GENERALSCAN

GS-R1000BT&M100BT

Laser Barcode Scanner Configration

User Manual

www.generalscan.com

Notice

Make sure you carefully read the following information to ensure that your barcode scan engine is able to perform at the level for which it is designed.

1. All software, including firmware, furnished to the user is on a licensed basis.
2. The right is reserved to make changes to any software or product to improve reliability, function, or design.
3. The material in this manual is subject to change without notice.
4. The manufacturer assumes no responsibility for any loss or claim by third parties which may arise from the use of this manual.
5. Do not throw or drop the scan engine or otherwise subject it to strong impact, which can damage the engine, interrupt program execution, corrupt memory contents, or otherwise interfere with proper operation.

1 Specifications

1-1 Technical specifications

Table 1-1 Technical specifications @25°C

Item	Description
Input voltage	3.3 VDC ± 5%
Scanning current	75mA typical/85mA maximum
Standby current	<8μA
Laser	650nm laser diode
Scan rate	100±10 scans/second
Scanning angle	±50°, ±65°, ±35° (Skew, Pitch, Roll)
Decode capability	UPC-A, UPC-E, EAN-13, EAN-8, ISBN/ISSN, Code 39, Code 39 full ASCII, Code 32, Trioptic Code 39, Interleaved 2 of 5, Industrial 2 of 5, Matrix 2 of 5, Codabar (NW7), Code 128, Code 93, Code 11(USD-8), MSI/Plessey, UK/Plessey, UCC/EAN 128, China Post, GS1 DataBar (formerly RSS) variants
Indicator interface	To control external Beeper and LED
Interface supported	UART
Scan mode	Good-read off, Momentary, Alternate, Continuous, Host
Dimensions	Height × Width × Depth: 12.0mm × 21.6mm × 15.5mm (maximum)
Weight	8.00±0.25g
Cable	Tapered 12-pin flex strip (12 x 0.5mm)
Temperature	Operating: -10°C to 60°C (-4°F to 140°F); Storage: -40°C to 70°C (-40°F to 158°F)
Humidity	5% to 90% (non-condensing)
Programming method	Method I: Manual (scanning special barcode in sequence) Method II: send command via UART interface
Firmware upgrade	Online
Decoding depth & Max. resolution	(1 mil = 0.0254 mm) 4 mil: 42- 75 mm 5 mil: 40-105 mm 10 mil: 10-250 mm 15 mil: 23-380 mm 20 mil: 35-490 mm 30 mil: 30-650 mm 55 mil: 75-900 mm See section of "1-3 Decode zone"
Mechanical vibration	IEC 60068-2-6 Un-powered engine withstands a random vibration along each of the X, Y and Z axes for a period of one hour per axis, define as follows: 20 to 80 Hz Ramp up to 0.04G^2/Hz at the rate of 3dB/oct 80 to 350 Hz 0.04G^2/Hz 350Hz to 2000Hz Ramp down at the rate of 3dB/oct
Mechanical shock	IEC 60068-2-27 Shock pulse: 0.5ms, Maximal acceleration: 1500G, Shock direction & time: ±X-axis, ±Y-axis, ±Z-axis, 3 times for each direction, total of 18 times.

Item	Description
Laser safety	EN 60825-1-2007, Class 1
ESD protection	EN 55024 (IEC 61000-4-2, contact discharge: +/-4KV, air discharge: +/-8KV), IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-11
RF immunity	IEC 61000-4-3, 10V/m
Power emission	EN 55022, class B; EN61000-3-2; IEC 61000-3-3
Artificial light immunity	100,000 lux

1-2 Default settings for various types of barcode

Table 1-2 Default settings

Code type	Read enable	Check digit verification	Check digit transmission	Min. code length	Proprietary code ID	AIM code ID
UPC-A	√	√	√	(12)[2]	A	]Em
UPC-E	√	√	√	(8)[2]	D	]Em
UPC-E1	√	√	√	(8)[2]	D	]Em
EAN-13	√	√	√	(13)[2]	A	]Em
EAN-8	√	√	√	(8)[2]	C	]Em
ISBN/ISSN[1]	√	√	√	(13)[2]	B	]Em
Code 39	√	-	-	1	M	]Am
Interleaved 2 of 5	√	-	-	6	I	]Im
Industrial 2 of 5	-	-	-	4	H	]Im
Matrix 2 of 5	√	-	-	6	X	]Im
Codabar	√	-	-	4	N	]Fm
Code 128	√	√	-	1	K	]Cm
UCC/EAN 128	√	√	-	1	K	]Cm
ISBT 128	√	√	-	1	K	]Cm
Code 93	√	√	-	1	L	]Gm
Code 11	-	√	-	4	V	-
MSI/Plessey	-	-	-	4	O	]Mm
UK/Plessey	√	√	-	1	U	]Mm
China Post	√	-	-	(11)[2]	T	]Im
China Finance	√	-	-	(10)[2]	Y	-
GS1 DataBar	√	-	-	(16)[2]	R	]em
GS1 DataBar Truncated[3]	√	-	-	(16)[2]	R	]em
GS1 DataBar Limited	√	-	-	(16)[2]	R	]em
GS1 DataBar Expanded	√	-	-	1	R	]em

Note: [1]The settings for ISBN/ISSN and EAN-13 must be the same except the code ID.
[2] Fixed-length barcodes.
[3]The settings for GS1 DataBar Truncated and GS1 DataBar must be the same.

1-3 Decode zone

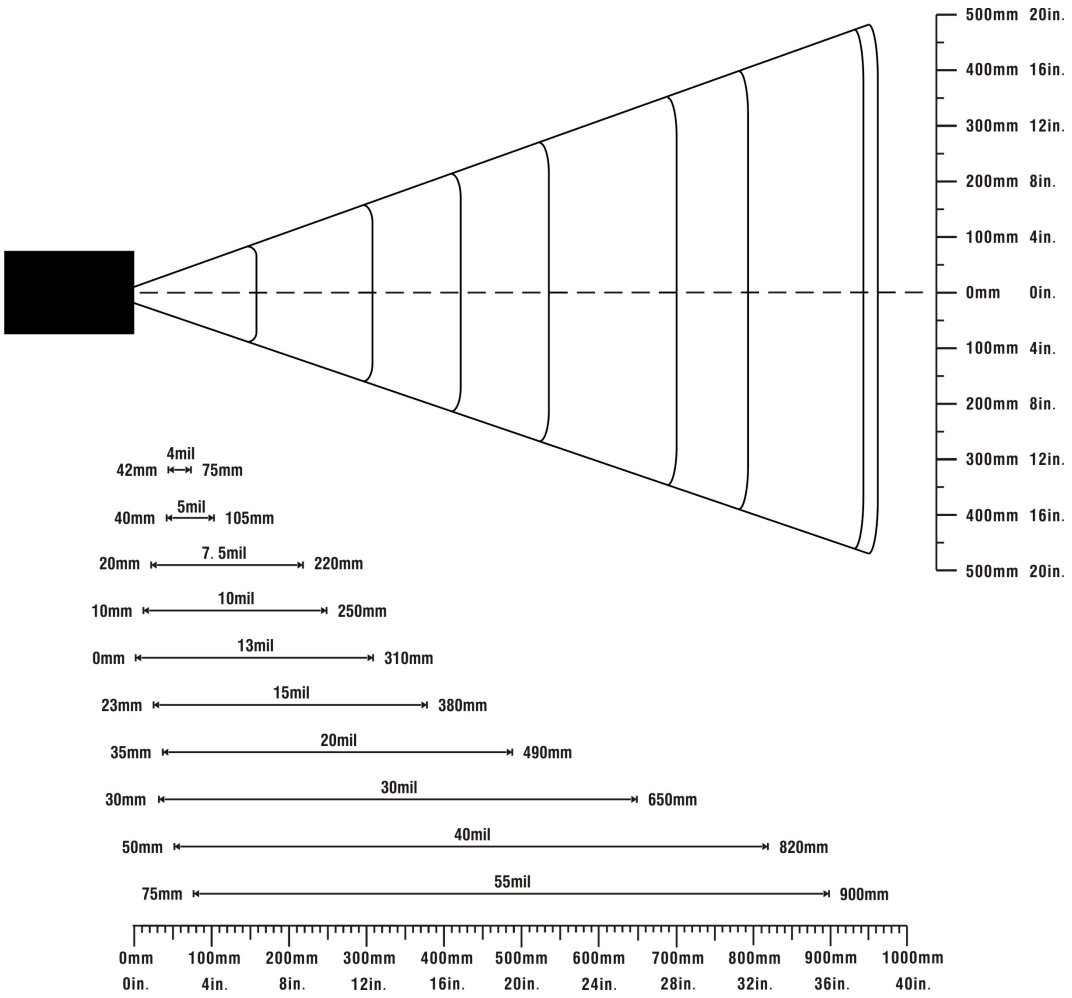


Figure 1-1 Decode zone @25°C

Table 1-3 Description of barcode patterns applied in Figure 1-1

Resolution	Barcode type	Wide-narrow element ratio	Barcode content	Contrast
4.0 mil	Code 39	2.5:1	ABCDEFGH	80%
5.0 mil	Code 39	2.5:1	ABCDEFGH	80%
7.5 mil	Code 39	2.5:1	ABCDEF	80%
10 mil	Code 39	2.5:1	ABCDE	90%
13 mil	100% UPC	-	12345678905	90%
15 mil	Code 39	2.5:1	ABCD	80%
20 mil	Code 39	2.2:1	123	80%
40 mil	Code 39	2.2:1	AB	80%
55 mil	Code 39	2.2:1	CD	80%

6 Parameter menus

6-1 Introduction

This section describes the programmable parameters, provides barcodes for programming
The engine is shipped with the factory default settings as described in this chapter. These factory-default-settings values are stored in flash memory and are preserved even when the engine is powered down. Changes to the factory default values can be stored as custom defaults. These values are also stored in flash memory and are preserved even when the engine is powered down.
There are two methods to change the parameter values as described following.

- Scan the appropriate barcodes as the example shown in the following Section 6-2. The new values replace the existing memory values.

6-2 Instruction: configure engine by scanning configuration barcodes

Refer to the next page, the steps of configuration are:

a) Scan the SETUP barcode on the parameter setting part.

b) Enter the option mode by scanning the Parameter name barcode.

c) To the right of the option barcode, the necessary alphanumeric inputs are listed. Scan these alphanumeric entries (see section 6-32) individually as Para. value.

d) Scan the END barcode, listed on the bottom of each parameter setting part.

e) Notes that only one parameter can be setup at each time.

f) Throughout the configuration barcode menus, the factory default settings are indicated with asterisks (*).

Example: to set Flow control to be None.

Steps: Scan the following barcodes in order.

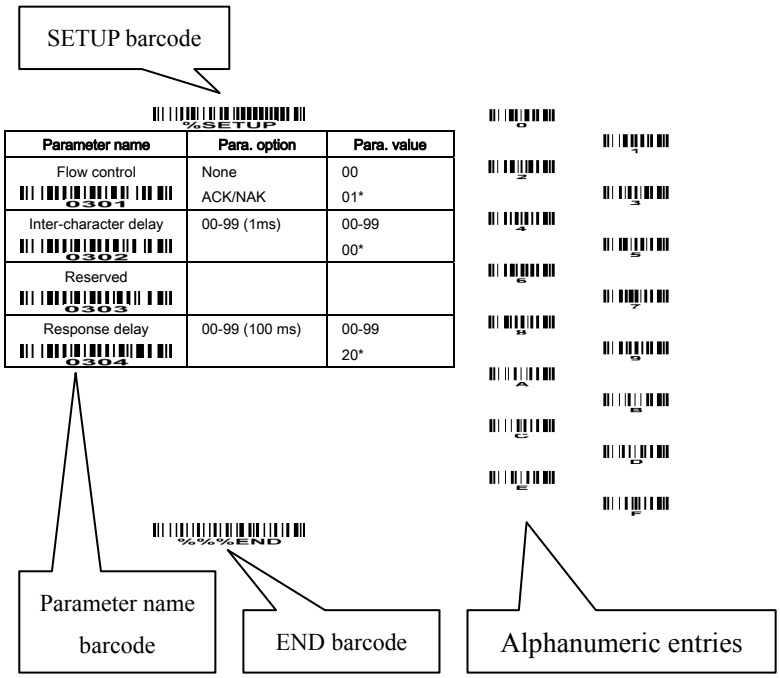


Figure 6-1 Set Flow control to be None

6-3 UART interface

Flow control:

None- No flow control.

