Wireless 2D Imager Scanner

- MS842RP -

User's Manual

Version 1.3

Change Log

Date	Change Description	Version
2016/12/8	First published version	1.0
2017/02/02	Update contents	1.1
2017/4/26	Add BC logo	1.2
2019/7/23	Update Battery Capacity	1.3

Preface

About This Manual

Thank you for purchasing the unitech product.

This manual explains how to install, operate and maintain our product.

No part of this publication may be reproduced or used in any form, or by any electrical or mechanical means, such as photocopying, recording, or information storage and retrieval systems, without permission in writing from the manufacturer. The material in this manual is subject to change without notice.

Regulatory Compliance Statements

FCC Warning Statement

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference with radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

–Reorient or relocate the receiving antenna.

–Increase the separation between the equipment and receiver.

–Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

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–Consult the dealer or an experienced radio/TV technician for help.

1. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. To maintain compliance with FCC RF exposure requirements, avoid direct contact to the transmitting antenna during transmitting.
3. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

Operation on the 5.15 - 5.25GHz frequency band is restricted to indoor use only. The FCC requires indoor use for the 5.15-5.25GHz band to reduce the potential for harmful interference to co-channel Mobile Satellite Systems. Therefore, it will only transmit on the 5.25-5.35 GHz, 5.47-5.725 GHz and 5.725 – 5.850 GHz band when associated with an access point (AP).

FCC Label Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:
1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

RF Radiation Exposure Statement

For body contact during operation, this device has been tested and meets FCC RF exposure guidelines when used with an accessory that contains no metal and that positions the handset a minimum of 1.5 cm from the body.
Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

Canadian Compliance Statement

This Class B Digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numerique de la classe B respecte les exigences du Reglement

sur le material broilleur du Canada.

European Conformity Statement

unitech Electronics co., Ltd herewith declares that the unitech product is in compliance with the essential requirements and all other provisions of the R&TTE 1999/5/EC directive, the EMC 2014/30/EU directive and the Low Voltage 2014/35/EU directive.
The declaration of conformity is available for download at :
https://portal.unitech.eu/public/Safetyregulatorystatement

RoHS Statement

This device conforms to RoHS (Restriction of Hazardous Substances) European Union regulations that set maximum concentration limits on hazardous materials used in electrical and electronic equipment.

Waste electrical and electronic equipment (WEEE)

unitech has set up a policy and process to meet the EU directive 2002/96/EC and update 2003/108/EC concerning electronic waste disposal.

For more detailed information of the electronic waste disposal of the products you have purchased from unitech directly or via unitech's resellers, you shall either contact your local supplier or visit us at :
https://portal.unitech.eu/public/WEEE

Taiwan NCC Warning Statement

低功率電波輻射性電機管理辦法

第十二條：經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條：低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。
前項合法通信，指依電信法規定作業之無線電通信。
低功率射頻電機需忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。
注意事項：
1. 使用過度恐傷害視力。
2. 使用30分鐘請休息10分鐘；2歲以下幼兒不看螢幕，2歲以上每天看螢幕不要超過1小時。
3. 減少電磁波影響，請妥適使用。

Laser Information

The unitech product is certified in the U.S. to conform to the requirements of DHHS/CDRH 21CFR Subchapter J and to the requirements of IEC 825-1. Class II and Class 2 products are not considered to be hazardous. The unitech product contains internally a Visible Laser Diode (VLD) whose emissions do not exceed the maximum limits as set forth in the above regulations. The scanner is designed so that there is no human access to harmful laser light during normal operation, user maintenance or prescribed service operations.

The laser safety warning label required by the DHHS/IEC for the unitech product's optional laser scanner module is located on the memory compartment cover, on the back of the unit.

* Laser information only applies to the products with laser components.

CAUTION! Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous laser light. Use of optical instruments with the scanner, including binoculars, microscopes, and magnifying glasses, with will increase eye damage. This does not include eyeglasses worn by the user.

LED Information

The unitech product contains LED indicator(s) or LED ring whose luminance is not harmful to human eyes during normal operation, user maintenance or prescribed service operations.

*LED information only applies to the products with LED components.

Battery Notice

1. To guarantee optimal performance, it is recommended that rechargeable batteries be replaced every year, or after 500 charging cycles are completed. It is normal for the battery to balloon or expand after one year or 500 cycles. Although it does not cause damage, it cannot be used again and must be disposed of according to the location's safe battery disposal procedures.

2. If a battery performance decreases more than 20%, the battery is at the end of its life cycle. Stop use and ensure the battery is disposed of properly.

3. The length of time that a battery lasts depends on the battery type and how the device is used. Conserve the battery life by doing the following:

   - Avoid fully uncharging the battery because this places additional strain on it. Several partial uncharges with frequent charges are better than a fully uncharged battery. Charging a partially charged battery does not cause harm to the unit.

   - Keep the battery cool. Avoid hot vehicles. For prolonged storage, keep the battery at a 40% charge level.

   - Do not leave the battery uncharged and unused for an extended period of time, the battery will wear out and the longevity of the battery will be at least half of one with frequent charges.

4. Protect battery life by not over or under charging the battery.

5. Please do not leave battery unused for long time without charging it. Despite unitech's safety precautions, the battery pack may begin to change shape. If so, stop using it immediately. Please check to see if you are using a proper power adapter to charge the battery or contact your service provider for service.

6. If you cannot charge the battery after it has been idle for an extended period of time and it begins to heat up, please do not try to charge it. It may not be functional anymore.

7. Please only use the original battery from unitech. Using a third party battery can damage our products. Please note that when such damage occurs, it is not covered by your warranty.

CAUTION!
- RISK OF EXPLOSION IF BATTERY IS REPLACED INCORRECTLY.
  DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.
- 如果更換不正確之電池行事會有爆炸的風險
  請依製造商說明書處理用過之電池
- 如果更换不正确之电池行事会有爆炸的风险
  请依制造商说明书处理用过之电池

Battery charge notice

It is important to consider temperature when the battery pack is charging. Charging is most efficient at normal room temperature or in a slightly cooler environment. It is essential that batteries are charged within the stated range of $0°C$ to $40°C$. Charging batteries outside of the specified range could damage the batteries and shorten their life cycle.

CAUTION! Do not charge batteries at a temperature lower than $0°C$. This will and make the batteries unstable and dangerous. Please use a battery temperature detecting device for a charger to ensure a safe charging temperature range.

CAUTION! To ensure the unit working properly, please keep all connectors away from the contaminants staying inside of them such as dust, grease, mud, and water. The negligence may cause the unit with no communication, short circuited, overheated and so on.

CAUTION! If the connector is damaged, please ensure the connector is being fully repaired before use the unit to avoid causing short circuited.

Storage and safety notice

Although charged batteries may be left unused for several months, their capacity may be depleted due to build up of internal resistance. If this happens, they will require recharging prior to use. Batteries may be stored at temperatures between -20°C to 60°C, however they may deplete more rapidly at higher temperatures. It is recommended to store batteries at room temperature.

The message above only applies to the usage of the removable batteries. For the products with non-removable batteries / without batteries, please refer to the specification of each product.

Product Operation and Storage Notice

The unitech product has applicable operation and storage temperature conditions. Please follow the limitation of suggested temperature conditions to avoid failure, damage or malfunction.

For applicable temperature conditions, please refer to the specification of each product.

Adapter Notice

1. Please do not leave the power adapter in the socket when it is not connected to your unitech product for charging.
2. Please remove the power adapter when the battery is fully recharged.
3. The bundled power adapter that comes with your unitech product is not meant to be used outdoors. An adapter exposed to water or rain, or a very humid environment can cause damage to both the adapter and the product.
4. Please only use the bundled power adapter or same specification of adapter to charge your unitech product. Using the wrong power adapter can damage your unitech product.

The message above only applies to the product connected to the adapter. For the products without using the adapters, please refer to the specification of each product.

Hearing Damage Warning

Zx.3 Warning

The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following:

-   the symbol of Figure 1 with a minimum height of 5 mm; and
-   the following wording, or similar :

> To prevent possible hearing damage, do not listen at high volume levels for long periods.

Figure 1 – Warning label (IEC 60417-6044)

Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.

Worldwide Support

unitech's professional support team is available to quickly answer questions or assist with technical-related issues. Should an equipment problem occur, please contact the nearest unitech regional service representative. For complete contact information please visit the Web sites listed below:

Taipei, Taiwan – Headquarters	Europe
Tel: +886-2-89121122 **E-mail:** info@hq.ute.com **Address:** 5F, No. 136, Lane 235, Baoqiao Road, Xindian District, New Taipei City 231, Taiwan (R.O.C.) **Website:** http://www.ute.com	**Tel:** +31-13-4609292 **E-mail:** info@eu.ute.com **Address:** Kapitein Hatterasstraat 19, 5015 BB, Tilburg, the Netherlands **Website:** http://eu.ute.com
China	**Japan**
Tel: +86-59-2310-9966 **E-mail:** info@cn.ute.com **Address:** Room401C, 4F, RIHUA International Mansion, Xinfeng 3nd Road, Huoju Hi-tech District, Xiamen, Fujan , China **Website:** http://cn.ute.com	**Tel:** +81-3-35232766 **E-mail:** info@jp.ute.com **Address:** Kayabacho Nagaoka Building 8F.,1-5-19 Shinkawa, Chuo-Ku, Tokyo, 104-0033, Japan **Website:** http://jp.ute.com
Asia & Pacific / Middle East	**Latin America**
Tel: +886-2-27911556 **E-mail:** info@apac.ute.com info@india.ute.com info@mideast.ute.com **Address:** 4F., No. 236, ShinHu 2nd Rd., NeiHu Chiu, 114, Taipei,Taiwan **Website:** http://apac.ute.com / http://mideast.ute.com	**Tel:** +52-55-5171-0528 **E-mail:** info@latin.ute.com **Address:** 17171 Park Row, Suite 210 Houston, TX 77084USA (Rep.) **Website:** http://latin.ute.com
North America	**Please scan QR Code to visit us :**
Tel: +1-714-8926400 **E-mail:** info@us.ute.com / info@can.ute.com **Address:** 6182 Katella Ave, Cypress, CA 90630, USA **Website:** http://us.ute.com	

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Warranty Policy

The items covered under the unitech Limited Warranty are free from defects during normal use.

The warranty period is varied from each country. Please consult with your supplier or unitech local office for actual length of warranty period to your purchased product.

Warranty becomes void if equipment is modified, improperly installed or used, damaged by accident or neglect, or if any parts are improperly installed or replaced by the user.

Table of Contents

Chapter 1 - Overview

1.1 Package

Please make sure the following contents are in the MS842RP gift box. If something is missing or damaged, please contact your unitech representative.

The standard package contents

- MS842RP Scanner

- Quick Start Guide

- Regulatory Compliance Statements

- USB Cable

- Power Adapter

- USB Dongle

Optional accessories

- Cradle

NOTE:
1. The items included in the package may be different, depending on your order. Save the box and packaging material for future use in case you need to store or ship the scanner.
2. When you receive and unpack the package at first time, if any item above is lost, please contact the dealer you bought from, immediately.
3. Environment temperature for charging should be between 0°C - 40°C.
4. The scanner's default power off (idle mode) time is 10 min.
5. When you use the scanner for the first time, the scanner must be charged continuously for some 5 hours.

