AsReader（ASX-510R, ASR-010D, ASR-010D-V2, ASR-010D-V3 and ASR-010D-V4）
Barcode Parameter Manual

Asterisk, Inc.

Version 1.3

※The data will be changed without a notice.

This document describes the programmable parameters, provides bar codes for programming, AsReader is shipped with the factory default settings. These factory default values are stored in non-volatile memory and are preserved even when the scan engine is powered down. Changes to the factory default values are also stored in non-volatile memory and are preserved even when the scan engine is powered down. Scan the appropriate bar codes included in this document. The new values replace the existing memory values. The factory default parameter values can be recalled by scanning Set Factory Defaults.

Revision History

Version	Date	Item
1.0	11 Aug. 2014	First Rivision
1.3	8 May. 2023	Adds "Illumination Brightness" Adds "Linear UPC/EAN" Adds "GS1 DataBar Limited Security Level"

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Set Default Parameter

Scan Set Factory Defaults to restore the factory default values listed in page 1– 4.

Set Factory Defaults

LED On Time

This parameter sets the maximum time decode processing continues during a scan attempt. It is programmable in 0.1 second increments from 0.5 to 25.5 seconds.

To set an LED On Time, scan the bar code below. Next scan three numeric bar codes beginning on the final page that correspond to the desired on time. Single digit numbers must have a leading zero. For example, to set an on time of 0.5 seconds, scan the bar code below, then scan the "0", "0", and "5" bar codes; to set an on time of 10.5 seconds, scan the bar code below, then scan the "1", "0" and "5" bar codes. To cancel an entry prior to scanning the third numeric digit, scan Cancel on the final page.

LED On Time
(Default: 3.0 sec.)

Power Mode

This parameter determines the power mode of the engine.

In Low Power mode, the scan engine enters into a low power consumption Sleep power state whenever possible.
In Continuous Power mode, the scan engine remains in the Awake state after each decode attempt.

Continuous Power
(00h)

*Low Power
(01h)

Trigger Mode

Select one of the following trigger modes for the digital engine:

Continuous - A trigger pull activates decode processing. Decode processing continues for as long as the trigger remains pulled (asserted). As the scan engine encounters different bar codes, each one is decoded and transmitted.

Level - A trigger pull activates decode processing. Decode processing continues until the bar code is decoded, the trigger is released, or the Decode Session Timeout is reached.

Continuous
(01h)

* Level
(00h)

NOTE   If reading several barcodes with Continuous mode extremely quickly, it might not work properly.

Transmit "No Read" Message

Enable this option to transmit "NR" if a symbol does not decode during the timeout period or before the trigger is released. Any enabled prefix or suffixes are appended around this message.

**Enable No Read
(01h)**

***Disable No Read
(00h)**

Illumination Brightness

Scan the parameter barcodes below to set the illumination brightness. The range is from 0 to 8 and the brightness is proportional to the parameter values. A value of 0 turns off the illumination completely while a value of 8 sets the illumination to full brightness. The decode performance might be reduced when the brightness level is set to a lower value. The default is 8 or full brightness.

Illumination Off (Level 0)
(00h)

Illumination On (Level 1)
(01h)

Illumination On (Level 2)
(02h)

Illumination On (Level 3)
(03h)

Illumination On (Level 4)
(04h)

Illumination On (Level 5)
(05h)

Illumination On (Level 6)
(06h)

Illumination On (Level 7)
(07h)

*Full Illumination (Level 8)
(08h)

Parameter Pass Through

Enable Parameter Pass Through to transmit bar codes in the following format, in Code 128, to the host: <FNC3>L<any length data> <FNC3>B<12 characters of data>
Note that the special Code 128 character <FNC3> must appear at the beginning of this data.
However, if the appropriate data does not follow this as shown above, it does not transmit to the host device.

Enable Parameter Pass Through
(01h)

*Disable Parameter Pass Through
(00h)

Disable All Symbologies

Scan the bar code below to disable the decoding of all symbologies. Use this to simplify selecting a single symbology to decode by scanning this, then scanning the desired enable code type bar code. Note that the decoder can still decode parameter bar codes.

Disable All Symbologies

Linear Code Type Security Level

AsReader offers four levels of decode security for linear code types (e.g. Code 39, Interleaved 2 of 5). Select higher security levels for decreasing levels of bar code quality. As security levels increase, the scan engine's aggressiveness decreases.
Select the security level appropriate for your bar code quality.

Linear Security Level 1

The following code types must be successfully read twice before being decoded:

Code Type	Value
Codaber	8 or less
MSI	4 or less
D 2 of 5	8 or less
I 2 of 5	8 or less

*Linear Security Level 1
(01h)

Linear Security Level 2

All code types must be successfully read twice before being decoded.

Linear Security Level 2
(02h)

Linear Security Level 3

Code types other than the following must be successfully read twice before being decoded. The following codes must be read three times:

Code Type	Value
Codaber	8 or less
MSI	4 or less
D 2 of 5	8 or less
I 2 of 5	8 or less

Linear Security Level 3
(03h)

Linear Security Level 4

All code types must be successfully read three times before being decoded.

Linear Security Level 4
(04h)

UPC/EAN/JAN

Enable/Disable UPC-A

To enable or disable UPC-A, scan the appropriate bar code below.

*Enable UPC-A
(01h)

Disable UPC-A
(00h)

Enable/Disable UPC-E

To enable or disable UPC-E, scan the appropriate bar code below.

*Enable UPC-E
(01h)

Disable UPC-E
(00h)

Enable/Disable UPC-E1

To enable or disable UPC-E1, scan the appropriate bar code below.

NOTE   UPC-E1 is not a UCC (Uniform Code Council) approved symbology.

**Enable UPC-E1
(01h)**

***Disable UPC-E1
(00h)**

Enable/Disable EAN-8

To enable or disable EAN-8, scan the appropriate bar code below.

***Enable EAN-8
(01h)**

**Disable EAN-8
(00h)**

Enable/Disable EAN-13

To enable or disable EAN-13, scan the appropriate bar code below.

***Enable EAN-13
(01h)**

**Disable EAN-13
(00h)**

Enable/Disable Bookland EAN

To enable or disable EAN Bookland, scan the appropriate bar code below.

**Enable Bookland EAN
(01h)**

***Disable Bookland EAN
(00h)**

NOTE   If you enable Bookland EAN, select a Bookland ISBN Format on page 19. Also select either Decode UPC/EAN Supplementals, Autodiscriminate UPC/EAN Supplementals, or Enable 978/979 Supplemental Mode in Decode UPC/EAN Supplementals on page 20.

Bookland ISBN Format

If Bookland EAN is enabled, select one of the following formats for Bookland data:

Bookland ISBN-10 - The digital scanner reports Bookland data starting with 978 in traditional 10-digit format with the special Bookland check digit for backward-compatibility. Data starting with 979 is not considered Bookland in this mode.

