USER INSTRUCTIONS

IDMxxx corded Hand-held Scanners

SICK
Sensor Intelligence.

General Remarks

Further information on the IDM corded Hand-held scanners can be found on the internet on the IDM product page at www.mysick.com

- Detailed technical data in the online data sheet
- Overview of accessories
- Configuration software IDM Set Up Tool
- EC Declaration of Conformity
- Identification solutions product catalog
- Product information Hand-held scanners

Deutsche Version/ German version

Diese Betriebsanleitung ist auch in Deutscher Sprache verfügbar und kann auf www.mysick.com heruntergeladen werden.

Print out this manual

If you want to print out this manual please ensure that the original size is remained and the print out is of good quality. Otherwise the configuration codes contained in this manual may be distorted and cannot be scanned anymore.

Regulatory

FC	Part 15 Subpart B	KC	KN22, KN24 (KN61000-2,-3,-4,-5,-6,-8,-11)
CE	EN61000-3-2/ EN61000-3-3[1], EN60950-1, EN61000-6-3, EN61000-6-2[2]	VCCI	V-3/2011.04, TECHNICAL REQUIREMENTS, Class B ITE
	CNS13438	**LED Eye Safety**	IEC62471 Exempt group
	AS/NZS CISPR 22:2009 Class B	**Laser Eye Safety**	IEC60825-1 Class 1

Copyright

Trademark

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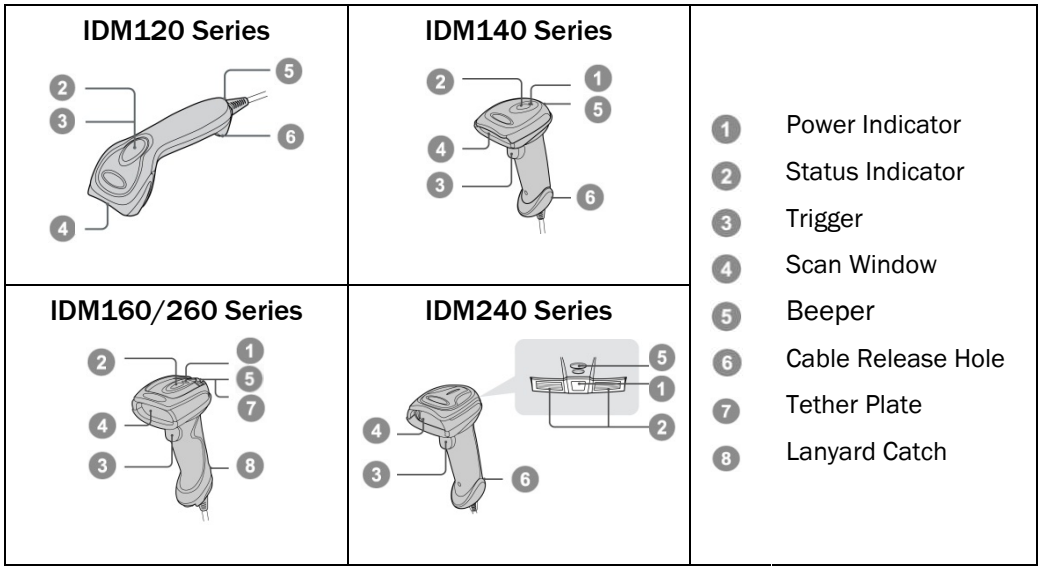
[1] Relevant for delivery with power supply.
[2] At the presence of high frequency interference in the frequency range of 15 MHz to 50 MHz there may be performance restrictions.

Table of contents

1 Getting Started

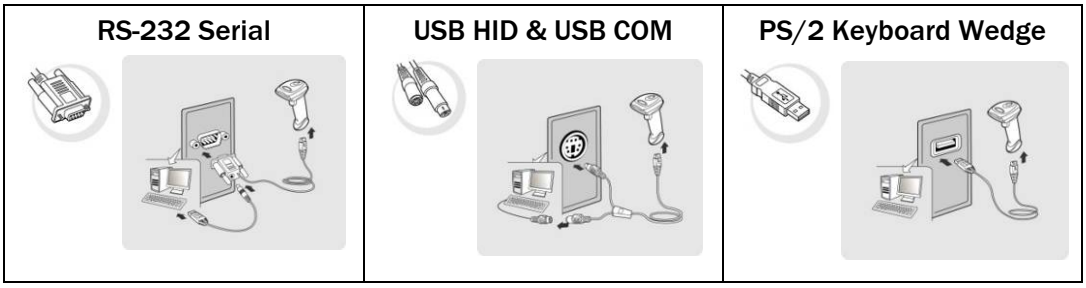
1.1 Getting familiar with your IDM Hand-held scanner

The IDM family includes 1D scanners with linear imagers and 2D scanners with area imagers. There are different models available. IDMx20 and IDMx40 can be used for general purpose applications whereas IDMx60 is designed for industrial environments.



1.2 Connectivity

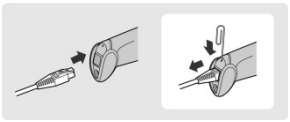
IDM scanners support USB[1], PS/2(DOS/V) Keyboard Wedge and RS-232 Serial interfaces.



- **USB HID (Human Interface Device):** The scanner works as a generic USB Keyboard.
- **USB COM:** The scanner works as a RS-232 serial device. Please note that you have to install the USB COM Port driver (available on www.mysick.com) before using.

[1] USB is not suitable for use in industrial environments. Therefore, at cable installation it is important to ensure that there are no close sources of interference.

To connect the scanner, plug the cable into the interface port of the scanner and connect it to the host. To remove the cable, straighten one end of a paper clip and insert it into the cable release hole to pull out the cable. For IDM160/260 series you need to push down the bracket of the enclosure clip and pull out the cable.

IDM120 Series	IDM140/240 Series	IDM160/260 Series
		

Depending on the Scanner model different cables have to be used.

			IDMx20, IDMx40, IDMxxx Bluetooth	IDMx60	IDMx40 Wifi IDMx60 Wifi
USB 	straight	1.8 m	6036728	6045195	6036728
	spiral	3.8 m[1]	6039158	6045232	6039158
RS-232 	straight	1.8 m	6041540	6045196	-
	spiral	3.8 m	6039156	6045233	-
PS/2 	straight	2.0 m	6036726	6045194	-
	spiral	3.8 m	6039155	6045231	-
Power Supply	needed for operation with RS-232 cables[2], Bluetooth and Wifi		6036722		

[1] If you want to use this cable for USB Com Port Mode, it is recommended to use an additional USB hub between cable and PC. The USB hub will boost the communication signal and secure the communication.
[2] If there is no power on Pin 6 or 9.

1.3 Technical Specifications

Type	IDM120	IDM140	IDM160	IDM240	IDM260
Field of application	General Purpose	General Purpose	Industrial	General Purpose	Industrial
Enclosure rating	IP 41	IP 41	IP 65	IP 41	IP 65
Supported code types	1D, Stacked[1]			1D, Stacked, 2D	
Code resolution	≥0.102 mm[1)]	≥0.076 mm[1)]		SR model: ≥0.08 mm[1)], ≥0.18 mm[2)] HD model: ≥0.08 mm[1)], ≥0.13 mm[2)]	
Reading distance (at code resolution)	0 mm ... 250 mm (0.33 mm)[1)]	50 mm ... 600 mm (0.5 mm)[1)]	50 mm ... 800 mm (0.5 mm)[1)]	SR model: 30 mm ... 155 mm (0.25 mm)[2)] HD model: 35 mm ... 90 mm (0.13 mm)[2)]	
Interfaces	USB (Keyboard Wedge & Com Port Emulation), RS-232 TTL, PS/2 (Ethernet TCP/IP, PROFINET, PRODIBUS, DeviceNet)[2]				
Optical indicators	1 LED (good read)	2 LEDs (operational status, good read)			
Vibration	No	No	Yes	No	Yes
Acoustic indicators	Beeper, disengageable				
Operating Voltage	5 V DC (+/- 5%)				
Current consumption (Operating)	Typical 170 mA	Typical 180 mA	180 mA (Vibrator disabled) 230 mA (Vibrator enable)	Typical 285 mA	Max. 285 mA (Vibrator disabled) Max. 335 mA (Vibrator enable)
Current consumption (Standby)	Typical 75 mA	Typical 80 mA	Typical 90 mA	Typical 160 mA	Max. 150 mA
Light source	LED: visible red light (630 nm)				
Laser aimer	No				Yes
Ambient operating temperature	0 °C ... 50 °C		-20 °C ... 50 °C	-10 °C ... 50 °C	-20 °C ... 50 °C
Storage temperature	-20 °C ... 60 °C	-40 °C ... 70 °C	-30 °C ... 70 °C	-40 °C ... 70 °C	-40 °C ... 70 °C

[1)] Valid for Code 39, [2)] Valid for Data Matrix

For detailed technical specifications, see the *Online Data Sheet* on the product site on the web (www.mysick.com/en).

[1] Depending on scanner version (To be able to read stacked codes, PDF version is necessary).
[2] Optional via external SICK connection modules.

2 Configuration

2.1 Programming Commands

The IDM scanner bar code commands are specially designed proprietary bar code labels which allow you to set the IDM Scanner's internal programming parameters. There are **System Command**, **Family Code** and **Option Code** for programming purpose.
Each programmable family and bar code command label is listed on the same page with major system commands. The detailed explanations and special programming flowchart are printed on facing or following pages. The Option Codes and System Commands can be found in the appendix on page 83 and 84.

2.1.1 System Command

The System Command is the highest level bar code command which directs the IDM Scanner to perform immediate operations, such as entering programming mode (PROGRAM), exiting programming mode (EXIT), listing system information (SYSLIST), recovering to factory preset configurations (M_DEFAULT) and so on. Please note that all system commands will take a few seconds to complete the operations. User must wait for the completion beeps before scanning another bar code.

2.1.2 Family Code

The Family Code is scanned to select the user desired programming family. IDM Scanner has already provided more than one hundred programming families to meet any specific requirements.

2.1.3 Option Code

The Option Codes is a set of bar code commands represented by "0–9", "A–F" and finishing selection (FIN). For most setting, you must select at least one option code following the family code selection to set the desired parameter for the selected programming family. The Option Codes can be found on page 83.

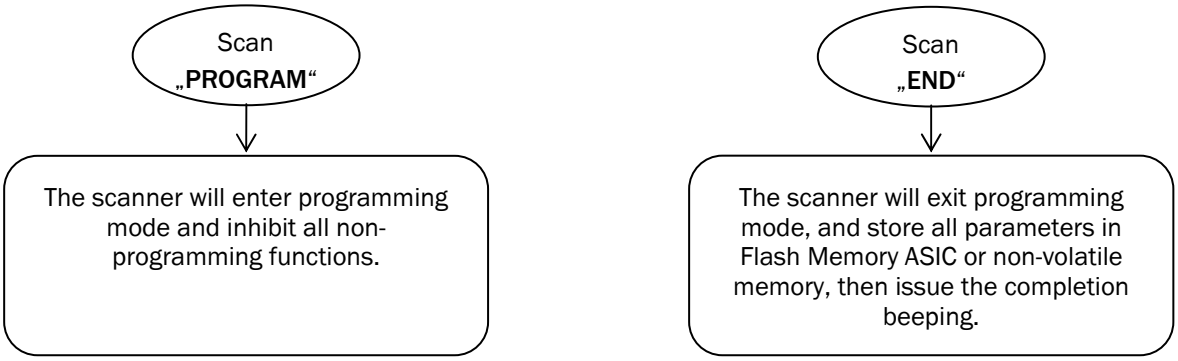
2.2 Programming Procedures

As you scan the bar code command to select the desired parameters, information about the final selected parameters represented by the bar code commands are stored in the Hand-held scanner's internal Flash Memory ASIC or non-volatile memory. If you turn off the unit, the Flash Memory ASIC or non-volatile memory retains all programming options. You don't need to re-program the IDM Scanner if you want to keep the existing configurations in the next power on.
The programming procedures of the IDM Scanner are designed as simple as possible for ease of setting. Most programming families take the "*Single Scan Selection*" programming procedure. But several programming families have more complex and flexible programmable options, and you must take "*Multiple Scan Selection*", "*Cycling Scan Selection*" or "Dual Level Selection" to complete their programming procedures. Each kind of programming procedure is listed in the following pages for your reference. Please give careful attention to become familiar with each programming procedure.

If the programming family must take “Multiple Scan Selection”, “Cycling Scan Selection”, or “Dual Level Selection” procedures, the family of the programming menu will be marked with the matched representing symbol of Programming Category (P.C.) listed in the following table.