1.2 Scanner Detail

Scan Window

Scanner LED indicator

Trigger

Cable Connector

Power ON/OFF
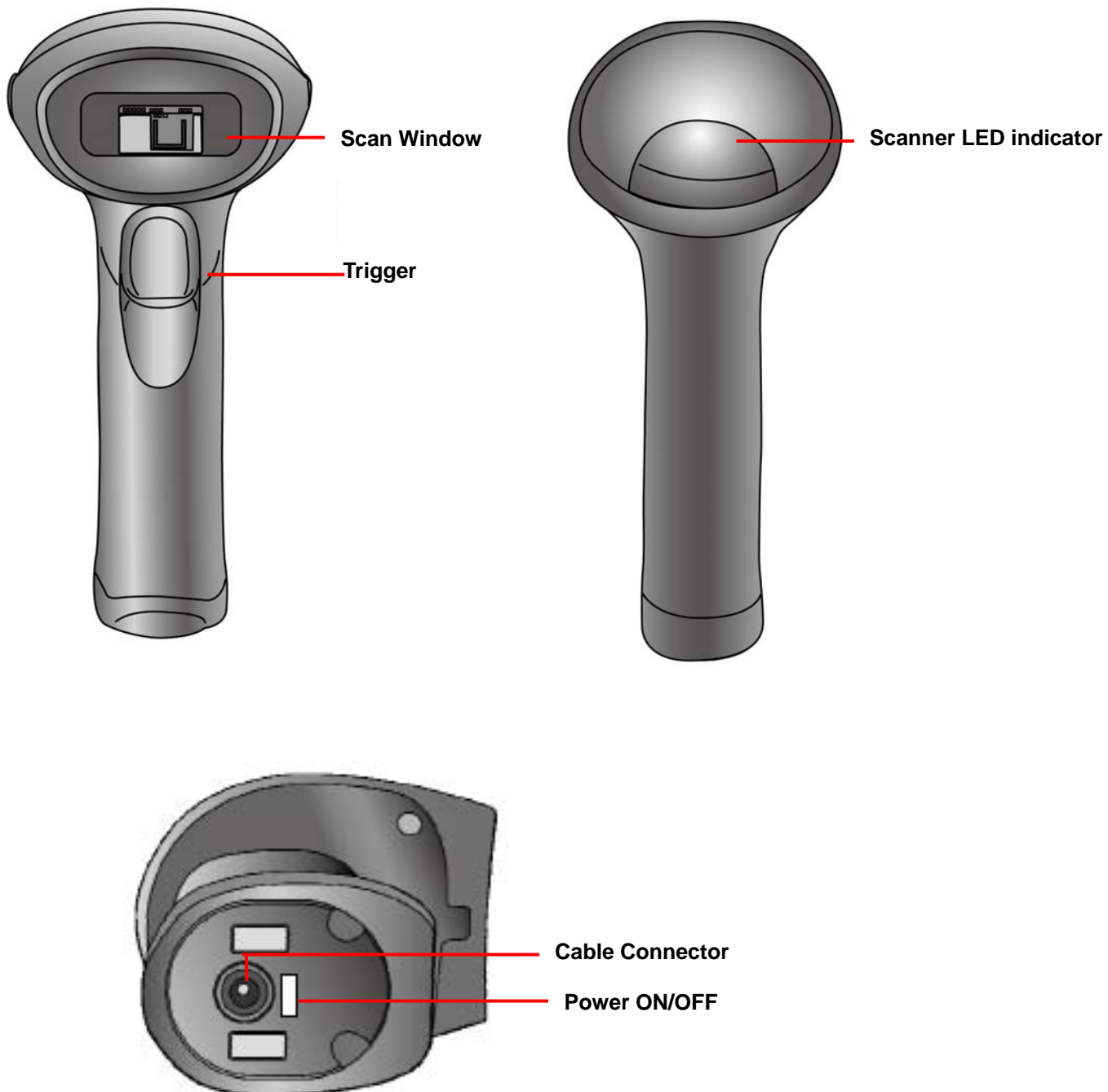
1.3 Specifications

Optical & Performance	
Receiving Device	CMOS sensor with 640 x 480 pixel
Light Source	White LED with CCT 5000K
Ambient Light	0–100,000 lux (total darkness to bright sunlight)
Motion Tolerance	Up to 100 cm/s (4 in/s) for 13 mil UPC at optimal focus
Typical frame rate	30 frames per second
Skew Angle	±45degrees
Pitch Angle	±45degrees
Printing Contrast Scale	35% minimum print contrast ratio
Reading Distance (DOF PCS=80%)	SR | Near | Far : 100% U.P.C. | 55mm | 280mm Code 39, 5 mil | 61mm | 130mm Code 39, 20 mil | 60mm | 380mm PDF417, 6.7 mil | 60mm | 125mm Data Matrix, 10 mil | 60mm | 130mm QR, 20 mil | 50mm | 230mm

Functionality	
Symbologies	Linear: Codabar, Code 11, Code 128, Code 2 of 5, Code 39, Code 93 and 93i, EAN/JAN-13, EAN/JAN 8, IATA Code 2 of 5, Interleaved 2 of 5, Matrix 2 of 5, MSI, GS1 Databar, UPC-A, UPC E, UPC-A/EAN-13 with Extended coupon Code, Coupon GS1 Code 32(PARAF), EAN-UCC Emulation, GS1 Data bar 2D Stacked: Codablock A, Codablock F, PDF417, MicroPDF417 2D Matrix: Aztec Code, Data Matrix, MaxiCode, QR Code, Chinese Sensible(Han Xin) code Postal Codes: Australian Post, British Post, Canadian Post, China Post, Japanese Post, Korea Post, Netherlands Post, Planet Code, Postnet
Operation Mode	Wedge, Auto, Batch
Environmental	
ESD Protection	Functional after 8K Contact and 12K Air
Mechanical Shock	1.8m onto concrete (scanner only)
IP Rate	IP42
Operating Temperature	0°C to 50°C
Storage Temperature	-30°C to 70°C
Relative Humidity	95% non-condensing
Electrical	
Operation Voltage	DC 3V to 5V
Battery Type	Lithium-ion
Battery Capacity	1600mAh charged via the cradle
Battery Charging time	Fully charged in 4 hours
Operating Time	Over 12 hours

Communication	
Radio Frequency	Unlicensed 2.4GHz
Protocol	Wireless, SPP & HID profiles
Range	10M(line of sight)
Host Interface supported	USB(via cradle or dongle)
Mechanical	
Scanner Dimension	176 x 74 x 89 mm
Scanner Weight	200g (without cable)
Switch life	10 million time
Cradle Dimension	73 x 95 x 200 mm
Regulation Approvals	
CE, FCC, BSMI, VCCI	

1.4 Getting Started

To turn on the scanner, please switch the power button to the **on** position.
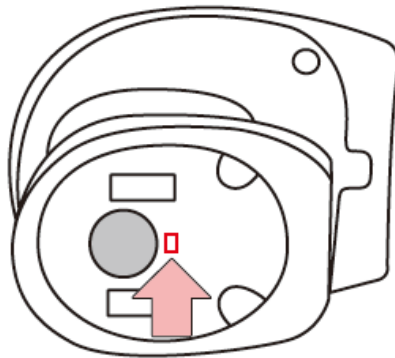
The aiming beam can be centered over the bar code with any direction and have the proper alignment for a good read. (see example below)
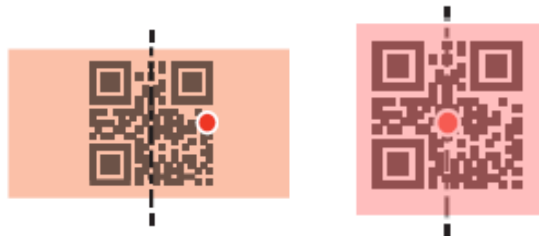
1.5 Battery Charging

■ Connect the power supply cable to the bottom of the MS842RP and to an electrical outlet. Charge for at least 4 hours.
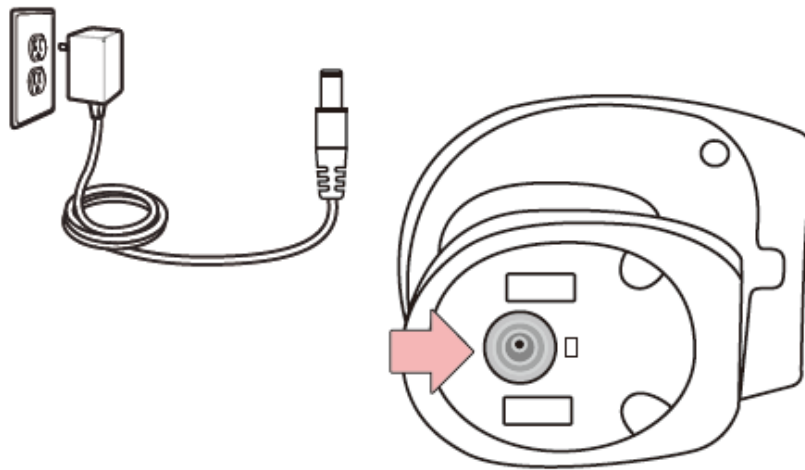
■ The scanner can be also set on the cradle for battery charging.

Step 1 : Plug the adapter cable into the power socket on the cradle.
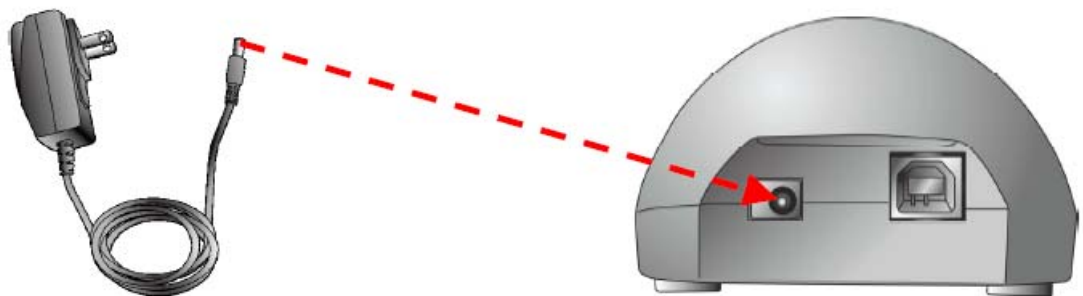
Step 2 : Plug the AC adapter cord into an electrical outlet.
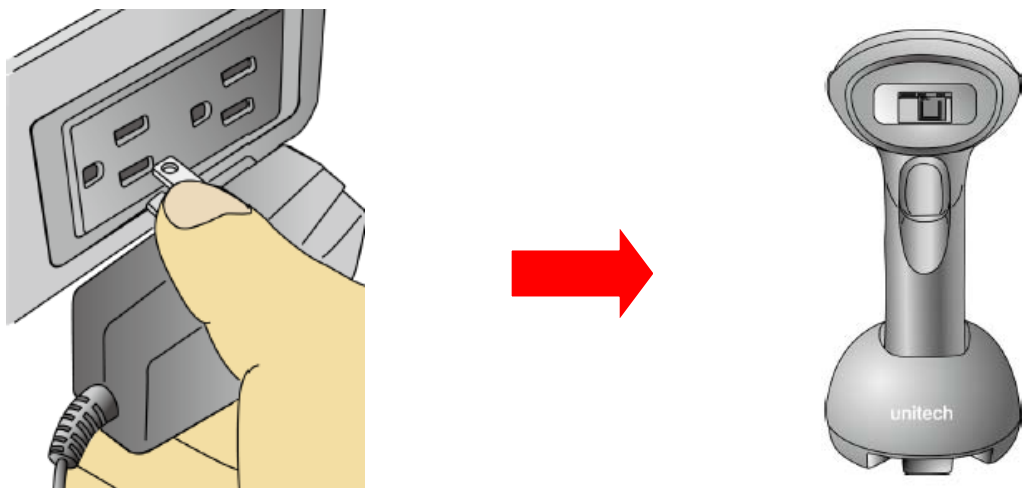
1.6 LED Indicator / Beeper Sequence

LED / Beep	Status	Action
LED Light State	Green LED blinks twice	Switch power on/off to "On" position
	Red LED blinks per 5 seconds	Low battery power
	Red LED on	1. Barcode reading when the trigger is pressed
		2. Battery charging when the scanner is set on the cradle
	Green LED blinks	Successful barcode reading
	Blue LED fast blinks and then turns off	Successful pairing/connection
	Blue LED slow blinks	Disconnect (out of range)
	Green LED on	Battery charging completion
Beep Sequence	One long beep with a medium tone	Switch power on/off to "On" position
	One short beep with a Hi tone	Successful barcode reading
	One beep with a Hi tone	Reconnection
	3 Hi-Low alarms	Disconnect (out of range) with 100ms delay from a high tone to a low tone or from a low tone to a high tone
	One short beep with a medium tone	Successful in-range reading in batch mode
	One short beep with a medium tone	Buffer mode is disabled
	One long beep (High-Low-High tone)	Data to buffer (out of range) in batch mode and inventory mode
	4 short beeps with a Low-Hi tone	Out of range (buffer mode disabled)

Chapter 2 - Installation

2.1 HID

HID*

Establishing RF connection in HID mode.