Bookland ISBN-13 - The digital scanner reports Bookland data (starting with either 978 or 979) as EAN-13 in 13-digit format to meet the 2007 ISBN-13 protocol.

*Bookland ISBN-10
(00h)

Bookland ISBN-13
(01h)

NOTE For Bookland EAN to function properly, ensure Bookland EAN is enabled (see Enable/Disable Bookland EAN on page 18), then select either Decode UPC/EAN Supplementals, Autodiscriminate UPC/EAN Supplementals, or Enable 978/979 Supplemental Mode in Decode UPC/EAN Supplementals on page 20.

Decode UPC/EAN Supplementals

Supplementals are bar codes appended according to specific format conventions (e.g., UPC A+2, UPC E+2, EAN 13+2). The following options are available:

If you select Ignore UPC/EAN with Supplementals, and the scanner is presented with a UPC/EAN plus supplemental symbol, the scanner decodes UPC/EAN and ignores the supplemental characters.

If you select Decode UPC/EAN with Supplementals, the scanner only decodes UPC/EAN symbols with supplemental characters, and ignores symbols without supplementals.

If you select Autodiscriminate UPC/EAN Supplementals, the scanner decodes UPC/EAN symbols with supplemental characters immediately. If the symbol does not have a supplemental, the scanner must decode the bar code the number of times set via Decode UPC/EAN Supplemental Redundancy on page 23 before transmitting its data to confirm that there is no supplemental.

If you select one of the following Supplemental Mode options, the scanner immediately transmits EAN-13 bar codes starting with that prefix that have supplemental characters. If the symbol does not have a supplemental, the scanner must decode the bar code the number of times set via Decode UPC/EAN Supplemental Redundancy on page 23 before transmitting its data to confirm that there is no supplemental. The scanner transmits UPC/EAN bar codes that do not have that prefix immediately.

Enable 378/379 Supplemental Mode.

Enable 978/979 Supplemental Mode.

NOTE If you select 978/979 Supplemental Mode and are scanning Bookland EAN bar codes, see Enable/Disable Bookland EAN on page 18 to enable Bookland EAN, and select a format using Bookland ISBN Format on page 19.
Enable 977 Supplemental Mode.

Enable 414/419/434/439 Supplemental Mode.

Enable 491 Supplemental Mode.

Enable Smart Supplemental Mode - applies to EAN-13 bar codes starting with any prefix listed previously.

 NOTE   To minimize the risk of invalid data transmission, select either to decode or ignore supplemental characters.

Select the desired option by scanning one of the following bar codes.

Decode UPC/EAN With Supplementals
(01h)

*Ignore UPC/EAN With Supplementals
(00h)

Autodiscriminate UPC/EAN Supplementals
(02h)

Enable 378/379 Supplemental Mode
(04h)

**Enable Smart Supplemental Mode
(03h)**

**Enable 978/979 Supplemental Mode
(05h)**

**Enable 977 Supplemental Mode
(07h)**

**Enable 414/419/434/439 Supplemental Mode
(06h)**

**Enable 491 Supplemental Mode
(08h)**

Decode UPC/EAN Supplemental Redundancy

With Autodiscriminate UPC/EAN Supplementals selected, this option adjusts the number of times a symbol without supplementals are decoded before transmission. The range is from 2 to 20 times. Five or above is recommended when decoding a mix of UPC/EAN symbols with and without supplementals, and the autodiscriminate option is selected.

Scan the bar code below to select a decode redundancy value. Next scan two numeric bar codes beginning on page 104. Single digit numbers must have a leading zero. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

Decode UPC/EAN Supplemental Redundancy
(Default: 7)

UPC/EAN/JAN Supplemental AIM ID Format

Select an output format when reporting UPC/EAN/JAN bar codes with Supplementals with Transmit Code ID Character on page 86 set to AIM Code ID Character:

・ Separate - transmit UPC/EAN with supplementals with separate AIM IDs but one transmission, i.e.:]E<0 or 4><data>]E<1 or 2>[supplemental data]

・ Combined – transmit UPC/EAN with supplementals with one AIM ID and one transmission, i.e.:]E3<data+supplemental data>

・ Separate Transmissions - transmit UPC/EAN with supplementals with separate AIM IDs and separate transmissions, i.e.:
]E<0 or 4><data>]E<1 or 2>[supplemental data]

**Separate
(00h)**

***Combined
(01h)**

**Separate Transmissions
NEW END**

Transmit UPC-A Check Digit

Scan the appropriate bar code below to transmit the symbol with or without the UPC-A check digit.

*Transmit UPC-A Check Digit
(01h)

Do Not Transmit UPC-A Check Digit
(00h)

Transmit UPC-E Check Digit

Scan the appropriate bar code below to transmit the symbol with or without the UPC-E check digit.

*Transmit UPC-E Check Digit
(01h)

Do Not Transmit UPC-E Check Digit
(00h)

Transmit UPC-E1 Check Digit

Scan the appropriate bar code below to transmit the symbol with or without the UPC-E1 check digit.

*Transmit UPC-E1 Check Digit
(01h)

Do Not Transmit UPC-E1 Check Digit
(00h)

UPC-A Preamble

Preamble characters (Country Code and System Character) can be transmitted as part of a UPC-A symbol. Select one of the following options for transmitting UPC-A preamble to the host device: transmit system character only, transmit system character and country code ("0" for USA), or transmit no preamble.

No Preamble
(<DATA>)
(00h)

*System Character
(<SYSTEM CHARACTER> <DATA>)
(01h)

System Character & Country Code
(< COUNTRY CODE> <SYSTEM CHARACTER> <DATA>)
(02h)

UPC-E Preamble

Preamble characters (Country Code and System Character) can be transmitted as part of a UPC-E symbol. Select one of the following options for transmitting UPC-E preamble to the host device: transmit system character only, transmit system character and country code ("0" for USA), or transmit no preamble.

No Preamble
(<DATA>)
(00h)

*System Character
(<SYSTEM CHARACTER> <DATA>)
(01h)

System Character & Country Code
(< COUNTRY CODE> <SYSTEM CHARACTER> <DATA>)
(02h)

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UPC-E1   Preamble

Preamble characters (Country Code and System Character) can be transmitted as part of a UPC-E1 symbol. Select one of the following options for transmitting UPC-E1 preamble to the host device: transmit system character only, transmit system character and country code ("0" for USA), or transmit no preamble.

No Preamble
(<DATA>)
(00h)

*System Character
(<SYSTEM CHARACTER> <DATA>)
(01h)

System Character & Country Code
(< COUNTRY CODE> <SYSTEM CHARACTER> <DATA>)
(02h)

Convert UPC-E to UPC-A

Enable this parameter to convert UPC-E (zero suppressed) decoded data to UPC-A format before transmission. After conversion, data follows UPC-A format and is affected by UPC-A programming selections (e.g., Preamble, Check Digit).
Scan DO NOT CONVERT UPC-E TO UPC-A to transmit UPC-E (zero suppressed) decoded data.

