
VEGA Area Imager V-1020/V-1020BT Handheld Bar code Scanner



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User's Installation and Configuration Manual

Scantech-ID VEGA

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Introduction

VEGA is a cutting-edge gun-type barcode scanner which is designed specifically for retail market. To the brand new series of **VEGA**, we add on more user-friendly functions with detachable cable that makes it more easily to be operated by the customers.

Speaking of the performance, this scanner supports middle to long range operation. According to specification, **VEGA** supports the reading depth up to 440 mm, scan rate is up to 200 scans / per second in linear emulation or 56 images / per second in 2D mode.

The new **VEGA** scanner has most modern design with the decorative cover display on the top of the scanner that will enhance the looks of the checkout counter in the retail market. This magnificent design allowed end-users to display their product information or any relevant commercial message in the cover display. This advanced mechanical design truly creates a win-win solution for both POS retail systems and consumers.

In short, **VEGA** is absolutely a high performance gun-type scanner, which provides the customer with the most cost-effective solution in the market. It is perfectly suitable and definitely the best choice for any retailers using POS environment.

Quality and Durability

The **VEGA** comes with the same top quality as all other Scantech-ID products. So at a very competitive price the same quality and performance of more expensive products is available. Due to the high MTBF times of every component a long and service free operation time is secured.

Connectivity

The **VEGA** is available into interface types, RS232 interface, USB interface and also with Bluetooth technology, so there is always a solution to connect the Vega to your POS system.

Chapter 1 Product Safety

1.1 SAFETY & CAUTION

1. Please read the following safety statement carefully.
2. Please preserve this user manual for reference sometime.
3. Before cleaning the *VEGA*, the users must cut off all AC power. Do not use liquid or spray type of detergent to clean the *VEGA*. Please use dampish cotton cloth to clean the *VEGA*.
4. The outlet must set nearby the *VEGA* for connecting power easily.
5. Keep the *VEGA* dry to avoid short circuit.
6. During installation you must fix the equipment at solid table to avoid damage caused by falling.
7. Before inserting power please ensure the voltage is healthy to the equipment.
8. For safety please tie wire well and don't put anything on the wire.
9. If you don't use this equipment for long time, please cut off the power to avoid damage from surge power.
10. Don't spray any liquid on this scanner because it may cause a fire or short circuit.
11. Please do not open the equipment. For safety only the qualified serviceman can open the equipment.
12. If there are the following situations please contact with the qualified serviceman to check this equipment.
 - (a) The damage of wire or pin of power supply.
 - (b) Some Liquid infiltrate into the equipment.
 - (c) The equipment has been exposed to wet environment.
 - (d) The equipment can't work well.
 - (e) The equipment has any obvious damage, making the *VEGA* working abnormally.
13. Don't storage the *VEGA* at the temperature lower than -20°C (-4°F) or higher than +70°C (158°F) to avoid any damage.

1.2 FCC WARNING

This equipment complies with the requirements in Part 15 of FCC.

Any operation must comply with the conditions below:

- (a) The equipment will not cause any severe interference.
- (b) The equipment can avoid any interference from environment.

Warning!



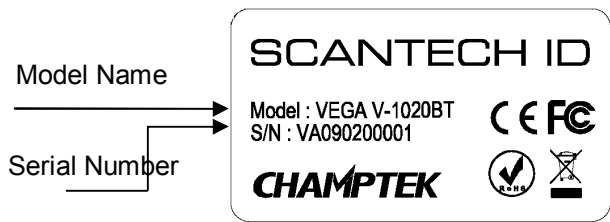
Statement:

This product is classified as A class product.

In environment this product may cause some interference.

In this situation the user may do something to avoid interference.

1.3 SCANNER LABELLING



Model Name: VEGA V-1020 Area Imager
VEGA V-1020BT Area Imager Bluetooth

Serial Number: Product Serial No. (VA.....)

See Appendix F for more information in detail.

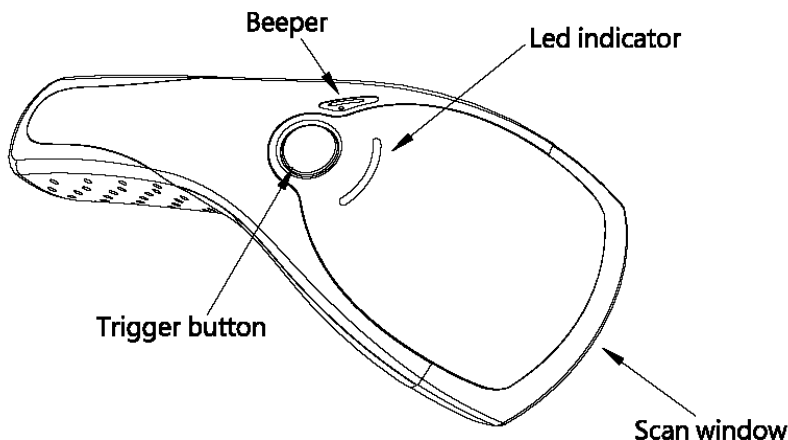
Chapter 2 General Description

2.1 USE OF THE VEGA

The *VEGA* is very ergonomic and modern designed and very user friendly. It can be connected to your POS or Host system trough a RS232 cable, KBW cable, USB cable or with Bluetooth wireless.

To read a bar code, you simply press the red trigger button and aim the beam to the bar code. But you need to position the beam so that it falls across all bars in the 1D barcodes. You will hear one beep and the green LED indicator will lights on after scan successfully.

The programming of the *VEGA* is very easy, you can set-up the *VEGA* by scan all necessary programming codes one time that meet applications, the settings are directly saved permanently, and all settings can be disabled after scan reset factory default. Thanks to the power full decoding processor, the *VEGA* can decode all major 1D codes.



Chapter 3 Installation of the VEGA V-1020

3.1 V-1020 UNPACKING

Unpack the *VEGA* as follows:

1. Take the *VEGA* and its accessories out of the box.
2. Remove the packing material.
3. Check the packing list to make sure you have received all of the items ordered.

Standard Shipment Package

- a. *VEGA* Area imager handheld bar code scanner
 - b. Power Adaptor if apply
 - c. User Manual
 - d. Communication Cable
 - e. Stand
 - f. Transparent Cover Plate
4. Visually inspect the *VEGA* and accessories for any evidence of physical damage.
 5. If anything is missing or appears to be damaged, immediately contact your dealer.

ATTENTION

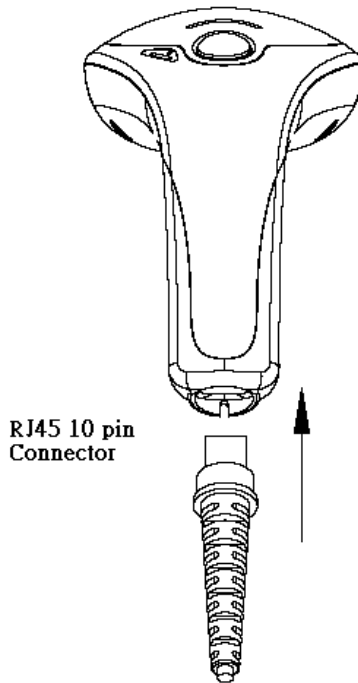
Store the packing material and boxes: it should be used whenever the *VEGA* is transported for servicing.