1. Turn on your computer or laptop PC.

2. Insert a dongle into a USB port of the computer or laptop PC.
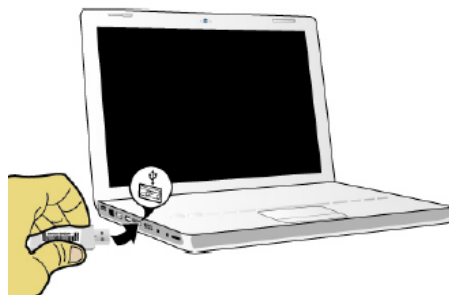
3. Scan the MAC address on the dongle by using the MS842RP scanner.

4. MS842RP will beep when your PC successfully establish a BT connection with MS842RP.

2.2 SPP

SPP

Establishing RF connection in SPP mode.

1. Turn on your computer or laptop PC.

2. Insert a dongle into a USB port of the computer or laptop PC.
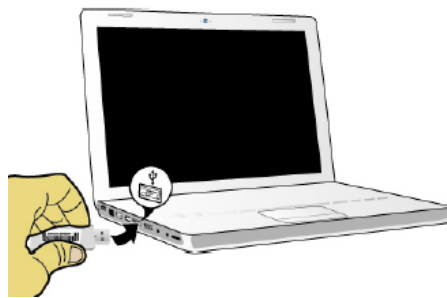
3. Scan the MAC address on the dongle by using the MS842RP scanner.

4. Go to PC device manager to check the COM information, for example; *CDC USB Demonstration (COM40).*

5. Back to the application, and select the corresponding COM port number.

6. MS842RP will beep when your pc successfully establish the connection with MS842RP.

2.3 Cradle Mode

In order to establish a proper connection between your computer and a scanner through a cradle into which a dongle is inserted, we suggest that you follow these step-by-step instructions:

1. Turn on your computer or laptop PC.

2. Plug the adapter cable into the power socket on the cradle.
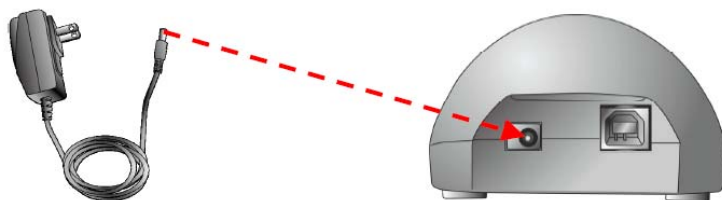
3. Plug the AC adapter cord into an electrical outlet.
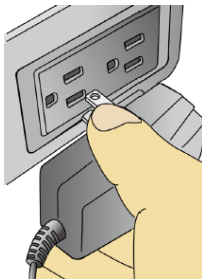
4. Connect the cradle to the USB port of your computer with a USB cable for transferring data to your computer by using the MS842RP scanner.

5. Insert a USB dongle into the USB port of the cradle.
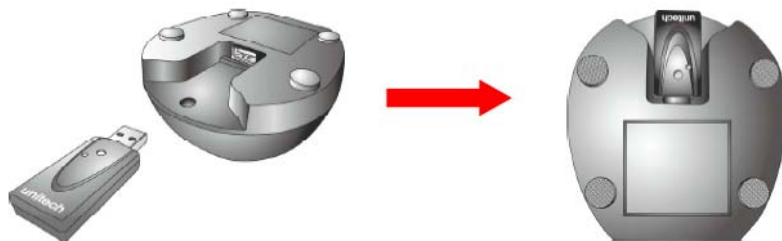
6. Scan the MAC address on the dongle by using the MS842RP scanner.

7. When being successfully connected to the dongle, the scanner will beep shortly one time with a high tone.

Chapter 3 – Symbology

3.1 All symbologies

If you want to decode all the symbologies allowable for your scanner, scan the **All Symbologies On** code. If on the other hand, you want to decode only a particular symbology, scan **All Symbologies Off** followed by the On symbol for that particular symbology.

Note: Scanner performance may reduce by scanning All Symobologies On.
Only scan All Symbologies On when needed.

Note : When All Symbologies On is scanned, 2D Postal Codes are not enabled.2D Postal Codes must be enabled separately.

All Symbologies On

||||||| |||| ||| ||||| ||| ||||| ||||

All Symbologies Off

||||||| |||| ||| ||||| ||| ||||| ||||

3.2 Message Length Description

You are able to set the valid reading length of some of the bar code symbologies. You may wish to set the same value for minimum and maximum length to force the scanner to read fixed length bar code data.
This helps reduce the chances of a misread.
EXAMPLE: Decode only those bar codes with a count of 9-20 characters.
Min. length = 09Max. length = 20
EXAMPLE: Decode only those bar codes with a count of 15 characters.
Min. length = 15Max. length = 15

For a value other than the minimum and maximum message length defaults, scan the bar codes included in the explanation of the symbology, then scan the digit value of the message length and Save bar codes on the [Programming Chart]. The minimum and maximum lengths and the defaults are included with the respective symbologies.

3.3 1D

3.3.1 Codabar

Codabar On*

Default All Codabar Settings

Codabar Off

3.3.1.1 Codabar Start / Stop Characters

Start/Stop characters identify the leading and trailing ends of the bar code. You may either transmit, or not transmit Start/Stop characters. Default = Don't Transmit.

Transmit

Don't Transmit*

3.3.1.2 Codabar Concatenation

Codabar supports symbol concatenation. When you enable concatenation, the scanner looks for a Codabar symbol having a "D" start character, adjacent to a symbol having a "D" stop character. In this case the two messages are concatenated into one with the "D" characters omitted.

Select Require to prevent the scanner from decoding a single "D" Codabar symbol without its companion. This selection has no effect on Codabar symbols without Stop/Start D characters.

On

Off*

Require

3.3.1.3 Codabar Message Length

Scan the bar codes below to change the message length. Refer to [Message Length Description](#) for additional information.

Minimum and Maximum lengths = 2-60.

Minimum Default = 4, Maximum Default = 60.

Minimum Message Length

Maximum Message Length

3.3.2 Code 39

Code 39 On*

||||||||||||||||||||||

Default All Code 39 Settings

||||||||||||||||||||||

Code 39 Off

||||||||||||||||||||||

3.3.2.1 Code 39 Start / Stop Characters

Start/Stop characters identify the leading and trailing ends of the bar code. You may either transmit, or not transmit Start/ Stop characters. Default = Don't Transmit.

Transmit

||||||||||||||||||||||

Don't Transmit*

||||||||||||||||||||||

3.3.2.2 Code 39 Check Characters

No Check Character indicates that the scanner reads and transmits bar code data with or without a check character.

When Check Character is set to **Validate, but Don't Transmit**, the unit only reads Code 39 bar codes printed with a check character, but will not transmit the check character with the scanned data.

When Check Character is set to **Validate and Transmit,** the scanner only reads Code 39 bar codes printed with a check character, and will transmit this character at the end of the scanned data.   Default = No Check Character.

No Check Character*

Validate , but Don't Transmit

Validate and Transmit

3.3.2.3 Code 39 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description for additional information.
Minimum and Maximum lengths = 0-48.
Minimum Default = 0, Maximum Default = 48.

Minimum Message Length

Maximum Message Length

3.3.2.4 Code 32 Pharmaceutical (PARAF)

Code 32 Pharmaceutical is a form of the Code 39 symbology used by Italian pharmacies. This symbology is also known as PARAF.

Note: Trioptic Code must be turned off while scanning Code 32 Pharmaceutical codes.

Off *

On

3.3.2.5 Full ASCIIlf

Full ASCII Code 39 decoding is enabled, certain character pairs within the bar code symbol will be interpreted as a single character.
For example: $V will be decoded as the ASCII character SYN, and /C will be decoded as the ASCII character #. Default = Off.

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

Character pairs /M and /N decode as a minus sign and period respectively.
Character pairs /P through /Y decode as 0 through 9.

Off *

||||||||||||||||

On

||||||||||||||||

3.3.3 Interleaved 2 of 5

Interleaved 2 of 5 On*

||||| |||||||||||||||||||||| |||

Default All Interleaved 2 of 5   Settings

||| ||||||||||||| ||| |||

Interleaved 2 of 5 Off

||| |||||||||||||||||||||

3.3.3.1 Check digit

No Check Digit indicates that the scanner reads and transmits bar code data with or without a check digit. When Check Digit is set to Validate, but Don't Transmit, the unit only reads Interleaved 2 of 5 bar codes printed with a check digit, but will not transmit the check digit with the scanned data.   When Check Digit is set to Validate and Transmit, the scanner only reads Interleaved 2 of 5 bar codes printed with a check digit, and will transmit this digit at the end of the scanned data.   Default = No Check Digit.

No Check Digit*

||| ||||| ||| ||||| ||| |||

Validate , but Don't Transmit

||| ||||| ||||| ||| ||||

Validate and Transmit

||| ||||| ||||||| ||| |||

3.3.3.2 Interleaved 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description for additional information.

Minimum and Maximum lengths = 2-80.

Minimum Default = 4, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

3.3.4 Code 93

Code 93 On*

Default All Code 93 Settings

Code 93 Off

3.3.4.1 Code 93 Message Length

Scan the bar codes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 0-80. Minimum Default = 0, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

3.3.5 Standard 2 of 5 Industrial

(three bar start/stop)

Standard 2 of 5
Industrial On

Default All Standard 2 of 5
Industrial Settings

Standard 2 of 5
Industrial Off*

3.3.5.1 Standard 2 of 5 Industrial Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description for additional information. Minimum and Maximum lengths = 1-48. Minimum Default = 4, Maximum Default = 48.

Minimum Message Length

Maximum Message Length

3.3.6 Standard 2 of 5 IATA (two-bar start/stop)

Standard 2 of 5 IATA
Industrial On

Default All Standard 2 of 5
IATA Industrial Settings

Standard 2 of 5 IATA
Industrial Off*

3.3.6.1 Standard 2 of 5 IATA Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description for additional information. Minimum and Maximum lengths = 1-48. Minimum Default = 4, Maximum Default = 48.

Minimum Message Length

Maximum Message Length

3.3.7 Matrix 2 of 5

Matrix 2 of 5 On

Default All Matrix 2 of 5
Settings

Matrix 2 of 5 Off*

3.3.7.1 Matrix 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 4, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

3.3.8 Code 11

Code 11 On

Default All Code 11 Settings

Code 11 Off*

3.3.8.1 Check Digits Required

This option sets whether 1 or 2 check digits are required with Code 11 bar codes. Default = Two Check Digits.

One Check Digit

Two Check Digits*

3.3.8.2 Code 11 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 4, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

3.3.9 Code 128

Code 128 On*

||||||||||||||||||||||||

Default All Code 128
Settings

||||||||||||||||||||||||

Code 128 Off

||||||||||||||||||||||||

3.3.9.1 ISBT 128 Concatenation

In 1994 the International Society of Blood Transfusion (ISBT) ratified a standard for communicating critical blood information in a uniform manner. The use of ISBT formats requires a paid license. The ISBT 128 Application Specification describes 1) the critical data elements for labeling blood products, 2) the current recommendation to use Code 128 due to its high degree of security and its space-efficient design, 3) a variation of Code 128 that supports concatenation of neigh-boring symbols, and 4) the standard layout for bar codes on a blood product label. Use the bar codes below to turn concatenation on or off. Default =Off.