Convert UPC-E to UPC-A (Enable)
**(01h)**

*Do Not Convert UPC-E to UPC-A (Disable)
(00h)

Convert UPC-E1 to UPC-A

Enable this parameter to convert UPC-E1 (zero suppressed) decoded data to UPC-A format before transmission. After conversion, data follows UPC-A format and is affected by UPC-A programming selections (e.g., Preamble, Check Digit).
Scan DO NOT CONVERT UPC-E TO UPC-A to transmit UPC-E1 (zero suppressed) decoded data.

Convert UPC-E1 to UPC-A (Enable)
(01h)

*Do Not Convert UPC-E1 to UPC-A (Disable)
(00h)

EAN Zero Extend

When enabled, this parameter adds five leading zeros to decoded EAN-8 symbols to make them compatible in format to EAN-13 symbols.
Disable this parameter to transmit EAN-8 symbols as is.

Enable EAN Zero Extend
(01h)
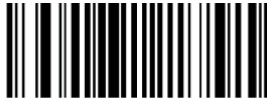
***Disable EAN Zero Extend**
(00h)

UPC/EAN Security Level

The SE655 offers four levels of decode security for UPC/EAN bar codes. Increasing levels of security are provided for decreasing levels of bar code quality. Select higher levels of security for decreasing levels of bar code quality. Increasing security decreases the scan engine's aggressiveness, so choose only that level of security necessary for the application.

- **UPC/ EAN Security Level 0**
  This default setting allows the scan engine to operate in its most aggressive state, while providing sufficient security in decoding most "in-spec" UPC/EAN bar codes.

UPC/EAN Security Level 0
(00h)

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

*UPC/EAN Security Level 1
(01h)

・ **UPC/ EAN Security Level 2**

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

UPC/EAN Security Level 2
(02h)

・ **UPC/ EAN Security Level 3**

If misdecodes still occur after selecting Security Level 2, 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 of security significantly impairs the decoding ability of the scan engine. If this level of security is necessary, try to improve the quality of the bar codes.

UPC/EAN Security Level 3
(03h)

UCC Coupon Extended Code

Enable this parameter to decode UPC-A bar codes starting with digit '5', EAN-13 bar codes starting with digit '99', and UPC-A/GS1-128 Coupon Codes. UPCA, EAN-13, and GS1-128 must be enabled to scan all types of Coupon Codes.

Enable UCC Coupon Extended Code
(01h)

*Disable UCC Coupon Extended Code
(00h)

NOTE See Decode UPC/EAN Supplemental Redundancy on page 23 to control autodiscrimination of the GS1-128 (right half) of a coupon code.

ISSN EAN

To enable or disable ISSN EAN, scan the appropriate bar code below

**Enable ISSN EAN
(01h)**

***Disable ISSN EAN
(00h)**

Linear UPC/EAN

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

**Enable Linear UPC/EAN
(01h)**

***Disable Linear UPC/EAN
(00h)**

Code 128

Enable/Disable Code 128

To enable or disable Code 128, scan the appropriate bar code below.

*Enable Code 128
(01h)

Disable Code 128
(00h)

Set Lengths for Code 128

The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s) the code contains. Set lengths for Code 128 to any length, one or two discrete lengths, or lengths within a specific range.

   NOTE   When setting lengths for different bar code types, enter a leading zero for single digit numbers.

·   **One Discrete Length** - Select this option to decode only Code 128 symbols containing a selected length. Select the length using the numeric bar codes beginning on page 104. For example, to decode only Code 128 symbols with 14 characters, scan Code 128 - One Discrete Length, then scan 1 followed by 4. To correct an error or change the selection, scan Cancel on page 105

Code 128 - One Discrete Length

- **Two Discrete Lengths** - Select this option to decode only Code 128 symbols containing either of two selected lengths. Select lengths using the numeric bar codes beginning on page 104. For example, to decode only Code 128 symbols containing either 2 or 14 characters, select Code 128 - Two Discrete Lengths, then scan 0, 2, 1, and then 4. To correct an error or change the selection, scan Cancel on page 105.

Code 128 - Two Discrete Lengths

- **Length Within Range** - Select this option to decode a Code 128 symbol with a specific length range. Select lengths using numeric bar codes beginning on page 104. For example, to decode Code 128 symbols containing between 4 and 12 characters, first scan Code 128 - Length Within Range. Then scan 0, 4, 1, and 2 (enter a leading zero for single digit numbers). To correct an error or change the selection, scan Cancel on page 105.

Code 128 - Length Within Range

- **Any Length** - Select this option to decode Code 128 symbols containing any number of characters within the digital scanner's capability.

*Code 128 - Any Length

Enable/Disable GS1-128 (formerly UCC/EAN-128)

To enable or disable GS1-128, scan the appropriate bar code below.

***Enable GS1-128
(01h)**

**Disable GS1-128
(00h)**

Enable/Disable ISBT 128

To enable or disable ISBT 128, scan the appropriate bar code below.

***Enable ISBT 128
(01h)**

**Disable ISBT 128
(00h)**

ISBT Concatenation

Select an option for concatenating pairs of ISBT code types:

・ If you select Disable ISBT Concatenation, the digital scanner does not concatenate pairs of ISBT codes it encounters.

*Disable ISBT Concatenation
(00h)

・ If you select Enable ISBT Concatenation, there must be two ISBT codes in order for the digital scanner to decode and perform concatenation. The digital scanner does not decode single ISBT symbols.

Enable ISBT Concatenation
(01h)

・ If you select Autodiscriminate ISBT Concatenation, the digital scanner decodes and concatenates pairs of ISBT codes immediately. If only a single ISBT symbol is present, the digital scanner must decode the symbol the number of times set via ISBT Concatenation Redundancy on page 42 before transmitting its data to confirm that there is no additional ISBT symbol.

Autodiscriminate ISBT Concatenation
(00h)

Check ISBT Table

The ISBT specification includes a table that lists several types of ISBT bar codes that are commonly used in pairs. If you set ISBT Concatenation to Enable, enable Check ISBT Table to concatenate only those pairs found in this table. Other types of ISBT codes are not concatenated.

*Enable Check ISBT Table
(01h)

Disable Check ISBT Table
(00h)

ISBT Concatenation Redundancy

If you set ISBT Concatenation to Autodiscriminate, use this parameter to set the number of times the digital scanner must decode an ISBT symbol before determining that there is no additional symbol.

Scan the bar code below, then scan two numeric bar codes in to set a value between 2 and 20. Enter a leading zero for single digit numbers. To correct an error or change a selection, scan . The default is 10.
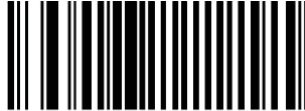

ISBT Concatenation Redundancy

Code 39

Enable/Disable Code 39

To enable or disable Code 39, scan the appropriate bar code below.

***Enable Code 39
(01h)**

**Disable Code 39
(00h)**

Enable/Disable Trioptic Code 39

Trioptic Code 39 is a variant of Code 39 used in marking computer tape cartridges. Trioptic Code 39 symbols always contain six characters.