ACK/NAK-When this option is selected, after transmitting data, the engine expects either an ACK (acknowledge) or NAK (not acknowledge) response from the host. If the engine does not get a response in this time, it resends its data up to two times before discarding the data and declaring a transmit error. See the chapter of "7 Serial Communication Interface" for more details.

Inter-character delay: This delay is inserted after each data character transmitted.

Response delay: This delay is used for serial communication of the engine when it waits for a handshaking acknowledgment from the host.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Flow control 0301	0x01 0x2D	None ACK/NAK Note 1	00 01*	Software Handshaking (0x9F)	00 01*
Inter-character delay 0302	0x01 0x2E	00-99 (1ms)	00*	Intercharacter Delay (0x6E)	00*
Reserved 0303	0x01 0x2F			-	-
Response delay 0304	0x01 0x30	00-99 (100ms)	00-99 20*	Host Serial Response Timeout (0x9B)	00-99 20*
Baud rate 0305	0x01 0x31	1200 2400 4800 9600 19200 38400 57600 115200	02 03 04 05* 06 07 08 09	Baud rate(0x9C)	03 04 05 06* 07 08 09 10
Parity 0306	0x01 0x32	None Odd Even	00* 01 02	Parity(0x9E)	04* 00 01
Data bit 0307	0x01 0x33	8 bits 7 bits	00* 01	-	-
Stop bit 0308	0x01 0x34	One bit Two bits	00* 01	Stop Bit Select (0x9D)	01* 02

%%%END

Note 1: The engine must use RTS/CTS handshaking to communicate with the host.

6-4 Trigger mode & some global settings

Trigger mode:

Good-read off- The TRIG pin must be pulled down once to activate scanning. The light source of engine stops scanning when there is a successful reading or no code is decoded after the Stand-by duration elapsed.

Momentary- The TRIG pin acts as a switch. Pull down the TRIG pin to activate scanning and pull up the TRIG pin to stop scanning. The light source of engine stops scanning when there is a successful reading or no code is decoded after the Stand-by duration elapsed.

Alternate- The TRIG pin acts as a toggle switch. Pull down and then pull up the TRIG pin to activate or stop scanning.

Continuous- The engine always keeps scanning, and it does not matter when the TRIG pin is pulled down or duration is elapsed.

Host- A host command issues the triggering signal. The scan engine interprets an actual trigger pull as a momentary triggering option.

Standby duration- The TRIG pin pulled or host command activates scanning. The light source of engine stops scanning when no code is successful decoded after the Stand-by duration elapsed.

Same barcode delay time: This feature is active only when the Trigger mode is in **Alternate** or **Continuous** mode. Once a barcode has been scanned and output successfully, the laser beam must be off or moved away from the barcode beyond delay time to active a next scanning on the same barcode. When this parameter is set to be “0xFF”, the delay time is indefinite.

Multiple confirm: If it is enabled, the engine will require a several times of same-decoded-data to confirm a valid reading.

Global Max./Min. code length: These two lengths are defined as the valid range of decoded barcode data length. Make sure that the minimum length setting is no greater than the maximum length setting, or otherwise the labels of the type of barcode will not be readable. In particular, the same value can be set for both minimum and maximum reading length to force the fixed length barcode decoded.

Notes:

1. Please set the max./min. length for individual barcode in later sections, if a special demand is requested.
2. The number of check digits is included in max./min. code length.
3. These two settings have no effect on the types of barcode with fixed-length, e.g. UPC-A, UPC-E, EAN-13, EAN-8 and China Post.

Global G1-G4 string selection: The engine offer one or two string group for ALL types of barcode. By setting one or two digits to indicate which string group you want to apply. You may refer to the chapters of “String setting” and “String position & Number of truncated leading/ending character”.

Example: Group 1 → set 01 or 10. Group 2 and 4 → set 24 or 42.

All valid settings include 00, 01, 02, 03, 04, 10, 11, 12, 13, 14, 20, 21, 22, 23, 24, 30, 31, 32, 33, 34, 40, 41, 42, 43, and 44.

Element amendment: If it is enabled, the engine can read the barcode comprised with bars and spaces in different scale.

Printable character only: If it is enabled, the engine will output the printable characters only, i.e. in ASCII from 20H to 7EH.

Decoder optimization: If it is enabled, the engine will optimize the engine with error correction. This function is not effective for all types of barcodes.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Trigger mode 0401	0x01 0x91	Good-read off Momentary Alternate Continuous Host	00 01* 02 03 04	Trigger Mode (0x8A)	02(Pulse) 00(Level) * 05(Alternate) 04(Continuous) 08(Host)
Standby duration 0402	0x01 0x92	01-99 (100ms)	01-99 40*	Laser On Time (0x88)	01-99 (100ms) 30*
Same barcode delay time 0403	0x01 0x93	00-99 (100ms)	00-99 10*	Timeout Between Same Type of barcode (0x89)	00-99(100ms) 10*
Multiple confirm 0404	0x01 0x94	00-09 (00: no)	00-09 00*	Multi-confirm (0xF2 0x10)	00-09 00*
Global max. code length 0405	0x01 0x95	04-99	04-99 99*	GlobalMaxCodeLength (0xF2 0x11)	04-99 99*
Global min. code length 0406	0x01 0x96	01-99	01-99 04*	GlobalMinCodeLength (0xF2 0x12)	01-99 04*
Global G1-G4 string selection 0407	0x01 0x97	00-44	00-44 00*	GlobalG1G4String Selection (0xF2 0x13)	00-44 00*
Element amendment 0408	0x01 0x98	Disable Enable	00 01*	ElementAmendment (0xF2 0x14)	00 01*
Printable character only 0409	0x01 0x99	Disable Enable	00* 01	PrintableCharacterOnly (0xF2 0x15)	00* 01
Decoder optimization 0410	0x01 0x9A	Disable Enable	00 01*	DecoderOptimization (0xF2 0x16)	00 01*
Reserved 0411	0x01 0x9B			-	-

%%%%END

6-5 Indication

Power-ON alert: After power-on the engine will send a boot up event message to the host. The boot-up event message format is 0x05, 0xF6, 0x00, 0x00, 0x03, 0xFF, 0x02. The detailed event message is described in section "7-8 EVENT".

LED-ON duration: This parameter can be adjusted for each successful reading.

Beeper indication: After each successful reading, the engine will beep to indicate a good barcode reading.

Beep duration: This parameter can be adjusted for a good reading upon favorite usage.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Power-ON alert 0501	0x01 0xF5	Disable Enable	00* 01	Boot up Event (0xF0 0x02)	00* 01
LED-ON duration 0502	0x01 0xF6	00-99 (100ms)	00-99 10*	LedOnDuration (0xF2 0x20)	10*
Beeper indication 0503	0x01 0xF7	Disable Enable	00 01*	Beep After Good Decode (0x38)	00 01*
Beep duration 0504	0x01 0xF8	01-09 (25ms)	01-09 03*	-	- (125ms)

%%%END

6-6 UPC-A

Read:

Format

System character	Data digits (10 digits)	1 check digit

Check digit verification: The check digit verification is optional.

Check digit trans.: By setting Enable, check digit will be transmitted.

Code ID setting: Code ID is a one-or-two-character string used to represent the barcode type upon a succeeding reading. If Code ID transmission is expected, Code ID transmission must be set Enable. Refer to the section of "6-29 String transmission" for details.

Insertion group selection: Refer to Global insertion group selection of the chapter of "6-4 Hand-held scan & some global settings".

Supplement digits: The Supplement digits barcode is the supplemental 2 or 5 characters.

Format

System character	Data digits (10 digits)	Check digit	Supplement digits 2 or 5

Truncation/Expansion:

Truncate leading zeros- The leading "0" digits of UPC-A data characters can be truncated when the feature is enabled.

Expand to EAN-13- It extends to 13-digits with a "0" leading digit when the feature is enabled.

Truncate system character- The system character of UPC-A data can be truncated when the feature is enabled.

Add country code- The country code ("0" for USA) can be added when the feature is enabled.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 1101	0x04 0x4D	Disable Enable	00 01*	UPC-A (0x01)	00 01*
Check digit verification 1102	0x04 0x4E	Disable Enable	00 01*	UPC-A CheckDigitVerification (0xF2 0x29)	00 01*
Check digit trans. 1103	0x04 0x4F	Disable Enable	00 01*	Transmit UPC-A Check Digit(0x28)	00 01*
Code ID setting 1104	0x04 0x50	00-FF_{16} (ASCII)	00-FF_{16} <A>*	UPC-A_CodeID_Setting (0xF2 0x2B)	<A>*
Insert group selection 1105	0x04 0x51	00-44	00-44 00*	UPC-A_InsertGroupSelection (0xF2 0x2C)	00-44 00*
Supplement digits 1106	0x04 0x52	None 2 digits 5 digits 2 or 5 digits	00* 01 02 03	Decode UPC/EAN Supplemental (0x10) Note1	00* FF_{16} FF_{16} 02
Truncation/Expansion 1107	0x04 0x53	None Truncate leading zeros Expand to EAN-13 Truncate system character Add country code	00* 01 02 03 04	UPC-A Preamble (0x22)Note2	01* FF_{16} FF_{16} 00 02
Reserved 1108	0x04 0x54			-	-

%%%END

6-7 UPC-E

Read:

Format

System character “0”	Data digits (6 digits)	Check digits

Check digit verification: The check digit verification is optional.

Check digit trans.: By setting Enable, check digit will be transmitted.

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

Supplement digits:

Format

System character “0”	Data digits (6 digits)	Check digit	Supplement digits 2 or 5

Truncation/Expansion:

Truncate leading zeros- Refer to Truncation/Expansion of UPC-A.

Expand to EAN-13- It extends to 13-digits with “0” digits when the feature is set to be enabled.

Example: Barcode “0123654”,

Output: “0012360000057”.

Expand to UPC-A- It extends to 12-digits when the feature is set to be enabled.

Example: Barcode “0123654”,

Output: “012360000057”.

Truncate system character- The system character “0” of UPC-E data can be truncated when this feature is enabled.

Add country code- The country code (“0” for USA) can be added when the feature is enabled.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 1201	0x04 0xB1	Disable Enable	00 01*	UPC-E (0x2)	00 01*
Check digit verification 1202	0x04 0xB2	Disable Enable	00 01*	UPC-E_CheckDigitVerification (0xF2 0x30)	00 01*
Check digit trans. 1203	0x04 0xB3	Disable Enable	00 01*	UPC-E Transmit CheckDigit (0x29)	00 01*
Code ID setting 1204	0x04 0xB4	00-FF_{16} (ASCII)	00-FF_{16} <D>*	UPC-E CodeIDSetting (0xF2 0x32)	<A>*
Insert group selection 1205	0x04 0xB5	00-44	00-44 00*	UPC-E InsertGroup Selection (0xF2 0x33)	00*
Supplement digits 1206	0x04 0xB6	None 2 digits 5 digits 2 or 5 digits	00* 01 02 03	Decode UPC/EAN Supplemental (0x10) Note1	00* FF_{16} FF_{16} 02
Truncation/Expansion 1207	0x04 0xB7	None Truncate leading zeros Expand to EAN-13 Expand to UPC-A Truncate system character Add country code	00* 01 02 03 04 05	UPC-E preamble (0x23) Convert UPC-E to A (0x25)	Note2
Reserved 1208	0x04 0xB8			-	-

%%%%END

GS-R1000BT & GS-M100BT			Reserved	
Option Bar Code	**para. code**		**UPC-E preamble (0x23)**	**Convert UPC-E to A (0x25)**
Truncation/Expansion 1207	0x04 0xB7	00	01	00
		01	FF_{16}	00
		02	FF_{16}	00
		03	unchanged	01
		04	00	00
		05	02	00

6-8 UPC-E1

Read:

Format

System character “1”	Data digits (6 digits)	1 check digit

Check digit verification: The check digit verification is optional.