On

||||||||||||||||||||||||

Off*

||||||||||||||||||||||||

3.3.9.2 Code 128 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description for additional information. Minimum and Maximum lengths = 0-80. Minimum Default = 0, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

3.3.10 UPC-A

Code UPC-A On*

Default All UPC-A Settings

Code UPC-A Off

Note: To convert UPC-A bar codes to EAN-13, see Convert UPC-A to EAN-13.

3.3.10.1 UPC-A Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data or not. Default = On.

On*

Off

3.3.10.2 UPC-A Number System

The numeric system digit of a U.P.C. symbol is normally transmitted at the beginning of the scanned data, but the unit can be programmed so it will not transmit it. Default = On.

On*

||||| ||||||| || |||| | |||||||| ||| |||

Off

||| |||||||| |||| | ||||||| || |||

3.3.10.3 UPC-A Addenda

This selection adds 2 or 5 digits to the end of all scanned UPC-A data. Default = Off for both 2 Digit and 5 Digit Addenda.

2 Digit Addenda Off*

||| ||||||| || | ||| ||||| ||| ||

2 Digit Addenda On

||| |||||| || | | |||| ||||| || |||

5 Digit Addenda Off*

||| | ||||| || | |||||| ||||| | |||

5 Digit Addenda On

||| | ||||| || | | ||| ||||||| ||| ||

3.3.10.4 UPC-A Addenda Required

When Required is scanned, the scanner will only read UPC-A bar codes that have addenda. You must then turn on a 2 or 5 digit addenda. Default = Not Required.

Not Required*

||||||||||||||||||||||||||||||||

Required

||||||||||||||||||||||||||||||||

3.3.10.5 UPC-A Addenda Separator

When this feature is on, there is a space between the data from the bar code and the data from the addenda. When turned off, there is no space. Default = On.

On *

||||||||||||||||||||||||||||||||

Off

||||||||||||||||||||||||||||||||

3.3.11 UPC-E0

Most U.P.C. bar codes lead with the 0 number system.   To read these codes, use the UPC-E0 On selection. If you need to read codes that lead with the 1 number system, use UPC-E1. Default = On.

Code UPC-A On*

Default All UPC-E Settings

Code UPC-A Off

3.3.11.1 UPC-E0 Expand

UPC-E Expand expands the UPC-E code to the 12 digit, UPC-A format. Default = Off.

Off *

On

3.3.11.2 UPC-E0 Addenda Required

When Required is scanned, the scanner will only read UPC-E bar codes that have addenda. Default = Not Required.

Not Required *

Required

3.3.11.3 UPC-E0 Addenda Separator

When this feature is On, there is a space between the data from the bar code and the data from the addenda. When turned Off, there is no space. Default = On.

On*

||||||||||||||||||||||||||

Off

||||||||||||||||||||||||||

3.3.11.4 UPC-E0 Check Digit

Check Digit specifies whether the check digit should be transmitted at the end of the scanned data or not. Default = On.

On*

||||||||||||||||||||||||||

Off

||||||||||||||||||||||||||

3.3.11.5 UPC-E0 Leading Zero

This feature allows the transmission of a leading zero (0) at the beginning of scanned data. To prevent transmission, scan Off. Default = On.

On*

||||||||||||||||||||||||||

Off

||||||||||||||||||||||||||

3.3.11.6 UPC-E0 Addenda

This selection adds 2 or 5 digits to the end of all scanned UPC-E data.
Default = Off for both 2 Digit and 5 Digit Addenda.

2 Digit Addenda Off*

2 Digit Addenda On

5 Digit Addenda Off*

5 Digit Addenda On

3.3.12 UPC-E1

Most U.P.C. bar codes lead with the 0 number system. For these codes,
use UPC-E0. If you need to read codes that lead with the 1 number system,
use the UPC-E1 On selection.   Default = Off.

Off*

On

3.3.13 EAN/JAN-13

EAN/JAN-13 On*

||||||||||||||||||||

Default All EAN/JAN Settings

||||||||||||||||||||

EAN/JAN-13 Off

||||||||||||||||||||

3.3.13.1 Convert UPC-A to EAN-13

When UPC-A Converted to EAN-13 is selected, UPC-A bar codes are converted to 13 digit EAN-13 codes by adding a zero to the front. When Do not Convert UPC-A is selected, UPC-A codes are read as UPC-A.

Do not Convert UPC-A*

||||||||||||||||||||

UPC-A Converted to EAN-13

||||||||||||||||||||

3.3.13.2 EAN/JAN-13 Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data or not. Default = On.

On*

||||||||||||||||||||

Off

||||||||||||||||||||

3.3.13.3 EAN/JAN-13 Addenda

This selection adds 2 or 5 digits to the end of all scanned EAN/JAN-13 data. Default = Off for both 2 Digit and 5 Digit Addenda.

2 Digit Addenda Off*

2 Digit Addenda On

5 Digit Addenda Off*

5 Digit Addenda On

3.3.13.4 EAN/JAN-13 Addenda Required

When Required is scanned, the scanner will only read EAN/JAN-13 bar codes that have addenda. Default = Not Required.

Not Required*

Required

3.3.13.5 EAN/JAN-13 Addenda Separator

When this feature is **On**, there is a space between the data from the bar code and the data from the addenda. When turned **Off**, there is no space. Default = On.

On*

||||||||||||||||||||||||||||

Off

||||||||||||||||||||||||||||

3.3.14 EAN/JAN-8

EAN/JAN-8 On*

||||||||||||||||||||||||||||

Default All EAN/JAN-8 Settings

||||||||||||||||||||||||||||

EAN/JAN-8 Off

||||||||||||||||||||||||||||

3.3.14.1 EAN/JAN-8 Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data or not. Default = On.

On*

||||||||||||||||||||||||||||

Off

||||||||||||||||||||||||||||

3.3.14.2 EAN/JAN-8 Addenda

This selection adds 2 or 5 digits to the end of all scanned EAN/JAN-8 data. Default = Off for both 2 Digit and 5 Digit Addenda.

2 Digit Addenda Off*

2 Digit Addenda On

5 Digit Addenda Off*

5 Digit Addenda On

3.3.14.3 EAN/JAN-8 Addenda Required

When Required is scanned, the scanner will only read EAN/JAN-8 bar codes that have addenda.   Default = Not Required.

Not Required*

Required

3.3.14.4 EAN/JAN-8 Addenda Separator

When this feature is On, there is a space between the data from the bar code and the data from the addenda. When turned Off, there is no space. Default = On.

On*

Off

3.3.15 MSI

MSI On

Default All MSI Settings

MSI Off *

3.3.15.1 MSI Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description for additional information. Minimum and Maximum lengths = 4-48. Minimum Default = 4, Maximum Default = 48.

Minimum Message Length

Maximum Message Length

3.3.16 GS1 DataBar Omnidirectional

GS1 DataBar
Omnidirectional On*

Default All GS1 DataBar
Omnidirectional Settings

GS1 DataBar
Omnidirectional Off

3.3.17 GS1 DataBar Limited

GS1 DataBar Limited On*

Default All GS1 DataBar
Limited Settings

GS1 DataBar Limited Off

3.3.18 GS1 DataBar Expanded

GS1 DataBar Expanded On*

Default All GS1 DataBar
Expanded Settings

GS1 DataBar Expanded Off

3.3.18.1 GS1 DataBar Expanded Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description for additional information. Minimum and Maximum lengths = 4-74. Minimum Default = 4, Maximum Default = 74.

Minimum Message Length

Maximum Message Length

3.3.19 PDF 417

PDF 417 On*

Default All PDF 417 Settings

PDF 417 Off

3.3.19.1 PDF417 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description for additional information. Minimum and Maximum lengths = 1-2750. Minimum Default = 1, Maximum Default = 2750.

Minimum Message Length

Maximum Message Length

3.3.20 QR Code

QR Code On*

Default All QR Code Settings

QR Code Off

3.3.20.1 QR Code Message Length

Scan the bar codes below to change the message length.   Refer to Message Length Description for additional information. Minimum and Maximum lengths = 1-7089.   Minimum Default = 1, Maximum Default = 7089.

Minimum Message Length

Maximum Message Length

3.3.21 Data Matrix

Data Matrix On*

Default All Data Matrix Settings

Data Matrix Off

3.3.21.1 Data Matrix Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description for additional information. Minimum and Maximum lengths = 1-3116. Minimum Default = 1, Maximum Default = 3116.

Minimum Message Length

Maximum Message Length

3.3.22 MaxiCode

MaxiCode On

||||||||||||||||||||||||||

Default All MaxiCode Settings

||||||||||||||||||||||||||

MaxiCode Off*

||||||||||||||||||||||||||

3.3.22.1 MaxiCode Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description for additional information. Minimum and Maximum lengths = 1-150. Minimum Default = 1, Maximum Default = 150..

Minimum Message Length

||||||||||||||||||||||||||

Maximum Message Length

||||||||||||||||||||||||||

3.3.23 Chinese Sensible (Han Xin) Code

Han Xin On

Default All Han Xin Settings

Han Xin Off*

3.3.23.1 Han Xin Code Message Length

Scan the bar codes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 1-7833.   Minimum Default = 1, Maximum Default = 7833.

Minimum Message Length

Maximum Message Length

3.3.24 NEC 2 of 5

NEC 2 of 5 On*

||||||||||||||||||||||||||

Default All NEC 2 of 5
Settings

||||||||||||||||||||||||||

NEC 2 of 5 Off

||||||||||||||||||||||||||

3.3.24.1 Check digit

No Check Digit indicates that the scanner reads and transmits bar code data with or without a check digit. When Check Digit is set to Validate, but Don't Transmit, the unit only reads NEC 2 of 5 bar codes printed with a check digit, but will not transmit the check digit with the scanned data. When Check Digit is set to Validate and Transmit, the scanner only reads NEC 2 of 5 bar codes printed with a check digit, and will transmit this digit at the end of the scanned data.   Default = No Check Digit.

No Check Digit*

||||||||||||||||||||||||||

3.3.24.2 NEC 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to
Message Length Description for additional information.
Minimum and Maximum lengths = 2-80.
Minimum Default = 4, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

3.3.25 GS1-128

GS1-128 On*

||||||||||||||||||||||||||

Default All GS1-128 Settings

||||||||||||||||||||||||||

GS1-128 Off

||||||||||||||||||||||||||

3.3.25.1 GS1 128 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description for additional information.

Minimum and Maximum lengths = 1-80.

Minimum Default = 1, Maximum Default = 80.

Minimum Message Length

||||||||||||||||||||||||||

Maximum Message Length

||||||||||||||||||||||||||

3.3.26 ISBN Translate

When **On** is scanned, EAN-13 Bookland symbols are translated into their equivalent ISBN number format. Default = Off.

Off*

On

3.3.27 Codablock A

Codablock A On

Default All Codablock A Settings

Codablock A Off*

3.3.27.1 Codablock A Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description for additional information.
Minimum and Maximum lengths = 1-600.
Minimum Default = 1, Maximum Default = 600.

Minimum Message Length

Maximum Message Length

3.3.28 Codablock F

Codablock F On

||||||||||||||||||||||||||||||||

Default All Codablock F
Settings

||||||||||||||||||||||||||||||||

Codablock F Off*

||||||||||||||||||||||||||||||||

3.3.28.1 Codablock F Message Length

Scan the bar codes below to change the message length. Refer to
Message Length Description for additional information. Minimum and
Maximum lengths = 1-2048. Minimum Default = 1, Maximum Default =
2048.

Minimum Message Length

||||||||||||||||||||||||||||||||

Maximum Message Length

||||||||||||||||||||||||||||||||

3.3.29 MacroPDF 417

MacroPDF417 is an implementation of PDF417 capable of encoding very
large amounts of data into multiple PDF417 bar codes. When this selection
is enabled, these multiple bar codes are assembled into a single data string.
Default = On.