To enable or disable Trioptic Code 39, scan the appropriate bar code below.

Enable Trioptic Code 39
(01h)

*Disable Trioptic Code 39
(00h)

NOTE Trioptic Code 39 and Code 39 Full ASCII cannot be enabled simultaneously. If the Enable Trioptic Code 39 setting is not accepted*, disable Code 39 Full ASCII and try again.

* An SSI parameter entry error, event ID 07h, is sent to the host if packeted data communication is enabled to inform the user that the parameter change was not accepted.

Convert Code 39 to Code 32 (Italian Pharma Code)

Code 32 is a variant of Code 39 used by the Italian pharmaceutical industry. Scan the appropriate bar code below to enable or disable converting Code 39 to Code 32.

   NOTE   Code 39 must be enabled in order for this parameter to function.

Enable Convert Code 39 to Code 32
(01h)

*Disable Convert Code 39 to Code 32
(00h)

Code 32 Prefix

Enable this parameter to add the prefix character "A" to all Code 32 bar codes. Convert Code 39 to Code 32 (Italian Pharma Code) must be enabled for this parameter to function.

Enable Code 32 Prefix
(01h)

*Disable Code 32 Prefix
(00h)

Set Lengths for Code 39

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

　NOTE　When setting lengths, single digit numbers must always be preceded by a leading zero.

・ **One Discrete Length** - This option limits decodes to only those Code 39 symbols containing a selected length. Lengths are selected from the numeric bar codes beginning on page 104. For example, to decode only Code 39 symbols with 14 characters, scan Code 39 - One Discrete Length, then scan 1 followed by 4. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

Code 39 - One Discrete Length

・ **Two Discrete Lengths** - This option limits decodes to only those Code 39 symbols containing either of two selected lengths. Lengths are selected from the numeric bar codes beginning on page 104. For example, to decode only those Code 39 symbols containing either 2 or 14 characters, select Code 39 - Two Discrete Lengths, then scan 0, 2, 1, and then 4. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

Code 39 - Two Discrete Lengths

- **Length Within Range** - This option limits decodes to only those Code 39 symbols 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. Numeric bar codes begin on page 104. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

Code 39 - Length Within Range

- **Any Length** - Scan this option to decode Code 39 symbols containing any number of characters.

Code 39 - Any Length

Code 39 Check Digit Verification

When this feature is enabled, the scan engine checks the integrity of all Code 39 symbols to verify that the data complies with specified check digit algorithm. Only those Code 39 symbols which include a modulo 43 check digit are decoded. Only enable this feature if your Code 39 symbols contain a module 43 check digit.

**Verify Code 39 Check Digit
(01h)**

*Do Not Verify Code 39 Check Digit
(00h)

Transmit Code 39 Check Digit

Scan this symbol to transmit the check digit with the data.

**Transmit Code 39 Check Digit (Enable)
(01h)**

Scan this symbol to transmit data without the check digit.

*Do Not Transmit Code 39 Check Digit (Disable)
(00h)

Enable/Disable Code 39 Full ASCII

Code 39 Full ASCII is a variant of Code 39 which pairs characters to encode the full ASCII character set. To enable or disable Code 39 Full ASCII, scan the appropriate bar code below.

**Enable Code 39 Full ASCII
(00h)**

***Disable Code 39 Full ASCII
(00h)**

NOTE Trioptic Code 39 and Code 39 Full ASCII cannot be enabled simultaneously. If the Enable Trioptic Code 39 setting is not accepted*, disable Code 39 Full ASCII and try again. *An SSI parameter entry error, event ID 07h, is sent to the host if packeted data communication is enabled to inform the user that the parameter change was not accepted.

Code 93

Enable/Disable Code 93

To enable or disable Code 93, scan the appropriate bar code below.

Enable Code 93
(01h)

*Disable Code 93
(00h)

Set Lengths for Code 93

The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s) the code contains. Lengths for Code 93 may be set for any length, one or two discrete lengths, or lengths within a specific range.

- **One Discrete Length** - Select this option to decode only those codes containing a selected length. For example, select Code 93 One Discrete Length, then scan 1, 4, to limit the decoding to only Code 93 symbols containing 14 characters. Numeric bar codes begin on page 104. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

Code 93 - One Discrete Length

- **Two Discrete Lengths** - Select this option to decode only those codes containing two selected lengths. For example, select Code 93 Two Discrete Lengths, then scan 0, 2, 1, 4, to limit the decoding to only Code 93 symbols containing 2 or 14 characters. Numeric bar codes begin on page 104. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

Code 93 - Two Discrete Lengths

·   **Length Within Range** - This option sets the unit to decode a code type within a specified range. For example, to decode Code 93 symbols containing between 4 and 12 characters, first scan Code 93 Length Within Range, then scan 0, 4, 1 and 2 (single digit numbers must always be preceded by a leading zero). Numeric bar codes begin on page 104. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

Code 93 - Length Within Range

·   **Any Length** - Scan this option to decode Code 93 symbols containing any number of characters.

Code 93 - Any Length

Code 11

Enable/Disable Code 11

To enable or disable Code 11, scan the appropriate bar code below.

Enable Code 11
(01h)

*Disable Code 11
(00h)

Set Lengths for Code 11

The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s) the code contains. Set lengths for Code 11 to any length, one or two discrete lengths, or lengths within a specific range.

- **One Discrete Length** - Select this option to decode only Code 11 symbols containing a selected length. Select the length using the numeric bar codes beginning on page 104. For example, to decode only Code 11 symbols with 14 characters, scan Code 11 - One Discrete Length, then scan 1 followed by 4. To correct an error or to change the selection, scan Cancel on page 105.

Code 11 - One Discrete Length

- **Two Discrete Lengths** - Select this option to decode only Code 11 symbols containing either of two selected lengths. Select lengths using the numeric bar codes beginning on page 104. For example, to decode only those Code 11 symbols containing either 2 or 14 characters, select Code 11 - Two Discrete Lengths, then scan 0, 2, 1, and then 4. To correct an error or to change the selection, scan Cancel on page 105.

Code 11 - Two Discrete Lengths

- **Length Within Range** - Select this option to decode a Code 11 symbol with a specific length range. Select lengths using numeric bar codes beginning on page 104. For example, to decode Code 11 symbols containing between 4 and 12 characters, first scan Code 11 - Length Within Range. Then scan 0, 4, 1, and 2 (single digit numbers must always be preceded by a leading zero). To correct an error or change the selection, scan Cancel on page 105.

Code 11 - Length Within Range

- **Any Length** - Scan this option to decode Code 11 symbols containing any number of characters within the scan engine capability.

Code 11 - Any Length

Code 11 Check Digit Verification

This feature allows the scan engine to check the integrity of all Code 11 symbols to verify that the data complies with the specified check digit algorithm. This selects the check digit mechanism for the decoded Code 11 bar code. The options are to check for one check digit, check for two check digits, or disable the feature.