Check digit trans.: By setting Enable, check digit will be transmitted.

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

Supplement digits:

Format

System character “1”	Data digits (6 digits)	Check digit	Supplement digits 2 or 5

Truncation/Expansion:

Expand to EAN-13- It extends to 13-digits with “0” digits when the feature is set to be enabled.

Expand to UPC-A- It extends to 12-digits when the feature is set to be enabled.

Truncate system character- The system character “1” of UPC-E1 data can be truncated when the feature is enabled.

Add country code- The country code (“0” for USA) can be added when the feature is enabled.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 3401	0x0D 0x49	Disable Enable	00 01*	UPC-E1(0xC)	00* 01
Check digit verification 3402	0x0D 0x4A	Disable Enable	00 01*	UPC-E1_Check Digit Verification (0xF2 0xBD)	00 01*
Check digit trans. 3403	0x0D 0x4B	Disable Enable	00 01*	UPC-E1_Transmit Check Digit (0x2A)	00 01*
Code ID setting 3404	0x0D 0x4C	00-FF_{16} (ASCII)	00-FF_{16} <D>*	UPC-E1 Code ID Setting (0xF2 0xBE)	<A>*
Insert group selection 3405	0x0D 0x4D	00-44	00-44 00*	UPC-E1 Insert Group Selection (0xF2 0xBF)	00*
Supplement digits 3406	0x0D 0x4E	None 2 digits 5 digits 2 or 5 digits	00* 01 02 03	Decode UPC/EAN Supplemental (0x10) Note1	00* FF_{16} FF_{16} 02
Truncation/Expansion 3407	0x0D 0x4F	None Reserved Expand to EAN-13 Expand to UPC-A Truncate system character Add country code	00* 01 02 03 04 05	UPC-E1 Preamble (0x24) Convert UPC-E1 to A (0x26)	Note2
Reserved 3408	0x0D 0x50			-	-

%%%END

6-9 EAN-13 (ISBN/ISSN)

Read:

Format

Data digits (12 digits)	1 check digit

Check digit verification: The check digit verification is optional.

Check digit transmission: By setting Enable, check digit will be transmitted.

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

Supplement digits:

Format

Data digits (12 digits)	1 check digit	Supplement digits 2 or 5

ISBN/ISSN: The ISBN (International Standard Book Number) and ISSN (International Standard Serial Number) are two kinds of barcode for books and magazines. The ISBN is 10 digits with leading “978” and the ISSN is 8 digits with leading “977” of the EAN-13 barcode.

Example:

Barcode “9780194315104”, Output: “019431510X”.

Barcode “9771005180004”, Output: “10051805”.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 1301	0x05 0x15	Disable Enable	00 01*	EAN-13 (0x03)	00 01*
Check digit verification 1302	0x05 0x16	Disable Enable	00 01*	EAN-13 CheckDigitVerification (0xF2 0x39)	01*
Check digit transmission 1303	0x05 0x17	Disable Enable	00 01*	EAN-13_TransmitCheckDigit (0xF2 0x3A)	00 01*
Code ID setting 1304	0x05 0x18	00-FF_{16} (ASCII)	00-FF_{16} <A>*	EAN-13 CodeIDSetting (0xF2 0x3B)	<A>*
Insert group selection 1305	0x05 0x19	00-44	00-44 00*	EAN-13 Insert GroupSelection (0xF2 0x3C)	00*
Supplement digits 1306	0x05 0x1A	None 2 digits 5 digits 2 or 5 digits	00* 01 02 03	Decode UPC/EAN Supplemental (0x10) Note1	00* FF_{16} FF_{16} 02
ISBN/ISSN conversion 1307	0x05 0x1B	Disable Enable	00* 01	Bookland EAN (0x53)	00* 01
Reserved 1308	0x05 0x1C			-	-
ISBN/ISSN Code ID setting 1309	0x05 0x1D	00-FF_{16} (ASCII)	00-FF_{16} <B>*	Bookland EAN CodeID Setting (0xF2 0x3D)	<L>*

%%%END

6-10 EAN-8

Read:

Format

Data digits (7 digits)	1 check digit

Check digit verification: The check digit verification is optional.

Check digit trans.: By setting Enable, check digit will be transmitted.

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

Supplement digits:

Format

Data digits (7 digits)	1 check digit	Supplement Digits 2 or 5

Truncation/Expansion: Refer to Truncation/Expansion of UPC-A.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 1401	0x05 0x79	Disable Enable	00 01*	EAN-8(0x04)	00 01*
Check digit verification 1402	0x05 0x7A	Disable Enable	00 01*	EAN-8 CheckDigitVerification (0xF2 0x40)	00 01*
Check digit trans. 1403	0x05 0x7B	Disable Enable	00 01*	EAN-8 TransmitCheckDigit (0xF2 0x41)	00 01*
Code ID setting 1404	0x05 0x7C	00-FF_{16} (ASCII)	00-FF_{16} <C>*	EAN-8 CodeIDSetting (0xF2 0x42)	<A>
Insert group selection 1405	0x05 0x7D	00-44 00*	00-44 00*	EAN-8 InsertGroupSelection (0xF2 0x43)	00-44 00*
Supplement digits 1406	0x05 0x7E	None 2 digits 5 digits 2 or 5 digits	00* 01 02 03	Decode UPC/EAN Supplemental (0x10) Note1	00* FF_{16} FF_{16} 02
Truncation/Expansion 1407	0x05 0x7F	None Truncate leading zero Expand to EAN-13	00* 01 02	EAN-8 Zero Extend (0x27) Note2	00* FF_{16} 01
Reserved 1408	0x05 0x80			-	-

%%%END

6-11 Code 39 (Code 32, Trioptic Code 39)

Read:

Format

⋆	Data digits (variable)	1 check digit (optional)	⋆

Check digit verification: The check digit is optional and made as the sum module 43 of the numerical value of the data digits.

Check digit transmission: By setting Enable, check digit will be transmitted.

Max./Min. code length: Each type of barcode has own max./min. code length. If both setting of max./min. code length are "00"s, the setting of global max./min. code length is effective. The length is defined as to the actual barcode data length to be sent. Label with length exceeds these limits will be rejected. Make sure that the minimum length setting is no greater than the maximum length setting, or otherwise all the labels of the type of barcode will not be readable. In particular, you can see the same value for both minimum and maximum reading length to force the fixed length barcode decoded.

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

Start/End transmission: The start and end characters of Code 39 are "⋆"s. By setting Enable, all data digits including two "⋆"s can be transmitted.

"⋆" as data character: By setting Enable, "⋆" can be recognized as data character.

Convert Code 39 to Code 32: Code 32 is a variant of Code 39 used by the Italian pharmaceutical industry. Note that Code 39 must be enabled in order for this parameter to function.

Format of Code 32

"A" (optional)	Data digits (8 digits)	1 check digit

Code 32 Prefix "A" transmission: By setting Enable, the prefix character "A" can be added to all Code 32 barcodes.

Trioptic Code 39 read: Trioptic Code 39 is a variant of Code 39 used in the marking of magnetic tapes and computer cartridges. Trioptic Code 39 barcodes always contain six characters.

Format

$	Data digits (6 digits)	$

Trioptic Code 39 Start/End transmission: The start and end characters of Trioptic Code 39 are "$"s. You can transmit all data digits including two "$"s.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 1501	0x05 0xDD	Disable Enable	00 01*	Code 39 (0x00)	00 01*
Check digit verification 1502	0x05 0xDE	Disable Enable	00* 01	Code 39 Check Digit (0x30)	00* 01
Check digit transmission 1503	0x05 0xDF	Disable Enable	00* 01	Transmit Code 39 Check Digit (0x2B)	00* 01
Max. code length 1504	0x05 0xE0	00-99	00-99 99*	Set Length(s) for Code 39 L1:(0x12) L2:(0x13) Note 1	 02* 55*
Min. code length 1505	0x05 0xE1	00-99	00-99 01*		
Code ID setting 1506	0x05 0xE2	00-FF_{16} (ASCII)	00-FF_{16} <M>*	Code39 CodeIDSetting (0xF2 0x49)	<B>*
Insert group selection 1507	0x05 0xE3	00-44	00-44 00*	InsertGroupSelection (0xF2 0x4A)	00-44 00*
Format 1508	0x05 0xE4	Standard Full ASCII	00* 01	Code 39 Full ASCII Conversion (0x11)	00* 01
Start/End transmission 1509	0x05 0xE5	Disable Enable	00* 01	Code39 StartEndTransmission (0xF2 0x4B)	00* 01
“⋆” as data character 1510	0x05 0xE6	Disable Enable	00* 01	Code39StartAsDataCharacter (0xF2 0x4C)	00* 01
Convert Code 39 to Code 32 1511	0x05 0xE7	Disable Enable	00* 01	Convert Code 39 to Code 32 (0x56)	00* 01
Code 32 Prefix “A” transmission 1512	0x05 0xE8	Disable Enable	00* 01	Code 32 Prefix (0xE7)	00* 01
Trioptic Code 39 read 1513	0x05 0xE9	Disable Enable	00 01*	Trioptic Code 39 (0x0D)Note2	00* 01
Trioptic Code 39 Start/End trans. 1514	0x05 0xEA	Disable Enable	00* 01	TriopticCode39StartEndTrans mission (0xF2 0x4D)	00* 01

%%%END

6-12 Interleaved 2 of 5

Read:

Format

Data digits (Variable)	1 check digit (optional)

Check digit verification: The check digit verification is optional. There are two optional check digit algorithms: the Uniform Type of barcode Specification (USS) and the Optical Product Code Council (OPCC).

Check digit transmission: By setting Enable, check digit will be transmitted.

Max./Min. code length: Refer to Max./Min. code length of Code 39.

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 1601	0x06 0x41	Disable Enable	00 01*	Interleaved2of5 (0x06)	00 01*
Check digit verification 1602	0x06 0x42	Disable USS OPCC	00* 01 02	I2of5 Check Digit Verification (0x31)	00* 01 02
Check digit transmission 1603	0x06 0x43	Disable Enable	00* 01	Transmit I2of5 Check Digit (0x2C)	00* 01
Max. code length 1604	0x06 0x44	00-99	00-99 99*	Set Length(s) for I2 of 5 L1:(0x16)	 14*
Min. code length 1605	0x06 0x45	00-99	00-99 06*	L2:(0x17) Note 1	14*
Code ID setting 1606	0x06 0x46	00-FF_{16} (ASCII)	00-FF_{16} <I>*	I2of5 CodeID Setting (0xF2 0x50)	<F>*
Insert group selection 1607	0x06 0x47	00-44	00-44 00*	I2of5_InsertGroupSelection (0xF2 0x51)	00-44 00*
Reserved 1608	0x06 0x48			-	-

%%%END

6-13 Industrial 2 of 5

Read:

Format

Data digits (variable)

Max./Min. code length: Refer to Max./Min. code length of Code 39.