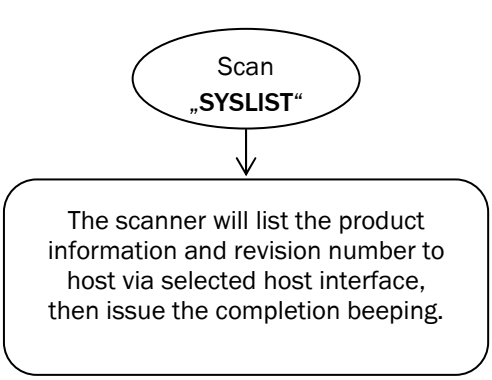
Conventions	Descriptions
◆	Factory default value
P.C.	Programming category
	SS: Single scan selection
	MS: Multiple scan selection
	CS: Cycling scan selection
	DS: Dual level scan selection
( )	Necessary option code
[ ]	Selectable option code

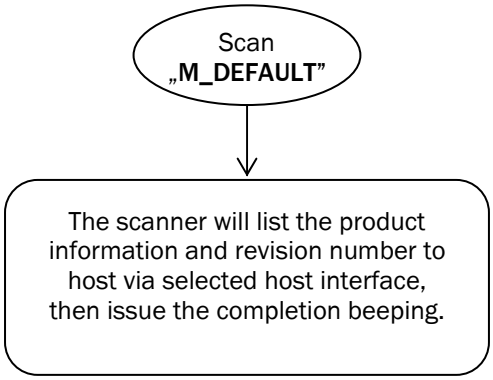
2.2.1 Program & End



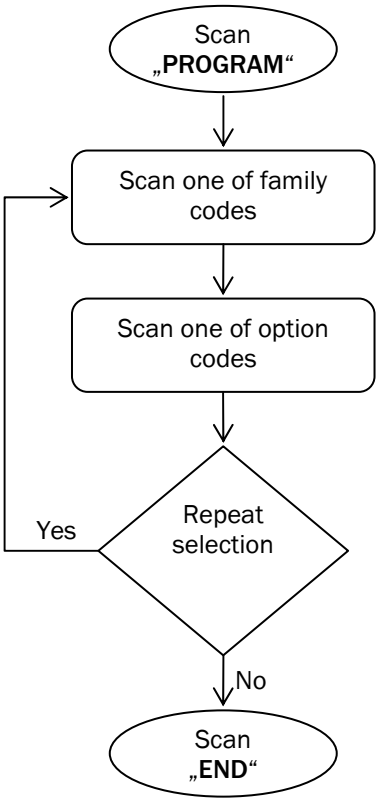
Please note that the IDM Scanner will take 3-4 seconds to store parameters in internal Flash Memory ASIC or non-volatile memory after you scan the “**END**”. Please don’t turn off the power before the completion beeping. It may destroy all configured parameters.

2.2.2 System List & Master Default





2.2.3 Single Scan Selection



Enter Programming mode.

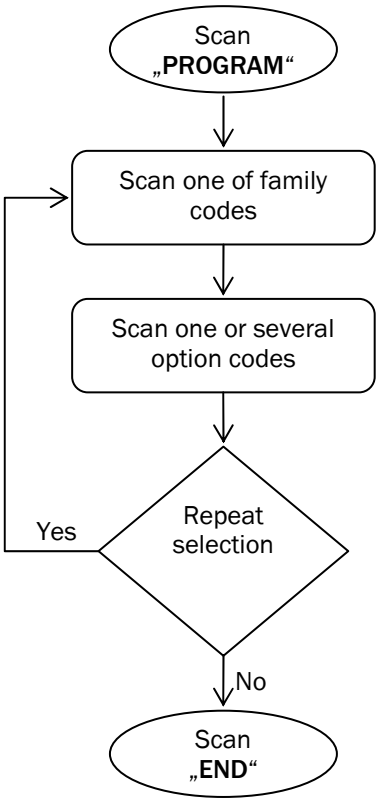
Select the desired programming family.

Select one option code for the desired parameter.

Do you want to select another programming family?

Exit programming mode.

2.2.4 Multiple Scan Selection



Enter Programming mode.

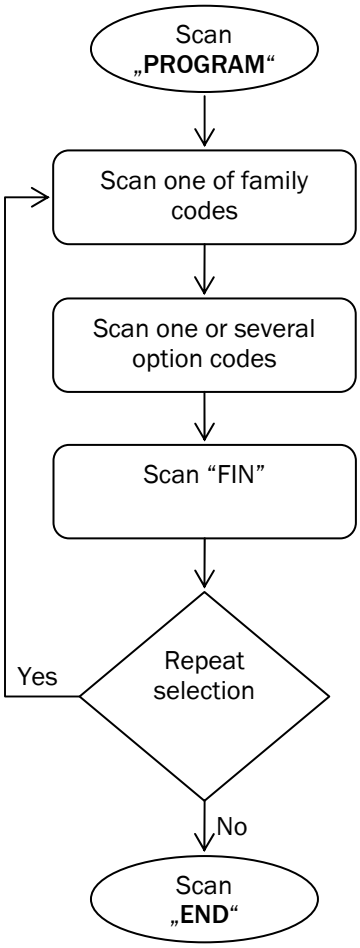
Select the desired programming family.

Select one or several option codes for the desired parameters.
If it‘s necessary scan „FIN“ to terminate the option code selection.

Do you want to select another programming family?

Exit programming mode.

2.2.5 Cycling Scan Selection



Enter Programming mode.

Select the desired programming family.

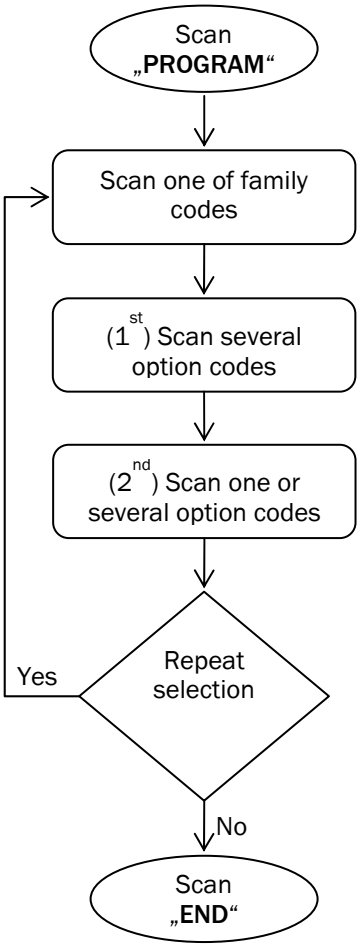
Select one or several option codes for the desired parameters as “Single” or “Multiple” scan selection.

Finish cycling selection. (If necessary)

Do you want to select another programming family?

Exit programming mode.

2.2.6 Dual Level Scan Selection



Enter Programming mode.

Select the desired programming family.

Select several option codes for the desired parameters.

1. Select one or several option codes for the desired parameters.
2. If it’s necessary scan “FIN” to terminate the option code selection.

Do you want to select another programming family?

Exit programming mode.

2.3 Host Interface Selection

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Host Interface Selection	MS	IBM PS/2 25-30 series keyboard wedge interface	02
	MS	Standard/TTL RS-232 peer-to-peer serial	06
	MS	Wand Emulation	08
	MS	USB Com Port Emulation	09
	MS	PS/2 (DOS/V) direct link (keyboard replacement)	10
	MS	PS/2 (DOS/V) keyboard wedge turbo mode	13
	MS	PS/2 (DOS/V) keyboard wedge standard mode	14
	MS	Laser emulation	17
	MS	USB HID standard mode ◆	18
	MS	USB HID turbo mode	19
	MS	USB HID Legacy	20

IDM2xx series doesn't support Wand emulation, Laser emulation and USB HID Legacy

2.4 Symbology Reading Control

2.4.1 User Defined Symbol ID

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code	2nd Option Code
Symbol ID 1 character 	DS	Code 128 (default=B)	00	(1 character)
		GS1-128 (default=C)	01	(1 character)
		UPC-A (default=A)	02	(1 character)
		EAN-13 (default=F)	03	(1 character)
		Codabar/NW-7 (default=D)	04	(1 character)
		Code 39/Code 32 (default=G)	05	(1 character)
		Code 93 (default=H)	06	(1 character)
		Standard/Industrial 2 of 5 (default=I)	07	(1 character)
		Interleaved 2 of 5 (default=J)	08	(1 character)
		Matrix 2 of 5 (default=K)	09	(1 character)
		China Postal Code (default=L)	10	(1 character)
		German Postal Code (default=M)	11	(1 character)
		IATA (default=O)	12	(1 character)
		Code 11 (default=P)	13	(1 character)
		MSI/Plessey (default=R)	14	(1 character)
		UK/Plessey (default=S)	15	(1 character)
		Telepen (default=T)	16	(1 character)
		GS1 DataBar (default=X)	17	(1 character)
		UPC-E (default=E)	18	(1 character)
		EAN-8 (default=N)	19	(1 character)
		Trioptic Code 39 (default=W)	20	(1 character)
		UCC Coupon Extended Code (default=Z)	21	(1 character)
		PDF417/Micro PDF417 (default=V)	22	(1 character)
		Codablock F (default=Y)	23	(1 character)
		Code 16K (default=Q)	24	(1 character)
		Code 49 (default=U)	25	(1 character)
		Korea Post Code (default=a)	26	(1 character)

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code	2nd Option Code
Symbol ID 1 character	DS	QR & Micro QR Code (default=b)	28	(1 character)
		Data Matrix (default=c)	29	(1 character)
		Australian Post (default=g)	33	(1 character)
		British Post (default=h)	34	(1 character)
		Intelligent Mail (USPS 4CB/One Code) (default=j)	36	(1 character)
		Japan Post (default=k)	37	(1 character)
		Netherlands KIX Post (default=l)	38	(1 character)
		US Planet (default=m)	39	(1 character)
		US Postnet (default=o)	41	(1 character)

2.4.2 Symbology ID Transmission

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Symbology ID Transmission	SS	Disable symbology ID transmission ◆	0
	SS	Enable prefix SICK symbology ID transmission	1
	SS	Enable suffix SICK symbology ID transmission	2
	SS	Enable both prefix and suffix SICK symbology ID transmission	3
	SS	Enable prefix AIM symbology ID transmission	4
	SS	Enable suffix AIM symbology ID transmission	5
	SS	Enable both prefix and suffix AIM symbology ID transmission	6

2.4.3 Readable Bar Code Setting

If your application is known, you may select those known symbologies only to increase the reading speed and decrease the possibility of reading error. Furthermore, adding the “Symbology ID” into the transmitted data is also helpful to identify the specific symbology.

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Readable Symbology Setting  Remember to scan “FIN“ after you terminate this section (Cycling Scan). If you choose “Auto” (Single Scan) you don’t need to scan “FIN”.	SS	Auto ◆	00
	CS	Code 128 *	01
	CS	GS1-128	31
	CS	UPC-A	02
	CS	UPC-E *	03
	CS	EAN-13 *	04
	CS	EAN-8 *	05
	CS	Codabar/NW-7 *	06
	CS	Code 39 *	07
	CS	Trioptic Code 39	47
	CS	Standard/Industrial 2 of 5	08
	CS	Matrix 2 of 5	38
	CS	Interleaved 2 of 5 *	48
	CS	China Postal Code	58
	CS	Germany Postal Code	68
	CS	Code 93 *	09
	CS	Code 11	10
	CS	MSI/Plessey	11
	CS	UK/Plessey	12
	CS	Telepen	13
	CS	GS1 DataBar (RSS-14) *	14
	CS	IATA	15
	CS	Coupon Code	16
	CS	PDF417 * /Micro PDF417	17
	CS	Codablock F	18
	CS	Code 16K	19
	CS	Code 49	20
	CS	Korea Post Code	21

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Readable Symbology Setting	CS	QR Code **/ Micro QR Code **	A0
	CS	Data Matrix *	A1
	CS	Aztec Code *	A3
	CS	Australian Post	B0
	CS	British Post	B1
	CS	Intelligent Mail barcode	B3
	CS	Japanese Post	B4
	CS	KIX Post	B5
	CS	Planet Code	B6
	CS	Postnet	B8

Above symbologies marked with * are enabled as default. When you select “Auto”, the scanner only reads those symbologies marked with *. When you set the minimum and maximum length of each symbology, please note the data length of the scanned bar code doesn’t include start/stop characters.