3.2 V-1020 MOUNTING

Once you have unpacked all components, you can start installing the **VEGA**.

Installing the **VEGA** is divided in different steps:

1. Connect the **VEGA** to the supplied communication cable (RJ45 side).
2. Connect the **VEGA** communication cable to the POS or Host system.
3. Connect the Power supply (if needed) to Power cable inlet.
4. Plug the power supply into the AC outlet.



3.3 V-1020 USB DRIVER

In case you will use the **VEGA** with USB virtual com port emulation, it is necessary to install the correct USB driver on your POS or Host system, needed for correct operation between your system and the **VEGA** scanner.

You can download this USB driver from the Scantech-ID web site:

[www. Scantech-ID.com / Support / Downloads](http://www.Scantech-ID.com/Support/Downloads)

Chapter 4 Installation of the VEGA V-1020BT

4.1 V-1020BT UNPACKING

Unpack the *VEGA* as follows:

1. Take the *VEGA* and its accessories out of the box.
2. Remove the packing material.
3. Check the packing list to make sure you have received all of the items ordered.

Standard Shipment Package

- a. *VEGA* Area Imager Handheld Bar code Scanner Bluetooth
 - b. Communication Cable (RS-232 or Keyboard wedge or USB)
 - c. Power adaptor
 - d. User Manual
 - e. Bluetooth Cradle or charger(optional)
 - f. Transparent Cover Plate
4. Visually inspect the *VEGA* and accessories for any evidence of physical damage.
 5. If anything is missing or appears to be damaged, immediately contact your dealer.

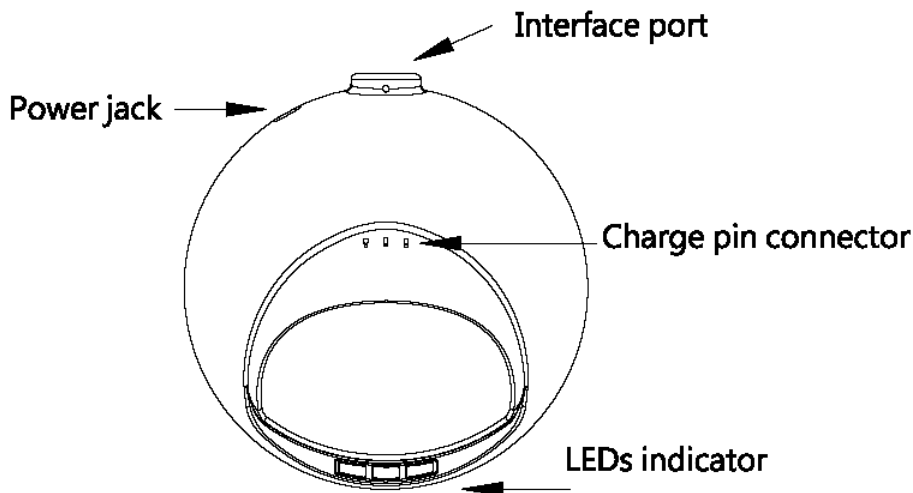
ATTENTION

Store the packing material and boxes: it should be used whenever the *VEGA* is transported for servicing.

4.2 V-1020BT CRADLE INSTALLATION

To set up your *VEGA* scanner with Bluetooth technology, please follow the next steps.

1. Connect the supplied communication cable at the bottom side of the cradle.
2. Connect the other side of the communication cable to the right connector of your POS or HOST system.
3. Plug the external power supply into the power jack on the bottom of the cradle.
4. Plug the power supply into the AC outlet.
5. Turn on your POS or HOST system.
6. Set up communication between the *VEGA* scanner and cradle.
To set up communication between *VEGA* scanner and cradle, see chapter 4.3 set up Bluetooth Communication.



4.3 V-1020BT SET UP BLUETOOTH COMMUNICATION

Before the *VEGA* scanner can be used for normal operation, Bluetooth communication must be set up between the *VEGA* scanner and cradle, Scanner client mode or to a Bluetooth application device, Scanner Server mode.

4.3.1 Pairing

Pairing refers to when a *VEGA* scanner has been linked or paired to a specific cradle by scanning that cradle's Bluetooth MAC address code, this Bluetooth MAC address code is unique for each cradle. This address code is located on the bottom side of the cradle. The pairing of a *VEGA* scanner to a cradle is one to one. Only one *VEGA* scanner can be paired to a cradle at any point in time.

4.3.2 Set up Client Mode Communication

To set-up the communication between the *VEGA* scanner and the cradle follow the next steps:

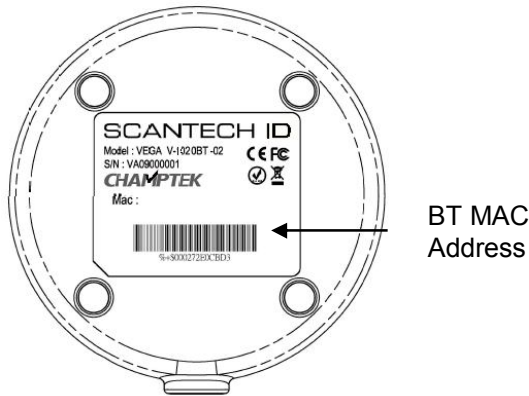
1. The *VEGA* scanner must scan "Scanner Client Mode ON/Scanner Server mode Off" barcode, to set the *VEGA* scanner in client mode.
2. Scan the Bluetooth MAC address code located on the bottom of the cradle.
3. When the Bluetooth MAC was successfully scanned, scanner will initiate with short beep sounds. Blue and red led will also blink followed by a long beep sound.
4. Wait approximately five seconds, for completing the connection process. Blue led will slow flash on scanner for connected the cradle.
5. If successful, the blue led on the cradle will be on.
6. If the connections failed the scanner indicates with shot beep sounds and the cradle with blinking blue led.

ATTENTION

The **VEGA** scanner must be charged for a minimum of 8 hours before the scanner can be placed in full operation for the first time.

The cradle red led will indicate in red when the scanner is charged. After the battery is full, The charge green light will be light. The charge green light will be off when the scanner leaving from cradle.

If the battery power of the **VEGA** is too low, the **VEGA** will indicate this with red led and beeper warning.



It is important to know that the **VEGA** scanner will only communicate with the cradle whose unique Bluetooth MAC address was the last address scanned.

If a cradle is paired with the **VEGA** scanner, another **VEGA** scanner can't be paired with that cradle until the original connection is broken.