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 1701	0x06 0xA5	Disable Enable	00* 01	Industrial2of5 (0x05)	00* 01
Max. code length 1702	0x06 0xA6	00-99	00-99 99*	Set Length(s) for Industrial2 of 5 L1:(0x14) L2:(0x15) Note 1	 12* 12*
Min. code length 1703	0x06 0xA7	00-99	00-99 04*		
Code ID setting 1704	0x06 0xA8	00-FF$_{16}$ (ASCII)	00-FF$_{16}$ <H>*	Industrial2of5_CodeIDSetting (0xF2 0x5B)	<G>*
Insert group selection 1705	0x06 0xA9	00-44	00-44 00*	InsertGroupSelection (0xF2 0x5C)	00-44 00*
Reserved 1706	0x06 0xAA			-	-

%%%%END

6-14 Matrix 2 of 5

Read:

Format

Data digits (variable)	1 check digit (optional)

Check digit verification: The check digit verification is optional.

Check digit transmission: By setting Enable, check digit will be transmitted.

Max./Min. code length: Refer to Max./Min. code length of Code 39.

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 1801	0x07 0x09	Disable Enable	00 01*	Matrix2of5 (0xF2 0x60)	00 01*
Check digit verification 1802	0x07 0x0A	Disable Enable	00* 01	Matrix2of5_CheckDigitVerification (0xF2 0x61)	00* 01
Check digit transmission 1803	0x07 0x0B	Disable Enable	00* 01	Matrix2of5 TransmitCheckDigit (0xF2 0x62)	00* 01
Max. code length 1804	0x07 0x0C	00-99	00-99 99*	Set Length(s) for Matrix 2Of5 L1:(0xF2 0x63)	00*
Min. code length 1805	0x07 0x0D	00-99	00-99 06*	L2:(0xF2 0x64) Note 1	00*
Code ID setting 1806	0x07 0x0E	00-FF_{16} (ASCII)	00-FF_{16} <X>*	Matrix2Of5_CodeIDSetting (0xF2 0x65)	<X>*
Insert group selection 1807	0x07 0x0F	00-44	00-44 00*	Matrix2Of5_InsertGroupSelection (0xF2 0x66)	00-44 00*
Reserved 1808	0x07 0x10			-	-

%%%END

6-15 Codabar

Read:

Format

Start character	Data digits (variable)	Check digit (optional)	End character

Check digit verification: The check digit verification is optional.

Check digit transmission: By setting Enable, check digit will be transmitted.

Max./Min. code length: Refer to Max./Min. code length of Code 39.

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

Start/End type: Codabar has four pairs of Start/End pattern; you may select one pair to match your application.

Start/End transmission: Refer to Start/End transmission of Code 39.

Start/End character equality: By setting Enable, the start and end characters of a Codabar barcode must be the same.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 1901	0x07 0x6D	Disable Enable	00 01*	Codabar (0x07)	00* 01
Check digit verification 1902	0x07 0x6E	Disable Enable	00* 01	CodeBar_CheckDigit Verification (0xF2 0x68)	00* 01
Check digit transmission 1903	0x07 0x6F	Disable Enable	00* 01	CodeBar_Transmit CheckDigit (0xF2 0x69)	00* 01
Max. code length 1904	0x07 0x70	00-99	00-99 99*	Set Lengths for Codabar L1:0x18 L2:0x19 Note1	 05* 55*
Min. code length 1905	0x07 0x71	00-99	00-99 04*		
Code ID setting 1906	0x07 0x72	00-FF_{16} (ASCII)	00-FF_{16} <N>*	CodeBar_CodeIDSetting (0xF2 0x6A)	<C> *
Insert group selection 1907	0x07 0x73	00-44	00-44 00*	CodeBar_InsertGroup Selection (0xF2 0x6B)	00*
Start/End type 1908	0x07 0x74	ABCD/ABCD abcd/abcd ABCD/TN*E abcd/tn*e	00* 01 02 03	CodeBar_StartEndTyp (0xF2 0x6C)	00* 01 02 03
Start/End transmission 1909	0x07 0x75	Disable Enable	00* 01	NOTIS Editing (0x37) Note2	01 00*
Start/End character equality 1910	0x07 0x76	Disable Enable	00* 01	CodeBar_StartEnd CharacterEquality (0xF2 0x6D)	00* 01

%%%END

6-16 Code 128

Read:

Format

Data digits (variable)	1 check digit (optional)

Check digit verification: The check digit verification is optional.

Check digit transmission: By setting Enable, check digit will be transmitted.

Max./Min. code length: Refer to Max./Min. code length of Code 39.

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

Truncate leading zeros: The leading “0” digits of Code 128 barcode characters can be truncated when the feature is enabled.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 2001	0x07 0xD1	Disable Enable	00 01*	Code-128 (0x08)	00 01*
Check digit verification 2002	0x07 0xD2	Disable Enable	00 01*	Code-128_CheckDigitVerification (0xF2 0x70)	00 01*
Check digit transmission 2003	0x07 0xD3	Disable Enable	00* 01	Code-128_Transmit CheckDigit (0xF2 0x71)	00* 01
Max. code length 2004	0x07 0xD4	00-99	00-99 99*	Set Lengths for Code128 L1:0xF2 0x72 L2:0xF2 0x73 Note1	 00* 00*
Min. code length 2005	0x07 0xD5	00-99	00-99 01*		
Code ID setting 2006	0x07 0xD6	00-FF_{16} (ASCII)	00-FF_{16} <K>*	Code128_CodeIDSetting (0xF2 0x74)	<D> *
Insert group selection 2007	0x07 0xD7	00-44	00-44 00*	Code128InsertGroupSelection (0xF2 0x75)	00-44 00*
Truncate leading zeros 2008	0x07 0xD8	Disable All leading “0”s Only the first “0”	00* 01 02	Code128_TruncateLeadingZeros (0xF2 0x76)	00* 01 02

%%%END

6-17 UCC/EAN 128

Read:

Format

Data digits (variable)	1 check digit (optional)

Check digit verification: The check digit is made as the sum module 103 of all data digits.

Check digit transmission: By setting Enable, check digit will be transmitted.

Max. /Min. code length: Refer to Max./Min. code length of Code 39.

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

Truncate leading zeros: Refer to Truncate leading zeros of Code 128.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 2501	0x09 0xC5	Disable Enable	00 01*	UCC/EAN-128(0x0E)	00 01*
Check digit verification 2502	0x09 0xC6	Disable Enable	00 01*	UCCEAN128_CheckDigitVerification (0xF2 0x98)	00 01*
Check digit transmission 2503	0x09 0xC7	Disable Enable	00* 01	UCCEAN128_TransmitCheckDigit (0xF2 0x99)	00* 01
Max. code length 2504	0x09 0xC8	00-99	00-99 99*	Set Lengths for UCCEAN 128 L1: (0xF2 0x9A) L2: (0xF2 0x9B) Note1	 00* 00*
Min. code length 2505	0x09 0xC9	00-99	00-99 01*		
Code ID setting 2506	0x09 0xCA	00-FF_{16} (ASCII)	00-FF_{16} <K>*	UCCEAN128_CodeIDSetting (0xF2 0x9C)	<K>*
Insert group selection 2507	0x09 0xCB	00-44	00-44 00*	UCCEAN128_InsertGroupSelection (0xF2 0x9D)	00-44 00*
Truncate leading zeros 2508	0x09 0xCC	Disable All leading “0”s Only the first “0”	00* 01 02	UCCEAN128_TruncateLeadingZeros (0xF2 0x9E)	00* 01 02

%%%END

6-18 ISBT 128

Read:

Format

“=” or “&”	Data digits (variable)	1 check digit (optional)

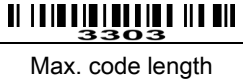
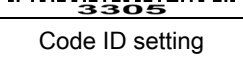
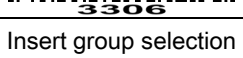
Check digit verification: The check digit verification is optional.

Check digit transmission: By setting Enable, check digit will be transmitted.

Max./Min. code length: Refer to Max./Min. code length of Code 39.

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 	0x0C 0xE5	Disable Enable	00 01*	ISBT 128(0x54)	00 01*
Check digit verification 	0x0C 0xE6	Disable Enable	00 01*	ISBT 128_CheckDigitVerification (0xF2 0xB6)	00 01*
Check digit transmission 	0x0C 0xE7	Disable Enable	00* 01	ISBT 128_TransmitCheckDigit (0xF2 0xB7)	00* 01
Max. code length 	0x0C 0xE8	00-99	00-99 99*	Set Lengths for ISBT 128 L1: (0xF2 0xB8)	 00*
Min. code length 	0x0C 0xE9	00-99	00-99 01*	L2: (0xF2 0xB9) Note1	00*
Code ID setting 	0x0C 0xEA	00-FF_{16} (ASCII)	00-FF_{16} <K>*	ISBT 128_CodeIDSetting (0xF2 0xBA)	<D>*
Insert group selection	0x0C 0xEB	00-44	00-44 00*	UCCEAN128_InsertGroupSelection (0xF2 0xBB)	00-44 00*

6-19 Code 93

Read:

Format

Data digits (variable)	2 check digits (optional)

Check digit verification: The check digit verification is optional.

Check digit transmission: By setting Enable, check digit will be transmitted.

Max./Min. code length: Refer to Max./Min. code length of Code 39.

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 2101	0x08 0x35	Disable Enable	00 01*	Code 93 (0x09)	00* 01
Check digit verification 2102	0x08 0x36	Disable Enable	00 01*	Code93_CheckDigitVerification (0xF2 0x79)	00 01*
Check digit transmission 2103	0x08 0x37	Disable Enable	00* 01	Code93_TransmitCheckDigit (0xF2 0x7A)	00* 01
Max. code length 2104	0x08 0x38	00-99	00-99 99*	Set Length(s) for Code 93 L1:(0x1A) L2:(0X1B) Note1	 04* 55*
Min. code length 2105	0x08 0x39	00-99	00-99 01*		
Code ID setting 2106	0x08 0x3A	00-FF$_{16}$ (ASCII)	00-FF$_{16}$ <L>*	Code93_CodeIDSetting (0xF2 0x7B)	<E>*
Insert group selection 2107	0x08 0x3B	00-44	00-44 00*	Code93_InsertGroupSelection (0xF2 0x7C)	00-44 00*
Reserved 2108	0x08 0x3C			-	-

%%%END

6-20 Code 11

Read:

Format

Data digits (variable)	Check digit 1 (optional)	Check digit 2 (optional)

Check digit verification: The check digit is presented as the sum module 11 of all data digits.

Check digit transmission: By setting Enable, check digit 1 and check digit 2 will be transmitted upon your selected check digit verification method.

Max./Min. code length: Refer to Max./Min. code length of Code 39.

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 2201	0x08 0x99	Disable Enable	00* 01	Code 11 (0x0A)	00* 01
Check digit verification 2202	0x08 0x9A	Disable One digit Two digit	00 01* 02	Code 11 Check Digit Verification (0x34)	00* 01 02
Check digit transmission 2203	0x08 0x9B	Disable Enable	00* 01	Transmit Code 11 Check Digit (0x2F)	00* 01
Max. code length 2204	0x08 0x9C	00-99	00-99 99*	Set Lengths for Code 11 L1: (0x1C) L2: (0x1D) Note1	04* 55*
Min. code length 2205	0x08 0x9D	00-99	00-99 04*		
Code ID setting 2206	0x08 0x9E	00-FF_{16} (ASCII)	00-FF_{16} <V>*	Code11_CodeIDSetting (0xF2 0x80)	<H>*
Insert group selection 2207	0x08 0x9F	00-44	00-44 00*	Code11_InsertGroupSelection (0xF2 0x81)	00-44 00*
Reserved 2208	0x08 0xA0			-	-

%%%END

6-21 MSI/Plessey

Read:

Format

Data digits (variable)	Check digit 1 (optional)	Check digit 2 (optional)

Check digit verification: The MSI/Plessey has one or two optional check digits. There are three methods of verifying check digits, i.e. Mod10, Mod10/10 and Mod 11/10. The check digit 1 and check digit 2 will be calculated as the sum module 10 or 11 of the data digits.