2.4.4 Code 39/ Code 32 Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Code 39 Family Setting	SS	Disable Code 39	0
	SS	Enable Code 39 ◆	1
	SS	Select Standard Code 39 as primary format ◆	2
	SS	Select Full ASCII Code 39 as primary format	3
	SS	Select Code 32 (PARAF, Italian Pharmaceutical) as primary format	4
	SS	Disable start/stop symbol transmission ◆	5
	SS	Enable start/stop symbol transmission	6
	SS	Disable Code 32 leading A transmission ◆	7
	SS	Enable Code 32 leading A transmission	8
	SS	Disable MOD 43 check digit verification ◆	9
	SS	Enable MOD 43 check digit verification	A
	SS	Disable check digit transmission ◆	B
	SS	Enable check digit transmission	C
	SS	Disable Code 39 buffering ◆	D
	SS	Enable Code 39 buffering	E
Trioptic Code 39 Setting	SS	Disable Trioptic Code 39 ◆	0
	SS	Enable Trioptic Code 39	1
Code 39 Min. Length	SS	Default (01) ◆	FIN
	MS	01-Maximum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
Code 39 Max. Length	SS	Default (98) ◆	FIN
	MS	98-Minimum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	

Trioptic Code 39 and Code 39 Full ASCII cannot be enabled simultaneously.

2.4.5 Code 39 Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Code 39 Security Level 	SS	Level 0	0
	SS	Level 1	1
	SS	Level 2 ◆	2
	SS	Level 3	3

Code 39 Security Level

The scanner offers four levels of decode security for Code 39 bar codes:

- **Level 0**: If you are experiencing misread of poorly-printed or serious out-of-spec. bar codes in level 1 please select level 0.
- **Level 1**: If you are experiencing misread of poorly-printed or out-of-spec. bar codes in level 2, please select level 1.
- **Level 2**: This is the default setting which allows the scanner to operate fastest, while providing sufficient security in decoding “in-spec” Code 39 bar codes.
- **Level 3**: If you failed to read poorly-printed or out-of-spec. bar codes in level 2, please select level 3. This is the most aggressive setting and may increase the misread.

2.4.6 Codabar/ NW-7 Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Codabar Settings	SS	Disable Codabar	0
	SS	Enable Codabar ◆	1
	SS	Select Codabar standard format ◆	2
	SS	Select Codabar ABC format	3
	SS	Select Codabar CLSI format	4
	SS	Select Codabar CX format	5
	SS	Disable start/stop symbol transmission ◆	6
	SS	Enable ABCD/ABCD start/stop symbol transmission	7
	SS	Enable abcd/abcd start/stop symbol transmission	8
	SS	Enable ABCD/TN*E start/stop symbol transmission	9
	SS	Enable abcd/tn*e start/stop symbol transmission	A
	SS	Disable check digit verification ◆	B
	SS	Enable check digit verification	C
	SS	Disable check digit transmission ◆	D
	SS	Enable check digit transmission	E
Codabar Check Digit Settings	SS	Modulus 16 ◆	0
	SS	Modulus 10/weight 3	1
	SS	Modulus 11	2
	SS	Modulus 10/weight 2	3
	SS	7 check DR	4
	SS	Weight Modulus 11	5
	SS	Runes (Modulus 10/weight 2)	6
Codabar Min. Length	SS	Default (04) ◆	FIN
	MS	01-Maximum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
Codabar Max. Length	SS	Default (98) ◆	FIN
	MS	98-Minimum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	

2.4.7 UPC-A/ UPC-E Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
UPC-A Family Settings 	SS	Disable UPC-A	0
	SS	Enable UPC-A ◆	1
	SS	Disable UPC-E	2
	SS	Enable UPC-E ◆	3
	SS	Disable UPC-E expansion ◆	4
	SS	Enable UPC-E expansion	5
	SS	Disable UPC standardization ◆	6
	SS	Enable UPC standardization	7
	SS	Disable UPC numeric system	8
	SS	Enable UPC numeric system ◆	9
	SS	Disable UPC-A check digit transmission	A
	SS	Enable UPC-A check digit transmission ◆	B
	SS	Disable UPC-E check digit transmission	C
	SS	Enable UPC-E check digit transmission ◆	D
	SS	Disable UPC “leading 1” portion ◆	E
	SS	Enable UPC “leading 1” portion	F

When enable UPC-E expansion, the UPC-E decoded data will be converted to UPC-A format and affected by related settings, such as UPC standardization, UPC numeric system and UPC-A check digit transmission.

UPC-E & EAN-8 Expansion: Expand the 8-digit UPC-E and 8-digit ENA-8 to 12-digit UPC-A and 13-digit EAN-13.
UPC-A Standardization: Expand the 12-digit UPC-A to 13-digit EAN-13 with 1 zero insertion.
UPC Lead 1 Numeric System: To read UPC leading with the 1 numeric system, you must enable this option.

WPC Selection (UPC/EAN/CAN)	Basic Length	Disable Check Digit	Disable Numeric System	With 2-digit Addendum	With 5-digit Addendum	Enable Standardization	Enable Expansion
UPC-A	12	- 1	- 1	+ 2	+ 5	+ 1	0
UPC-E	8	- 1	- 1	+ 2	+ 5	+ 1	+ 4
EAN-13	13	- 1	NC	+ 2	+ 5	NC	0
EAN-8	8	- 1	NC	+ 2	+ 5	NC	+ 5

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
UPC Supplement Settings 	SS	Select UPC without supplement digits ◆	0
	SS	Select UPC with only 2 supplement digits	1
	SS	Select UPC with only 5 supplement digits	2
	SS	Select UPC with 2/5 supplement digits	3
	SS	Disable force supplement digits output ◆	4
	SS	Enable force supplement digits output	5
	SS	UPC Family Addenda Separator Off ◆	6
	SS	UPC Family Addenda Separator On	7
UPC/ EAN Security Level 	SS	Level 0	0
	SS	Level 1 ◆	1
	SS	Level 2	2
		Only available for UPC-A & EAN-13	
Supplement Scan Vorting 	SS	None	0
	SS	Level 1	1
	SS	Level 2	2
	SS	Level 3 ◆	3
	SS	Level 4	4
	SS	Level 5	5
	SS	Level 6	6
	SS	Level 7	7
	SS	Level 8	8
	SS	Level 9	9
	SS	Level 10	A
	SS	Level 11	B
	SS	Level 12	C
	SS	Level 13	D

UPC/EAN Security Level

The scanner offers three levels of decode security for UPC/EAN bar codes:

- **Level 0:** If you are experiencing misread of poorly-printed or out-of-spec. bar codes, especially in characters 1, 2, 7, and 8 in level 1, please select level 0. Selection of this security level may significantly impair the decoding ability of the scanner.

- **Level 1**: This is the default setting which allows the scanner to operate fastest, while providing sufficient security in decoding “in-spec” UPC/EAN bar codes.
- **Level 2**: If you are experiencing misread of poorly-printed, soiled or damage bar codes in level 1, please select level 2. This is the most aggressive setting and may increase the misread.

Supplement Scan Voting

The Supplement Scan Voting is the number of times the same UPC/EAN with 2/5 supplement digits has to be decoded before it is transmitted. It is helpful when decoding a mix of UPC/EAN symbols with and without supplement digits. This function is effective when you select UPC/EAN with only 2 supplement digits, UPC/EAN with only 5 supplement digits or UPC/EAN with 2/5 supplement digits. The default value is Level 3. When you select a higher level, it may impact the reading speed on poorly-printed, low contrast or damaged barcode labels.

2.4.8 EAN Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
EAN Settings	SS	Disable EAN-13	0
	SS	Enable EAN-13 ◆	1
	SS	Disable EAN-8	2
	SS	Enable EAN-8 ◆	3
	SS	Disable EAN-8 expansion ◆	4
	SS	Enable EAN-8 expansion	5
	SS	Disable EAN-13 check digit transmission	6
	SS	Enable EAN-13 check digit transmission ◆	7
	SS	Disable EAN-8 check digit transmission	8
	SS	Enable EAN-8 check digit transmission ◆	9
	SS	Disable ISBN/ISSN Conversion reading check ◆	A
	SS	Enable ISBN/ISSN Conversion reading check	B
EAN Supplement Settings	SS	Select EAN without supplement digits ◆	0
	SS	Select EAN with only 2 supplement digits	1
	SS	Select EAN with only 5 supplement digits	2
	SS	Select EAN with 2/5 supplement digits	3
	SS	Disable force supplement digits output ◆	4
	SS	Enable force supplement digits output	5
	SS	EAN Addenda Separator Off ◆	6
	SS	EAN Addenda Separator On	7
Supplement Scan Vorting	SS	None	0
	SS	Level 1	1
	SS	Level 2	2
	SS	Level 3 ◆	3
	SS	Level 4	4
	SS	Level 5	5
	SS	Level 6	6
	SS	Level 7	7
	SS	Level 8	8
	SS	Level 9	9
	SS	Level 10	A
	SS	Level 11	B
	SS	Level 12	C
	SS	Level 13	D

Supplement Scan Voting

The Supplement Scan Voting is the number of times the same UPC/EAN with 2/5 supplement digits has to be decoded before it is transmitted. It is helpful when decoding a mix of UPC/EAN symbols with and without supplement digits. This function is effective when you select UPC/EAN with only 2 supplement digits, UPC/EAN with only 5 supplement digits or UPC/EAN with 2/5 supplement digits. The default value is Level 3. When you select a higher level, it may impact the reading speed on poorly-printed, low contrast or damaged barcode labels.

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
EAN Supplement Control 	SS	Disable all specific prefix supplement digital output ◆	0
	SS	Enable all specific prefix supplement digital output	1
	SS	Enable 491 Supplement Digit Output	2
	SS	Enable 978/979 Supplement Digit Output	3
	SS	Enable 977 Supplement Digit Output	4
	SS	Enable 378/379 Supplement Digit Output	5
	SS	Enable 414/419 Supplement Digit Output	6
	SS	Enable 434/439 Supplement Digit Output	7
UPC/ EAN Security Level 	SS	Level 0	0
	SS	Level 1 ◆	1
	SS	Level 2	2
		Only available for UPC-A & EAN-13	

EAN Supplement Control

If you select EAN with only 2 or 5 or 2/5 supplement digits and enable 491 prefix supplement digit output, the scanner will transmit EAN with 2, or 5 or 2/5 supplement digits bar codes starting with 491 prefix. The EAN without supplement digit **will not be** transmitted.

If you select EAN with only 2 or 5 or 2/5 supplement digits and enable the other except 491 prefix supplement digit output, the scanner will transmit EAN with 2, or 5, or 2/5 supplement digits bar codes starting with specific prefix. The EAN without supplement digit **will be** transmitted.

UPC/EAN Security Level

The scanner offers three levels of decode security for UPC/EAN bar codes:

- **Level 0**: If you are experiencing misread of poorly-printed or out-of-spec. bar codes, especially in characters 1, 2, 7, and 8 in level 1, please select level 0. Selection of this security level may significantly impair the decoding ability of the scanner.
- **Level 1**: This is the default setting which allows the scanner to operate fastest, while providing sufficient security in decoding “in-spec” UPC/EAN bar codes.
- **Level 2**: If you are experiencing misread of poorly-printed, soiled or damage bar codes in level 1, please select level 2. This is the most aggressive setting and may increase the misread.

2.4.9 UCC Coupon Extended Code Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
UCC Coupon Extended Code Setting 	SS	Disable UCC Coupon Extended Code ◆	0
	SS	Enable UCC Coupon Extended Code	1

UCC Coupon Extended Code

When UCC coupon extended code function is enabled, scanner decodes UPC-A barcodes starting with digit “5”, EAN-13 barcodes starting with digit “99” and GS1-128 Coupon Codes. UPC-A, EAN-13 and EAN-128 must be enabled to scan all types of Coupon Codes.

2.4.10 IATA & Interleaved 2 of 5 Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
IATA Settings	SS	Disable IATA ◆	0
	SS	Enable IATA	1
	SS	Select 15-digit fixed length IATA checking ◆	2
	SS	Select variable length IATA	3
	SS	Disable check digit verification ◆	4
	SS	Enable check digit automatic verification	5
	SS	Enable S/N checking digit verification only	6
	SS	Enable CPN checking digit verification only	7
	SS	Enable CPN, Airline and S/N check digit verification	8
	SS	Disable check digit transmission ◆	9
	SS	Enable check digit transmission	A
	SS	Disable start/stop symbol transmission ◆	B
	SS	Enable start/stop symbol transmission	C
Interleaved 2 of 5 Settings	SS	Disable Interleaved 2 of 5	0
	SS	Enable Interleaved 2 of 5 ◆	1
	SS	Select Interleaved 2 of 5 as primary format ◆	2
	SS	Select German Postal Code as primary format	3
	SS	No check character ◆	4
	SS	Validate USS check digit	5
	SS	Validate OPCC check digit	6
	SS	Disable check digit transmission ◆	7
	SS	Enable check digit transmission	8

2.4.11 Code 25 Family Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Code 25 Settings	SS	Disable Standard/Industrial 2 of 5 ◆	0
	SS	Enable Standard/Industrial 2 of 5	1
	SS	Disable Matrix 2 of 5 ◆	2
	SS	Enable Matrix 2 of 5	3
	SS	Disable China Postal Code ◆	4
	SS	Enable China Postal Code	5
	SS	Disable check digit verification ◆	6
	SS	Enable check digit verification	7
	SS	Disable check digit transmission ◆	8
	SS	Enable check digit transmission	9
Code 25 Family Min. Length	SS	Default (04) ◆	FIN
	MS	01-Maximum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
Code 25 Family Max. Length	SS	Default (98) ◆	FIN
	MS	98-Minimum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	

For Code25 setting, we recommend you to select only one type of Code 25 or set the maximum/minimum bar code length. To decode all types of Code 25 or to variable length of Code 25 will increase the possibility of reading error.