If you pair a second **VEGA** scanner to an in use cradle, the cradle's connection to the first **VEGA** scanner will be broken and the connection re-established with the second **VEGA** scanner.

4.3.3 Set up Server Mode Communication

To set-up the communication between the **VEGA** scanner and Bluetooth application device follow the next steps.

1. The VEGA scanner must scan “Scanner Server Mode ON/Scanner Client Mode Off” barcode, to set the VEGA scanner in server mode.
2. When control the Bluetooth device to search the scanner, enter pin code (default 00:00:00:00) to setup comport.
3. When VEGA scanner is successful connected, scanner will initiate with short beep sounds. Blue and red led will also blink followed by a long beep sound. Blue led will slow flash to finish the set up.

4.3.4 Sleep Mode

The VEGA scanner is equipped with sleep mode function to save battery energy, when the VEGA scanner is not used for a 1 minute time (option 10 minute). During sleep mode all the functions and connection will be halted, after press the red trigger button the scanner can be wake up and reconnect the communication with the cradle or Bluetooth device. By scanning the according programming code, see chapter 7.

4.3.5 Memory Mode

This memory mode function is enabled when you have scanned “memory on” barcode. Scanning data is stored in the memory of the VEGA scanner. This function is disabled when you have scanned “memory off” barcode.

When scan barcode “memory read” barcode stored data will be immediately transmit to the cradle after reconnection. when scan barcode “memory clear” barcode all stored memory data will be erased. The capacity of this memory depends on the scanned data size, approximately 50 sets of data.

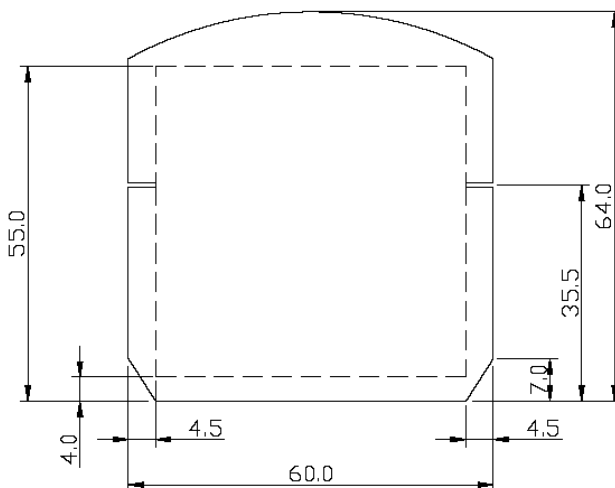
Chapter 5 Cover Display

5.1 SETUP COVER DISPLAY

The **VEGA** scanner has the opportunity to change the decorative cover display on the top of the scanner into a display that can show our own commercial message.

5.1.1 Message Format

Create your own commercial message with the following outline format, use thicker paper



5.1.2 Change Cover Display

Follow the next instruction steps to change the black Cover Display into the transparent Cover Display, so that your customers can read your own commercial message.

Step 1:
Press out the front rubber lid
toward the arrow.



Step 2:
Pull out the front rubber lid off the
main unit.



Step 3:
Press out top cover rim from the
inner lock.



Step 4:

Press out the other side of inner lock and remove the complete cover.



Step 5

Assemble transparent top cover rim into inner lock.



Step 6

Assemble another side transparent top cover rim into the inner lock.



Step 7

Insert your commercial message card into the top cover toward the arrow.

**Step 8**

Assemble the front rubber lid into the main unit toward the arrow.



Chapter 6 Configuring the VEGA

6.1 PREFACE

How to configure the *VEGA*:

The Barcode Programming Feature gives the possibility to change the *VEGA* scanner settings with use programming codes or with the Utility Tool.

6.1.1 Changing Scanner Settings with Programming Codes

You can set-up your *VEGA* by scan all necessary programming codes for parameters that meet applications. After these scans the *VEGA* is direct permanently saved. To go back to the factory default settings, just scan only programming code factory default.

In order to change the scanner settings please follow the sequence below:

1. Power-up the scanner.
2. Change scanner settings by scanning any of the programming code that meet applications.

An Example:

For changing the Baud rate to 38400 only scan the programming code that represents this.

After reading a valid programming code the scanner will give a High beep and the green led indicator will lights on.

At any moment you can stop your programming, and if needed read programming code factory default setting for set your scanner back to default.

6.1.2 Changing Scanner Settings with Utility Tool

Scantech-ID has setup this user manual with the most common used programming codes, it could be possible that you need more advanced settings to use the *VEGA* without any problems into your application.

In this case you can set-up your VEGA by using the advanced Utility Tool.

This tool can be used with the following operation systems: Windows98, Windows2000, Windows XP en Windows Vista.

This Utility Tool can be delivered on request. Please contact Scantech-ID Technical Support Department.

6.2 FACTORY DEFAULT SETTING

The VEGA is set default with the following settings:

RS-232 COMMUNICATION	DEFAULT
Baud rate	57600
Parity	None
Data bits	8
Stop bits	1
RTS/CTS	Off
Postamble	<CR+LF>
DECODER SELECTION	DEFAULT
Aztec	Off
Codabar	Off
Code 11	Off
Code 39	On
Code 93	Off
Code128	On
Data Matrix	On
EAN8 / EAN13	On (Add On Off)
EAN128 / UCC	On
Interleaved 2/5	Off
ISBN	Off
ISSN	Off
GS1 Databar	Off
GS1 Databar Expanded	Off
GS1 Databar Limited	Off
MSI / Plessey	Off
PDF417 / MicroPDF417	On / Off
UPCA / UPCE	On
CODE IDENTIFIERS	DEFAULT
Code identifiers	Off

The factory default settings are shown with * and bold in the followings sections

Chapter 7 Programming Codes

7.1 RETURN TO DEFAULT

7.1.1 Scan this programming code to set the scanner parameters to factory default:

Set the scanner to Factory Default



- Reset all configuration parameters to their factory default setting.
- After this reset you must select all required parameters that meet applications.

7.1.2 Scan this programming code to set the cradle parameters to factory default:

Note: The parameter barcode only used V-1020BT series model.

Please don't used setting for V-1020 series model.

Set the Cradle to Factory Default



- Reset all configuration parameters to their factory default setting of the cradle.
- After this reset you must select all required parameters that meet applications.

7.2 RS-232 MODE PARAMETERS

Note: These parameter barcodes only used setting RS-232 interface for V-1020.Please don't used setting for V-1020BT series model.