Check digit transmission: By setting Enable, check digit 1 and check digit 2 will be transmitted upon your selected check digit verification method.

Max./Min. code length: Refer to Max./Min. code length of Code 39.

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 2301	0x08 0xFD	Disable Enable	00* 01	MSI (0x0B)	00* 01
Check digit verification 2302	0x08 0xFE	Disable 1 digit (mod 10) 2 digit (Mod 10/10) 2 digit (Mod 11/10)	00* 01 02 03	MSI_Check_Digit (0x32) MSI_Check_Digit_Algorithm (0x33) Note1	0x00* 0x01*
Check digit transmission 2303	0x08 0xFF	Disable Enable	00* 01	Transmit MSI Check Digit (0x2E)	00* 01
Max. code length 2304	0x09 0x00	00-99	00-99 99*	Set Lengths for MSI L1: (0x1E) L2: (0x1F) Note2	 06* 37*
Min. code length 2305	0x09 0x01	00-99	00-99 04*		
Code ID setting 2306	0x09 0x02	00-FF_{16} (ASCII)	00-FF_{16} <O>*	MSI_CodeID (0xF2 0x88)	<J>*
Insert group selection 2307	0x09 0x03	00-44	00-44 00*	MSI_InsertGroupSelection (0xF2 0x89)	00-44 00*
Reserved 2308	0x09 0x04			-	-

%%%END

6-22 UK/Plessey

Read:

Format

Data digits (variable)	2 check digits (optional)

Check digit verification: The UK/Plessey has two optional check digits.

Check digit transmission: By setting Enable, check digit will be transmitted.

Max./Min. code length: Refer to Max./Min. code length of Code 39.

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 2401	0x09 0x61	Disable Enable	00 01*	UK_Plessey (0xF2 0x90)	00 01*
Check digit verification 2402	0x09 0x62	Disable Enable	00 01*	UK_PlesseyCheckDigitVerification (0xF2 0x91)	00 01*
Check digit transmission 2403	0x09 0x63	Disable Enable	00* 01	UK_PlesseyTransmitCheckDigit (0xF2 0x92)	00* 01
Max. code length 2404	0x09 0x64	00-99	00-99 99*	Set Lengths for UK_Plessey L1: (0xF2 0x93)	00*
Min. code length 2405	0x09 0x65	00-99	00-99 01*	L2: (0xF2 0x94) Note1	00*
Code ID setting 2406	0x09 0x66	00-FF_{16} (ASCII)	00-FF_{16} <U>*	UK_Plessey_CodeIDSetting (0xF2 0x95)	<U>*
Insert group selection 2407	0x09 0x67	00-44	00-44 00*	UK_Plessey_InsertGroupSelection (0xF2 0x96)	00-44 00*
Reserved 2408	0x09 0x68			-	-

%%%END

6-23 China Post

Read:

Format

11 Data digits

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 2601	0x0A 0x29	Disable Enable	00 01*	Chinese 2 of 5 (0xF0 0x98)	00* 01
Reserved 2602	0x0A 0x2A			-	-
Reserved 2603	0x0A 0x2B			-	-
Reserved 2604	0x0A 0x2C			-	-
Reserved 2605	0x0A 0x2D			-	-
Code ID setting 2606	0x0A 0x2E	00-FF_{16} (ASCII)	00-FF_{16} <T>*	ChinaPost_CodeID (0xF2 0xA4)	<T>*
Insert group selection 2607	0x0A 0x2F	00-44	00-44 00*	ChinaPost_InsertGroupSelection (0xF2 0xA5)	00-44 00*
Reserved 2608	0x0A 0x30			-	-

%%%END

6-24 GS1 DataBar (GS1 DataBar Truncated)

GS1 DataBar Truncated is structured and encoded the same as the standard GS1 DataBar format, except its height is reduced to a 13 modules minimum; while GS1 DataBar should have a height greater than or equal to 33 modules.

Read:

Format

16 Data digits

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

Conversion:

UCC/EAN 128- Refer to Code ID transmission of String transmission, "]Cm" will be identified as AIM ID.

UPC-A or EAN-13- Barcode beginning with a single zero as the first digit has the leading "010" stripped and the barcode reported as EAN-13. Barcode beginning with two or more zeros but not six zeros has the leading "0100" stripped and the barcode reported as UPC-A.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 2701	0x0A 0x8D	Disable Enable	00 01*	RSS-14 (0xF0 0x52)	00* 01
Code ID setting 2702	0x0A 0x8E	00-FF_{16} (ASCII)	00-FF_{16} <R >*	RSS-14_CodeIDSetting (0xF2 0xA8)	<R>*
Insert group selection 2703	0x0A 0x8F	00-44	00-44 00*	RSS-14_InsertGroupSelection (0xF2 0xA9)	00-44 00*
Conversion 2704	0x0A 0x90	None UCC/EAN 128 UPC-A or EAN-13	00* 01 02	Convert RSS to UPC/EAN (0xF0 0X8D) Note1	00* FF_{16} 01
Reserved 2705	0x0A 0x91			-	-

%%%END

6-25 GS1 DataBar Limited

Read:

Format

16 Data digits

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

Conversion: Refer to Conversion of GS1 DataBar (GS1 DataBar Truncated).

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 2801	0x0A 0xF1	Disable Enable	00 01*	RSS-Limited (0xF0 0x53)	00* 01
Code ID setting 2802	0x0A 0xF2	00-FF_{16} (ASCII)	00-FF_{16} <R >*	RSS-Limited_CodeIDSetting (0xF2 0xAB)	<R >*
Insert group selection 2803	0x0A 0xF3	00-44	00-44 00*	RSS-Limited_InsertGroupSelection (0xF2 0xAC)	00
Conversion 2804	0x0A 0xF4	None UCC/EAN 128 UPC-A or EAN-13	00* 01 02	Convert RSS to UPC/EAN (0xF0 0X8D) Note1	00* FF_{16} 01
Reserved 2805	0x0A 0xF5			-	-

%%%END

6-26 GS1 DataBar Expanded

Read:

Format

Data characters (variable)

Code ID setting: Refer to Code ID setting of UPC-A.

Insertion group selection: Refer to Insertion group selection of UPC-A.

Conversion:

UCC/EAN 128- Refer to Code ID transmission of String transmission, “]Cm” will be identified as AIM ID.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Read 2901	0x0B 0x55	Disable Enable	00 01*	RSS-Expanded (0xF0 0x54)	00* 01
Max. code length 2902	0x0B 0x56	00-99	00-99 99*	Set Lengths for RSS-Expanded L1:(0xF2 0xB0)	 00*
Min. code length 2903	0x0B 0x57	00-99	00-99 01*	L2:(0xF2 0xB1) Note1	00*
Code ID setting 2904	0x0B 0x58	00-FF_{16} (ASCII)	00-FF_{16} <R >*	RSS-Expanded_CodeIDSetting (0xF2 0xB2)	<R >*
Insert group selection 2905	0x0B 0x59	00-44	00-44 00*	RSS-Expanded_InsertGroupSelection (0xF2 0xB3)	00-44 00*
Conversion 2906	0x0B 0x5A	None UCC/EAN 128	00* 01	RSS-Expanded_Conversion (0xF2 0xB4)	00* 01
Reserved 2907	0x0B 0x5B			-	-

%%%END

6-27 G1-G4 & FN1 substitution string setting

Format of barcode data transmission

Prefix	Code name	Preamble	Code ID	Code length	Code data	Code ID	Postamble	Suffix

Suffix string setting: The <enter > key is represented in different ASCII when it is applied by different OS. For a Windows/DOS OS, <enter> is represented as <CR><LF> (0x0D 0x0A); for an Apple MAC OS, <enter> is represented as <CR> (0x0D); for a Linux/Unix OS, <enter> is represented as <LF> (0x0A).

Prefix/Suffix string setting: & **Preamble/Postamble string setting:**

They are appended to the data automatically when a barcode is decoded.

Example: Add a type of barcode of "$" as a prefix for all types of barcode.

Steps:

1) Scan SETUP and Prefix string setting barcode.
2) Use the ASCII table to find the value of $→24.
3) Scan barcode 2 and barcode 4 in section "6-32 Configuration alphanumeric entry barcode (as Para. value)".
4) Scan END barcode.
5) Refer to section "6-29 String transmission", set Prefix transmission to be Enable.

Scanning steps: Scan the following barcodes in order.

Insert G1/G2/G3/G4 string setting: The engine offers 4 positions and 4 character strings to insert among the barcode data string.

Example: Set G1 string to be "AB".

Original code data	"1 2 3 4 5 6"
Output code data	"1 2 A B 3 4 5 6"

Steps:

1) Scan SETUP and Insert G1 string setting barcode.
2) Use the ASCII table to find the value of A→41, B→42.
3) Scan 4, 1 and 4, 2 in section "6-32 Configuration alphanumeric entry barcode (as Para. value)".
4) Scan END barcode.
5) Refer to section "6-28 G1-G4 string position & Code ID position".
6) Refer to section "6-4 Trigger mode & some global settings".

Testing barcode:

123456

FN1 substitution string setting: The FN1 character (0x1D) in an UCC/EAN128 barcode, or a Code 128 barcode, or a GS1 DataBar barcode can be substituted with a defined string.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Prefix string setting 8001	0x1F 0x41	0-22 characters None	00-FF$_{16}$ 00*	Prefix(0x69) Suffix1(0x68)	0x00* 0x0A*
Suffix string setting 8002	0x1F 0x42	0-22 characters <ENTER>	00-FF$_{16}$ 0D0A*	Suffix2(0x6A) ScanDataTransmissionFormat (0xEB)[Note1] Prefix2~Prefix22 (0xF3 0x01~0x15) PrefixLen(0xF3 0x16) Suffix3~Suffix22 (0xF3 0x19~0x2C) SuffixLen(0xF3 0x2D)[Note2]	0x0B* 0x00* 0x41* 0x00* 0x41* 0x00*
Preamble string setting 8003	0x1F 0x43	0-22 characters None	00-FF$_{16}$ 00*	Preamb1~Preamb22 (0xF3 0x2E~0x43) PreamblLen (0xF3 0x44)	0x41* 0x00*
Postamble string setting 8004	0x1F 0x44	0-22 characters None	00-FF$_{16}$ 00*	Postamb1~Postamb22 (0xF3 0x45~0x5A) PostambLen (0xF3 0x5B)	0x41* 0x00*
Insert G1 string setting 8005	0x1F 0x45	0-22 characters None	00-FF$_{16}$ 00*	InsertG1Str 1~22 (0xF3 0x5C~0x71) InsertG1StrLen (0xF3 0x72)	0x41* 0x00*
Insert G2 string setting 8006	0x1F 0x46	0-22 characters None	00-FF$_{16}$ 00*	InsertG2Str 1~22 (0xF3 0x73~0x88) InsertG2StrLen (0xF3 0x89)	0x41* 0x00*
Insert G3 string setting 8007	0x1F 0x47	0-22 characters None	00-FF$_{16}$ 00*	InsertG3Str 1~22 (0xF3 0x8A~0x9F) InsertG3SrtLen (0xF3 0xA0)	0x41* 0x00*
Insert G4 string setting 8008	0x1F 0x48	0-22 characters None	00-FF$_{16}$ 00*	InsertG4Str 1~22 (0xF3 0xA1~0xB6) InsertG4StrLen (0xF3 0xB7)	0x41* 0x00*
FN1 substitution string setting	0x1F 0x49	0-4 characters	00-FF$_{16}$	FN1SubStr1~4	0x41*

8009		<SP>	20*	(0xF3 0xB9~0xBC) FN1SubStrLen (0xF3 0xBD)	0x00*
%%%END					

6-28 G1-G4 string position & Code ID position

Format of barcode data transmission

Prefix	Code name	Preamble	Code ID	Code length	Code data	Code ID	Postamble	Suffix

Insert G1/G2/G3/G4 string position: The engine offers 4 positions to insert strings among the barcode data string. In case of the insertion position is greater than the length of the barcode data string, the insertion of string is not effective.