2.4.12 Code 11 & Code 93 Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Code 11 Settings 	SS	Disable Code 11 ◆	0
	SS	Enable Code 11	1
	SS	Disable check digit verification ◆	2
	SS	Select 1-check digit verification	3
	SS	Select 2-check digit verification	4
	SS	Disable check digit transmission ◆	5
	SS	Enable check digit transmission	6
Code 11 Min. Length 	SS	Default (04) ◆	FIN
	MS	01-Maximum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
Code 11 Max. Length 	SS	Default (98) ◆	FIN
	MS	98-Minimum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
Code 39 Settings 	SS	Disable Code 93	0
	SS	Enable Code 93 ◆	1
	SS	Disable check digit transmission ◆	2
	SS	Enable check digit transmission	3
Code 39 Min. Length 	SS	Default (01) ◆	FIN
	MS	01-Maximum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
Code 39 Max. Length 	SS	Default (98) ◆	FIN
	MS	98-Minimum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	

2.4.13 MSI/ Plessey Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
MSI/ Plessey Settings 	SS	Disable MSI/Plessey ◆	0
	SS	Enable MSI/Plessey	1
	SS	Select MOD 10 check digit ◆	2
	SS	Select MOD 10-10 check digit	3
	SS	Select MOD 11-10 check digit	4
	SS	Disable check digit transmission ◆	5
	SS	Enable check digit transmission	6
MSI/ Plessey Min. Length 	SS	Default (04) ◆	FIN
	MS	01-Maximum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
MSI/ Plessey Max. Length 	SS	Default (98) ◆	FIN
	MS	98-Minimum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	

2.4.14 Code 128 Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Code 128 Settings 	SS	Disable Code 128	0
	SS	Enable Code 128 ◆	1
	SS	ISBT Concatenation Off ◆	2
	SS	ISBT Concatenation On	3
Code 128 Min. Length 	SS	Default (01) ◆	FIN
	MS	01-Maximum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
Code 128 Max. Length 	SS	Default (98) ◆	FIN
	MS	98-Minimum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
Code 128 Security Level 	SS	Level 0	0
	SS	Level 1 ◆	1

Code 128 Security Level

The scanner offers two levels of decode security for Code128 bar codes:

- Level 0: If you are experiencing misread of poor-printed or out-of-spec. bar codes in level 1, please select level 0.
- Level 1: This is the default setting which allows the scanner to operate fastest, while providing sufficient security in decoding "in-spec." Code 128 bar codes.

2.4.15 GS1-128 Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
GS1-128 Settings 	SS	Disable GS1-128	0
	SS	Enable GS1-128 ◆	1
GS1-128 Min. Length 	SS	Default (01) ◆	FIN
	MS	01-Maximum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
GS1-128 Max. Length 	SS	Default (98) ◆	FIN
	MS	98-Minimum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	

2.4.16 UK/ Plessey Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
UK/ Plessey Settings 	SS	Disable UK/Plessey ◆	0
	SS	Enable UK/Plessey	1
	SS	Select UK/Plessey Standard Format ◆	2
	SS	Select UK/Plessey CLSI Format	3
	SS	Disable Convert X to A-F ◆	4
	SS	Enable Convert X to A-F	5
	SS	Disable check digit transmission ◆	6
	SS	Enable check digit transmission	7
UK/ Plessey Min. Length 	SS	Default (04) ◆	FIN
	MS	01-Maximum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
UK/ Plessey Max. Length 	SS	Default (98) ◆	FIN
	MS	98-Minimum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	

2.4.17 Telepen Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Telepen Settings 	SS	Disable Telepen ◆	0
	SS	Enable Telepen	1
	SS	Select Telepen Numeric mode ◆	2
	SS	Select Telepen Full ASCII mode	3
	SS	Disable check digit transmission ◆	4
	SS	Enable check digit transmission	5
Telepen Min. Length 	SS	Default (04) ◆	FIN
	MS	01-Maximum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
Telepen Max. Length 	SS	Default (98) ◆	FIN
	MS	98-Minimum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	

2.4.18 GS1 DataBar Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
GS1 DataBar Settings 	SS	Disable GS1 DataBar (RSS-14)	0
	SS	Enable GS1 DataBar (RSS-14) ◆	1
	SS	Disable GS1 DataBar Limited	2
	SS	Enable GS1 DataBar Limited ◆	3
	SS	Disable GS1 DataBar Expanded	4
	SS	Enable GS1 DataBar Expanded ◆	5
GS1 DataBar Min. Length 	SS	Default (04) ◆	FIN
	MS	01-Maximum	(2 digits)
		Only available for Expanded GS1 DataBar. Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
GS1 DataBar Max. Length 	SS	Default (74) ◆	FIN
	MS	74-Minimum	(2 digits)
		Only available for Expanded GS1 DataBar. Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	

2.4.19 Composite Codes, Codablock F, PDF417, Micro PDF417 Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Composite Codes Settings 	SS	Disable composite codes ◆	0
	SS	Enable composite codes	1
	SS	UPC Composite Mode: UPC never linked ◆	2
	SS	UPC Composite Mode: UPC always linked	3
		If “UPC Composite Mode: UPC never linked” is selected, UPC barcodes are transmitted whether Micro PDF417 symbol is detected or not. If “UPC Composite Mode: UPC always linked” is selected, UPC barcodes are only transmitted when the Micro PDF417 is detected.	
Codablock F Settings 	SS	Disable ◆	0
	SS	Enable	1
PDF417/ Micro PDF417 Settings 	SS	Disable PDF417	0
	SS	Enable PDF417 ◆	1
	SS	Disable MicroPDF417 ◆	2
	SS	Enable MicroPDF417	3

2.4.20 Code 16K & Code 49 Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Code 16K Settings	SS	Disable Code 16K ◆	0
	SS	Enable Code 16K	1
Code 16K Min. Length	SS	Default (01) ◆	FIN
	MS	01-Maximum	(3 digits)
		Scan 3 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
Code 16K Max. Length	SS	Default (160) ◆	FIN
	MS	160-Minimum	(3 digits)
		Scan 3 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
Code 49 Settings	SS	Disable Code 49 ◆	0
	SS	Enable Code 49	1
Code 49 Min. Length	SS	Default (01) ◆	FIN
	MS	01-Maximum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
Code 49 Max. Length	SS	Default (81) ◆	FIN
	MS	81-Minimum	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	

2.4.21 QR Code Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
QR Code Settings	SS	Disable QR Code	0
	SS	Enable QR Code ◆	1
	SS	Disable MicroQR Code	2
	SS	Enable MicroQR Code ◆	3
	SS	Disable QR Code Append	4
	SS	Enable QR Code Append ◆	5
	SS	Disable QR Code Inverse Reading◆	6
	SS	Enable QR Code Inverse Reading	7
	SS	Auto detect QR Code Inverse Reading	8
QR Code Min. Length	SS	Default (01) ◆	FIN
	MS	01-Maximum	(4 digits)
		Scan 4 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
QR Code Max. Length	SS	Default (7089) ◆	FIN
	MS	7089-Minimum	(4 digits)
		Scan 4 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	

2.4.22 Data Matrix Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Data Matrix Settings 	SS	Disable Data Matrix	0
	SS	Enable Data Matrix ◆	1
	SS	Disable Data Matrix Inverse Reading	4
	SS	Enable Data Matrix Inverse Reading	5
	SS	Auto Detect Data Matrix Inverse Reading ◆	6
	SS	Disable Data Matrix Mirror Images	7
	SS	Enable Data Matrix Mirror Images	8
	SS	Auto Detect Data Matrix Mirror Images ◆	9
Data Matrix Min. Length 	SS	Default (01) ◆	FIN
	MS	01-Maximum	(4 digits)
		Scan 4 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
Data Matrix Max. Length 	SS	Default (3116) ◆	FIN
	MS	3116-Minimum	(4 digits)
		Scan 4 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	

2.4.23 Aztec Code Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Aztec Code Settings 	SS	Disable Aztec Code	0
	SS	Enable Aztec Code ◆	1
Aztec Code Min. Length 	SS	Default (01) ◆	FIN
	MS	01-Maximum	(4 digits)
		Scan 4 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
Aztec Code Max. Length 	SS	Default (3832) ◆	FIN
	MS	3832-Minimum	(4 digits)
		Scan 4 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	

2.4.24 Autralian Post, US Planet, US Postnet, British Post, Japan Post Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Australian Post Settings 	SS	Disable Australian Post ◆	0
	SS	Enable Australian Post	1
	SS	Raw format Output ◆	2
	SS	Numeric Encoding Output (N Encoding Table)	3
	SS	Alphanumeric Encoding Output (C Encoding Table)	4
	SS	Auto-discriminate Output (Combination C & N Encoding Table)	5
US Planet Settings 	SS	Disable US Planet ◆	0
	SS	Enable US Planet	1
	SS	Disable Check Digit Transmission ◆	2
	SS	Enable Check Digit Transmission	3
US Postnet Settings 	SS	Disable US Postnet ◆	0
	SS	Enable US Postnet	1
	SS	Disable Check Digit Transmission ◆	2
	SS	Enable Check Digit Transmission	3
British Post Settings 	SS	Disable British Post ◆	0
	SS	Enable British Post	1
	SS	Disable Check Digit Transmission ◆	2
	SS	Enable Check Digit Transmission	3
Japan Post Settings 	SS	Disable Japan Post ◆	0
	SS	Enable Japan Post	1

Australian Post Setting

Auto-discriminate output option increases the risk of misread because the encoded data format does not specify the encoding table used for encoding.

2.4.25 Netherland KIX Code, Intelligent Mail & Korea Post Code Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Netherlands KIX Code Settings 	SS	Disable Netherlands KIX Code ◆	0
	SS	Enable Netherlands KIX Code	1
Intelligent Mail Settings (USPS 4CB/ One Code) 	SS	Disable Intelligent Mail ◆	0
	SS	Enable Intelligent Mail	1
Korea Post Code Settings 	SS	Disable Korea Post Code ◆	0
	SS	Enable Korea Post Code	1
		Length fixed in 6 characters.	

2.5 Keyboard Interface Control

2.5.1 Keyboard Layout (Language) Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Keyboard Layout 	SS	USA (QWERTY) ◆	00
	SS	France (AZERTY)	01
	SS	Germany (QWERTZ)	02
	SS	United Kingdom (QWERTY)	03
	SS	Canadian French (QWERTY)	04
	SS	Spain (Spanish, QWERTY)	05
	SS	Sweden/Finland (QWERTY)	06
	SS	Portugal (QWERTY)	07
	SS	Norway (QWERTY)	08
	SS	Spain (Latin America, QWERTY)	09
	SS	Italy (QWERTY)	10
	SS	Netherlands (QWERTY)	11
	SS	Denmark (QWERTY)	12
	SS	Belgium (AZERTY)	13
	SS	Switzerland-Germany (QWERTZ)	14
	SS	Iceland (QWERTY)	15
	SS	Japan (DOS/V)	16
	SS	Czech (QWERTY)	17

Please refer to the ASCII/HEX Table listed in the Appendix to determine the HEX codes for characters, symbols, and functions to be used as preamble or postamble.
To set preamble or postamble as function key output, you must enable the “Function Key Emulation” feature first.