7.2.1 Baud rate

75



150



300



600



1200



2400



4800



19200**9600****38400****57600(*)****115200****128000****230400****256000****460800**

7.2.2 Data bits

Data Bits 7



Data Bits 8(*)



7.2.3 Stop bits

Stop Bits 1(*)



Stop Bits 2



7.2.4 Parity

None(*)



Even



Odd



7.2.5 Hardware/Software Protocols Timeout

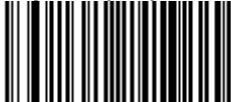
compose (ms): 500



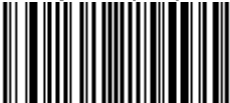
compose (ms):1000(*)



compose (ms): 1500



compose (ms): 2000



compose (ms): 2550



7.2.6 RS-232 Parameters–ENQ

Not Active(*)



Active



Default: 05H(*)



7.2.7 RS-232 Parameters–ACK

Not Active(*)



Active



Default: 06H(*)



7.2.8 RS-232 Parameters–NAK

Not Active(*)



Active



Default: 15H(*)



7.2.9 Software Protocol–XON/XOFF

Active



Not Active(*)



7.2.10 Hardware Protocol–RTS/CTS

Not Active(*)



Active,
RTS idle after each character



Active,
RTS idle after whole message



7.2.11 RS-232 Parameters-LRC

(Longitudinal Redundancy Check)

Not Active(*)



Active



7.2.12 RS-232 Parameters-Inter-Character Delay

None(*)



10 ms



20 ms



30 ms



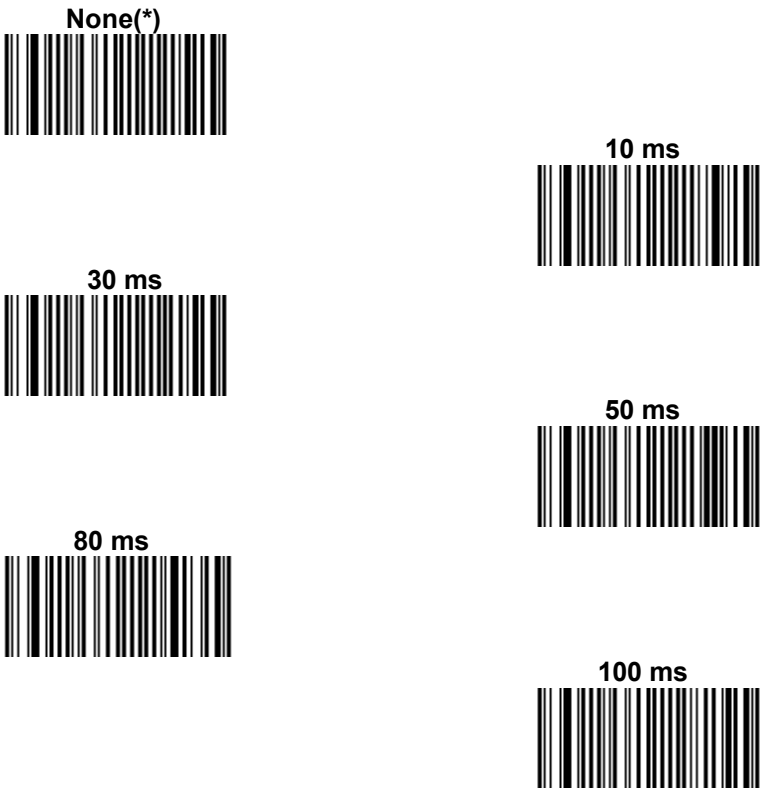
40 ms



50 ms



7.2.13 RS-232 Parameters-Inter-Message Delay



7.3 **BLUETOOTH SCANNER SETUP**

7.3.1 **Bluetooth Default Setting**



7.3.2 **Scanner Server/Client Mode**

Scanner Server Mode Barcode



Scanner Client Mode Barcode



7.3.3 **Sleep Mode**

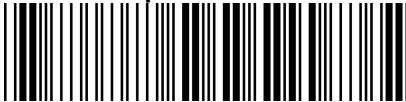
Sleep Mode 1 min. ON(*)



Sleep Mode 10min. ON



Sleep Mode OFF



7.3.4 Memory Mode

Memory Mode ON



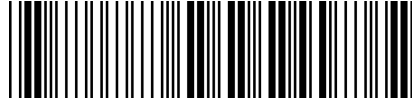
Memory Mode OFF(*)



Memory Read



Memory Clear



7.3.5 Set Scanner Pin Code Mode

**Set Default Security Code Barcode
(PINCODE = 000000)**



Set Security Code ON Barcode



Set Security OFF Barcode



7.3.6 Set Pin Code Charactor

(PINCODE max. 6 digits, 0-9and A-Z ASCII CODE)

1) Begin to Set PINCODE



2) Go to the ASCII Tables in 9.10, scan 6 labels that represents the PINCODE.

3) Complete to Set PINCODE



7.4 BLUETOOTH CRADLE SETUP

7.4.1 Set Cradle Pin Code Mode

Set Default Security Code Barcode
(PINCODE = 000000)



Set Security ON Barcode



Set Security OFF Barcode



7.4.2 Set Pin Code Barcode

(PINCODE max. 6 digits ,0-9,A-Z ASCII CODE)

1) Begin to Set PINCODE



2) Go to the ASCII Tables in 9.10, scan 6 labels that represents the PINCODE.

3) Complete to Set Scanner BT PINCODE



7.4.3 Set Cradle Interface Barcode

Note: These parameter barcodes only used setting RS-232 interface for V-1020BT series model. Please don't used setting for V-1020 series model.

Set Cradle Interface Default Barcode
(default RS232, 19200, N-8-1)



Set Cradle KB Interface Barcode



Set Cradle RS232 Interface Barcode



Set Cradle USB HID Interface Barcode



7.4.3.1 Cradle Baud rate

600





7.4.3.2 Cradle Data bits

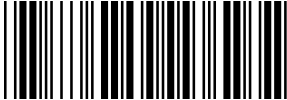


7.4.3.3 Cradle Stop bits

<1 bit>



2 bits



7.4.3.4 Cradle Parity

<None>



Even



Odd



Mark



Space



7.4.3.5 Cradle Hand shaking

RTS/CTS Enable



ACK/NAK Enable



<RTS/CTS Disable>



<ACK/NAK Disable>



XON/XOFF Enable



< XON/XOFF Disable >



7.4.3.6 Cradle Keyboard Wedge mode parameters

1. Terminal type

<IBM PC/AT,PS/2>



IBM PC/XT



IBM PS/2 25, 30



2. Upper/Lower Case

<No change>



Upper Case



Lower Case



3. Send Character by ALT Method

Enable



<Disable>



4. Select Numerical Pad

ON



<OFF>



5. Time out Between Characters

<0 ms>



5 ms



10 ms



25 ms



50ms



100ms



6. Language Selection

<US English>



UK English



Italian



French



Swedish



Hungarian



Belgium



Denmark



Spanish



German



Switzerland



Japanese



Portuguese



Turkey



Netherlands



Reserved 1



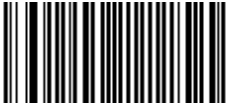
7.5 DECODING SELECTION

7.5.1 Symbologies Selection

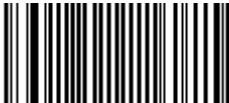
Australian Post ON



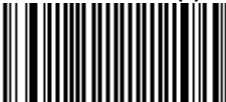
Australian Post OFF (*)