Code ID position: It is allowed to select different code ID position/placement.

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Insert G1 string position 8101	0x1F 0xA5	00-99	00-99 00*	Insert G1 string position (0xF2 0xC0)	00-99 00*
Insert G2 string position 8102	0x1F 0xA6	00-99	00-99 00*	Insert G2 string position (0xF2 0xC1)	00-99 00*
Insert G3 string position 8103	0x1F 0xA7	00-99	00-99 00*	Insert G3 string position (0xF2 0xC2)	00-99 00*
Insert G4 string position 8104	0x1F 0xA8	00-99	00-99 00*	Insert G4 string position (0xF2 0xC3)	00-99 00*
Code ID position 8105	0x1F 0xA9	Before code data After code data	00* 01	Code ID position (0xF2 0xC4)	00* 01
Reserved 8106	0x1F 0xAA			-	-
Reserved 8107	0x1F 0xAB			-	-

%%%END

6-29 String transmission

Note: The information in this chapter is closely related to the chapter of G1-G4 & FN1 substitution string setting.

Format of barcode data transmission

Prefix	Code name	Preamble	Code ID	Code length	Code data	Code ID	Postamble	Suffix

Preamble transmission: By setting Enable, preamble will be appended before the data transmitted.

Postamble transmission: By setting Enable, postamble will be appended after the data is transmitted.

Code ID transmission: Code ID can be transmitted in the format of either Proprietary ID or AIM ID. Refer to section “1-2 Default settings for various types of barcode”.

Code length transmission: The length of code data string can be transmitted before the code data when Enable is selected. The length is represented by a number with two digits.

Code name transmission: By setting Enable, code name will be transmitted before code data.

Case conversion: The characters within code data or the whole output string can be set in either upper case or lower case.

FN1 substitution transmission: The engine supports a FN1 substitution feature. The replacement string of FN1 can be chosen by user (see section “6-27 G1-G4 & FN1 substitution string setting”).

%SETUP

GS-R1000BT & GS-M100BT				Reserved	
Parameter name	**Para. code**	**Para. option**	**Para. value**	**Parameter (Para. No.)**	**Para. value**
Prefix transmission 8201	0x20 0x09	Disable Enable	00* 01	Prefix(0x69) Suffix1(0x68) Suffix2(0x6A) ScanDataTransmissionFormat (0xEB)[Note1]	0x00* 0x0A* 0x0B* 0X00*
Suffix transmission 8202	0x20 0x0A	Disable Enable	00* 01		
Code name transmission 8203	0x20 0x0B	Disable Enable	00* 01	CodeNameTransmission (0XF2 0xC8)	00* 01
Preamble transmission 8204	0x20 0x0C	Disable Enable	00* 01	PreambleTransmission (0xF2 0xC9)	00* 01
Postamble transmission 8205	0x20 0x0D	Disable Enable	00* 01	PostambleTransmission (0xF2 0xCA)	00* 01
Code ID transmission 8206	0x20 0x0E	Disable Proprietary ID AIM ID	00* 01 02	Transmit Code ID Character (0x2D)	00* 02 01
Code length transmission 8207	0x20 0x0F	Disable Enable	00* 01	CodeLengthTransmission (0xF2 0xCB)	00* 01
Case conversion 8208	0x20 0x10	Disable Upper (data only) Lower (data only) Upper (whole string) Lower (whole string)	00* 01 02 03 04	CaseConversion (0xF2 0xCC)	00* 01 02 03 04
FN1 substitution transmission 8209	0x20 0x11	Disable Enable	00* 02	FN1 Substitution Transmission (0xF2 0xCD)	00* 02

%%%END

6-30 Return default parameters & firmware version

Load to Factory Default

If you wish to return the engine to all the factory default setting above

6-31 Enable & Disable scanning configuration barcode

***Enable scanning configuration barcode**

The default status of the engine is enabled to scan configuration barcode, and the parameter of “Parameter Scanning (0xEC)” in Table 6-1 is set 0x01.

Disable scanning configuration barcode

Scan the above barcode to disable scanning configuration barcode, and the parameter of “Parameter Scanning (0xEC)” in Table 6-1 is set 0x00. Then the engine will not operate configuration by scanning configuration barcode, but the data string of configuration barcode will be displayed.

Note: The setting of the above two barcodes does affect the operation of scanning the barcodes in section 6-30.

6-32 Configuration alphanumeric entry barcode (as Para. value)

Generalscan 1D Laser Serial Parameters List

GS-R1000BT & GS-M100BT				Reserved	
Parameter	**Para. No. (Hex)**	**Parameter value & option**	**Factory default**	**Factory default**	**Supp.**
Beeper Volume	0x8C	0:High 1:Medium 2:Low	1 (Medium)	Same as left	No
Beeper Tone	0x91	0:Low Frequency 1:Medium Frequency 2:High Frequency	1 (Medium Frequency)	Same as left	No
Beeper Frequency Adjustment	0xF0 0x91	0xFF(1230Hz)~0x7F(3770Hz) (unit 10Hz)	0 (2500 Hz)	Same as left	Yes
Laser On Time	0x88	0x00~0x63 (unit 100ms)	0x1E (3 s)	0x28 (4 s)	Yes
Aim Duration	0xED	0x00~0x63 (unit 100ms)	0 (0 s)	Same as left	No
Scan Angle	0xBF	0xB5 (Narrow 35°) 0xB7 (Wide 47°)	0xB7(Wide)	Same as left	No
Power Mode	0x80	0: Continuous 1: Low	1(Low)	Same as left	Yes
Trigger Mode	0x8A	0x00: Level 0x02: Pulse 0x04: Continuous 0x05: Alternate 0x07: Blinking 0x08: Host	0x00 (Level)	Same as left	Yes
Time-out Between Same Type of barcode	0x89	0x00~0x63 (unit 100ms)	0x0A (1s)	Same as left	Yes
Beep After Good Decode	0x38	0: Disable 1: Enable	1 (Enable)	Same as left	Yes
Transmit “No Read” Message	0x5E	0: Disable 1: Enable	0 (Disable)	Same as left	Yes
Parameter Scanning	0xEC	0: Disable 1: Enable	1(Enable)	Same as left	Yes
UPC/EAN					
UPC-A Read	0x01	0: Disable 1: Enable	1 (Enable)	Same as left	Yes
UPC-E Read	0x02	0: Disable 1: Enable	1 (Enable)	Same as left	Yes
UPC-E1 Read	0x0C	0: Disable 1: Enable	0 (Disable)	Same as left	No
EAN-8 Read	0x04	0: Disable 1: Enable	1 (Enable)	Same as left	Yes

GS-R1000BT & GS-M100BT				Reserved	
Parameter	**Para. No. (Hex)**	**Parameter value & option**	**Factory default**	**Factory default**	**Supp.**
EAN-13 Read	0x03	0: Disable 1: Enable	1 (Enable)	Same as left	Yes
UPC/EAN Supplemental	0x10	0x00: Ignore UPC/EAN with Supplemental 0x02: Auto-discriminate UPC/EAN Supplemental 0x05: Enable 978 Supplemental	0x00 (Ignore)	Same as left	Yes
Transmit UPC-A Check Digit	0x28	0: Disable 1: Enable	1 (Enable)	Same as left	Yes
Transmit UPC-E Check Digit	0x29	0: Disable 1: Enable	1 (Enable)	Same as left	Yes
Transmit UPC-E1 Check Digit	0x2A	0: Disable 1: Enable	1 (Enable)	Same as left	No
UPC-A Preamble	0x22	0: Data 1: System Character + Data 2: Country Code+ System Character + Data	1 (System Character + Data)	Same as left	Yes
UPC-E Preamble	0x23	0: Data 1: System Character + Data 2: Country Code+ System Character + Data	1 (System Character + Data)	Same as left	Yes
UPC-E1 Preamble	0x24	0: Data 1: System Character + Data 2: Country Code+ System Character + Data	1 (System Character + Data)	Same as left	Yes
Convert UPC-E to A	0x25	0: Disable 1: Enable	0 (Disable)	Same as left	Yes
Convert UPC-E1 to A	0x26	0: Disable 1: Enable	0 (Disable)	Same as left	Yes
EAN-8 Zero Extend	0x27	0: Disable 1: Enable	0 (Disable)	Same as left	Yes
Code 128					
Code-128 Read	0x08	0: Disable 1: Enable	1 (Enable)	Same as left	Yes
UCC/EAN-128 Read	0x0E	0: Disable 1: Enable	1 (Enable)	Same as left	Yes
ISBT 128 Read	0x54	0: Disable 1: Enable	1 (Enable)	Same as left	Yes
Code 39					
Code 39 Read	0x00	0: Disable 1: Enable[1]	1 (Enable)	Same as left	Yes
Trioptic Code 39 Read	0x0D	0: Disable 1: Enable [2]	0 (Disable)	Same as left	Yes
Convert Code 39 to Code 32	0x56	0: Disable 1: Enable	0 (Disable)	Same as left	Yes
Code 32 Prefix	0xE7	0: Disable	0 (Disable)	Same as left	Yes

GS-R1000BT & GS-M100BT				Reserved	
Parameter	**Para. No. (Hex)**	**Parameter value & option**	**Factory default**	**Factory default**	**Supp.**
		1: Enable			
Set Length(s) for Code 39	0x12 (L1) 0x13 (L2)	0x00~0x99 0x00~0x99 (L1>L2 is not supported)	0x02 0x37	0x01 0x63	Yes
Code 39 Check Digit Verification	0x30	0: Disable 1: Enable	0 (Disable)	Same as left	Yes
Transmit Code 39 Check Digit	0x2B	0: Disable 1: Enable	0 (Disable)	Same as left	Yes
Code 39 Full ASCII Conversion	0x11	0: Disable 1: Enable	0 (Disable)	Same as left	Yes
Code 93					
Code 93 Read	0x09	0: Disable 1: Enable	0 (Disable)	1 (Enable)	Yes
Set Length(s) for Code 93	0x1A(L1) 0x1B(L2)	0x00~0x63 0x00~0x63 (L1>L2 is not supported)	0x04 0x37	0x01 0x63	Yes
Code 11					
Code 11 Read	0x0A	0: Disable 1: Enable	0 (Disable)	Same as left	Yes
Set Lengths for Code 11	0x1C(L1) 0x1D(L2)	0x00~0x63 0x00~0x63 (L1>L2 is not supported)	0x04 0x37	0x04 0x63	Yes
Code 11 Check Digit Verification	0x34	0: Disable 1: One check digit 2: Two check digit	0 (Disable)	1 (One check digit)	Yes
Transmit Code 11 Check Digit(s)	0x2F	0: Disable 1: Enable	0 (Disable)	Same as left	Yes
Interleaved 2 of 5					
Interleaved 2 of 5 Read	0x06	0: Disable 1: Enable	1 (Enable)	Same as left	Yes
Set Length(s) for I 2 of 5	0x16 (L1) 0x17 (L2)	0x00~0x63 0x00~0x63 (L1>L2 is not supported)	0x0E 0x0E	0x06 0x63	Yes
I 2 of 5 Check Digit Verification	0x31	0: Disable 1: USS Check Digit 2: OPCC Check Digit	0 (Disable)	Same as left	Yes
Transmit I 2 of 5 Check Digit	0x2C	0: Disable 1: Enable	0 (Disable)	Same as left	Yes
Convert I 2 of 5 to EAN 13	0x52	0: Disable 1: Enable	0 (Disable)	Same as left	No
Chinese 2 of 5 (China Post)					
Chinese 2 of 5 Read	0xF0	0: Disable	0 (Disable)	1 (Enable)	Yes