MacroPDF 417 On*

||||||||||||||||||||||||||||||||

MacroPDF 417 Off

||||||||||||||||||||||||||||||||

3.3.30 MicroPDF 417

MicroPDF 417 On

Default All MicroPDF 417 Settings

MicroPDF 417 Off*

3.3.30.1 MicroPDF 417 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description for additional information. Minimum and Maximum lengths = 1-366. Minimum Default = 1, Maximum Default = 366.

Minimum Message Length

Maximum Message Length

3.3.31 GS1 Composite Codes

Linear codes are combined with a unique 2D composite component to form a new class called GS1 Composite symbology. GS1 Composite symbologies allow for the co-existence of symbologies already in use. Default = Off.

GS1 Composite On

GS1 Composite Off*

3.3.31.1 GS1 Composite Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description for additional information. Minimum and Maximum lengths = 1-2435. Minimum Default = 1, Maximum Default = 2435.

Minimum Message Length

Maximum Message Length

3.3.32 TCIF Linked Code 39

This code is a composite code since it has a Code 39 linear component and a MicroPDF417 stacked code component. All bar code readers are capable of reading the Code 39 linear component. The MicroPDF417 component can only be decoded if TLC39 On is selected. The linear component may be decoded as Code 39 even if TLC39 is off. Default = Off.

TCIF Linked Code 39 On

TCIF Linked Code 39 Off*

3.3.33 Aztec Code

Aztec Code On*

Default All Aztec Code Settings

Aztec Code Off

3.3.30.1 Aztec Code Message Length

Scan the bar codes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 1-3832. Minimum Default = 1, Maximum Default = 3832.

Minimum Message Length

Maximum Message Length

3.4 2D

3.4.1 Postal Codes - 2D

The following lists the possible 2D postal codes, and 2D postal code combinations that are allowed. Only one 2D postal code selection can be active at a time.   If you scan a second 2D postal code selection, the first selection is overwritten. Default = 2D Postal Codes Off.

2D Postal Codes Off

||||||||| ||| ||| ||| |||||

3.4.1.1 Single 2D Postal Codes

Australian Post On

||| ||||| ||| ||| ||||| ||| |||

British Post On

||| ||||| ||| ||| ||||||| ||| |||

Canadian Post On

||| ||||| ||| ||| ||||| ||| |||

Intelligent Mail Bar Code On

||| ||||| ||| ||| ||||| ||| |||

Japanese Post On

||| ||||| ||| ||| ||||| ||| |||

KIX Post On

||| ||||| ||| ||| ||||| ||| |||

Planet Code On

||| ||||| ||| ||| ||||| ||| |||

Postal-4i On

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

Postnet On

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

Postnet with B and B' Fields On

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

InfoMail On

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

3.4.1.2 Combination 2D Postal Codes

InfoMail and British Post   On

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

Postal-4i and Postnet with B and B' Fields On

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

Postnet and Postal-4i On

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

Planet Code and Postal-4i On

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

Postal-4i and Intelligent Mail Bar Code On

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

Planet Code, Postnet, and Postal-4i On

||||| ||| |||| ||| ||||| ||| |||| |||||

Planet Code and Postnet On

||||| |||| ||| |||| ||| ||||| |||

Planet Code, Postal-4i, and Intelligent Mail Bar Code On

||||| ||| |||| ||| |||| ||| |||||

Intelligent Mail Bar Code and Postnet with B and B' Fields On

||||| |||| ||| ||| |||| |||||

Planet Code, Postal-4i, and Postnet with B and B' Fields On

||||| ||| |||| ||| |||| ||| |||||

Postnet and Intelligent Mail Bar Code On

||||| |||| ||| |||| ||| |||||

Postal-4i, Intelligent Mail Bar Code, and Postnet with B and B' Fields On

||||| ||| |||| ||| |||| ||| |||||

Planet Code and Postnet with B and B' Fields On

||||| |||| ||| |||| ||| |||||

Planet Code, Postal-4i, Intelligent Mail Bar Code, and Postnet with B and B' Fields On

Planet Code and Intelligent Mail Bar Code On

Planet Code, Postal-4i, Intelligent Mail Bar Code, and Postnet   On

Planet Code, Postnet, and Intelligent Mail Bar Code On

Postnet, Postal-4i, and Intelligent Mail Bar Code On

Planet Code, Intelligent Mail Bar Code, and Postnet with B and B' Fields On

3.4.1.3 China Post (Hong Kong 2 of 5)

China Post (Hong Kong 2 of 5) On

Default All China Post (Hong Kong 2 of 5) Settings

China Post (Hong Kong 2 of 5) Off*

3.4.1.4 China Post (Hong Kong 2 of 5) Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

3.4.2 Korea Post

3.4.2.1 Korea Post

Korea Post On

||||||||||||||||||||||||||||||||

Default All Korea Post
Settings

||||||||||||||||||||||||||||||||

Korea Post Off*

||||||||||||||||||||||||||||||||

3.4.2.2 Korea Post Message Length

Scan the bar codes below to change the message length. Refer to
Message Length Description for additional information. Minimum and
Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 48.

Minimum Message Length

||||||||||||||||||||||||||||||||

Maximum Message Length

||||||||||||||||||||||||||||||||

Chapter 4 – Command Settings

4.1 System setting

4.1.1 Default

Scan below bar code to restore the factory setting

Factory Default

4.1.2 Display FW version / Data Format

Scan below bar code to show the current F/W & BT version

FW version

4.1.3 Show Decoder Revision

Scan the bar code below to output the decoder revision.

Show Decoder Revision

4.1.4 Power Saving

Scan below bar code for power saving.

Enabled   Disabled

4.2 Un-Pair

4.2.1 Remove the pair

Scan below bar code to remove pair

Remove Pair

4.3 Output data transmit

4.3.1 Auto mode

In this mode, when scanner is out off BT transmit range, the scanned data will be stored in the memory and transmit data automatically when back to in-range.

Auto mode*

4.3.1.1 Erase last memory entry

Scan below bar code to erase last scanned data in memory

Erased Last Memory Entry

4.3.1.2 Erase all data in buffer (Erase Memory)
Scan below bar code to erase all data in the memory

Erase Memory

Erase

4.3.1.3 Check buffer memory space
Scan below bar code to check buffer memory space

Free Memory Space

4.3.2 Wedge mode

In this mode, the data only transmit while the BT is connected

Wedge mode

4.3.3 Batch mode

In this mode, the scanned data will be stored in the memory all the time and transmit data only when BT is connected by scanned the "send batch" bar code

Batch mode

4.3.3.1 Send batch
Scan below bar code to send the stored data to host

Send Batch

4.3.3.2 Erase last memory entry
Scan below bar code to erase last scanned data in batch memory

Erase Last Memory Entry

4.3.3.3 Erase all data in batch (Erase memory)
Scan below bar code to erase all data in batch memory

Erase Memory

Erase

4.3.3.4 Free batch memory space
Scan below bar code to check batch memory space

Free Memory Space

4.4 Wireless Config

4.4.1 HID keyboard block delay

In BT HID mode, scan below bar code to set the block delay time.

10 ms

50 ms

100 ms

500 ms

1 Sec.

3 Sec.

4.4.2 HID keyboard inter-character delay

In BT HID mode, scan below bar code to set inter-character delay time.

1 ms

5 ms

10 ms

20 ms

50 ms

100 ms

4.4.3 HID keyboard Case

In BT HID mode, scan below bar code to change the alphabet case. Scan ''to lower'' barcode to output data in lower case; or scan "to upper" barcode to output data in upper case.

Auto Trace *

To Upper

To Lower

4.4.4 HID keyboard language

In BT HID mode, scan below bar code to change keyboard language.

US English	UK English	Swiss

Swedish	Norwegian	Italian

German	French	Danish

Partial ALT	Japanese (OADG109)	Spanish

ALT Mode

4.4.5 HID keyboard Numeric Keypad

In BT HID mode, scan below bar code to enable/ disable numeric keypad.

OFF

ON

4.5 Beep & Vibration

4.5.1 Trigger Click

To hear an audible click every time the scanner trigger is pressed, scan the Trigger Click On bar code below. Scan the Trigger Click Off code if you don't wish to hear the click.   (This feature has no effect on serial or automatic triggering.)   Default = Trigger Click Off.

Trigger Click Off *

Trigger Click On

4.5.2 Beeper

4.5.2.1 Good Read

Beep on Good Read (Toggle)

4.5.2.2 Connection Status

Beep on Connection Change (Toggle)

4.5.3 Beep Volume- good read

The beeper volume codes modify the volume of the beep the scan engine emits on a good read.   Default = High.

High *

Low

Medium

Mute

4.5.4 Beeper Frequency- good read

The beeper pitch codes modify the pitch (frequency) of the beep the scan engine emits on a good read.   Default = Medium.

Low (1600 Hz)

High (4200 Hz)

Medium (2700 Hz)*

4.5.5 Beeper Frequency- error

The beeper pitch codes modify the pitch (frequency) of the sound the scan engine emits when there is a bad read or error.   Default = Razz.

Razz (250 Hz) *

High (4200 Hz)

Medium (3250 Hz)

4.5.6 Beeper Duration – Good Read

The beeper duration codes modify the length of the beep the scan engine emits on a good read.   Default = Normal.

Normal Beep*

Short Beep

4.5.7 Number of Beeps – Good Read

The number of beeps of a good read can be programmed from 1 - 9. The same number of beeps will be applied to the beeper and LED in response to a good read. For example, if you program this option to have five beeps, there will be five beeps and five LED flashes in response to a good read.   The beeps and LED flashes are in sync with one another. To change the number of beeps, scan the bar code below and then scan a digit (1-9) bar code and the Save bar code on the Programming Chart inside the back cover of this manual. Default = 1.

Number of Good Read Beeps/LED Flashes

4.5.8 Good Read Delay

This sets the minimum amount of time before the scan engine can read another bar code.   Default = 0 ms (No Delay).

No Delay*

Medium Delay (1,000 ms)

Short Delay (500 ms)

Long Delay (1,500 ms)

4.5.8.1 User-Specified Good Read Delay

If you want to set your own length for the good read delay, scan the bar code below, then set the delay (from 0-30,000 milli-seconds) by scanning digits from the inside back cover, then scanning **Save** on **Programming Chart**.

User-Specified Good Read Delay

4.6 Scan mode / Parameter Selection

4.6.1 Manual Trigger Mode

When in manual trigger mode, the scanner scans until a bar code is read, or until the trigger is released.

Manual Trigger - Normal

4.6.1.1 LED Illumination

If you wish to set the illumination LED brightness, scan one of the bar codes below. This sets the LED illumination for the scan engine when the trigger is pressed. Default = High.

Note: *The LEDs are like a flash on a camera. The lower the ambient light in the room, the brighter the LEDs need to be so the scan engine can "see" the bar codes.*

High*

Medium

4.6.2   Presentation Mode

Presentation Mode uses ambient light to detect bar codes. The LED dims until a bar code is presented to the scanner, then the LED brightens to read the code. If the light level in the room is not high enough, Presentation Mode may not work properly. Scan the following bar code to program your scanner for Presentation Mode.

Presentation Mode

4.6.2.1 Idle Illumination - Presentation Mode

Scan one of the bar codes below to set the LED illumination for the scanner when it is in an idle state in Presentation Mode. Default = High.

Note: If you use one of the lower Idle Illumination settings, and there is not enough ambient light, the scanner may have difficulty detecting when a bar code is presented to it. If the scanner has difficulty "waking up" to read bar codes, you may need to set the Idle Illumination to a brighter setting.

Note: LED Illumination - Presentation Mode does not apply to Poor Quality PDF Codes or Mobile Phone Read Mode.

Low

Medium

High *

4.6.2.2 Presentation Sensitivity

Presentation Sensitivity is a numeric range that increases or decreases the scan engine's reaction time to bar code presentation. To set the sensitivity, scan the Sensitivity bar code, then scan the degree of sensitivity (from 0-20) from the inside back cover, and Save.   0 is the most sensitive setting, and 20 is the least sensitive. Default = 1.