Keyboard Interface Message String:

Preamble	Data Length	Prefix Symbol ID	Scanned Data	Suffix Symbol ID	Postamble	Record Suffix
1-15 characters	2-4 digits	1 or 3 characters	Variable length	1 or 3 characters	1-15 characters	1 character

2.5.2 Record Suffix, Preamble, Postamble, FNC1 Transmit, Caps Lock

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Record Suffix	SS	None	0
	SS	RETURN ◆	1
	SS	TAB ◆	2
	SS	SPACE	3
	SS	ENTER (Numeric Key Pad)	4
	SS	User defined character (1 character)	5, (00-7F)
Preamble	SS	None ◆	FIN
	MS	1-15 characters	[00-7F], [FIN]
		Maximum 15-character input. Scan “FIN” to terminate this selection.	
Postamble	SS	None ◆	FIN
	MS	1-15 characters	[00-7F], [FIN]
		Maximum 15-character input. Scan “FIN” to terminate this selection.	
FNC1 Symbol Char. Transmit	SS	Disable ◆	0
	SS	Enable	1
Caps Lock Control	SS	“Caps Lock Off” State ◆	0
	SS	“Caps Lock On” State	1
	SS	Auto Detect (PC/AT, PS/2, Kerd Replacement and DOS/V Machines only)	2
Caps Lock Release Control	SS	“Caps Lock On, Caps Off” ◆	0
	SS	“Caps Lock On, Shift Off”	1

FNC1 Symbol Character. Transmit

When this function is enabled and the FNC1 is contained in the scanned data, the scanner transmits the FNC1 to the host. When the scanner interface is set to keyboard, the scanned code is converted to corresponding key function before it is transmitted.

The function of “**Caps Lock Control**” and “**Key Pad Emulation**” are only available for IBM PC/AT, PS/VP, PS/2

series personal computers and compatible machines. While selecting the other host interfaces, these selections don't perform the above functions.
Please check the actual Caps Lock state in use while software application is running. If the Caps Lock state is off, select "Caps Lock Off" state, and then the Hand-held scanner will perform normal data transmission. If the Caps Lock state is on, select "Caps Lock On" state. If "Auto Detect" is selected, the Hand-held scanner will perform special transmission handshaking without changing the status of Caps Lock switch.

2.5.3 Delay Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Intermessage Delay 	SS	None ◆	FIN
	MS	1-99 (x5) msec.	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
Intercharacter Delay 	SS	None ◆	FIN
	MS	1-99 (x5) msec.	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
Interfunction Delay 	SS	None ◆	FIN
	MS	1-99 (x5) msec.	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	

Intermessage Delay: is a time delay between messages outputted by the Hand-held scanner. Increasing this delay will help host applications to process the incoming data on time.

Intercharacter Delay: is a time delay between data characters outputted by the Hand-held scanner. These two parameters are used to synchronize data communication when: 1) the data transmission speed is too fast, characters may be skipped; 2) multitasking operation system or host computers in a network may slow down the keyboard handling; 3) various notebook or desktop PC systems require different timing parameter settings. It is recommended to always add one extra unit as safety margin when adjusting these two parameters.

Interfunction Delay: is a time delay of between transmission and reception of each segment of the message string.

2.5.4 Emulation Settings, Key Pad Emulation, Upper/Lower Case Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Function Key Emulation 	SS	Enable ASCII 00-31 code as keyboard function code output ◆	0
	SS	Ctrl-Output	1
		Refer to Appendix – Keyboard Function Code Table for details.	
Key Pad Emulation 	SS	Disable key pad emulation ◆	0
	SS	Enable numeric output as key pad (Num Lock On) output	1
Upper/ Lower Case 	SS	Normal case (neglect the upper/lower case control) ◆	0
	SS	Inverse case (change all characters output to inverse case)	1
	SS	Upper case (force all characters output as upper case)	2
	SS	Lower case (force all characters output as lower case)	3

2.6 Serial Interface Control

2.6.1 Record Suffix, Preamble, Postamble Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
STX/ ETX Control	SS	Disable STX/ETX transmission ◆	0
	SS	Enable STX/ETX transmission	1
		STX/ETX are two characters used to indicate the starting and ending of the total data frame transmitted via serial interface.	
Record Suffix	SS	None	0
	SS	CR (0DH) ◆	1
	SS	LF (0AH)	2
	SS	CRLF (0D0AH)	3
	SS	TAB (09H)	4
	SS	SPACE (20H)	5
Preamble	SS	None ◆	FIN
	MS	1-15 characters	[00-7F], [FIN]
		Maximum 15-character input; scan “FIN” to terminate this selection.	
Postamble	SS	None ◆	FIN
	MS	1-15 characters	[00-7F], [FIN]
		Maximum 15-character input; scan “FIN” to terminate this selection.	
FNC1 Symbol Char. Transmit	SS	Disable	0
	SS	Enable ◆	1
		When this function is enabled and the FNC1 is contained in scanned data, the scanner transmits the FNC1 to the host. A chart of the FNC1 is provided in the Appendix – Keyboard Function Code Table. When the scanner interface is set to keyboard, the scanned code is converted to corresponding key function before it is transmitted.	

Serial Interface Message String (RS-232, USB COM)

STX	Preamble	Data Length	Prefix Symbol ID	Scanned Data	Suffix Symbol ID	Postamble	ETX	Record Suffix
1 character	1-15 characters	2-4 digits	1 or 3 characters	Variable length	1 or 3 characters	1-15 characters	1 character	1 character

2.6.2 Delay Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Intermessage Delay 	SS	None ◆	FIN
	MS	1-99 (x5) msec.	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
Intercharacter Delay 	SS	None ◆	FIN
	MS	1-99 (x5) msec.	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	
Interfunction Delay 	SS	None ◆	FIN
	MS	1-99 (x5) msec.	(2 digits)
		Scan 2 digits from the option code chart in the Appendix; then the scanner will terminate this selection automatically.	

Intermessage Delay: is a time delay between messages outputted by the Hand-held scanner. Increasing this delay will help host applications to process the incoming data on time.

Intercharacter Delay: is a time delay between data characters outputted by the Hand-held scanner. These two parameters are used to synchronize data communication when: 1) the data transmission speed is too fast, characters may be skipped; 2) multitasking operation system or host computers in a network may slow down the keyboard handling; 3) various notebook or desktop PC systems require different timing parameter settings. It is recommended to always add one extra unit as safety margin when adjusting these two parameters.

Interfunction Delay: is a time delay of between transmission and reception of each segment of the message string.

2.6.3 Protocol, ACK/ NAK Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Handshaking Protocol 	SS	None (free running mode) ◆	0
	SS	RTS/CTS (hardware handshaking)	1
	SS	ACK/NAK (software handshaking)	2
	SS	Xon/Xoff (software handshaking)	3
NAK Retry Count 	SS	3 times ◆	FIN
	SS	0-255 times	(3 digits)
ACK Indication 	SS	Disable ACK Time-out Indication	0
	SS	Enable ACK Time-out Indication ◆	1
	SS	Disable ACK Indication ◆	2
	SS	Enable ACK Indication	3

- USB COM doesn't support RTS/CTS handshaking protocol.
- When the **RTS/CTS Hardware Handshaking** option is selected, the RTS (request to send) and CTS (clear to send) signals will be issued before normal data communication. This option is very helpful to ensure the reliability of data communication.
- When the **ACK/NAK Software Handshaking** option is selected, the Hand-held scanner waits for an ACK (acknowledge) or NAK (not acknowledge) from the host computer after each data transmission. If the NAK is received, the Hand-held scanner will re-send the data until receiving ACK.

NAK Retry Count

After transmitting data, the scanner expects a NAK response from the host up to the preset "Serial Response Time-out". If the scanner doesn't get a response, the scanner will issue an error indication and discard the data. When a NAK is received, the scanner transmits the same data again and waits for either an ACK or NAK. The scanner issues an error indication and discards the data under following two conditions:

1. After preset NAK retry counts is received within the preset serial response time-out.
2. If the preset time-out is up but the preset NAK retry counts haven't come to the end.

The default retry counts are three times. If you program "0 times", the scanner will not resend the data to the host when the scanner receives a NAK. The scanner will discard the data. If you program "255 times", the scanner can receive unlimited NAKs from the host within the pre-set serial response time-out.
This function is not available for batch mode. When you enable this function in on-line mode, the out-of-range function will be disabled automatically.

ACK Indication

Disable: There's neither LED nor beeping indication for this setting.

Enable: There's a specific LED and beeping indication for this setting.

2.6.4 Response Time-out, Baud Rate Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Serial Response Time-out 	SS	None	0
	SS	200 mseconds	1
	SS	500 mseconds ◆	2
	SS	800 mseconds	3
	SS	1 second	4
	SS	2 seconds	5
	SS	3 seconds	6
	SS	4 seconds	7
	SS	5 seconds	8
	SS	8 seconds	9
	SS	10 seconds	A
Baud Rate (BPS) 	SS	38.4K BPS	0
	SS	19.2K BPS	1
	SS	9600 BPS ◆	2
	SS	4800 BPS	3
	SS	2400 BPS	4
	SS	1200 BPS	5
	SS	57.6K BPS	6
	SS	115.2K BPS	7
	SS	38.4K BPS	8
	SS	19.2K BPS	9

The Serial Response Time-out is a pre-defined delay time for the Hand-held scanner to wait for handshaking, acknowledgment or non-acknowledgment from the host computer

2.6.5 Data Frame Settings

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Data Frame 	SS	8, None, 1 ◆	0
	SS	8, Odd, 1	1
	SS	8, Even, 1	2
	SS	8, Space, 1	3
	SS	8, Mark, 1	4
	SS	8, None, 2	5
	SS	7, Odd, 1	6
	SS	7, Even, 1	7
	SS	7, Space, 1	8
	SS	7, Mark, 1	9
	SS	7, None, 2	A
	SS	7, Odd, 2	B
	SS	7, Even, 2	C

2.7 Wand/ Laser Emulation Control (IDM1xx series)

2.7.1 Output Polarity, Signal State, Margin/ Module Time

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Output Polarity	SS	High level (5Vdc) on Bar (low level on Space) ◆	0
	SS	Low level (0Vdc) on Bar (high level on Space)	1
		Determine the output voltage level for both bar and space.	
Initial Signal State	SS	High Level (5Vdc) ◆	0
	SS	Low Level (0Vdc)	1
		Determine the initial state of output voltage level.	
Margin Time	SS	10 msec.	0
	SS	15 msec.	1
	SS	20 msec. ◆	2
	SS	25 msec.	3
	SS	30 msec.	4
Module Time	SS	Extremely short	0
	SS	Short	1
	SS	Medium ◆	2
	SS	Long	3
Narrow/ Wide ratio	SS	1:2 ◆	0
	SS	1:2.5	1
	SS	1:3	2
Code 39/ Code 128 Emulation	SS	Disable standard Code 39 emulation ◆	0
	SS	Enable standard Code 39 skip emulation	1
	SS	Enable standard Code 39 replace emulation	2
	SS	Enable Full ASCII Code 39 emulation	3
	SS	Enable Code 128 emulation	4

Code 39 Skip

When this option is selected, all scanned data will be translated as Standard Code 39 wand/laser emulation output. If any lower case characters are read, they will be translated to upper case characters. Any other characters that are not available in Code 39 symbology set will be skipped.

Code 39 Replace

Any character not normally available in the standard Code 39 symbology set, will be translated as Space.

2.8 Operation Control (IDM1xx series)

2.8.1 Operation Mode Setting

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Operation Mode	SS	Low Power mode	0
	SS	Trigger mode ◆	1
	SS	Presentation mode	2
	SS	Alternative mode	3
	SS	Flash mode	4
	SS	Force mode	5
	SS	Toggle mode	6
	SS	Diagnostic mode	7
	SS	Level mode	8

Low Power Mode (Low Power Triggering)
The scanner goes into idle state after scanning the barcode. You must press the trigger to wake up the scanner for operation. It is very helpful for mobile data collection and applications, which are concerned with power saving.

Trigger Mode (External Triggering)
The scanner goes into standby state after scanning the barcode. You must press the trigger to turn on the light source of the scanner before scanning the bar code.

Presentation Mode (Auto Detection)
Presentation mode uses ambient light to detect the barcodes. The light source is off until the scanner detects an image which is similar to a barcode. Then the light source turns on automatically to read the bar code. If the light level in the room is not high enough, Presentation Mode may not work properly. You can choose different level of “Presentation Sensitivity” to meet your application’s requirements. (Please refer to the setting of “Presentation Sensitivity” on page 68.)

Alternative Mode (Periodic Power Off)
The scanner keeps the light source of the scanner turned on till the pre-defined light source on time is up. After the scanner turns off the light source, you must press the trigger to turn on the light source again. After each good read, the timer counter of “Light Source on Time” is reset. For you do not have to press the trigger frequently it is very convenient for multiple scanning.

Flash Mode (Pulse Driven Reading)
The scanner flashes the light source of the scanner without using the trigger. If the scanner detects an image which is similar to a barcode, the scanner forces on the light source automatically and scans the barcode. Flash Duty Cycle adjustment can change the frequency of the blinking.

Force Mode (Continued Power On)
The light source of the scanner is forced on for continued operation without pressing the trigger button. This mode is convenient for high speed bar code reading.