To enable this feature, scan the bar code below corresponding to the number of check digits encoded in your Code 11 symbols.

*Disable
(00h)

One Check Digit
(01h)

Two Check Digits
(02h)

Transmit Code 11 Check Digits

This feature selects whether or not to transmit the Code 11 check digit(s).

Transmit Code 11 Check Digit(s) (Enable)
(01h)

*Do Not Transmit Code 11 Check Digit(s) (Disable)
(00h)

NOTE Code 11 Check Digit Verification must be enabled for this parameter to function.

Interleaved 2 of 5

Enable/Disable Interleaved 2 of 5

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

*Enable Interleaved 2 of 5
(01h)

Disable Interleaved 2 of 5
(00h)

Set Lengths for Interleaved 2 of 5

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

  NOTE   When setting lengths, single digit numbers must always be preceded by a leading zero.

・ **One Discrete Length** - Select this option to decode only those codes containing a selected length. For example, select I 2 of 5 One Discrete Length, then scan 1, 4, to decode only I 2 of 5 symbols containing 14 characters. Numeric bar codes begin on page 104. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

I 2 of 5 - One Discrete Length

・ **Two Discrete Lengths** - Select this option to decode only those codes containing two selected lengths. For example, select I 2 of 5 Two Discrete Lengths, then scan 0, 6, 1, 4, to decode only I 2 of 5 symbols containing 6 or 14 characters. Numeric bar codes begin on page 104. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

I 2 of 5 - Two Discrete Lengths

- **Length Within Range** - Select this option to decode only codes 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 begin on page 104. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

I 2 of 5 - Length Within Range

- **Any Length** - Scan this option to decode I 2 of 5 symbols containing any number of characters.

NOTE   Selecting this option may lead to misdecodes for I 2 of 5 codes.

I 2 of 5 - Any Length

I 2 of 5 Check Digit Verification

When enabled, this parameter checks the integrity of an I 2 of 5 symbol to ensure it complies with a specified algorithm, either USS (Uniform Symbology Specification),   or OPCC (Optical Product Code Council).

*Disable
(00h)

USS Check Digit
(01h)

OPCC Check Digit
(02h)

Transmit I 2 of 5 Check Digit

Scan this symbol to transmit the check digit with the data.

Transmit I 2 of 5 Check Digit (Enable)
(01h)

Scan this symbol to transmit data without the check digit.

*Do Not Transmit I 2 of 5 Check Digit (Disable)
(00h)

Convert I 2 of 5 to EAN-13

This parameter converts a 14 character I 2 of 5 code into EAN-13, and transmits to the host as EAN-13. To accomplish this, I 2 of 5 must be enabled, one length must be set to 14, and the code must have a leading zero and a valid EAN-13 check digit.

Convert I 2 of 5 to EAN-13 (Enable)
(01h)

*Do Not Convert I 2 of 5 to EAN-13 (Disable)
(00h)

Discrete 2 of 5

Enable/Disable Discrete 2 of 5

To enable or disable Discrete 2 of 5, scan the appropriate bar code below.

**Enable Discrete 2 of 5
(01h)**

***Disable Discrete 2 of 5
(00h)**

Set Lengths for Discrete 2 of 5

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

- **One Discrete Length** - Select this option to decode only those codes containing a selected length. For example, select D 2 of 5 One Discrete Length, then scan 1, 4, to decode only D 2 of 5 symbols containing 14 characters. Numeric bar codes begin on page 104. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

D 2 of 5 - One Discrete Length

- **Two Discrete Lengths** - Select this option to decode only those codes containing two selected lengths. For example, select D 2 of 5 Two Discrete Lengths, then scan 0, 2, 1, 4, to decode only D 2 of 5 symbols containing 2 or 14 characters. Numeric bar codes begin on page 104. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

D 2 of 5 - Two Discrete Lengths

- **Length Within Range** - Select this option to decode codes within a specified range. For example, to decode D 2 of 5 symbols containing between 4 and 12 characters, first scan D 2 of 5 Length Within Range, then scan 0, 4, 1 and 2 (single digit numbers must be preceded by a leading zero). Numeric bar codes begin on page 104. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

D 2 of 5 - Length Within Range

- **D 2 of 5** - Length Within Range Any Length - Scan this option to decode D 2 of 5 symbols containing any number of characters.

  NOTE Selecting this option may lead to misdecodes for D 2 of 5 codes.

D 2 of 5 - Any Length

Chinese 2 of 5

Enable/Disable Chinese 2 of 5

To enable or disable Chinese 2 of 5, scan the appropriate bar code below.

Enable Chinese 2 of 5
(01h)

*Disable Chinese 2 of 5
(00h)

![AsReader logo]

Matrix 2 of 5

Enable/Disable Matrix 2 of 5

To enable or disable Matrix 2 of 5, scan the appropriate bar code below.

Enable Matrix 2 of 5
(01h)

*Disable Matrix 2 of 5**
(00h)

Set Lengths for Matrix 2 of 5

The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s) the code contains. Set lengths for Matrix 2 of 5 to any length, one or two discrete lengths, or lengths within a specific range.

- **One Discrete Length** - Select this option to decode only Matrix 2 of 5 symbols containing a selected length. Select the length using the numeric bar codes beginning on page 104. For example, to decode only Matrix 2 of 5 symbols with 14 characters, scan Matrix 2 of 5 - One Discrete Length, then scan 1 followed by 4. To correct an error or to change the selection, scan Cancel on page 105.

*Matrix 2 of 5 - One Discrete Length

- **Two Discrete Lengths** - Select this option to decode only Matrix 2 of 5 symbols containing either of two selected lengths. Select lengths using the numeric bar codes beginning on page 104. For example, to decode only Matrix 2 of 5 symbols containing either 2 or 14 characters, select Matrix 2 of 5 - Two Discrete Lengths, then scan 0, 2, 1, and then 4. To correct an error or to change the selection, scan Cancel on page 105.

Matrix 2 of 5 - Two Discrete Lengths

- **Length Within Range** - Select this option to decode a Matrix 2 of 5 symbol with a specific length range. Select lengths using the numeric bar codes beginning on page 104. For example, to decode Matrix 2 of 5 symbols containing between 4 and 12 characters, first scan Matrix 2 of 5 - Length Within Range. Then scan 0, 4, 1, and 2 (enter a leading zero for single digit numbers). To correct an error or change the selection, scan Cancel on page 105

Matrix 2 of 5 - Length Within Range

Matrix 2 of 5 Redundancy

To enable or disable Matrix 2 of 5 redundancy, scan the appropriate bar code below.

Enable Matrix 2 of 5 Redundancy
(01h)

*Disable Matrix 2 of 5 Redundancy
(00h)

Matrix 2 of 5 Check Digit

The check digit is the last character of the symbol used to verify the integrity of the data. Scan the appropriate bar code below to transmit the bar code data with or without the Matrix 2 of 5 check digit.

