you make an error, or wish to change your selection, scan **CANCEL**, below.

CANCEL

Programming Utilities

Enter

When an **ENTER** is required, such as for **DATA TRANSMISSION FORMATS**, scan the bar code below.

ENTER

Programming Utilities

Applications Items

Reserved for future use.

APPLICATIONS ITEM 1
ENABLE

Programming Utilities

Applications Items

Reserved for future use.

APPLICATIONS ITEM 1
DISABLE

Programming Utilities

Applications Items

Reserved for future use.

APPLICATIONS ITEM 2
ENABLE

Programming Utilities

Applications Items

Reserved for future use.

APPLICATIONS ITEM 2
DISABLE

Programming Utilities

Applications Items

Reserved for future use.

APPLICATIONS ITEM 3
ENABLE

Programming Utilities

Applications Items

Reserved for future use.

APPLICATIONS ITEM 3
DISABLE

Programming Utilities

Applications Items

Reserved for future use.

Enter a 3 digit value from 0 to 255.

APPLICATIONS VALUE