Toggle Mode (Repeat Reading)
The toggle mode is very similar to the Alternative Mode but without the pre-defined light source on time concern. You must press the trigger to turn on the light source of the scanner to scan. The scanner keeps the light source turned on until you press the trigger again.

Diagnostic Mode (Test Reading)
This operation mode is specifically designed for diagnostic purposes. When this operation mode is selected, the light source of the scanner is force on without regard for other programmable parameters, such as reread delay, redundancy, and so forth.

Level Mode (Auto Power Off)
When this operation mode is selected, the scanner continues to turn on the light source of the scanner before a good read or pre-defined “Light Source on Time”. If the scanner decodes a barcode successfully, it turns off the light source immediately. After the scanner turns off the light source, you must press the trigger to turn on the light source again. If there is no scanning operation performed during the pre-defined light source on time, the scanner enters the idle state after the pre-defined light source on time is up.

2.8.2 Presentation Control, Scan Rate, Flash Duty

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Presentation Control 	SS	Presentation mode ◆	0
	SS	Flash mode	1
	SS	Force mode	2
Scan Rate Control 	SS	Dynamic ◆	0
	SS	Fixed	1
Flash Duty Cycle 	SS	1/2 duty cycle ◆	0
	SS	2/3 duty cycle	1
	SS	3/4 duty cycle	2
	SS	4/5 duty cycle	3

Presentation Control

When the scanner is placed on the Hands-free stand, the scanner will be switched from hand-held scanning to hands-free scanning automatically. Three hands-free scanning modes are available. You are recommended to use flash mode or force mode while under insufficient ambient light.

Scan Rate Control

The scanner will have better motion tolerance when you select “Fixed” scan rate. It’s suitable for applications which need higher motion tolerance on the move. But this may impact to the reading distance.

Flash Duty Cycle

The Flash Duty Cycle is designed to control the flashing frequency of the light source.

2.8.3 1D Barcode Reading Direction

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
1D Barcode Forward-reading Indication	SS	None ◆	0
	SS	“S”	1
	MS	User defined character (1 character)	2 [00-7F]
1D Barcode Backward-reading Indication	SS	None ◆	0
	SS	“X”	1
	MS	User defined character (1 character)	2 [00-7F]
1D Barcode Direction Indication Transmission	SS	Disable ◆	0
	SS	Enable prefix direction mark transmission	1
	SS	Enable suffix direction mark transmission	2
	SS	Enable both prefix and suffix direction mark transmission	3

2.9 Operation Control (IDM2xx series)

2.9.1 Operation, Presentation and Illumination Control

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Operation Mode	SS	Low Power mode (Low power triggering)	0
	SS	Trigger mode (External triggering) ◆	1
	SS	Presentation mode (Auto detection)	2
	SS	Alternative mode (Periodic power off)	3
	SS	Force mode (Continued power on)	4
	SS	Toggle mode (Repeat reading)	5
	SS	Diagnostic mode (Test reading)	6
	SS	Level mode (Auto power off)	7
	SS	Multiple Read Mode	8
Presentation Control	SS	Presentation mode ◆	0
	SS	Force mode	1
Illumination Control	SS	Disable	0
	SS	Enable ◆	1
Presentation Backround Lighting	SS	LEDs Off	0
	SS	LEDs On ◆	1

Hand-Held Mode: Low power mode, Trigger mode, Alternative mode, Toggle mode, Level mode, Multiple read mode

Hands-Free Mode: Presentation mode, Force mode, Diagnostic mode

Illumination Control: is only available for hand-held modes.

Presentation Background Lighting Control: You can enable or disable presentation background lighting of the scanner according to the ambient light condition in presentation mode. When the ambient light is dim or dark, you can enable this function to turn on the scanner's LED illumination at a dim level. This is helpful to detect the motion of scene.

2.9.2 Aiming Control, Delay Aiming, Decode Aiming Control

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Aiming Control	SS	Regular Aiming	0
	SS	Intelligent Aiming ◆	1
	SS	Delay Aiming Control	2
Delay Aiming Time-out Control	SS	200 ms	0
	SS	400 ms ◆	1
	SS	800 ms	2
	SS	1 sec	3
	SS	1.5 secs.	4
	SS	2 secs.	5
	SS	3 secs.	6
	SS	4 secs.	7
Decode Aiming Control	SS	Disable in Hand-Held mode	0
	SS	Enable in Hand-Held mode ◆	1
	SS	Disable in Hands-Free mode	2
	SS	Enable in Hands-Free mode ◆	3

Aiming Control

The Aiming Control is only available for trigger mode. In Intelligent Aiming, the aiming light is turned on when the scanner is lifted. A trigger pull activates decoding process. After 2 seconds of inactivity, the aiming light will be shut off. Delay Aiming Control allows a delay time for the operator to aim the scanner before the image is taken. During the delay time, the aiming light will be on, but the LED illumination won't be turned on until the delay time is up.

Delay Aiming Time-out Control

The Delay Aiming Time-out Control is only available for trigger mode. You can use Delay Aiming Time-out Control to set the delay time.

Decode Aiming Control

For IDM260, this function is not supported in Hands-Free mode.

2.9.3 Center Alignment, Unique Barcode Reporting

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Center Alignment 	SS	Disable in Hand-Held mode ◆	0
	SS	Enable in Hand-Held mode	1
	SS	Disable in Hands-Free mode ◆	2
	SS	Enable in Hands-Free mode	3
Unique Barcode Reporting 	SS	Disable ◆	0
	SS	Enable	1

Center Alignment

When this function is enabled, the scanner only decodes barcode(s) around the aiming line.

Unique Bar Code Reporting

When this function is enabled, the scanner only outputs unique barcodes when the trigger is pressed. This function is workable when Multiple Read mode is selected.

2.9.4 Batch Reading

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Batch reading	SS	None ◆	[FIN]
	SS	Batch reading rule input (01-16 rules)	[Rules] [FIN]

Batch Reading

When this function is enabled, you can scan multiple barcodes one by one continuously upon one trigger event. The scanner reports a good read beep and indication only if all bar codes set by the “Batch Reading Rule” are read. Otherwise, the scanner reports an error beep and indication. The scanned data will be transmitted according to the preset sequence which is defined in “Batch Reading Rule” regardless the scanned order of those barcodes.

Batch Reading function is only available in Trigger Mode.
Batch Reading is not available when Multiple Read Mode or Center Alignment is turned on.

Batch Reading Rule

To set the Batch Reading rule:

1. Scan the PROGRAM code.
2. Scan the Batch Reading Family Code.
3. Use the Option Codes to define the preset Batch Reading rule.
4. Scan the FIN symbol.
5. Scan the END symbol to save your Batch Reading rule.

Scan the ABORT and END code to exit without saving any Batch Reading rule setting.
When you scan “None”, the preset Batch Reading Rule will be deleted.

Batch Reading Rule Syntax

The Syntax is: *[n] [Element 1] FF [Element 2] FF [Element 3] FF ... [Element n] FF*
Where *n* is the number of elements in the overall rule. The number of elements is limited to 16.
FF indicates the end of one element.

The Element structure is: *[SICK ID Hex value] [Code length] [Character match(es)]*

[SICK ID Hex value]

- Length: 2 byte

You can find the SICK ID hex value in the Symbology ID Table in the appendix on page 77.
Locate the Hex value for the symbology and scan the 2 digit hex values from the Option Codes.
99 is the universal number, indicating all symbologies.

[Code length]

- Length: 4 byte

Specify what length of data output will be acceptable for this symbology. When you calculate the length, you must consider the whole data string which includes the programmed Preamble, Postamble, Scanned Data Length, Prefix/Suffix Symbol ID or AIM ID. Scan the four digit data length from the Option Code.
40 is entered as 0040; 9999 is a universal number, indicating all lengths.

[Character match]

- Length: 2-8 byte

You can refer to HEX/ASCII Reference Table to find the Hex value that represents the character(s) you want to match. Use the Option Codes to scan the alphanumeric combination that represents the ASCII characters. You can match up to 4 characters which are counted from the start character of the whole Data String.
Note: When setting the matched character(s), you must match the content of the whole Data String, including the programmed Preamble, Postamble, Scanned Data Length, Prefix/Suffix Symbol ID or AIM ID.
FF is the universal character, indicating all characters.

Batch Reading Rule Example

In this example, you are scanning Code 39, Code 128, and Code 93 bar codes, but you would like to output the data in following sequence: Code 128 - Code 39 - Code 93


B-CODE39


A-CODE128


C-CODE93

You would set up the Batch Reading rule with the following command line:
[PROGRAM] [Batch Reading] [0301999941FF0799994243FF09999945464748FF] [FIN] [END]

The breakdown of the command line is shown below:

03	The number of elements in the overall rule
01	Code identifier of Code 128
9999	Code length that must match for Code 128, 9999 = all lengths
41	Start character match for Code 128, 41h = “A”
FF	End of first code
07	Code identifier of Code 39
9999	Code length that must match for Code 39, 9999 = all lengths
4243	Start character that must match for Code 39, 42h = “B”, 43h = “C”
FF	End of second code
09	Code identifier of Code 93
9999	Code length that must match for Code 93, 9999 = all lengths
45464748	Start character match for Code 93, 45h = “E”, 46h = “F”, 47h = “G”, 48h = “H”
FF	End of third code

To program the previous example using specific lengths, you would have to count the programmed Preamble, Postamble, Scanned Data Length, Prefix/Suffix Symbol ID Or AIM ID if you had defined as part of the length. If you enable the Suffix Symbol ID of symbology, you would add one character to the previous example's length. You would set up the Batch Reading rule with the following command line:
[PROGRAM] [Batch Reading] [0301001141FF070011FF09001345464748FF] [FIN] [END]

The breakdown of the command line is shown below:

03	The number of elements in the overall rule
01	Code identifier of Code 128
0011	Code length that must match for Code 128 A-Code 128 sample length (10) plus Suffix Symbol ID (1) = 11
41	Start character match for Code 128, 41h = "A"
FF	End of first code
07	Code identifier of Code 39
0011	Code length that must match for Code 39 BC-CODE 39 sample length (10) plus Suffix Symbol ID (1) = 11
FF	Universal matched character indicating all characters. Also indicates end of second code.
09	Code identifier of Code 93
0013	Code length that must match for Code 93 EFGH-CODE 93 sample length (12) plus Suffix Symbol ID (1) = 13
45464748	Start character match for Code 93, 45h = "E", 46h = "F", 47h = "G", 48h = "H"
FF	End of third code

If the [Character match(es)] is set to "FF", the following "FF" which indicates the end of the code does not have to be set.

STX (RS-232/ USB Com interface)	Preamble	Scanned Data Length	Prefix Symbol ID or Prefix AIM Symbol ID	Scanned Data modified by DataWizard	Suffix Symbol ID or Suffix AIM Symbol ID	Postamble	ETX (RS-232/ USB Com interface)
1 character	1-15 characters	2-4 digits	1 or 3 characters	Variable length	1 or 3 characters	1-15 characters	1 character

2.10 Operation Control (all IDM series)

2.10.1 Buzzer, Indicator, Vibrator Control

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Buzzer Tone Adjust 	SS	Buzzer tone – mute	0
	SS	Buzzer tone – low	1
	SS	Buzzer tone – medium ◆	2
	SS	Buzzer tone – high	3
	SS	Buzzer tone - extremely high	4
	SS	Power-on beep ◆	5
	SS	No power-on beep	6
Power On Indicator 	SS	Disable (LED off)	0
	SS	LED steady on ◆	1
	SS	LED flash	2
		IDM120 series doesn't support this function.	
Good Read Indicator 	SS	Disable	0
	SS	Enable ◆	1
Vibrator Control 	SS	Disable	0
	SS	Enable ◆	1
		Only available for IDM160 and IDM260 series.	

2.10.2 Dollar Sign, Redundancy, 1D Code Inverse Reading

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Dollar Sign Control 	SS	Dollar sign output as "$" ◆	0
	SS	Dollar sign output as "¥"	1
	SS	Dollar sign output as "€"	2
	SS	Dollar sign output as "£"	3
	SS	Dollar sign output as "¢"	4
Redundancy 	SS	None	0
	SS	Level 1 ◆	1
	SS	Level 2	2
	SS	Level 3	3
	SS	Level 4	4
	SS	Level 5	5
		The Redundancy is the number of times the same barcode has to be decoded before it is transmitted. (To prevent potential misreading.)	
1D Barcode Inverse Reading 	SS	Disable ◆	0
	SS	Enable	1

2.10.3 Reread Delay, Good Read Delay Control

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Reread Delay (Double Scan Verification)	SS	Disable	0
	SS	Immediate time out ◆	1
	SS	Short time out	2
	SS	Medium time out	3
	SS	Long time out	4
	SS	Force verification	5
Good Read Delay	SS	None ◆	0
	SS	200 msec.	1
	SS	500 msec.	2
	SS	1 sec.	3
	SS	1.5 sec.	4
	SS	2 sec.	5
	SS	3 sec.	6

The Reread Delay (Double Scan Verification)

This function is designed to inhibit the Hand-held scanner from reading the same bar code label twice in pre-defined short duration. Force Verification will not allow the reading of the same bar code twice.