AZTEC ON



AZTEC OFF (*)



BPO ON



BPO OFF (*)



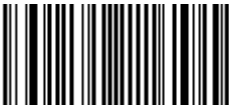
Canada Post ON



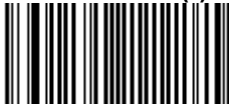
Canada Post OFF (*)



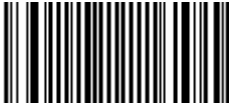
CODABAR ON



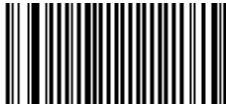
CODABAR OFF (*)



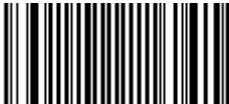
Codablock A ON



Codablock A OFF (*)



Codablock F ON



Codablock F OFF (*)

CODE 11 ON



CODE 11 OFF (*)



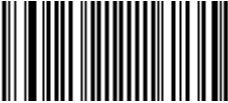
CODE 39 ON (*)



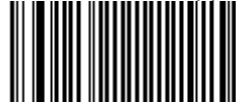
CODE 39 OFF



CODE 93 ON



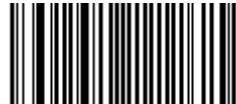
CODE 93 OFF (*)



CODE 128 ON (*)



CODE 128 OFF



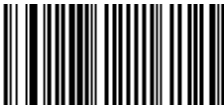
GS1-128 ON (*)



DATAMATRIX ON (*)



Dutch Post ON



EAN-8 ON (*)



EAN-13 ON (*)



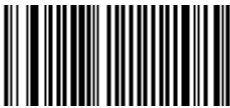
GS1-128 OFF



DATAMATRIX OFF



Dutch Post OFF (*)

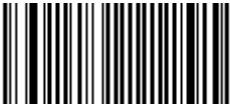


EAN-8 OFF

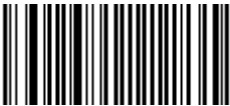


EAN-13 OFF

EAN 128 ON (*)



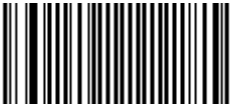
EAN 128 OFF



GS1 CC-A/B ON



GS1 CC-A/B OFF (*)



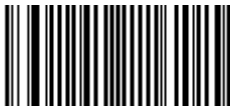
GS1 CC-C ON



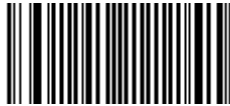
GS1 CC-C OFF (*)



GS1 DataBar-Omni ON



GS1 DataBar-Omni OFF (*)



GS1 DataBar-Limited ON



GS1 DataBar-Expanded ON



Infomail ON



INTERLEAVED 2 of 5 ON



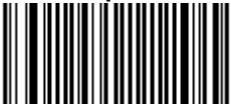
Japan Post ON



GS1 DataBar-Limited OFF (*)



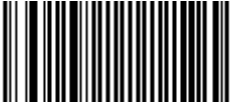
GS1 DataBar-Expanded OFF (*)



Infomail OFF (*)

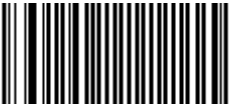


INTERLEAVED 2 of 5 OFF (*)

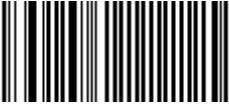


Japan Post OFF (*)

Matrix 2 of 5 ON



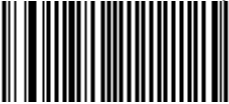
Matrix 2 of 5 OFF (*)



MaxiCode ON



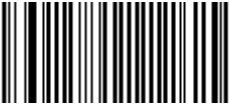
MaxiCode OFF (*)



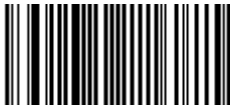
MicroPDF417 ON



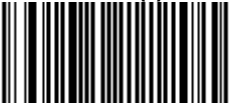
MicroPDF417 OFF (*)



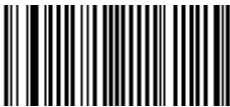
MSI ON



MSI OFF (*)



PDF417 ON (*)



Planet ON



PLESSEY ON



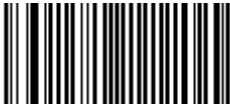
Postnet ON



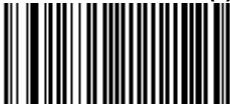
QR Code ON



PDF417 OFF



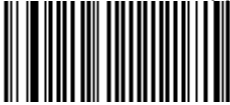
Planet OFF (*)



PLESSEY OFF (*)

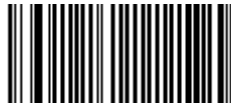
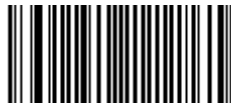
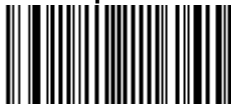
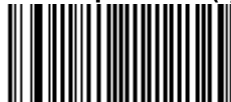


Postnet OFF (*)



QR Code OFF (*)



Standard 2 of 5 ON**Standard 2 of 5 OFF (*)****Sweden Post ON****Sweden Post OFF (*)****Telepen ON****Telepen OFF (*)****TLC 39 ON****TLC 39 OFF (*)****UPC-A ON (*)****UPC-A OFF**



UPC-E ON (*)



UPC-E OFF



Note: This step does not include codes for all support Barcode symbologies.

For a complete overview of support symbologies see appendix.

If you need programming codes for symbologies which are not available in this chapter, please contact Scantech-ID Technical Support department or use *VEGA* utility tool.

7.5.2 Disable All Symbologies.

Disable All Symbologies



- Disabled all Symbologies.
- Use the“OFF”option to disable individual symbologies.
- Does not reset individual parameters settings for each symbology. (When you enable a symbology, you recover the parameter settings stored in memory for that symbology when it was disabled – use reset factory defaults to reset all the symbology parameters to their factory default settings).

7.6 AUSTRALIAN POST SETTINGS

7.6.1 Symbology Identifier

UDSI-Default"P3"(*)



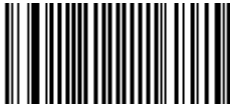
Code Mark-Default""(*)



7.7 AZTEC SETTINGS

7.7.1 Structure Append Mode

Active

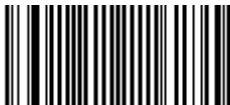


Not Active(*)

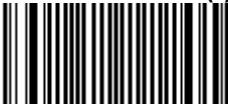


7.7.2 Aztec Runes

Active

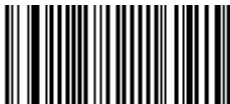


Not Active(*)

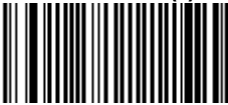


7.7.3 GS1-128 Emulation

Active

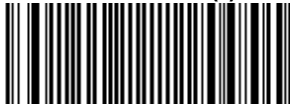


Not Active(*)