**Enable Matrix 2 of 5 Check Digit
(01h)**

*****Disable Matrix 2 of 5 Check Digit
(00h)**

Transmit Matrix 2 of 5 Check Digit

Scan a bar code below to transmit Matrix 2 of 5 data with or without the check digit.

**Transmit Matrix 2 of 5 Check Digit
(01h)**

*****Do Not Transmit Matrix 2 of 5 Check Digit
(00h)**

Inverse 1D

This parameter sets the 1D inverse decoder setting. Options are:

・ Regular Only - the digital scanner decodes regular 1D bar codes only.

・ Inverse Only - the digital scanner decodes inverse 1D bar codes only.

・ Inverse Autodetect - the digital scanner decodes both regular and inverse 1D bar codes.

*Regular
(00h

Inverse Only
(01h)

Inverse Autodetect
(02h)

Codabar(NW7)

Enable/Disable Codabar

To enable or disable Codabar, scan the appropriate bar code below.

Enable Codabar
(01h)
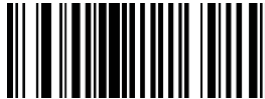
*Disable Codabar
(00h)

Set Lengths for Codabar (NW7)

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

・   **One Discrete Length** - Select this option to decode only those codes containing a selected length. For example, select Codabar One Discrete Length, then scan 1, 4, to decode only Codabar symbols containing 14 characters. Numeric bar codes begin on page 104. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

Codabar - One Discrete Length

・   **Two Discrete Lengths** - This option sets the unit to decode only those codes containing two selected lengths. For example, select Codabar Two Discrete Lengths, then scan 0, 2, 1, 4, to decode only Codabar symbols containing 6 or 14 characters.
Numeric bar codes begin on page 104. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

Codabar - Two Discrete Lengths

- **Length Within Range** - Select this option to decode a code 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 begin on page 104. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

Codabar - Length Within Range

- **Any Length** - Scan this option to decode Codabar symbols containing any number of characters.

Codabar - Any Length

CLSI Editing

When 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   Symbol length does not include start and stop characters.

Enable CLSI Editing
(01h)

*Disable CLSI Editing
(00h)

NOTIS Editing

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

Enable NOTIS Editing
(01h)

*Disable NOTIS Editing
(00h)

Codabar(NW7) Upper or Lower Case Start/Stop Characters Detection

Select whether to detect upper case or lower case Codabar start/stop characters.

Upper Case
(00h)

*Lower Case
(01h)

MSI

Enable/Disable MSI

To enable or disable MSI, scan the appropriate bar code below.

Enable MSI
(01h)

*Disable MSI
(00h)

Set Lengths for MSI

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

- **One Discrete Length** - Select this option to decode only those codes containing a selected length. For example, select MSI - One Discrete Length, then scan 1, 4, to decode only MSI symbols containing 14 characters. Numeric bar codes begin on page 104. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

MSI - One Discrete Length

- **Two Discrete Lengths** - Select this option to decode only those codes containing two selected lengths. For example, select MSI - Two Discrete Lengths, then scan 0, 6, 1, 4, to decode only MSI symbols containing 6 or 14 characters. Numeric bar codes begin on page 104. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

MSI - Two Discrete Lengths

- **Length Within Range** - Select this option to decode codes within a specified range. For example, to decode MSI symbols containing between 4 and 12 characters, first scan MSI Length Within Range, then scan 0, 4, 1 and 2 (single digit numbers must always be preceded by a leading zero). Numeric bar codes begin on page 104. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

MSI - Length Within Range

- **Any Length** - Scan this option to decode MSI Plessey symbols containing any number of characters.

  NOTE   Selecting this option may lead to misdecodes for MSI codes.

MSI - Any Length

MSI Check Digits

These check digits at the end of the bar code verify the integrity of the data. At least one check digit is always required. Check digits are not automatically transmitted with the data.

*One MSI Check Digit
(00h)

If two check digits are selected, also select an MSI Check Digit Algorithm on page 82.

Two MSI Check Digit
(01h)

Transmit MSI Check Digit

Scan this symbol to transmit the check digit with the data.

Transmit MSI Check Digit (Enable)
(01h)

Scan this symbol to transmit data without the check digit.

*Do Not Transmit MSI Check Digit (Disable)
(00h)

MSI Check Digit Algorithm

When the Two MSI check digits option is selected, an additional verification is required to ensure integrity. Select one of the following algorithms.

MOD 10/ MOD 11
(00h)

*MOD 10/ MOD 10
(01h)

GS1- DataBar

Enable/Disable GS1 DataBar Omnidirectional

To enable or disable GS1 DataBar Omnidirectional, scan the appropriate bar code below.

*Enable GS1 DataBar Omnidirectional
(01h)

Disable GS1 DataBar Omnidirectional
(00h)

Enable/Disable GS1 DataBar Limited

To enable or disable GS1 DataBar Limited, scan the appropriate bar code below.

*Enable GS1 DataBar Limited
(01h)

Disable GS1 DataBar Limited
(00h)

GS1 DataBar Limited Security Level

The engine offers four levels of decode security for GS1 DataBar Limited bar codes. There is an inverse relationship between security and engine aggressiveness. Increasing the level of security may result in reduced aggressiveness in scanning, so only choose the level of security necessary.

- Level 1 – No clear margin required. This complies with the original GS1 standard, yet might result in erroneous decoding of the DataBar Limited bar code when scanning some UPC symbols that start with the digits "9" and "7".
- Level 2 – Automatic risk detection. This level of security may result in erroneous decoding of DataBar Limited bar codes when scanning some UPC symbols. If a misdecode is detected, the engine operates in Level 3 or Level 1.
- Level 3 – Security level reflects newly proposed GS1 standard that requires a 5X trailing clear margin.
- Level 4 – Security level extends beyond the standard required by GS1. This level of security requires a 5X leading and trailing clear margin.

Security Level 1
(01h)

Security Level 2
(02h)

*Security Level 3
(03h)

Security Level 4
(04h)

Enable/Disable GS1 DataBar Expanded

To enable or disable GS1 DataBar Expanded, scan the appropriate bar code below.

*Enable GS1 DataBar Expanded (01h)

Disable GS1 DataBar Expanded (00h)

Convert GS1 DataBar to UPC/EAN/JAN

This parameter only applies to GS1 DataBar Omnidirectional and GS1 DataBar Limited symbols. When this conversion is enabled, GS1 DataBar Omnidirectional and GS1 DataBar Limited symbols encoding a single zero as the first digit have the leading '010' stripped and the bar code reported as EAN-13.

Bar codes beginning with two or more zeros but not six zeros have the leading '0100' stripped and the bar code reported as UPC-A. The UPC-A Preamble parameter to transmit the system character and country code applies to converted bar codes. Note that neither the system character nor the check digit can be stripped.