IDM1xx: The Reread Delay function is only available when using the Hands-free stand.
IDM2xx: The Reread Delay function is only available in Multiple Read mode or when using the Hands-free stand.

Good Read Delay

This Good Read Delay is the minimum amount of time before the Hand-held scanner can read another barcode.

2.10.4 Light Source On Time, Hands Free Time-out

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Light Source On Time	SS	Short ◆	0
	SS	Medium	1
	SS	Long	2
	SS	Extremely long	3
Hands-free Time Out	SS	Short ◆	0
	SS	Medium	1
	SS	Long	2
	SS	Extremely long	3
	SS	Disable	4
Good Read Duration	SS	Short ◆	0
	SS	Medium	1
	SS	Long	2
	SS	Extremely long	3
	SS	Extremely short	4
Time Delay to Low Power Mode	SS	1 sec.	0
	SS	3 sec.	1
	SS	5 sec.	2
	SS	7 sec.	3
	SS	9 sec.	4
	SS	Immediate ◆	5

Light Source On Time

This function is a pre-defined light source time out counter for Alternative Mode, Presentation Mode and Level Mode. The scanner keeps the light source on till the pre-defined light source on time is up.

Hands-free Time Out

The Presentation Mode, Force Mode and Flash Mode are referred to as “Hands-free” mode. The Hands-free mode will be automatically changed to manual trigger mode when you press the trigger. You can remain the scanner in manual trigger mode by setting the Hands Free Time-Out. Once the time-out duration is up (if there isn’t any trigger operation), the imager will revert to the original hands free mode.

Time Delay to Low Power Mode

This function sets the time for the scanner to enter low power mode after any scanning activity. This setting is only available if the scanner is in low power mode.

2.10.5 Presentation Auto-Sense , Sensitivity

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Presentation Auto-sense 	SS	Disable	0
	SS	Enable ◆	1
Presentation Sensitivity 	SS	Level 1	0
	SS	Level 2	1
	SS	Level 3	2
	SS	Level 4	3
	SS	Level 5 ◆	4
	SS	Level 6	5
	SS	Level 7	6

Presentation Auto sense

When enabling the Presentation Auto-sense, the scanner can switch automatically from hand-held to hands-free scanning when working with the Hands-free stand.

Presentation Sensitivity

The presentation sensitivity is used to configure the sensitivity level when the scanner is set as presentation mode. The higher lever means higher sensitivity for detecting the barcode.

2.11 Condensed Data Wizard

DataWizard is a data editing system provided specially for the IDM hand-held scanners. Through DataWizard, you can process the scanned data prior the transmission in many ways as: Insert, Delete, Match, Verify, Replace, Reorganize, and Repeat Transmission. It will help you to arrange the transmission of scanned data to any specific format without software modification. For further configuration options please use the IDM Set Up Tool[1]. Through the IDM Set Up Tool, all settings and configurations can be done on-screen on Windows 2000 / XP / 7. A Condensed Version DataWizard is provided by each IDM series. Through this menu, the condensed DataWizard can be utilized via bar code menu readings with ease. All “Character” input should be referred to the ASCII/HEX Table listed in the Appendix (page 79) to find the matched HEX value.

2.11.1 Preamble, Postamble, Data Length, Symbol ID Transmission

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code
Preamble	SS	None ◆	FIN
	MS	1-15 characters	[00-7F], [FIN]
		Maximum 15-character input; scan “FIN” to terminate this selection.	
Postamble	SS	None ◆	FIN
	MS	1-15 characters	[00-7F], [FIN]
		Maximum 15-character input; scan “FIN” to terminate this selection.	
Data Length Transmission	SS	Disable ◆	0
	SS	Enable 2-4 digits data length transmission	1
Symbology ID Transmission	SS	Disable symbology ID transmission ◆	0
	SS	Enable prefix symbology ID transmission	1
	SS	Enable suffix symbology ID transmission	2
	SS	Enable both prefix and suffix symbology ID transmission	3
	SS	Enable prefix AIM symbology ID transmission	4
	SS	Enable suffix AIM symbology ID transmission	5
	SS	Enable both prefix and suffix AIM symbology ID transmission	6

[1] The IDM Set Up Tool can be downloaded on www.mysick.com.

2.11.2 Data Formatter Settings

The Data Formatter is used to edit the scanned raw data prior to transmitting the data to the host computers or terminals. It allows you to select desired barcode symbologies for formatter control and provides Multiple Position Insertion and Multiple Character Insertion (max three characters) in the identified position.

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code	2nd Option Code
Formatter Control 	SS	Disable ◆	FIN	
	MS	Select one barcode symbology	(2 digits)	Automatic termination
	MS	Select all barcode symbologies	00	Automatic termination
1st insertion 	SS	Disable ◆	FIN	
	DS	Enable	Position: (2 digits)	[1-3 characters]; [FIN]
		2-digits identified position; max. 3 insertion characters		
2nd insertion 	SS	Disable ◆	FIN	
	DS	Enable	Position: (2 digits)	[1-3 characters]; [FIN]
		2-digits identified position; max. 3 insertion characters		
3rd insertion 	SS	Disable ◆	FIN	
	DS	Enable	Position: (2 digits)	[1-3 characters]; [FIN]
		2-digits identified position; max. 3 insertion characters		
4th insertion 	SS	Disable ◆	FIN	
	DS	Enable	Position: (2 digits)	[1-3 characters]; [FIN]
		2-digits identified position; max. 3 insertion characters		

While the Data Formatter is enabled, it arranges only scanned data without Preamble, Postamble, STX, ETX, Data Length, Prefix/Suffix Symbology ID or Record Suffix. All of the above programmable parameters perform the same function depending on your setting.
Regarding the “Bar Code Selection” and “Position Calculation” of data formatter, please refer to page 74 and 75 for details. All “Character” input should be referred to the ASCII/HEX Table listed in the Appendix (page 79) to find matched HEX value.

2.11.3 Data Verifier Settings

The Data Verifier is used to provide advanced verification for error-free scanning and to work as an Embedded Data Transmitting Filter. All data must conform to the Identified Barcode Symbologies, Identified Data Length, and one to three Identified Characters in the checking position. Otherwise, the Hand-held scanner will not transmit the data to the host computers or terminals, but will instead issue 3 long beeps for verification error and skip the scanned data. The Data Verifier checks only scanned data without Preamble, Postamble, STX, ETX, Data Length, Prefix/Suffix Symbology ID or Record Suffix. Regarding the “Bar Code Selection” and “Position Calculation” of Data Verifier, please refer to page 74 and 75 for details. All “Character” input should be referred to the ASCII/HEX Table listed in the Appendix (page 79) to find matched HEX value.

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code	2nd Option Code
Verifier Control 	SS	Disable ◆	FIN	
	MS	Select one barcode symbology	(2 digits)	Automatic termination
	MS	Select all barcode symbologies	00	Automatic termination
Identified Data Length 	SS	Disable ◆	FIN	
	DS	Enable	(2 digits)	
		Determine the identified data length for verification.		
1st identified character 	SS	Disable ◆	FIN	
	DS	Enable	Position: (2 digits)	[00-7F]
		2-digits checking position; 1 identified character		
2nd identified character 	SS	Disable ◆	FIN	
	DS	Enable	Position: (2 digits)	[00-7F]
		2-digits checking position; 1 identified character		
3rd identified character 	SS	Disable ◆	FIN	
	DS	Enable	Position: (2 digits)	[00-7F]
		2-digits checking position; 1 identified character		

2.11.4 Data Replacer Settings

The Data Replacer is used to edit the scanned raw data prior to transmitting the data to the host computers or terminals. It allows you to select desired barcode symbologies for replacer control, and provides Multiple Position Replacement in the identified position.
All data must conform to the Identified Bar Code Symbologies, and one to three Identified Characters in the identified position. While the Data Replacer is enabled, it arranges only scanned data without Preamble, Postamble, STX, ETX, Data Length, Prefix/Suffix Symbology ID or Record Suffix.
Regarding the “Bar Code Selection” and “Position Calculation” of Data Replacer, please refer to page 74 and 75 for details. All “Character” input should be referred to the ASCII/HEX Table listed in the Appendix (page 79) to find matched HEX value.

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code	2nd Option Code
Replacer Control 	SS	Disable ◆	FIN	
	MS	Select one barcode symbology	(2 digits)	Automatic termination
	MS	Select all barcode symbologies	00	Automatic termination
1st Replacement 	SS	Disable ◆	FIN	
	DS	Enable	Position: (2 digits)	[00-7F]
		2-digits identified position; 1 replacement character		
2nd Replacement 	SS	Disable ◆	FIN	
	DS	Enable	Position: (2 digits)	[00-7F]
		2-digits identified position; 1 replacement character		
3rd Replacement 	SS	Disable ◆	FIN	
	DS	Enable	Position: (2 digits)	[00-7F]
		2-digits identified position; 1 replacement character		

2.11.5 Data Organizer Settings

The Data Organizer is used to edit the scanned raw data prior to transmitting the data to the host computers or terminals. It allows you to select desired barcode symbologies for organizer control and provides maximum two identified positions to send the data forward or backward. It also allows you to control the transmitted data including or excluding the data of identification position. Please refer to the application example listed in page 75 for details. While the Data Organizer is enabled, it arranges only scanned data without Preamble, Postamble, STX, ETX, Data Length, Prefix/Suffix Symbology ID or Record Suffix. Regarding the “Bar Code Selection” and “Position Calculation” of Data Organizer, please refer to page 74 and 75 for details. All “Character” input should be referred to the ASCII/HEX Table listed in the Appendix (page 79) to find matched HEX value.

PROGRAM

F_DEFAULT

Family Code Selection	P.C.	Parameter Selection	Option Code	2nd Option Code
Organizer Control 	SS	Disable ◆	FIN	
	MS	Select one barcode symbology	(2 digits)	Automatic termination
	MS	Select all barcode symbologies	00	Automatic termination
1st Organization 	SS	Disable ◆	FIN	
	DS	Enable	(2 digits) position direction	0 (Forward) ◆ 1 (Backward)
		2-digits identified position; Forward/ backward data transmission setting		
2nd Organization 	SS	Disable ◆	FIN	
	DS	Enable	(2 digits) position direction	0 (Forward) ◆ 1 (Backward)
		2-digits identified position; Forward/ backward data transmission setting		
Include/ Exclude Control 	SS	Transmitted data excluded the data of identified position ◆	0	
	DS	Transmitted data included the data of identified position	1	

2.11.6 Select a Barcode Symbology

You can select one or all types of barcode symbologies to use Condensed DataWizard for advanced transmission arrangement. If you scan “00” to select all types, the Hand-held scanner will arrange all incoming data to meet your pre-defined format. If you want to select only one type of barcode, please select one of the option codes listed below.

1D Barcode Symbology			
Code 128	01	Matrix 2 of 5	38
GS1-128	31	Interleaved 2 of 5	48
UPC-A	02	China Postal Code	58
UPC-A with 2 supplement	32	German Postal Code	68
UPC-A with 5 supplement	42	Standard/ Industrial 2 of 5	08
UPC-E	03	Code 93	09
UPC-E with 2 supplement	33	Code 11	10
UPC-E with 5 supplement	43	MSI/ Plessey	11
EAN-13	04	UK/ Plessey	12
EAN-13 with 2 supplement	34	Telepen	13
EAN-13 with 5 supplement	44	GS1 Data Bar	14
EAN-8	05	Composite Codes	14
EAN-8 with 2 supplement	35	IATA	15
EAN-8 with 5 supplement	45	Coupon Code	16
Codabar/ NW-7	06	PDF417/ Micro PDF417	17
Code 39	07	Codablock F	18
Code 32	37	Code 16K	19
Trioptic Code 39	47	Code 49	20

2D Barcode Symbology			
QR Code	A0	Data Matrix	A2
Micro QR Code	A0	Aztec Code	A3

Postal Codes			
Korea Post Code	21	Japanese Post	B4
Australian Post	B0	KIX Post	B5
British Post	B1	Planet Post	B6
Intelligent Mail barcode	B3	Postnet	B8

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2.11.7 Position Calculation

Data Formatter

If there is a 5-character input data string, refer to the following table to calculate the actual position for insertion:

	X		X		X		X		X	
00		01		02		03		04		05

Data Verifier, Data Replacer, Data Organizer

If there is an 11-character data string, please refer to the following table to calculate the actual position for identification.