GS-R1000BT & GS-M100BT				Reserved	
Parameter	**Para. No. (Hex)**	**Parameter value & option**	**Factory default**	**Factory default**	**Supp.**
	0x98	1: Enable			
Codabar					
Codabar Read	0x07	0: Disable 1: Enable	0 (Disable)	1 (Enable)	Yes
Set Lengths for Codabar	0x18 (L1) 0x19 (L2)	0x00~0x63 0x00~0x63 (L1>L2 is not supported)	0x05 0x37	0x04 0x63	Yes
MSI					
MSI Read	0x0B	0: Disable 1: Enable	0 (Disable)	0 (Disable)	Yes
Set Length(s) for MSI	0x1E(L1) 0x1F(L2)	0x00~0x63 0x00~0x63 (L1>L2 is not supported)	0x06 0x37	0x04 0x63	Yes
MSI Check Digits	0x32	0: One digit 1: Two digit 0xFF: (No MSI Check Digit)	0	0xFF	Yes
Transmit MSI Check Digit	0x2E	0: Disable 1: Enable	0 (Disable)	Same as left	Yes
MSI Check Digit Algorithm	0x33	0: Mod10/Mod11 1: Mod10/Mod10	1 (Mod 10/Mod 10)	Same as left	Yes
GS1 DataBar (formerly RSS)					
GS1 DataBar (GS1 DataBar Truncated) Read	0xF0 0x52	0: Disable 1: Enable	0 (Disable)	1 (Enable)	Yes
GS1 DataBar Limited Read	0xF0 0x53	0: Disable 1: Enable	0 (Disable)	1 (Enable)	Yes
GS1 DataBar Expanded Read	0xF0 0x54	0: Disable 1: Enable	0 (Disable)	1 (Enable)	Yes
Convert GS1 DataBar to UPC/EAN	0xF0 0x8D	0: Disable 1: Enable	0 (Disable)	Same as left	Yes
Data options					
Transmit Code ID Character	0x2D	0: None 1: AIM code ID 2: User Defined ID	0 (None)	Same as left	Yes
Prefix/ Suffix 1/ Suffix 2	0x69 0x68 0x6A	0x00~0x7F 0x00~0x7F 0x00~0x7F	0x00 (NULL) 0x0A (LF) 0x0D (CR)	0x00(NULL) 0x0D (CR) 0x0A (LF)	Yes
Scan Data Transmission Format	0xEB	0x00: Data Only 0x01: Data + Suffix1 0x02: Data + Suffix2 0x03: Data +Suf1+Suf2 0x04: Prefix+Data 0x05: Prefix+Data+Suf1	0x00 (Data Only)	Same as left	Yes

GS-R1000BT & GS-M100BT				Reserved	
Parameter	**Para. No. (Hex)**	**Parameter value & option**	**Factory default**	**Factory default**	**Supp.**
		0x06: Prefix+Data+Suf2 0x07: Prefix + Data + Suf1 + Suf2			
Serial interface					
Baud Rate	0x9C	0x03: 1200 0x04: 2400 0x05: 4800 0x06: 9600 0x07: 19200 0x08: 38400 0x09: 57600 0x0A: 115200	0x06 (9600)	Same as left	Yes
Parity	0x9E	0x00: Odd 0x01: Even 0x04: None	0x04 (None)	Same as left	Yes
Software Handshaking	0x9F	0: Disable 1: Enable	1 (Enable)	Same as left	Yes
Decode Data Packet Format	0xEE	0: Raw 1: Packeted	0 (Raw)	Same as left	Yes
Host Serial Response Time-out	0x9B	0x00~0x63 (unit 100ms)	0x14 (2 sec)	Same as left	Yes
Stop Bit	0x9D	1: One 2: Two	1 (One)	Same as left	Yes
Inter-character Delay	0x6E	00~99 (unit 1ms) [1]	0 (0 ms)	Same as left	Yes
Host Character Time-out	0xEF	00~99(unit 10ms) [1]	0x14 (200 ms)	Same as left	Yes
Event reporting					
Decode Event	0xF0 0x00	0: Disable 1: Enable	0 (Disable)	Same as left	No
Boot Up Event	0xF0 0x02	0: Disable 1: Enable	0 (Disable)	Same as left	Yes
Parameter Event	0xF0 0x03	0: Disable 1: Enable	0 (Disable)	Same as left	No
Note 1: If Trioptic Code 39 read is set Enable, Code 39 read is forced Enable. Note 2: If Code 39 read is set Disable, Trioptic Code 39 read is forced Disable.					

GS-R1000BT & GS-M100BT				Reserved
Parameter	**Para. code (Hex)**	**Parameter value & option**	**Factory default**	**Factory default**
LED ON duration	0xF2 0x20	0x01~0x63 (unit 100ms)	0x0A (1.0 sec)	same as left
Double confirm	0xF2 0x10	00~09 (00: No)	0	same as left
Global max. code length	0xF2 0x11	0x04~0x63	0x63	same as left
Global min. code length	0xF2 0x12	0x01~0x63	4	same as left
Global G1-G4 String selection	0xF2 0x13	(Note that following data should be in Hex format.) 00/01/02/03/04/ 10/11/12/13/14/ 20/21/22/23/24/ 30/31/32/33/34/ 40/41/42/43/44/	0	same as left
Element amendment	0xF2 0x14	0: Disable 1: Enable	1 (Enable)	same as left
Printable character only	0xF2 0x15	0: Disable 1: Enable	0 (Disable)	same as left
Decoder optimization	0xF2 0x16	0: Disable 1: Enable	1 (Enable)	same as left
UPC/EAN				
UPC-A Check Digit verification	0xF2 0x29	0: Disable 1: Enable	1 (Enable)	same as left
UPC-A Code ID	0xF2 0x2B	0x00-0xFF	<A> (0x41)	same as left
UPC-A Insert Group Selection	0xF2 0x2C	same as “Global G1-G4 String selection”	0	same as left
UPC-E Check digit verification	0xF2 0x30	0: Disable 1: Enable	1 (Enable)	same as left
UPC-E Code ID	0xF2 0x32	0x00-0xFF	<D> (0x44)	same as left
UPC-E Insert Group Selection	0xF2 0x33	same as “Global G1-G4 String selection”	0	same as left
UPC-E1_CheckDigitVerification	0xF2 0xBD	0: Disable 1: Enable	1 (Enable)	same as left
UPC-E1 CodeIDSetting	0xF2 0xBE	0x00~0xFF	<D> (0x44)	<A>(0x41)
UPC-E1 InsertGroupSelection	0xF2 0xBF	same as “Global G1-G4 String selection”	0	same as left
EAN-13 Check Digit Verification	0xF2 0x39	0: Disable 1: Enable	1 (Enable)	same as left
Transmit EAN-13 Check Digit	0xF2 0x3A	0: Disable 1: Enable	1 (Enable)	same as left

GS-R1000BT & GS-M100BT				Reserved
Parameter	**Para. code (Hex)**	**Parameter value & option**	**Factory default**	**Factory default**
EAN-13 Code ID	0xF2 0x3B	0x00-0xFF	<A> (0x41)	same as left
EAN-13 Insert Group Selection	0xF2 0x3C	same as "Global G1-G4 String selection"	0	same as left
ISBN/ISSN Code ID	0xF2 0x3D	0x00-0xFF	<B>	<L>
EAN-8 Check Digit Verification	0xF2 0x40	0: Disable 1: Enable	1 (Enable)	same as left
Transmit EAN-8 Check Digit	0xF2 0x41	0: Disable 1: Enable	1 (Enable)	same as left
EAN-8 Code ID	0xF2 0x42	0x00-0xFF	<C> (0x43)	<A>(0x41)
EAN-8 Insert Group Selection	0xF2 0x43	same as "Global G1-G4 String selection"	0	same as left
Code 128				
Code-128 Check Digit Verification	0xF2 0x70	0: Disable 1: Enable	1 (Enable)	same as left
Transmit Code-128 Check Digit	0xF2 0x71	0: Disable 1: Enable	0 (Disable)	same as left
Set Lengths for Code-128	0xF2 0x72(L1) 0xF2 0x73(L2)	0x00~0x63 0x00~0x63 (L1>L2 is not supported)	01 99(0x63)	0 0
Code-128 Code ID	0xF2 0x74	0x00~0xFF	<K> (0x4B)	<D>(0x44)
Code-128 Insert Group Selection	0xF2 0x75	same as "Global G1-G4 String selection"	0	same as left
Code-128 Truncate Leading Zeros	0xF2 0x76	0: Disable 1: All leading "0"s 2: Only the first "0"	0 (Disable)	same as left
UCC/EAN 128				
UCC_EAN128 Check Digit Verification	0xF2 0x98	0: Disable 1: Enable	1 (Enable)	same as left
Transmit UCC_EAN128 Check Digit	0xF2 0x99	0: Disable 1: Enable	0 (Disable)	same as left
Set Lengths for UCC_EAN128	0xF2 0x9A(L1) 0xF2 0x9B(L2)	0x00~0x63 0x00~0x63 (L1>L2 is not supported)	0x01 0x63	0 0
UCC_EAN128 Code ID	0xF2 0x9C	0x00~0xFF	<K> (0x4B)	same as left
UCC_EAN128 Insert Group Selection	0xF2 0x9D	same as "Global G1-G4 String selection"	0	same as left
UCC_EAN128 Truncate Leading Zeros	0xF2 0x9E	0:Disable 1:All Leading "0"s 2:Only the first "0"	0 (Disable)	same as left
ISBT 128				
ISBT 128_Check DigitVerification	0xF2 0xB6	0: Disable 1: Enable	1 (Enable)	same as left

GS-R1000BT & GS-M100BT				Reserved
Parameter	**Para. code (Hex)**	**Parameter value & option**	**Factory default**	**Factory default**
ISBT 128_Transmit CheckDigit	0xF2 0xB7	0: Disable 1: Enable	0 (Disable)	same as left
Set Lengths for ISBT 128	0xF2 0xB8(L1) 0xF2 0xB9(L2)	0x00~0x63 0x00~0x63 (L1>L2 is not supported)	01 99 (0x63)	0 0
ISBT 128_CodeID	0xF2 0xBA	0x00~0xFF	<K> (0x4B)	<D>(0x44)
ISBT 128_Insert GroupSelection	0xF2 0xBB	same as “Global G1-G4 String selection”	0	same as left
UK Plessey				
UK_Plessy Read	0xF2 0x90	0: Disable 1: Enable	0 (Disable)	same as left
UK_Plessy Check Digit Verification	0xF2 0x91	0: Disable 1: Enable	1 (Enable)	same as left
Transmit UK_Plessy Check Digit	0xF2 0x92	0: Disable 1: Enable	0 (Disable)	same as left
Set Length(s) for UK_Plessy	0xF2 0x93(L1) 0xF2 0x94(L2)	0x00~0x63 0x00~0x63 (L1>L2 is not supported)	0x01 0x63	0 0
UK_Plessy Code ID	0xF2 0x95	0x00~0xFF	<U>(0x55)	same as left
UK_Plessy Insert Group Selection	0xF2 0x96	same as “Global G1-G4 String selection”	0	same as left
Code 39				
Code 39 Code ID	0xF2 0x49	0x00-0xFF	<M>(0x4D)	<B>(0x42)
Code 39 Insert Group Selection	0xF2 0x4A	same as “Global G1-G4 String selection”	0	same as left
Code 39 Start/End Transmission	0xF2 0x4B	0: Disable 1: Enable	0 (Disable)	same as left
Code 39 Star As Data	0xF2 0x4C	0: Disable 1: Enable	0 (Disable)	same as left
Trioptic Code 39 Start/End transmission	0xF2 0x4D	0: Disable 1: Enable	0 (Disable)	same as left
Code 93				
Code 93 Check Digit Verification	0xF2 0x79	0: Disable 1: Enable	1 (Enable)	same as left
Transmit Code 93 Check Digit	0xF2 0x7A	0: Disable 1: Enable	0 (Disable)	same as left
Code 93 Code ID	0xF2 0x7B	0x00~0xFF	<L>(0x4C)	<E>(0x45)
Code 93 Insert Group Selection	0xF2 0x7C	same as “Global G1-G4 String selection”	0	same as left
Code 11				
Code 11 Code ID	0xF2 0x80	0x00~0xFF	<V>(0x56)	<H>(0x48)
Code 11 Insert Group Selection	0xF2 0x81	same as “Global G1-G4	0	same as left