Enable Convert GS1 DataBar to UPC/EAN

*Disable Convert GS1 DataBar to UPC/EAN

Data Options

Transmit Code ID Character

A code ID character identifies the code type of a scanned bar code. This can be useful when decoding more than one code type. The code ID character is inserted between the prefix character (if selected) and the decoded symbol.
Select no code ID character, a Symbol Code ID character, or an AIM Code ID character. The Symbol Code ID characters are listed below;

Symbol Code ID Character
(02h)

Aim Code ID Character
(01h)

*None
(00h)

Prefix/Suffix Values

A prefix and/or one or two suffixes can be appended to scan data for use in data editing. To set these values, scan a four-digit number (i.e. four bar codes) that corresponds to ASCII values. See page 89 – 93 and Numeric Bar Codes on page 104. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

NOTE In order to use Prefix/Suffix values, the Scan Data Transmission Format on page 94-95 must be set. See page 94 - 95.

Scan Prefix

Scan Suffix 1

Scan Suffix 2

Data Format Cancel

Setting Prefixes and Suffixes Via Parameter Bar Codes

To append a prefix and suffixes to the decode data:

・ Set the Scan Data Transmission Format (parameter EBh) to the desired option.
・ Enter the required value(s) for Prefix (69h), Suffix1 (68h) or Suffix2 (6Ah) using the hex values for the desired ASCII value from Table below.

ßcan Value	Hex Value	Full ASCII Code 39 Encode Char.	keystroke
1000	00h	%U	CTRL 2
1001	01h	$A	CTRL A
1002	02h	$B	CTRL B
1003	03h	$C	CTRL C
1004	04h	$D	CTRL D
1005	05h	$E	CTRL E
1006	06h	$F	CTRL F
1007	07h	$G	CTRL G
1008	08h	$H	CTRL H
1009	09h	$I	CTRL I
1010	0Ah	$J	CTRL J
1011	0Bh	$K	CTRL K
1012	0Ch	$L	CTRL L
1013	0Dh	$M	CTRL M
1014	0Eh	$N	CTRL N
1015	0Fh	$O	CTRL O
1016	10h	$P	CTRL P
1017	11h	$Q	CTRL Q
1018	12h	$R	CTRL R
1019	13h	$S	CTRL S
1020	14h	$T	CTRL T
1021	15h	$U	CTRL U
1022	16h	$V	CTRL V
1023	17h	$W	CTRL W
1024	18h	$X	CTRL X

Scan Value	Hex Value	Full ASCII Code 39 Encode Char.	keystroke
1025	19h	$Y	CTRL Y
1026	1Ah	$Z	CTRL Z
1027	1Bh	%A	CTRL [
1028	1Ch	%B	CTRL ¥
1029	1Dh	%C	CTRL]
1030	1Eh	%D	CTRL 6
1031	1Fh	%E	CTRL -
1032	20h	Space	Space
1033	21h	/A	!
1034	22h	/B	'
1035	23h	/C	#
1036	24h	/D	$
1037	25h	/E	%
1038	26h	/F	&
1039	27h	/G	'
1040	28h	/H	(
1041	29h	/I	)
1042	2Ah	/J	*
1043	2Bh	/K	+
1044	2Ch	/L	,
1045	2Dh	-	-
1046	2Eh	.	.
1047	2Fh	/	/
1048	30h	0	0
1049	31h	1	1
1050	32h	2	2
1051	33h	3	3
1052	34h	4	4
1053	35h	5	5
1054	36h	6	6

Scan Value	Hex value	Full ASCII Code 39 Encode Char.	keystroke
1055	37h	7	7
1056	38h	8	8
1057	39h	9	9
1058	3Ah	/Z	:
1059	3Bh	%F	;
1060	3Ch	%G	<
1061	3Dh	%H	=
1062	3Eh	%I	>
1063	3Fh	%J	?
1064	40h	%V	@
1065	41h	A	A
1066	42h	B	B
1067	43h	C	C
1068	44h	D	D
1069	45h	E	E
1070	46h	F	F
1071	47h	G	G
1072	48h	H	H
1073	49h	I	I
1074	4Ah	J	J
1075	4Bh	K	K
1076	4Ch	L	L
1077	4Dh	M	M
1078	4Eh	N	N
1079	4Fh	O	O
1080	50h	P	P
1081	51h	Q	Q
1082	52h	R	R
1083	53h	S	S
1084	54h	T	T

Scan Value	Hex Value	Full ASCII Code 39 Encode Char.	keystroke
1085	55h	U	U
1086	56h	V	V
1087	57h	W	W
1088	58h	X	X
1089	59h	Y	Y
1090	5Ah	Z	Z
1091	5Bh	%K	[
1092	5Ch	%L	¥ (※¥)
1093	5Dh	%M	]
1094	5Eh	%N	^
1095	5Fh	%O	_
1096	60h	%W	'
1097	61h	+A	a
1098	62h	+B	b
1099	63h	+C	c
1100	64h	+D	d
1101	65h	+E	e
1102	66h	+F	f
1103	67h	+G	g
1104	68h	+H	h
1105	69h	+I	i
1106	6Ah	+J	j
1107	6Bh	+K	k
1108	6Ch	+L	l
1109	6Dh	+M	m
1110	6Eh	+N	n
1111	6Fh	+O	o
1112	70h	+P	p
1113	71h	+Q	q
1114	72h	+R	r

Scan Value	Hex Value	Full ASCII Code 39 Encode Char.	keystroke
1115	73h	+S	s
1116	74h	+T	t
1117	75h	+U	u
1118	76h	+V	v
1119	77h	+W	w
1120	78h	+X	x
1121	79h	+Y	y
1122	7Ah	+Z	z
1123	7Bh	%P	{
1124	7Ch	%Q	|
1125	7Dh	%R	}
1126	7Eh	%S	~
1127	7Fh		Undefined

Values from 1128 through 1255 (hex values 80h through FFh for SSI) may also be set.

Scan Data Transmission Format

To change the Scan Data Transmission Format, scan one of the eleven bar codes corresponding to the desired format.

*Data As Is
(00h)

<DATA><CR><LF>
(01h)

<DATA> <CR>
(02h)

<DATA> <LF>
(03h)

<DATA> <SUFFIX1>
(04h)

<DATA> <SUFFIX2>
(05h)

\<DATA\> \<SUFFIX1\>\<SUFFIX2\>
(06h)

\<PREFIX\>\<DATA\>
(07h)

\<PREFIX\>\<DATA\> \<SUFFIX1\>
(08h)

\<PREFIX\>\<DATA\> \<SUFFIX2\>
(09h)

\<PREFIX\>\<DATA\> \<SUFFIX1\>\<SUFFIX2\>
(0Ah)

Symbol Code Identifiers

Code Character	Code Type
A	JAN(UPC-A, UPC-E, UPC-E1, EAN-8, EAN-13)
B	Code 39, Code 32
C	NW7(Codabar)
D	Code 128, ISBT 128
E	Code 93
F	Interleaved 2 of 5
G	Discrete 2 of 5
H	Code 11
J	MSI
K	GS1-128
L	Bookland EAN
M	Trioptic Code 39
N	Coupon Code
R	GS1 DataBar Family
S	Matrix 2 of 5
U	Chinese 2 of 5
X	ISSN

AIM Code Identifiers

Each AIM Code Identifier contains the three-character string]cm where:

  ] = Flag Character (ASCII 93)

  c = Code Character (see the table on this page)

  m = Modifier Character (see page 98 ~)

Code Character	Code Type
A	Code 39, Code 39 Full ASCII, Code 32
C	Code 128, ISBT 128, GS1-128, Coupon (Code 128 portion)
E	JAN(UPC/EAN), Coupon (UPC portion)
F	NW7(Codabar)
G	Code 93
H	Code 11
I	Interleaved 2 of 5
M	MSI
S	Discrete 2 of 5, IATA 2 of 5
X	Code 39 Trioptic, Bookland EAN, Matrix 2 of 5, Chinese 2 of 5, ISSN
e	GS1 DataBar Family

The modifier character is the sum of the applicable option values based on the following table.