X	X	X	X	X	X	X	X	X	X	X
00	01	02	03	04	05	06	07	08	09	10

2.11.8 Application Example

If your bar code label is a 16-digit Interleaved 2 of 5 which includes the information of 6-digit date code, 6-digit serial number and 4-digit unit price, you want the Hand-held scanner to do the following for you without software modification:

- Apply only Interleaved 2 of 5 to the condensed DataWizard.
- Check bar code is actually with 16-digit length.
- Allow bar code output whose date code is leading with “9”.
- Three outputs with “TAB” suffix.
- The date code output should skip “9” and replaced it by “A”.
- The serial number output should be led with “SN”.
- The unit price output should be skipped the first 2 digits.
- Test Bar Code : 9 8 1 0 2 5 1 2 3 4 5 6 9 8 7 6
- Actual Output : A81025[TAB]SN123456[TAB]76[TAB]

Programming Procedure

Data Verifier

- Scan “Program” to enter the programming mode.
- Scan “Verifier Control” and set the barcode symbology to “48” (Interleaved 2 of 5).
- Scan “Identified Data Length” and set the length to “16”.
- Scan “1st Identified Character” and set the identified position to “00”, then set the identified character to “39” (Hex Code of 9).

Data Formatter

- Scan “Formatter Control” and set the barcode symbology to “48”.
- Scan “1st Insertion” and set the identified position to “06”, then inserted characters to “09” (Hex Code of TAB), “53” (Hex Code of S), “4E” (Hex Code of N).
- Scan “2nd Insertion” and set the identified position to “12”, then inserted character to “09”. At the end, you must scan “FIN” (Finish) code to terminate this selection.
- Scan “3rd Insertion” and set the identified position to “16”, then inserted character to “09”. At the end, you must scan “FIN” (Finish) code to terminate this selection.

Data Replacer

- Scan “Replacer Control” and set the barcode symbology to “48”.
- Scan “1st Replacement” and set the identified position to “00”, then replaced character to “41” (Hex Code of A).

Data Organizer

- Scan “Organizer Control” and set the barcode symbology to “48”.
- Scan “1st Organization” and set the identified position to “16”, then set the data transmission to “0” (forward).
- Scan “2nd Organization” and set the identified position to “17”, then set the data transmission to “1” (backward).
- Scan “END” (Exit) to terminate the programming.

Important notice

The Condensed DataWizard will follow the preset working flow as below:

Verifier ⏩ Formatter ⏩ Replacer ⏩ Organizer

Therefore when you set the identified position in the Data organizer, you must consider the inserted data which you already set via Data Formatter.

3 Appendix

3.1 Symbology ID Table (1D Codes)

Each AIM Code Identifier contains the three-character string **]cm** where:
] = Flag Character; c = Code Character; m = Modifier Character

Code Family	Primary Format	SICK ID		AIM ID	
		Hex Value	Char.	Code Char.	Modified Char.
UPC	UPC-A	2	A	E	0
	UPC-A with 2 supple.	32			1
	UPC-A with 5 supple.	42			2
	UPC-E	3	E		0
	UPC-E with 2 supple.	33			1
	UPC-E with 5 supple.	43			2
	Example: A UPC-A bar code 012345678950 with 2 supplement 12 is transmitted as **]E0**012345678950**]E1**12				
Code 128	Code 128	01	B	C	m
	GS1-128	31	C		1
Codabar	Codabar/NW-7	06	D	F	m
Code 25	Standard/Industrial 2 of 5	08	I	S	0
	Matrix 2 of 5	38	K	X	0
	Interleaved 2 of 5	48	J	I	m
	China Postal Code	58	L	X	0
	German Postal Code	68	M	I	M
IATA	IATA	15	O	R	M
Code 16K	Code 16K	19	Q	K	m
UCC Coupon	UCC Coupon Code	Z			
	Example: An UPC-A 512345678900 + GS1-128 81010123451297 barcode is transmitted as **]E0**512345678900**]C1**81010123451297 Example: An EAN-13 9923456789019 + GS1-128 81010123451297 barcode is transmitted as **]E0**9923456789019**]C1**81010123451297				
EAN/ JAN	EAN/JAN-8	05	N	E	4
	EAN/JAN-8 with 2 supple.	35			1
	EAN/JAN-8 with 5 supple.	45			2
	EAN/JAN-13	04	F	E	0
	EAN/JAN-13 with 2 supple.	34			1
	EAN/JAN-13 with 5 supple.	44			2
	Example: An EAN/JAN-8 barcode 49123562 with 5 supplements 12345 is transmitted as **]E4**49123562**]E2**12345				
Code 39	Code 39	09	H	G	m
Code 11	Code 11	10	P	H	m
MSI/ Plessey	MSI/ Plessey	11	R	M	m
UK/ Plessey	UK/ Plessey	12	S	P	0
Telepen	Telepen	13	T	B	m
GS1 Databar	GS1 Databar	14	X	e	m
Composite Code	Composite Code				
Code 39	Code 39	07	G	A	m
	Code 39 Trioptic	47	W	X	0
	Code 32	37	G	A	0
Code 49	Code 49	20	U	T	m
PDF417	PDF417/ Micro PDF417	17	V	L	m
Codablock	Codablock F	18	Y	O	m
Korea Post	Korea Post Code	21	a	X	0
Remark: Above examples are given for the transmission of AIM ID.					

3.2 Symbology ID table (2D and Post codes)

Code Family	Primary Format	SICK ID		AIM ID	
		Hex Value	Char.	Code Char.	Modified Char.
QR Code	QR Code	A0	b	Q	m
Micro QR Code	Micro QR Code				
Data Matrix	Data Matrix	A1	c	d	m
Aztec Code	Aztec Code	A3	e	z	m
Australian Post	Australian Post	B0	g	X	0
British Post	British Post	B1	h	X	0
Intelligent Mail Barcode	Intelligent Mail Barcode	B3	j		0
Japanese Post	Japanese Post	B4	k		0
KIX Post	KIX Post	B5	l		0
Planet Code	Planet Code	B6	m		0
Postnet	Postnet	B8	o		0

3.3 Keyboard Function Code Table

No.	ANSI	ASCII	Key Function	Ctrl Output	No.	ANSI	ASCII	Key Function	Ctrl Output
00	NUL	00H	RESERVED	Ctrl + @	16	DLE	10H	F7	Ctrl + P
01	SOH	01H	CTRL (Left)	Ctrl + A	17	DC1	11H	F8	Ctrl + Q
02	STX	02H	ALT (Left)	Ctrl + B	18	DC2	12H	F9	Ctrl + R
03	ETX	03H	SHIFT	Ctrl + C	19	DC3	13H	F10	Ctrl + S
04	EOT	04H	CAPS LOCK	Ctrl + D	20	DC4	14H	F11	Ctrl + T
05	ENQ	05H	NUM LOCK	Ctrl + E	21	NAK	15H	F12	Ctrl + U
06	ACK	06H	ESC	Ctrl + F	22	SYN	16H	INS (Insert) (Edit)	Ctrl + V
07	BEL	07H	F1	Ctrl + G	23	ETB	17H	DEL (Delete) (Edit)	Ctrl + W
08	BS	08H	BACK SPACE	Ctrl + H	24	CAN	18H	HOME (Edit)	Ctrl + X
09	HT	09H	TAB	Ctrl + I	25	EM	19H	END (Edit)	Ctrl + Y
10	LF	0AH	F2	Ctrl + J	26	SUB	1AH	PAGE UP (Edit)	Ctrl + Z
11	VT	0BH	F3	Ctrl + K	27	ESC	1BH	PAGE DOWN (Edit)	Ctrl + [
12	FF	0CH	F4	Ctrl + L	28	FS	1CH	UP (Edit)	Ctrl + \
13	CR	0DH	ENTER (CR)	Ctrl + M	29	GS	1DH	DOWN (Edit)	Ctrl +]
14	SO	0EH	F5	Ctrl + N	30	RS	1EH	LEFT (Edit)	Ctrl + 6
15	SI	0FH	F6	Ctrl + O	31	US	1FH	RIGHT (Edit)	see note[1)]

[1)] To emulate the keyboard function key input for user definable parameters, the user must configure actual content using the Reserved ASCII 00 – 31 characters and also enable the “Function Key Emulation”. Otherwise, the Ctrl output will be done by the scanner. Please refer to the above Keyboard Function Code Table which is for IBM PC/XT/AT, PS/2, PS/VP, COMPAQ PC, HP Vectra PC, Notebook PC, APPLE and PowerMac, and WYSE PC Enhanced or fully compatible machines.

The last character in the Ctrl output column varies for different countries.

Country (refer to Keyboard Layout) & Character							
United States	-	Spain	-	Denmark	-	Germany	-
Belgium	-	Switzerland	-	Italy	-	Norway	-
Sweden	-	UK	-	France	=		

3.4 ASCII Input Shortcut (Reference Table)

To configure the user definable parameters of the Hand-held scanner via the programming menu, the scanner will ask you to scan your desired ASCII value in HEX form. You have to refer to the “HEX/ASCII Table” for details.

H / L	0	1	2	3	4	5	6	7
0	NUL	DLE	SPACE	0	@	P	`	p
1	SOH	DC1	!	1	A	Q	a	q
2	STX	DC2	"	2	B	R	b	r
3	ETX	DC3	#	3	C	S	c	s
4	EOT	DC4	$	4	D	T	d	t
5	ENQ	NAK	%	5	E	U	e	u
6	ACK	SYN	&	6	F	V	f	v
7	BEL	ETB	'	7	G	W	g	w
8	BS	CAN	(	8	H	X	h	x
9	HT	EM	)	9	I	Y	i	y
A	LF	SUB	*	:	J	Z	j	z
B	VT	ESC	+	;	K	[	k	{
C	FF	FS	,	<	L	\	l	|
D	CR	GS	-	=	M	]	m	}
E	SO	RS	.	>	N	^	n	~
F	SI	US	/	?	O	_	o	DEL

Example: ASCII “A” → HEX “41”; ASCII “a” → HEX “61”

: High Byte of HEX Value

: Low Byte of HEX Value

Example:

If you want the scanned data output leading with a Dollar Sign, you have to set the “Preamble” to “$”. The configuration procedure is listed below for reference.

- Scan the system command – PROGRAM listed on page 45 and 48 to enter programming mode.
- Scan family code – PREAMBLE to select this family.
- Refer to the Hex/ASCII Table, you will find the HEX value of “$” is 24.
- Scan the option code – 2 listed on page 83.
- Scan the option code – 4 listed on page 83.
- Scan the system command – FIN (Finish) to terminate Preamble setting.
- Scan the system command – End to exit the programming mode for normal operation.

3.5 Host Interface Quick Set


RS-232 Serial


PS/2 (DOS/V) KBW Standard Mode


USB HID Standard Mode ◆


Keyboard Replacement


PS/2 (DOS/V) KB W Turbo Mode


USB HID Turbo Mode


USB Com Port Emulation

3.6 Operation Mode Quick Set (IDM1xx series)


Low Power (Low Power Trigger)


Force (Continued power on)


Alternative (Periodic Power off)


Trigger (External Triggering) ◆


Toggle (Repeat reading)


Flash (Pulse driven reading)


Presentation (Auto Sensing)


Diagnostic (Test reading)


Level (Auto power off)

3.7 Operation Mode Quick Set (IDM2xx series)


Low Power (Low Power Trigger)


Force (Continued power on)


Alternative (Periodic Power off)


Trigger (External Triggering) ◆


Toggle (Repeat reading)


Level (Auto power off)


Presentation (Auto Sensing)


Diagnostic (Test reading)


Multiple Read

3.8 Option Codes


0


A


5


1


B


6


2


C


7


3


D


8


4


E


9


F


Abort


FIN (Finish)


END (Exit)

3.9 System Commands

PROGRAM
(Enter Programming Mode)

System Information List
(SYSLIST)

Safe User Default

FIN (Finish)

IDM Set Up Link

User Default

END
(Exit Programming Mode)

Master Default

Factory Default

Factory Default: After scanning “Factory Default” command, all parameters will be returned to factory default value.

Master Default: After scanning “Master Default” command, the scanner will remain the pre-set parameters of Host Interface Selection, Keyboard Interface Control (except Record Suffix; Preamble; Postamble), Serial Interface Control (except Record Suffix; Preamble; Postamble), and Wand/Laser Emulation Control, the rest of the parameters will be returned to default value.

User Default: After scanning “Save User Default” command, all current parameters will be stored to the flash memory. Once you change the parameter and would like to return to previous setting, please scan “User Default”.

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