Sensitivity

4.6.2.3 Centering

Use Centering to narrow the scan engine's field of view to make sure that when the scanner is hand-held, it reads only those bar codes intended by the user. For instance, if multiple codes are placed closely together, centering will insure that only the desired codes are read. (Centering can be used in conjunction with Aimer Delay, for the most error-free operation in applications where multiple codes are spaced closely together. Using the Aimer Delay and Centering features, the scanner can emulate the operation of older systems, such as linear laser bar code scanners.)If a bar code is not touched by a predefined window, it will not be decoded or output by the scan engine. If centering is turned on by scanning Centering On, the scan engine only reads codes that pass through the centering window you specify using the Top of Centering Window and Bottom of Centering Window bar codes.

4.6.2.4 Presentation Centering

Use Presentation Centering to narrow the scanner's field of view when it is in the stand to make sure the scanner reads only those bar codes intended by the user. For instance, if multiple codes are placed closely together, Presentation Centering will insure that only the desired codes are read.
To adjust centering when the scanner is hand-held, <u>see Centering</u>.If a bar code is not touched by a predefined window, it will not be decoded or output by the scanner. If Presentation Centering is turned on by scanning Presentation Centering On, the scanner only reads codes that pass through the centering window you specify using the Top of Presentation Centering Window, Bottom of Presentation Centering Window, Left, and Right of Presentation Centering Window bar codes. In the example below, the white box is the centering window.   The centering window has been set to 20% left, 30% right, 8% top, and 25% bottom.   Since Bar Code 1 passes through he centering window, it will be read. Bar Code 2 does not pass through the centering window, so it will not be read.

Note: *A bar code needs only to be touched by the centering window in order to be read. It does not need to pass completely through the centering window.*
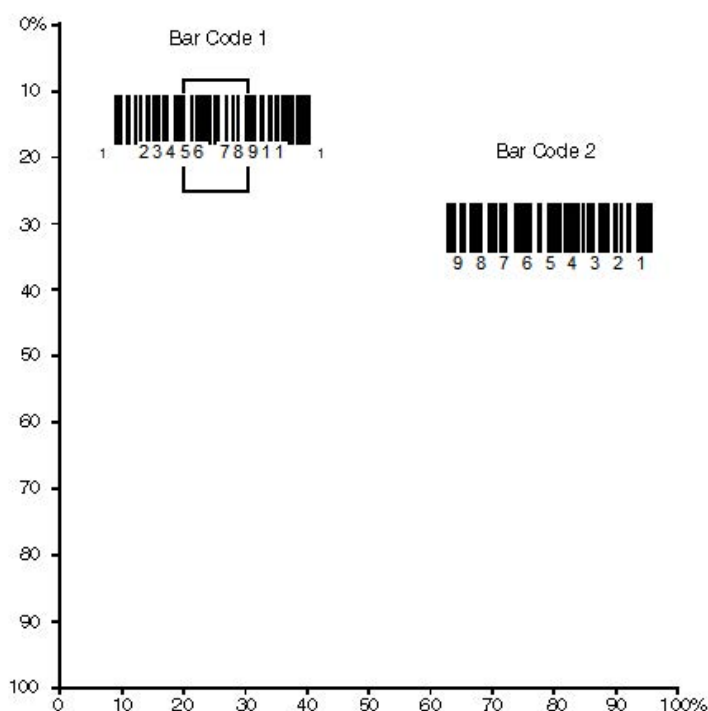
Scan Presentation Centering On, then scan one of the following bar codes to change the top, bottom, left, or right of the centering window. Then scan the percent you want to shift the centering window using digits on the inside back cover of this manual. Scan Save. Default Presentation Centering = 40% for Top and Left, 60% for Bottom and Right.

Note: *If you are taking images, you must set the In-Stand Sensor to Off. You may program a Streaming Presentation Mode (Normal, Enhanced, or Mobile Phone) you wish to use for in-stand scanning, and a Manual Trigger mode (Normal, Enhanced, or Mobile Phone) you wish to use for out-of-stand scanning. To do this, you must first scan the preferred Streaming Presentation mode (see below), then scan the Manual Trigger mode you want to use.*

Presentation Centering On

Presentation Centering Off *

Top of Presentation Centering Window

Bottom of Presentation Centering Window

Left of Presentation Centering Window

Right of Presentation Centering Window

4.6.3 Poor Quality Codes

4.6.3.1 Poor Quality 1D Codes

This setting improves the scanner's ability to read damaged or badly printed linear bar codes. When Poor Quality 1D Reading On is scanned, poor quality linear bar code reading is improved, but the scanner's snappiness is decreased, making it less aggressive when reading good quality bar codes.   This setting does not affect 2D bar code reading. Default = Poor Quality 1D Reading Off.

Poor Quality 1D Reading Off*

Poor Quality 1D Reading On

4.6.3.2 Poor Quality PDF Codes

This setting improves the scanner's ability to read damaged or badly printed PDF codes by combining information from multiple images. When Poor Quality PDF On is scanned, poor quality PDF code reading is improved, but the scanner's snappiness is decreased, making it less aggressive when reading good quality bar codes. This setting does not affect 1D bar code reading. Default = Poor Quality PDF Reading Off.

Poor Quality PDF Reading Off*

Poor Quality PDF Reading On

4.6.4 Mobile Phone Read Mode

When this mode is selected, your scanner is optimized to read bar codes from mobile phone or other LED displays. However, the speed of scanning printed bar codes may be slightly lower when this mode is enabled.

Hand Held Scanning - Mobile Phone

Presentation Scanning - Mobile Phone

4.6.5 Hands Free Time-Out

The Scan Stand and Presentation Modes are referred to as "hands free" modes. If the scanner's trigger is pulled when using a hands free mode, the scanner changes to manual trigger mode. You can set the time the scanner should remain in manual trigger mode by setting the Hands Free Time-Out. Once the time-out value is reached, (if there have been no further trigger pulls) the scanner reverts to the original hands free mode. Scan the **Hands Free Time-Out** bar code, then scan the time-out duration (from 0-300,000 milliseconds) from the inside back cover, and Save. Default = 5,000 ms.

Hands Free Time-Out

4.6.6 Reread Delay

This sets the time period before the scan engine can read the same bar code a second time. Setting a reread delay protects against accidental rereads of the same bar code. Longer delays are effective in minimizing accidental rereads. Use shorter delays in applications where repetitive bar code scanning is required. Reread Delay only works when in a [Presentation Mode](#).
Default = Medium.

Short (500 ms)

Medium (750 ms)*

Long (1000 ms)

Extra Long (2000 ms)

4.6.6.1 2D reread delay

Sometimes 2D bar codes can take longer to read than other bar codes.   If you wish to set a separate Reread Delay for 2D bar codes, scan one of the programming codes that follows. 2D Reread Delay Off indicates that the time set for Reread Delay is used for both 1D and 2D bar codes. Default = 2D Reread Delay Off.

2D Reread Delay Off*

Short (1000ms)

Medium (2000ms)

Long (3000ms)

Extra Long (4000ms)

4.6.7 Aimer Delay

The aimer delay allows a delay time for the operator to aim the scan engine before the picture is taken.   Use these codes to set the time between when the trigger is pulled and when the picture is taken. During the delay time, the aiming light will appear, but the LEDs won't turn on until the delay time is over. Default = Off.

200 milliseconds

||||||||||||||||||||||||||||

400 milliseconds

||||||||||||||||||||||||||||

Off (no delay) *

||||||||||||||||||||||||||||

4.6.7.1 Aimer Mode

This feature allows you to turn the aimer on and off.   When the Interlaced bar code is scanned, the aimer is interlaced with the illumination LEDs. Default = Interlaced.

Interlaced*

||||||||||||||||||||||||||||

Off

||||||||||||||||||||||||||||

4.6.8 No Read

With No Read turned On, the scan engine notifies you if a code cannot be read.
If No Read is turned Off, the "NR" will not appear. Default = Off.
If you want a different notation than "NR," for example, "Error," or "Bad Code,"
you can edit the output message (see Data Formatting).   The hex code for
the No Read symbol is 9C.

Off*

On

4.6.9 Video Reverse

Video Reverse is used to allow the scan engine to read bar codes that are inverted. The **Video Reverse Off** bar code below is an example of this type of bar code. Scan **Video Reverse Only** to read only inverted bar codes. Scan **Video Reverse and Standard Bar Codes** to read both types of codes.

*Note: After scanning **Video Reverse Only**, menu bar codes cannot be read. You must scan* ***Video Reverse Off** or **Video Reverse and Standard Bar Codes** in order to read menu bar codes.*

Note: Images downloaded from the unit are not reversed. This is a setting for decoding only.

Video Reverse Off *

Video Reverse and Standard Bar Codes

Video Reverse Only

4.6.10 Illumination Lights

If you want the illumination lights on while reading a bar code, scan the Lights On bar code, below. However, if you want to turn just the lights off, scan the Lights Off bar code. Default = Lights On.
Note: This setting does not affect the aimer light. The aiming light can be set using Aimer Mode.

Lights On*

||||||||||||||||||||||||||||||

Lights Off

||||||||||||||||||||||||||||||

4.6.11 CodeGate®

When CodeGate is On, the trigger is used to allow decoded data to be transmitted to the host system. The scanner remains on, scanning and decoding bar codes, but the bar code data is not transmitted until the trigger is pressed. When CodeGate is Off, bar code data is transmitted when it is decoded. Default = CodeGate Off Out-of-Stand.

CodeGate Off Out-of-Stand *

||||||||||||||||||||||||||||||

CodeGate On Out-of-Stand

||||||||||||||||||||||||||||||

4.7 Prefix/Suffix selections

4.7.1 Prefix

4.7.1.1 Add Prefix

Step 1. Scan Preamble to begin

Step 2. Scan characters from Appendix A , maximum 16.

Step 3. Scan Preamble when done.

Preamble

||||||||||||||||||||||

4.7.1.2 Clear Prefix

To clear Prefix, scan preamble barcode twice.

Preamble

||||||||||||||||||||||

4.7.2 Suffix

4.7.2.1 Add Suffix

Step 1. Scan Postamble to begin
Step 2. Scan characters from [Appendix A](#) , maximum 16.
Step 3. Scan Postamble when done.

Postamble

4.7.2.2 Clear Suffix

To clear Suffix, scan Postamble barcode twice.

Postamble

4.8 Data format Selections

4.8.1 Data Format Editor Introduction

You may use the Data Format Editor to change the scan engine's output. For example, you can use the Data Format Editor to insert characters at certain points in bar code data as it is scanned. The selections in the following pages are used only if you wish to alter the output. Default Data Format setting = None. Normally, when you scan a bar code, it is output automatically.   However, when you create a format, you must use a "send" command (see Send Commands) within the format program to output data. Multiple formats may be programmed into the scan engine. They are stacked in the order in which they are entered.   However, the following list presents the order in which formats are applied:

1. Specific Terminal ID, Actual Code ID, Actual Length
2. Specific Terminal ID, Actual Code ID, Universal Length
3. Specific Terminal ID, Universal Code ID, Actual Length
4. Specific Terminal ID, Universal Code ID, Universal Length
5. Universal Terminal ID, Actual Code ID, Actual Length
6. Universal Terminal ID, Actual Code ID, Universal Length
7. Universal Terminal ID, Universal Code ID, Actual Length
8. Universal Terminal ID, Universal Code ID, Universal Length

The maximum size of a data format configuration is 2000 bytes, which includes header information. If a bar code is read that fails the first data format, the next data format, if there is one, will be used on the bar code data. If there is no other data format, the raw data is output. If you have changed data format settings, and wish to clear all formats and return to the factory defaults, scan the **Default Data Format** code below.

Default Data Format *

4.8.2 Data Format Editor Commands

When working with the Data Format Editor, a virtual cursor is moved along your input data string. The following commands are used to both move this cursor to different positions, and to select, replace, and insert data into the final output.

4.8.2.1 Send Commands

■ **Send all characters**

F1 Include in the output message all of the characters from the input message, starting from current cursor position, followed by an insert character. Syntax = F1xx where xx stands for the insert character's hex value for its ASCII code. Refer to the ASCII Conversion Chart (Code Page 1252), for decimal, hex and character codes.