GS-R1000BT & GS-M100BT				Reserved
Parameter	**Para. code (Hex)**	**Parameter value & option**	**Factory default**	**Factory default**
		String selection"		
Industrial 2 of 5				
Industrial 2 of 5 Code ID	0xF2 0x50	0x00~0xFF	<I>(0x49)	<F>(0x46)
Industrial 2 of 5 Insert Group Selection	0xF2 0x51	same as "Global G1-G4 String selection"	0	same as left
Industrial 2 of 5 Read	0x05	0: Disable 1: Enable	0 (Disable)	same as left
Set Lengths for Industrial 2 of 5	0x14 (L1) 0x15 (L2)	0x00~0x63 0x00~0x63 (L1>L2 is not supported)	04 99(0x63)	12 12
Industrial 2 of 5 Code ID	0xF2 0x5B	0x00~0xFF	<G>(0x47)	same as left
Industrial 2 of 5 Insert Group selection	0xF2 0x5C	same as "Global G1-G4 String selection"	0	same as left
Matrix 2 of 5				
Matrix 2 of 5 Read	0xF2 0x60	0: Disable 1: Enable	1 (Enable)	same as left
Matrix 2 of 5 Check Digit Verification	0xF2 0x61	0: Disable 1: Enable	0 (Disable)	same as left
Transmit Matrix 2 of 5 Check Digit	0xF2 0x62	0: Disable 1: Enable	0 (Disable)	same as left
Set Lengths for Matrix 2 of 5	0xF2 0x63(L1) 0xF2 0x64(L2)	0x00~0x63 0x00~0x63 (L1>L2 is not supported)	06 0x63	0 0
Matrix 2 of 5 Code ID	0xF2 0x65	0x00~0xFF	<X>(0x58)	same as left
Matrix 2 of 5 Insert Group Selection	0xF2 0x66	same as "Global G1-G4 String selection"	0	same as left
China Post				
ChinaPostCode ID	0xF2 0xA4	0x00~0xFF	<T>(0x54)	same as left
ChinaPost Insert Group Selection	0xF2 0xA5	same as "Global G1-G4 String selection"	0	same as left
Codabar				
Codabar Check Digit Verification	0xF2 0x68	0: Disable 1: Enable	0 (Disable)	same as left
Transmit Codabar Check Digit	0xF2 0x69	0: Disable 1: Enable	0 (Disable)	same as left
Codabar Code ID	0xF2 0x6A	0x00-0xFF	<N> (0x4E)	<C> (0x43)
Codabar Insert Group Selection	0xF2 0x6B	same as "Global G1-G4 String selection"	0	same as left
Codabar Start End Type	0xF2 0x6C	0: ABCD/ABCD 1: abcd/abcd 2: ABCD/TN*E 3: abcd/tn*e	0	same as left

GS-R1000BT & GS-M100BT				Reserved
Parameter	**Para. code (Hex)**	**Parameter value & option**	**Factory default**	**Factory default**
Codabar Start End Character Equality	0xF2 0x6D	0: Disable 1: Enable	0 (Disable)	same as left
MSI				
MSI_CodeIDSetting	0xF2 0x88	0x00~0xFF	<O> (0x4F)	<J> (0x4A)
MSI_InsertGroupSelection	0xF2 0x89	same as "Global G1-G4 String selection"	0	same as left
GS1 Databar (formerly RSS)				
GS1 DataBar Code ID	0xF2 0xA8	0x00~0xFF	<R> (0x52)	same as left
GS1 DataBar Insert Group Selection	0xF2 0xA9	same as "Global G1-G4 String selection"	0	same as left
GS1 DataBar Limited Code ID	0xF2 0xAB	0x00~0xFF	<R> (0x52)	same as left
GS1 DataBar Limited Insert Group Selection	0xF2 0xAC	same as "Global G1-G4 String selection"	<R> (0x52)	same as left
Set Lengths for GS1 DataBar Expanded	0xF2 0xB0(L1) 0xF2 0xB1(L2)	0x00~0x63 0x00~0x63 (L1>L2 is not supported)	01 99 (0x63)	0 0
GS1 DataBar Expanded Code ID	0xF2 0xB2	0x00~0xFF	<R> (0x52)	same as left
GS1 DataBar Expanded Insert Group Selection	0xF2 0xB3	same as "Global G1-G4 String selection"	0	same as left
GS1 DataBar Expanded to UCC/EAN	0xF2 0xB4	0: Disable 1: Enable	0 (Disable)	same as left
Data options				
Prefix 2~Prefix22	0xF3 0x01~ 0xF3 0x15	0x00~0xFF	0x41 (A)	same as left
Prefix Length	0xF3 0x16	0x00~0x16	0	same as left
Suffix 3~Suffix22	0xF3 0x19~ 0xF3 0x2C	0x00~0xFF	0x41 (A)	same as left
Suffix Length	0xF3 0x2D	0x00~0x16	0	same as left
Preamble String Setting1~ Preamble String Setting22	0xF3 0x2E~ 0xF3 0x43	0x00~0xFF	0x41 (A)	same as left
Preamble String Length	0xF3 0x44	0x00~0x16	0	same as left
Postamble String Setting1~ Postamble String Setting22	0xF3 0x45~ 0xF3 0x5A	0x00~0xFF	0x41 (A)	same as left
Postamble String Length	0xF3 0x5B	0x00~0x16	0	same as left
Insert G1 String Setting1~ Insert G1 String Setting22	0xF3 0x5C~ 0xF3 0x71	0x00~0xFF	0x41 (A)	same as left
Insert G1 String Length	0xF3 0x72	0x00~0x16	0	same as left
Insert G2 String Setting1~ Insert G2 String Setting22	0xF3 0x73~ 0xF3 0x88	0x00~0xFF	0x41 (A)	same as left
Insert G2 String Length	0xF3 0x89	0x00~0x16	0	same as left
Insert G3 String Setting1~ Insert G3 String Setting22	0xF3 0x8A~ 0xF3 0x9F	0x00~0xFF	0x41 (A)	same as left

GS-R1000BT & GS-M100BT				Reserved
Parameter	**Para. code (Hex)**	**Parameter value & option**	**Factory default**	**Factory default**
Insert G3 String Length	0xF3 0xA0	0x00~0x16	0	same as left
Insert G4 String Setting1~ Insert G4 String Setting22	0xF3 0xA1~ 0xF3 0xB6	0x00~0xFF	0x41 (A)	same as left
Insert G4 String Length	0xF3 0xB7	0x00~0x16	0	same as left
FN1 Substitution String Setting 1~4	0xF3 0xB9 0xF3 0xBA 0xF3 0xBB 0xF3 0xBC	0x00~0xFF	0x41 (A) 0x41 (A) 0x41 (A) 0x41 (A)	same as left
FN1 Substitution String Setting Length	0xF3 0xBD	00~04	0	same as left
Code Name Transmission	0xF2 0xC8	0: Disable 1: Enable	0 (Disable)	same as left
Preamble Transmission	0xF2 0xC9	0: Disable 1: Enable	0 (Disable)	same as left
Postamble Transmission	0xF2 0xCA	0: Disable 1: Enable	0 (Disable)	same as left
Code Length Transmission	0xF2 0xCB	0: Disable 1: Enable	0 (Disable)	same as left
Case Conversion	0xF2 0xCC	0: Disable 1: Upper(data only) 2: Lower(data only) 3: Upper(whole string) 4: Lower(whole string)	0	same as left
FN1 substitution transmission	0xF2 0xCD	0: Disable 2: RS-232	0	same as left
Insert G1 String position	0xF2 0xC0	0x00~0x63	0	same as left
Insert G2 String position	0xF2 0xC1	0x00~0x63	0	same as left
Insert G3 String position	0xF2 0xC2	0x00~0x63	0	same as left
Insert G4 String position	0xF2 0xC3	0x00~0x63	0	same as left
Code ID position	0xF2 0xC4	0: Before code data 1: After code data	0	same as left

9 Test chart

UPC-A

UPC-E

EAN-8

EAN-13

Code 39

Code 32

Code 128

Interleaved 2 of 5

Industrial 2 of 5

(Default setting: Read disable)

Matrix 2 of 5

Code 93

UCC/EAN 128

Code 11

(Default setting: Read disable)

MSI/Plessey

(Default setting: Read disable)

0123456789

UK/Plessey

01ABEF89

ISBN/ISSN

9 780194 315104

China Post

5478963214 5

GS1 DataBar (GS1 DataBar Truncated)

(01) 12345678901231

GS1 DataBar Limited

(01) 09876543210128

GS1 DataBar Expanded

Ab_09+yZ

10 ASCII table

H / L	for keyboard wedge		for RS-232	
	0	1	0	1
0	Null		NUL	DLE
1	Up	F1	SOH	DC1
2	Down	F2	STX	DC2
3	Left	F3	ETX	DC3
4	Right	F4	EOT	DC4
5	PgUp	F5	ENQ	NAK
6	PgDn	F6	ACK	SYN
7		F7	BEL	ETB
8	Bs	F8	BS	CAN
9	Tab	F9	HT	EM
A		F10	LF	SUB
B	Home	Esc	VT	ESC
C	End	F11	FF	FS
D	Enter	F12	CR	GS
E	Insert	Ctrl+	SO	RS
F	Delete	Alt+	SI	US

Notes: The 2nd and the 3rd columns above are used for keyboard wedge only.

H / L	2	3	4	5	6	7
0	SP	0	@	P	`	p
1	!	1	A	Q	a	q
2	“	2	B	R	b	r
3	#	3	C	S	c	s
4	$	4	D	T	d	t
5	%	5	E	U	e	u
6	&	6	F	V	f	v
7	‘	7	G	W	g	w
8	(	8	H	X	h	x
9	)	9	I	Y	i	y
A	*	:	J	Z	j	z
B	+	;	K	[	k	{
C	,	<	L	\	l	|
D	-	=	M	]	m	}
E	.	>	N	^	n	~
F	/	?	O	_	o	DEL

Example: ASCII “A” = “41”.

11 Glossary

Bar	The dark element in a printed barcode.
Space	The lighter element of a barcode formed by the background between bars.
Barcode density	The thickness of the narrowest element in the barcode (e.g. 5mil, 10mil, etc).
Resolution	The narrowest element dimension which can be distinguished by a particular reading device or printed with a particular device or method.
Decode zone	An area within an engine's field of view.
MIL	1 mil = 1 thousandth of an inch, i.e. 0.0254mm.
Byte	1 byte = 8 bits
Bit	1 byte = 8 bits