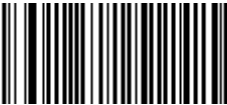


7.7.4 Symbology Identifier

UDSI-Default"D3"(*)



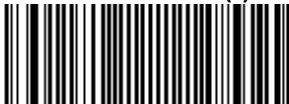
Code Mark-Default""(*)



7.8 BPO SETTINGS

7.8.1 Symbology Identifier

UDSI-Default"P2"(*)



Code Mark-Default"*(*)



7.8.2 Check Digit Transmission

Active (*)



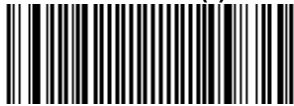
Not Active



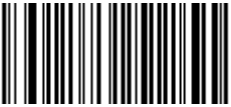
7.9 CANADA POST SETTINGS

7.9.1 Symbology Identifier

UDSI-Default"P6"(*)



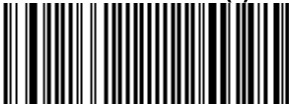
Code Mark-Default""(*)



7.10 CODABAR SETTINGS

7.10.1 Symbology Identifier

UDSI-Default"B7"(*)



Code Mark- Default"D"(*)



7.10.2 Start/Stop

Not Transmitted(*)



Transmitted-a,b,c,d



Transmitted-A,B,C,D



Transmitted-a,b,c,d/t,n,*,e



Transmitted-DC1,DC2,DC3,DC4



7.10.3 CLSI Library System

Active(insert spaces)



Not Active(*)

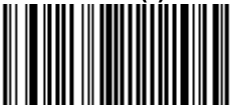


7.10.4 Check Digit Verification

Used



Not Used(*)

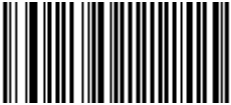


7.10.5 Check Digit Transmission

Transmitted



Not Transmitted(*)



7.10.6 Concatenation

Not Active (*)



Transmit All Codes
(Single, Concatenated)

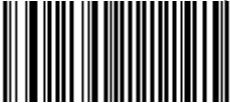


Transmit Concatenated
Codes Only



No Start/Stop

Restrictions (*)



Stop 1 = Start 2



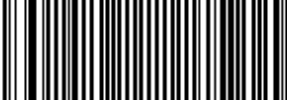
ABC
(American Blood Commission)



7.11 CODABLOCK SETTINGS

7.11.1 Symbology Identifier

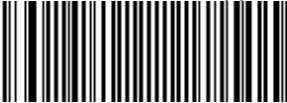
Codablock A
UDSI-Default"K0"(*)



Codablock A
Code Mark-Default""(*)



Codablock F
UDSI-Default"K1"(*)



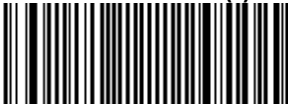
Codablock F
Code Mark-Default""(*)



7.12 CODE 11 SETTINGS

7.12.1 Symbology Identifier

UDSI-Default"C1"(*)



Code Mark-Default"***"(*)



7.12.2 Check Digits

1 Digit(*)



2 Digits



Checked and Transmitted(*)



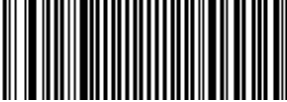
Checked but not Transmitted



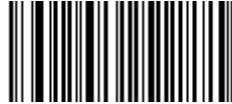
7.13 CODE 39 SETTINGS

7.13.1 Symbology Identifier

UDSI-Default"B1"(*)

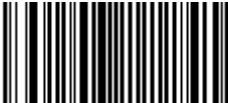


Code Mark-Default""(*)

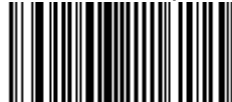


7.13.2 Format

Standard 43 Characters(*)

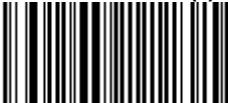


Full ASCII (Extended)



7.13.3 Start/Stop

Not Transmitted(*)



Transmitted

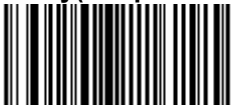


7.13.4 Accepted Characters

* Only(Standard Code 39)(*)



\$ Only(Trioptic Code 39)



\$ and *

(Standard and Trioptic Code 39)

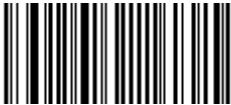


7.13.5 Check Digit Verification

Not Used (*)



Modulo 43



French CIP



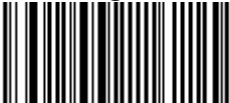
Italian CPI



Check Digit not Transmitted (*)



Check Digit Transmitted



7.13.6 Reading Range

Extended (*)



Normal



7.13.7 Reading Tolerance

High (*)



Medium



Low



7.14 CODE 93 / CODE 93I SETTINGS

7.14.1 Symbology Identifier

UDSI-Default"B6"(*)



Code Mark-Default"D"(*)



7.15 CODE 128 / GSI-128 SETTINGS

7.15.1 Symbology Identifier

UDSI-
Code 128-Default"B3"(*)



UDSI-
GS1-128-Default"C9"(*)



Code Mark-
Code 128-Default"D"(*)



Code Mark-
GS1-128-Default"D"(*)



7.15.2 GS1-128 Identifier

Include]C1 Identifier (*)



Remove]C1 Identifier



7.15.3 CIP 128 French Pharmaceutical Codes

Active



Not Active (*)



FNC1 Separator Character
(GS1-128 norms)-<GS>(1Dh)(*)



7.15.4 Reading Tolerance

High (*)



Medium



Low



7.15.5 ISBT 128

Active



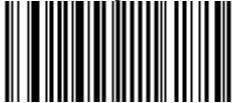
Not active (*)



Transmit Single
Codes Only (*)



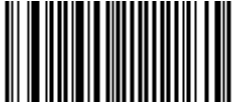
Transmit Concatenated
Codes Only



Transmit Single Codes/
Concatenated Codes



Concatenate Authorized
ISBT 128 Code Pairs Only(*)



Concatenate All
ISBT 128 Code Pairs



7.15.6 GTIN Processing For GS1-128

Active



Not Active (*)



7.15.7 Unconventional GS1-128

Active (*)



Not Active



7.16 DATAMATRIX SETTINGS

7.16.1 Symbology Identifier

UDSI-Default"D0"(*)



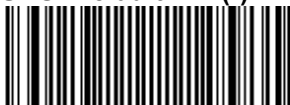
Code Mark-Default""(*)



7.17 DUTCH POST SETTINGS

7.17.1 Symbology Identifier

UDSI-Default"P4"(*)



Code Mark-Default""(*)



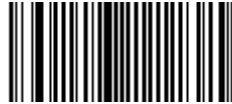
7.18 EAN /UPC PARAMETERS SETTINGS

7.18.1 Reading Type

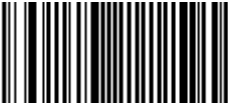
UPC-A Transmitted As EAN-13 (*)