Code Type	Option Value	Option
Code 39		
	0	No Check character or Full ASCII processing.
	1	Reader has checked one check character.
	3	Reader has checked and stripped check character.
	4	Reader has performed Full ASCII character conversion.
	5	Reader has performed Full ASCII character conversion and checked one check character.
	7	Reader has performed Full ASCII character conversion and checked and stripped check character.
	Example: A Full ASCII bar code with check character W, A+I+MI+DW, is transmitted as]A7AimId where 7 = (3+4).	
Trioptic Code 39		
	0	No option specified at this time. Always transmit 0.
	Example: A trioptic bar code 412356 is transmitted as]X0412356	
Code 128		
	0	Standard data packet, No Function code 1 in first symbol position.
	1	Function code 1 in first symbol character position.
	2	Function code 1 in second symbol character position.
	Example: A CoFdNeC(E1 AN) 128 bar code with Function 1 character in the first position, Aim Id is transmitted as]C1AimId	
I 2 of 5		
	0	No check digit processing.
	1	Reader has validated check digit.
	3	Reader has validated and stripped check digit.
	Example: An I 2 of 5 bar code without check digit, 4123, is transmitted as]I04123	
NW7(Codabar)		
	0	No check digit processing.
	1	Reader has checked check digit.
	Example: A Codabar bar code without check digit, 4123, is transmitted as]F04123	

Code Type	Option Value	Option
Code 93		
	0	No options specified at this time. Always transmit 0.
	Example: A Code 93 bar code 012345678905 is transmitted as]G0012345678905	
MSI		
	0	Mod 10 check digit checked and transmitted.
	1	Mod 10 check digit checked but not transmitted.
	Example: An MSI bar code 4123, with a single check digit checked, is transmitted as]M04123	
D 2 of 5		
	0	No options specified at this time. Always transmit 0.
	Example: A D 2 of 5 bar code 4123, is transmitted as]S04123	
JAN(UPC/EAN)		
	0	Standard packet in full EAN country code format, which is 13 digits for UPC-A, UPC-E, and EAN-13 (not including supplemental data).
	1	Two digit supplement data only.
	2	Five digit supplement data only.
	3	Combined data packet comprising 13 digits from a UPC-A, UPC-E, or EAN-13 symbol and 2 or 5 digits from a supplemental symbol.
	4	EAN-8 data packet.
	Example: A UPC-A bar code 012345678905 is transmitted as]E00012345678905	
Bookland EAN		
	0	No options specified at this time. Always transmit 0.
	Example: A Bookland EAN bar code 123456789X is transmitted as]X0123456789X	

According to AIM standards, a UPC with supplemental bar code is transmitted in the following format:]E0 (UPC chars) (terminator)]E2 (supplemental) (terminator)

In the AsReader, however, the format is changed to:]E0 (UPC chars)]E2 (supplemental)

Therefore, a UPC with two supplemental characters, 01234567890510, is transmitted to the host as a 21-character string,]E00012345678905]E110.

Serial Parameters

Baud Rate

Baud rate is the number of bits of data transmitted per second. The scan engine'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.

*Baud Rate 9600
(06h)

Baud Rate 19,200
(07h)

Baud Rate 38,400
(08h)

Baud Rate 57,600
(0ah)

Baud Rate 115,200
(0bh)

Decode Data Packet Format

This parameter selects whether decoded data is transmitted in raw format (unpacketed), or transmitted with the packet format as defined by the serial protocol.

If the raw format is selected, ACK/NAK handshaking is disabled for decode data.

***Send Raw Decode Data
(00h)**

**Send Packeted Decode Data
(01h)**

Host Serial Response Time-out

This parameter specifies how long the decoder waits for an ACK or NAK before resending. Also, if the decoder wants to send, and the host has already been granted permission to send, the decoder waits for the designated time-out before declaring an error.

The delay period can range from 0.0 to 9.9 seconds in 0.1 second increments. After scanning the bar code below, scan two numeric bar codes beginning on page 104. Values less than 10 require a leading zero. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

**Host Serial Response Time-out
(Default: 2.0 sec.)**

Host Character Time-out

This parameter determines the maximum time the decoder waits between characters transmitted by the host before discarding the received data and declaring an error. The time-out is set in 0.01 second increments from 0.01 seconds to 0.99 seconds. After scanning the bar code below, scan two bar codes beginning on page 104 to set the desired time-out. To change the selection or cancel an incorrect entry, scan Cancel on page 105.

Host Character Time-out
(Default: 50 msec.)

Event Reporting

The host can request the decoder to furnish certain information (events) relative to the decoder's behavior. Enable or disable the events listed in table below by scanning the appropriate bar codes on the pages that follow.

Event Class	Event	Code Reported
Boot up Event	System power-up	03h
Parameter Event	Parameter entry error	07h
	Parameter stored	08h
	Defaults set (and parameter event is enabled by default)	0Ah
	Number expected	0Fh
System Failure Event	A fault has been detected which prevents further scanning operation	20h
Over Temperature Event	The engine temperature has reached its maximum allowed temperature and shuts off.	21h

Parameter number format for these parameters follow those shown in table for parameters numbered 256 or higher.

Parameter Number	Data Format
0 through EFh	<param_num> <value>
F0h,F1h,F2h	<extended parameter code> <param_num offset> <value>
F4h	<WORD parameter> <Parameter Number> <Value: High Byte> <Value: Low Byte>

Event report packets are only communicated to the host when the Decode Data Packet Format parameter is set to Send Packeted Decode Data (page 101).

Boot Up Event

When enabled, the decoder sends a message to the host whenever power is applied. When disabled, no message is sent.

Enable
(01h)

*Disable
(00h)

Parameter Event

When enabled, the decoder sends a message to the host when one of the events specified in

Table on Page 103 occurs. When disabled, no message is sent.

* Enable
(01h)

Disable
(00h)

Numeric Bar Codes

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

0

1

2

3

4

5

6

7

8

9

・ **Cancel**

Cancel