■ **Send a number of characters**

F2 Include in the output message a number of characters followed by an insert character. Start from the current cursor position and continue for "nn" characters or through the last character in the input message, followed by character "xx." Syntax = F2nnxx where nn stands for the numeric value (00-99) for the number of characters, and xx stands for the insert character's hex value for its ASCII code. Refer to the ASCII Conversion Chart (Code Page 1252), for decimal, hex and character codes.

F2 Example: Send a number of characters

1234567890ABCDEFGHIJ

Send the first 10 characters from the bar code above, followed by a carriage return. Command string:F2100D
F2 is the "Send a number of characters" command
10 is the number of characters to send
0D is the hex value for a CR
The data is output as: **1234567890**

F2 and F1 Example: Split characters into 2 lines

Send the first 10 characters from the bar code above, followed by a carriage return, followed by the rest of the characters.

Command string: **F2100DF10D**

F2 is the "Send a number of characters" command

10 is the number of characters to send for the first line

0D is the hex value for a CR

F1 is the "Send all characters" command

0D is the hex value for a CR

The data is output as:

1234567890

ABCDEFGHIJ

<CR>

■ **Send all characters up to a particular character**

F3   Include in the output message all characters from the input message, starting with the character at the current cursor position and continuing to, but not including, the search character "ss," followed by an insert character. The cursor is moved forward to the "ss" character. Syntax = F3ssxx where ss stands for the search character's hex value for its ASCII code, and xx stands for the insert character's hex value for its ASCII code. Refer to the ASCII Conversion Chart (Code Page 1252), for decimal, hex and character codes.

F3 Example: Send all characters up to a particular character

1234567890ABCDEFGHIJ

Using the bar code above, send all characters up to but not including "D," followed by a carriage return.

Command string: **F3440D**

F3 is the "Send all characters up to a particular character" command

44 is the hex value for a 'D"

0D is the hex value for a CR

The data is output as: **1234567890ABC**

■ **Send all characters up to a string**

B9 Include in the output message all characters from the input message, starting with the character at the current cursor position and continuing to, but not including, the search string "s...s." The cursor is moved forward to the beginning of the "s...s" string. Syntax = B9nnnns...s where nnnn stands for the length of the string, and s...s stands for the string to be matched. The string is made up of hex values for the characters in the string. Refer to the ASCII Conversion Chart (Code Page 1252), for decimal, hex and character codes.

B9 Example: Send all characters up to a defined string

1234567890ABCDEFGHIJ

Using the bar code above, send all characters up to but not including "AB."

Command string: **B900024142**

B9 is the "Send all characters up to a string" command

0002 is the length of the string (2 characters)

41 is the hex value for A

42 is the hex value for B

The data is output as: **1234567890**

■ **Send all characters up to a string**

E9 Include in the output message all but the last "nn" characters, starting from the current cursor position. The cursor is moved forward to one position past the last input message character included. Syntax = E9nn where nn stands for the numeric value (00-99) for the number of characters that will not be sent at the end of the message.

■ **Insert a character multiple times**

F4 Send "xx" character "nn" times in the output message, leaving the cursor in the current position. Syntax = F4xxnn where xx stands for the insert character's hex value for its ASCII code, and nn is the numeric value (00-99) for the number of times it should be sent. Refer to the ASCII Conversion Chart (Code Page 1252), for decimal, hex and character

E9 and F4 Example: Send all but the last characters, followed by 2 tabs

1234567890ABCDEFGHIJ

Send all characters except for the last 8 from the bar code above, followed by 2 tabs.

Command string: **E908F40902**

E9 is the "Send all but the last characters" command

08 is the number of characters at the end to ignore

F4 is the "Insert a character multiple times" command

09 is the hex value for a horizontal tab

02 is the number of times the tab character is sent

The data is output as: **1234567890AB <tab><tab>**

■ **Insert a string**

BA Send "ss" string of "nn" length in the output message, leaving the cursor in the current position. Syntax = BAnnnns...s where nnnn stands for the length of the string, and s...s stands for the string. The string is made up of hex values for the characters in the string. Refer to the ASCII Conversion Chart (Code Page 1252), for decimal, hex and character codes.

B9 and BA Example: Look for the string "AB" and insert 2 asterisks (**)

1234567890ABCDEFGHIJ

Using the bar code above, send all characters up to but not including "AB." Insert 2 asterisks at that point, and send the rest of the data with a carriage return after.

Command string: **B900024142BA00022A2AF10D**

B9 is the "Send all characters up to a string" command

0002 is the length of the string (2 characters)

41 is the hex value for A

42 is the hex value for B

BA is the "Insert a string" command

0002 is the length of the string to be added (2 characters)

2A is the hex value for an asterisk (*)

F1 is the "Send all characters" command

0D is the hex value for a CR

The data is output as:

1234567890**ABCDEFGHIJ

<CR>

■ **Insert symbology name**

B3   Insert the name of the bar code's symbology in the output message, without moving the cursor. Only symbologies with <u>Symbology Charts</u>. Refer to the <u>ASCII Conversion Chart (Code Page 1252)</u>, for decimal, hex and character codes.

■ **Insert bar code length**

B4   Insert the bar code's length in the output message, without moving the cursor. The length is expressed as a numeric string and does not include leading zeroes.

B3 and B4 Example: Insert the symbology name and length

1234567890ABCDEFGHIJ

Send the symbology name and length before the bar code data from the bar code above. Break up these insertions with spaces. End with a carriage return.

Command string: **B3F42001B4F42001F10D**

B3 is the "Insert symbology name" command

F4 is the "Insert a character multiple times" command

20 is the hex value for a space

01 is the number of times the space character is sent

B4 is the "Insert bar code length" command

F4 is the "Insert a character multiple times" command

20 is the hex value for a space

01 is the number of times the space character is sent

F1 is the "Send all characters" command

The data is output as:
Code128 20 1234567890ABCDEFGHIJ
<CR>

■ **Insert key strokes**

B5   Insert a key stroke or combination of key strokes. Key strokes are dependent on your keyboard. Any key can be inserted, including arrows and functions. Syntax = B5xxssnn where xx is the number of keys pressed (without key modifiers), ss is the key modifier from the table below, and nn is the key number.

Key Modifiers	
No Key Modifier	00
Shift Left	01
Shift Right	02
Alt Left	04
Alt Right	08
Control Left	10
Control Right	20

For example, B501021F inserts an "A" on a 104 key, U.S. style keyboard. B5 = the command, 01 = number of keys pressed (without the key modifier), 02 is the key modifier for Shift Right, and 1F is the "a" key. If a lower case "a" were to be inserted, B501001F would be entered.
If there are three keystrokes, the syntax would change from B5xxssnn for one keystroke to B5xxssnnssnnssnn. An example that would insert "abc" is as follows: B503001F00320030F833.
Note: Key modifiers can be added together when needed.
Example: Control Left+Shift Left = 11.

4.8.3 Data Formatter

When Data Formatter is turned Off, the bar code data is output to the host as read, including prefixes and suffixes.

Data Formatter Off

You may wish to require the data to conform to a data format you have created and saved. The following settings can be applied to your data format:

Data Formatter On, Not Required, Keep Prefix/Suffix

Scanned data is modified according to your data format, and prefixes and suffixes are transmitted.

Data Formatter On, Not Required, Drop Prefix/Suffix

Scanned data is modified according to your data format. If a data format is found for a particular symbol, those prefixes and suffixes are not transmitted. If a data format is not found for that symbol, the prefixes and suffixes are transmitted.

Data Format Required, Keep Prefix/Suffix

Scanned data is modified according to your data format, and prefixes and suffixes are transmitted. Any data that does not match your data format requirements generates an error tone and the data in that bar code is not transmitted. If you wish to process this type of bar code without generating an error tone, see Primary/Alternate Data Formats.

Data Format Required, Drop Prefix/Suffix

Scanned data is modified according to your data format. If a data format is found for a particular symbol, those prefixes and suffixes are not transmitted. Any data that does not match your data format requirements generates an error tone. If you wish to process this type of bar code without generating an error tone, see Primary/Alternate Data Formats.

Choose one of the following options.

Default = Data Formatter On, Not Required, Keep Prefix/Suffix.

Data Formatter On, Not Required, Keep Prefix/Suffix *

Data Formatter On, Not Required, Drop Prefix/Suffix

Data Format Required, Keep Prefix/Suffix

Data Format Required, Drop Prefix/Suffix

4.8.4 Primary/Alternate Data Formats

You can save up to four data formats, and switch between these formats. Your primary data format is saved under 0. Your other three formats are saved under 1, 2, and 3. To set your device to use one of these formats, scan one of the bar codes below.

Primary Data Format

Data Format 1

Data Format 2

Data Format 3

4.8.5 Show Data Format

Scan the bar code below to show current data format settings.

Data Format Settings

||||| |||| |||| ||| ||| ||| ||| ||| |||||

4.8.6 To Add a Test Code I.D. Prefix to All Symbologies

This selection allows you to turn on transmission of a Code I.D. before the decoded symbology. This action first clears all current prefixes, then programs a Code I.D. prefix for all symbologies. This is a temporary setting that will be removed when the unit is power cycled.

Add Code I.D. Prefix toAll
Symbologies (Temporary)

||| ||||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||||| ||| |||||

Appendix A –
Symbology Charts

"m" represents the AIM modifier character. Refer to International Technical Specification, Symbology Identifiers, for AIM modifier character details. Prefix/Suffix entries for specific symbologies override the universal (All Symbologies, 99) entry.
Refer to Data Editing and Data Formatting for information about using Code ID and AIM ID.

Linear Symbologies

Symbology	AIM		Honeywell	
	ID	Possible modifiers (*m*)	ID	Hex
All Symbologies				99
Codabar	]F*m*	0-1	a	61
Code 11	]H3		h	68
Code 128	]C*m*	0, 1, 2, 4	j	6A
Code 32 Pharmaceutical (PARAF)	]X0		<	3C
Code 39 (supports Full ASCII mode)	]A*m*	0, 1, 3, 4, 5, 7	b	62
TCIF Linked Code 39 (TLC39)	]L2		T	54
Code 93 and 93i	]G*m*	0-9, A-Z, a-m	i	69
EAN	]E*m*	0, 1, 3, 4	d	64
EAN-13 (including Bookland EAN)	]E0		d	64
EAN-13 with Add-On	]E3		d	64
EAN-13 with Extended Coupon Code	]E3		d	64
EAN-8	]E4		D	44
EAN-8 with Add-On	]E3		D	44
GS1				
GS1 DataBar	]e*m*	0	y	79
GS1 DataBar Limited	]e*m*		{	7B
GS1 DataBar Expanded	]e*m*		}	7D
GS1-128	]C1		I	49
2 of 5				
China Post (Hong Kong 2 of 5)	]X0		Q	51
Interleaved 2 of 5	]I*m*	0, 1, 3	e	65
Matrix 2 of 5	]X0		m	6D
NEC 2 of 5	]X0		Y	59
Straight 2 of 5 IATA	]R*m*	0, 1, 3	f	66
Straight 2 of 5 Industrial	]S0		f	66
MSI	]M*m*	0, 1	g	67
Telepen	]B*m*		t	74
UPC		0, 1, 2, 3, 8, 9, A, B, C		

Symbology	AIM		Honeywell	
	ID	Possible modifiers (*m*)	ID	Hex
UPC-A	]E0		c	63
UPC-A with Add-On	]E3		c	63
UPC-A with Extended Coupon Code	]E3		c	63
UPC-E	]E0		E	45
UPC-E with Add-On	]E3		E	45
UPC-E1	]X0		E	45

Add Honeywell Code ID				5C80
Add AIM Code ID				5C81
Add Backslash				5C5C
Batch mode quantity			5	35

2D Symbologies

Symbology	AIM		Honeywell	
	ID	Possible modifiers (*m*)	ID	Hex
All Symbologies				99
Aztec Code	]z*m*	0-9, A-C	z	7A
Chinese Sensible Code (Han Xin Code)	]X0		H	48
Codablock A	]O6	0, 1, 4, 5, 6	V	56
Codablock F	]O*m*	0, 1, 4, 5, 6	q	71
Code 49	]T*m*	0, 1, 2, 4	l	6C
Data Matrix	]d*m*	0-6	w	77
GS1	]e*m*	0-3	y	79
GS1 Composite	]e*m*	0-3	y	79
GS1 DataBar Omnidirectional	]e*m*		y	79
MaxiCode	]U*m*	0-3	x	78
PDF417	]L*m*	0-2	r	72
MicroPDF417	]L*m*	0-5	R	52
QR Code	]Q*m*	0-6	s	73
Micro QR Code	]Q*m*		s	73

Postal Symbologies

Symbology	AIM		Honeywell	
	ID	Possible modifiers (*m*)	ID	Hex
All Symbologies				99
Australian Post	]X0		A	41
British Post	]X0		B	42
Canadian Post	]X0		C	43
China Post	]X0		Q	51
InfoMail	]X0		,	2c
Intelligent Mail Bar Code	]X0		M	4D
Japanese Post	]X0		J	4A
KIX (Netherlands) Post	]X0		K	4B
Korea Post	]X0		?	3F
Planet Code	]X0		L	4C
Postal-4i	]X0		N	4E
Postnet	]X0		P	50

ASCII Conversion Chart (Code Page 1252)

In keyboard applications, ASCII Control Characters can be represented in 3 different ways, as shown below. The CTRL+X function is OS and application dependent. The following table lists some commonly used Microsoft functionality. This table applies to U.S. style keyboards. Certain characters may differ depending on your Country Code/PC regional settings.