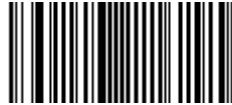
UPC-A Transmitted As UPC-A



UPC-E Transmitted As UPC-E (*)



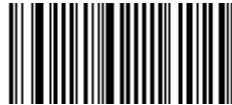
UPC-E Transmitted As UPC-A



EAN-8 Transmitted As EAN 8 (*)



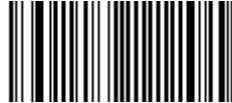
EAN-8 Transmitted As EAN-13



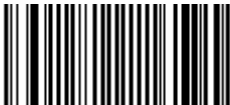
ISBN – Active



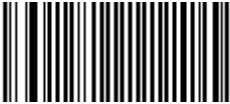
ISBN - Not Active (*)



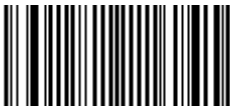
ISMN – Active



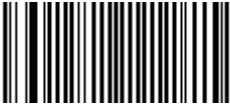
ISMN - Not Active (*)



ISSN – Active



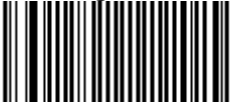
ISSN - Not Active (*)



GTIN Processing – Active



GTIN Processing - Not Active (*)

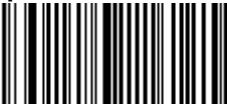


7.18.2 Supplemental Setup

**ADD-ON Digits Not Required
but Transmitted If Read (*)**



**ADD-ON Digits
Required and Transmitted**



ADD-ON 2 ON



ADD-ON 2 OFF (*)



ADD-ON 5 ON

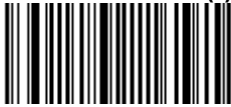


ADD-ON 5 OFF (*)

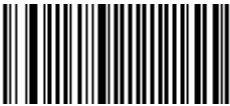


7.18.3 Check Digit Transmission

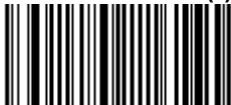
**UPC-A Check Digit
Transmission ON (*)**



**UPC-A Check Digit
Transmission OFF**



**UPC-E Check Digit
Transmission ON (*)**



**UPC-E Check Digit
Transmission OFF**



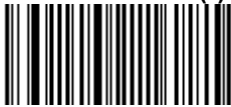
**EAN-8 Check Digit
Transmitted ON (*)**



**EAN-8 Check Digit
Transmission OFF**



**EAN-13 Check Digit
Transmitted ON (*)**



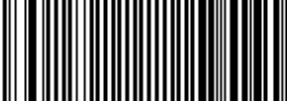
EAN-8 Check Digit

Transmission OFF

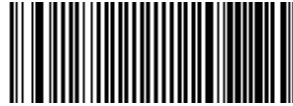


7.18.4 Symbology Identifier

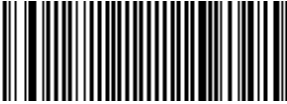
UDSI-UPC-A-Default"A0"(*)



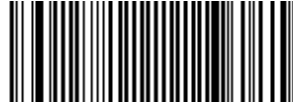
UDSI-UPC-E-Default"E0"(*)



UDSI-EAN-8-Default"FF"(*)



UDSI-EAN-13-Default"F"(*)



Code Mark-UPC-A-Default"A"(*)



Code Mark-UPC-E-Default"E"(*)



Code Mark-EAN-8-Default"FF"(*)



Code Mark-EAN-13-Default"F"(*)



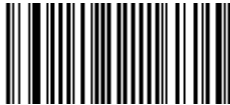
7.19 GS1 COMPOSITE SETTINGS

7.19.1 EAN/UPC Composite Message Decoding

Auto-Discriminate (*)



Always Linked



Never Linked

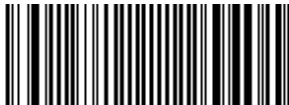


7.19.2 Symbology Identifier

UDSI-CC-A/B-Default"G0"(*)



UDSI-CC-C-Default"G1"(*)



Code Mark-CC-A/B-Default""(*)



Code Mark—CC-C-Default""*")

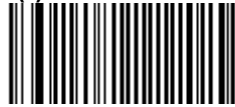


7.19.3 Linear Transmission Only

Active



Not Active (*)



7.20 GS1 DATABAR SETTINGS

7.20.1 Symbology Identifier

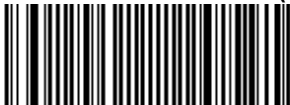
Omni-UDSI-Default"C3"(*)



Omni-Code Mark-Default""(*)



Limited-UDSI-Default"C4"(*)



Limited-Code Mark-Default""(*)



Expanded-UDSI-Default"C5"(*)



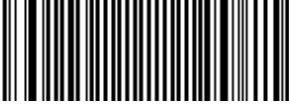
Expanded-Code Mark-Default""(*)



7.21 INFOMAIL SETTINGS

7.21.1 Symbology Identifier

UDSI-Default"P8"(*)



Code Mark-Default "*"(*)



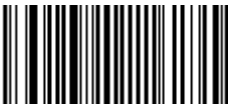
7.22 INTERLEAVED 2 OF 5 PARAMETERS

7.22.1 Check Digit Verification

Not Used (*)



Modulo 10



French CIP



Not Transmitted (*)

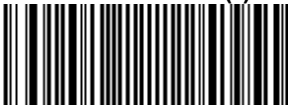


Transmitted



7.22.2 Symbology Identifier

UDSI-Default"B2"(*)



Code Mark-Default"I"(*)



7.22.3 Reading Tolerance

High (*)



Medium



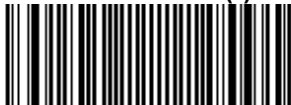
Low



7.23 JAPAN POST SETTINGS

7.23.1 Symbology Identifier

UDSI-Default"P5"(*)



Code Mark-Default"\"(*)



7.23.2 Check Digit Transmission

Active (*)



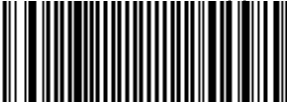
Not Active



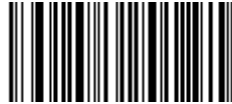
7.24 MATRIX 2 OF 5 SETTINGS

7.24.1 Symbology Identifier

UDSI-Default"B4"(*)



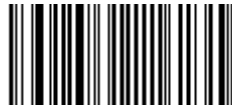
Code Mark-Default"D"(*)



Code Mark-Regular(*)



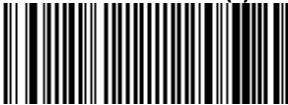
Code Mark-China Post



7.25 MAXICODE SETTINGS

7.25.1 Symbology Identifier

UDSI-Default"D2"(*)

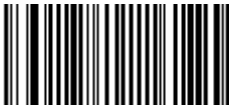


Code Mark-Default""(*)



7.25.2 Mode 0

Active



Not Active(*)

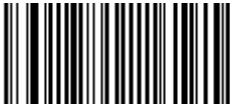


7.25.3 Header

Regular(AIM)(*)