Non-printable characters		ASCII control	Keyboard Control + ASCII (CTRL+X) Mode		
				Windows Mode Control + X Mode On (KBDCAS2)	
DEC	HEX	Char	Control + X Mode Off (KBDCAS0)	CTRL + X	CTRL + X function
0	00	NUL	Reserved	CTRL+ @	
1	01	SOH	NP Enter	CTRL+ A	Select all
2	02	STX	Caps Lock	CTRL+ B	Bold
3	03	ETX	ALT Make	CTRL+ C	Copy
4	04	EOT	ALT Break	CTRL+ D	Bookmark
5	05	ENQ	CTRL Make	CTRL+ E	Center
6	06	ACK	CTRL Break	CTRL+ F	Find
7	07	BEL	Enter / Ret	CTRL+ G	
8	08	BS	(Apple Make)	CTRL+ H	History
9	09	HT	Tab	CTRL+ I	Italic
10	0A	LF	(Apple Break)	CTRL+ J	Justify
11	0B	VT	Tab	CTRL+ K	hyperlink
12	0C	FF	Delete	CTRL+ L	list, left align
13	0D	CR	Enter / Ret	CTRL+ M	
14	0E	SO	Insert	CTRL+ N	New
15	0F	SI	ESC	CTRL+ O	Open
16	10	DLE	F11	CTRL+ P	Print
17	11	DC1	Home	CTRL+ Q	Quit
18	12	DC2	PrtScn	CTRL+ R	
19	13	DC3	Backspace	CTRL+ S	Save
20	14	DC4	Back Tab	CTRL+ T	
21	15	NAK	F12	CTRL+ U	
22	16	SYN	F1	CTRL+ V	Paste
23	17	ETB	F2	CTRL+ W	
24	18	CAN	F3	CTRL+ X	
25	19	EM	F4	CTRL+ Y	
26	1A	SUB	F5	CTRL+ Z	
27	1B	ESC	F6	CTRL+ [	
28	1C	FS	F7	CTRL+ \	
29	1D	GS	F8	CTRL+]	
30	1E	RS	F9	CTRL+ ^	
31	1F	US	F10	CTRL+ -	
127	7F	⌂	NP Enter		

ISO 2022/ISO 646 Character Replacements

Code pages define the mapping of character codes to characters.　If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host pro-gram is expecting. If this is the case, select the code page with which the bar codes were created. The data characters should then appear properly.

Code Page Selection Method/Country	Standard	Keyboard Country	Honeywell Code Page Option
United States (standard ASCII)	ISO/IEC 646-IRV	n/a	1
Automatic National Character Replacement	ISO/IEC 2022	n/a	2 (default)
Binary Code page	n/a	n/a	3
Default "Automatic National Character replacement" will select the below Honeywell Code Page options for Code128, Code 39 and Code 93.			
United States	ISO/IEC 646-06	0	1
Canada	ISO /IEC 646-121	54	95
Canada	ISO /IEC 646-122	18	96
Japan	ISO/IEC 646-14	28	98
China	ISO/IEC 646-57	92	99
Great Britain (UK)	ISO /IEC 646-04	7	87
France	ISO /IEC 646-69	3	83
Germany	ISO/IEC646-21	4	84
Switzerland	ISO /IEC 646-CH	6	86
Sweden / Finland (extended Annex C)	ISO/IEC 646-11	2	82
Ireland	ISO /IEC 646-207	73	97
Denmark	ISO/IEC 646-08	8	88
Norway	ISO/IEC 646-60	9	94
Italy	ISO/IEC 646-15	5	85
Portugal	ISO/IEC 646-16	13	92
Spain	ISO/IEC 646-17	10	90
Spain	ISO/IEC 646-85	51	91

COUNTRY	Country Keyboard	Honeywell CodePage	35	36	64	91	92	93	94	96	123	124	125	126
		Hex	23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
US	0	1	#	$	@	[	\	]	^	`	{	|	}	~
CA	54	95	#	$	à	â	ç	ê	î	ô	é	ù	è	û
CA	18	96	#	$	à	â	ç	ê	É	ô	é	ù	è	û
JP	28	98	#	$	@	[	¥	]	^	`	{	|	}	‾
CN	92	99	#	¥	@	[	\	]	^	`	{	|	}	‾
GB	7	87	£	$	@	[	\	]	^	`	{	|	}	~
FR	3	83	£	$	à	°	ç	§	^	µ	é	ù	è	¨
DE	4	84	#	$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß
CH	6	86	ù	$	à	é	ç	ê	î	ô	ä	ö	ü	û
SE/FI	2	82	#	¤	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü
DK	8	88	#	$	@	Æ	Ø	Å	^	`	æ	ø	å	~
NO	9	94	#	$	@	Æ	Ø	Å	^	`	æ	ø	å	‾
IE	73	97	£	$	Ó	É	Í	Ú	Á	ó	é	í	ú	á
IT	5	85	£	$	§	°	ç	é	^	ù	à	ò	è	ì
PT	13	92	#	$	§	Ã	Ç	Õ	^	`	ã	ç	õ	°
ES	10	90	#	$	§	¡	Ñ	¿	^	`	°	ñ	ç	~
ES	51	91	#	$	·	¡	Ñ	Ç	¿	`	¨	ñ	ç	¨

ISO / IEC 646 National Character Replacements

Full ASCII Chart

(Characters in parentheses represent Code 39 barcode printing)

NUL (%U)

SOH ($A)

STX ($B)

ETX ($C)

EOT ($D)

ENQ ($E)

ACK ($F)

BEL ($G)

BS ($H)

HT ($I)

LF ($J)

VT ($K)

FF ($L)

CR ($M)

SO ($N)

SI ($O)

DLE ($P)

DC1 ($Q)

DC2 ($R)

DC3 ($S)

DC4 ($T)

NAK ($U)

SYN ($V)

ETB ($W)

CAN ($X)

EM ($Y)

SUB ($Z)

ESC (%A)

FS (%B)

GS (%C)

RS (%D)	**)** (/I)	4
US (%E)	* (/J)	5
SP	+(/K)	6
! (/A)	, (/L)	7
" (/B)	-	8
# (/C)	.	9
$	/	: (/Z)
%	0	; (%F)
& (/F)	1	< (%G)
' (/G)	2	= (%H)
((/H)	3	> (%I)

|||||||||||||||
? (%J)

|||||||||||||||
@ (%V)

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A

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B

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C

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D

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E

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F

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G

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H

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J

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L

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M

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U

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V

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W

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X

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Y

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Z

|||||||||||||||
[(%K)

|||||||||||||||
\ (%L)

|||||||||||||||
] (%M)

|||||||||||||||
^ (%N)

|||||||||||||||
_ (%O)
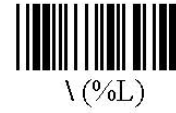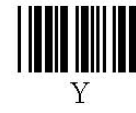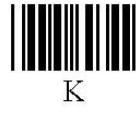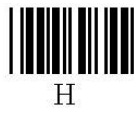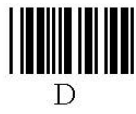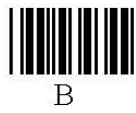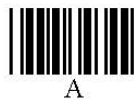
‖‖‖ barcode	‖‖‖ barcode	‖‖‖ barcode
` (%W)	k (+K)	v (+V)
‖‖‖ barcode	‖‖‖ barcode	‖‖‖ barcode
a (+A)	l (+L)	w (+W)
‖‖‖ barcode	‖‖‖ barcode	‖‖‖ barcode
b (+B)	m (+M)	x (+X)
‖‖‖ barcode	‖‖‖ barcode	‖‖‖ barcode
c (+C)	n (+N)	y (+Y)
‖‖‖ barcode	‖‖‖ barcode	‖‖‖ barcode
d (+D)	o (+O)	z (+Z)
‖‖‖ barcode	‖‖‖ barcode	‖‖‖ barcode
e (+E)	p (+P)	{ (%P)
‖‖‖ barcode	‖‖‖ barcode	‖‖‖ barcode
f (+F)	q (+Q)	| (%Q)
‖‖‖ barcode	‖‖‖ barcode	‖‖‖ barcode
g (+G)	r (+R)	} (%R)
‖‖‖ barcode	‖‖‖ barcode	‖‖‖ barcode
h (+H)	s (+S)	~ (%S)
‖‖‖ barcode	‖‖‖ barcode	‖‖‖ barcode
i (+I)	t (+T)	DEL (%T)
‖‖‖ barcode	‖‖‖ barcode	
j (+J)	u (+U)	

Function Codes for PC

‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖
F1 (%VA) (80H)	Right + (%VV) (95H)	Esc (/FK) (A2H)
‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖
F2 (%VB) (81H)	LWin Make(%VW) (96H)	Left Enter (/FL) (A3H)
‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖
F3 (%VC) (82H)	LWin Break(%VX) (97H)	Right Enter (/FM) (A4H)
‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖
F4 (%VD) (83H)	Home (/FA) (98H)	Right Ctrl (/FO) (A6H)
‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖
F5 (%VE) (84H)	End(/FB) (99H)	Shift Make (/FP) (A7H)
‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖
F6 (%VF) (85H)	Cursor Right (/FC) (9AH)	Ctrl Make (/FQ) (A8H)
‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖
F7 (%VG) (86H)	Cursor Left (/FD) (9BH)	Alt Make (/FR) (A9H)
‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖
F8 (%VH) (87H)	Cursor Up (/FE) (9CH)	Shift Break (/FS) (AAH)
‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖
F9 (%VI) (88H)	Cursor Down (/FF) (9DH)	Ctrl Break (/FT) (ABH)
‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖
F10 (%VJ) (89H)	PgUp (/FG) (9EH)	Alt Break (/FU) (ACH)
‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖
F11 (%VK) (8AH)	PgDn (/FH) (9FH)	Ins (/FW) (AEH)
‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖
F12 (%VL) (8BH)	TAB (/FI) (A0H)	Del (/FX) (AFH)
		C6=Block Delay
		C7=Double Block Delay
‖‖‖‖‖‖‖‖‖	‖‖‖‖‖‖‖‖‖	
Right - (%VU) (94H)	Back Tab (/FJ) (A1H)	

Appendix B – Programming Charts

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Save

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Discard

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Reset

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