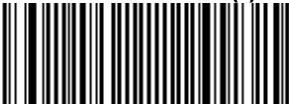
Extended



7.26 MICROPDF417 SETTINGS

7.26.1 Symbology Identifier

UDSI-Default"C8"(*)



Code Mark-Default""(*)



7.26.2 Code 128 Emulation

Active



Not Active (*)



7.27 MSI CODE PARAMETERS SETTINGS

7.27.1 Symbology Identifier

UDSI-Default"B8"(*)



Code Mark-Default"D"(*)



7.27.2 Check Digit Verification

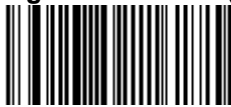
Modulo 10 (*)



Double Modulo 10



Check Digit Transmitted (*)



Check Digit Not Transmitted



7.28 PDF417 SETTINGS

7.28.1 Symbology Identifier

UDSI-Default"C7"(*)



Code Mark-Default""(*)

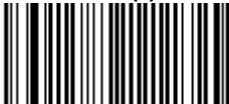


7.28.2 Irregular PDF

Active



Not Active(*)

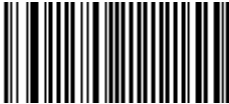


7.28.3 Control Header

Transmitted



Not Transmitted(*)



7.28.4 Optional Fields

File Name Transmitted



File Name
Not Transmitted (*)



Segment Count
Transmitted



Segment Count
Not Transmitted (*)



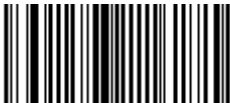
Time Stamp Transmitted



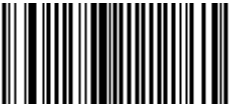
Time Stamp
Not Transmitted (*)



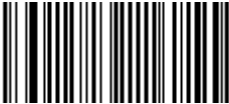
Sender Transmitted



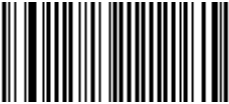
Sender Not
Transmitted (*)



Addressee Transmitted



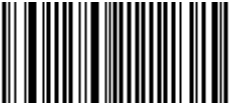
**Addressee
Not Transmitted (*)**



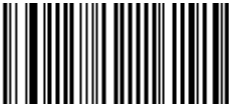
File Size Transmitted



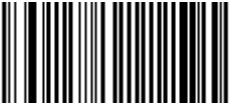
**File Size
Not Transmitted (*)**



Checksum Transmitted



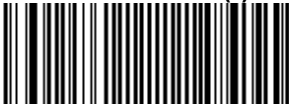
Checksum Not Transmitted (*)



7.29 PLANET SETTINGS

7.29.1 Symbology Identifier

UDSI-Default"P1"(*)



Code Mark-Default"\"(*)



7.29.2 Check Digit Transmission

Active (*)



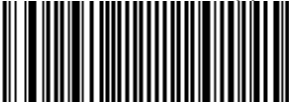
Not Active



7.30 PLESSEY CODE PARAMETERS

7.30.1 Symbology Identifier

UDSI-Default"C2"(*)



Code Mark-Default"D"(*)

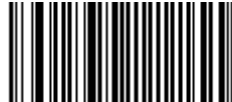


7.30.2 Check Digit Transmission

Check Digit Transmitted



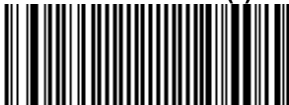
Check Digit
Not Transmitted (*)



7.31 POSTNET SETTINGS

7.31.1 Symbology Identifier

UDSI-Default"P0"(*)



Code Mark-Default"*(*)



7.31.2 Check Digit Transmission

Active(*)



Not Active



7.32 QR CODE SETTINGS

7.32.1 Model 1 Control

Active

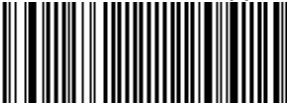


Not Active (*)



7.32.2 Symbology Identifier

UDSI-Default"D1"(*)



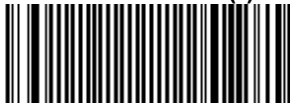
Code Mark-Default""(*)



7.33 STANDARD 2 OF 5 SETTINGS

7.33.1 Symbology Identifier

UDSI-Default"B5"(*)



Code Mark-Default"D"(*)



7.33.2 Format

Identicon
(6 start/stop bars)(*)



Computer Identics
(4 start/stop bars)



7.33.3 Check Digit Verification

Not Used (*)



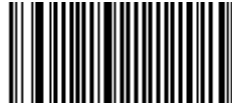
Modulo 10



Transmitted



Not Transmitted (*)



7.34 SWEDEN POST SETTINGS

7.34.1 Symbology Identifier

UDSI-Default"P7"(*)



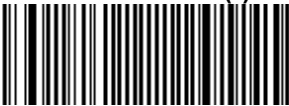
Code Mark-Default "*"(*)



7.35 TELEPEN SETTINGS

7.35.1 Symbology Identifier

UDSI-Default"C6"(*)



Code Mark-Default""(*)

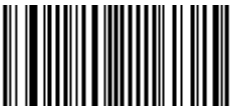


7.35.2 Format

ASCII(*)



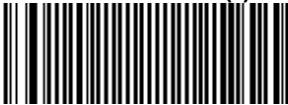
Numeric



7.36 TLC 39 SETTINGS

7.36.1 Symbology Identifier

UDSI-Default"H0"(*)



Code Mark-Default""(*)



7.36.2 Linear Transmission Only

Active



Not Active (*)



7.36.3 ECI security

10(*)



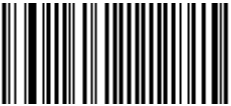
7.37 MISCELLANEOUS PARAMETERS

7.37.1 Symbology Identifier

Symbology Identifier Transmitted



Symbology Identifier
Not Transmitted(*)



With this function ON, a leading character will be added to the output string while scanning code, user may refer to the following table to know what kind of barcode is being scanned.

Please refer to the table below for matching code Symbology Identifier of codes read in.

Code Type	ID	Code Type	ID
Aztec	*	Interleaved 2 of 5	I
Codabar	D	GS1 DataBar RSS-14	*
Code 11	*	GS1 DataBar Expanded	*
Code 39	*	GS1 DataBar Limited	*
Code 93	D	MSI code	*
Code 128	D	Plessey Code	D
DataMatrix	*	PDF417	*
EAN-8	FF	MicroPDF417	*
EAN-13	F	UPC-A	A
EAN-128	D	UPC-E	E

7.38 PREAMBLES AND POSTAMBLES

7.38.1 Preamble

The scanner can be programmed to output Barcode data according the following format: [PREAMBLE STRING] [BAR CODE DATA]

Example:

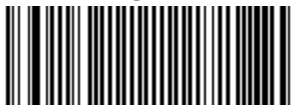
To send a <STX> in front of the barcode, scan only programming code <STX>.

As a result, the scanner will give the following barcode output:
[<STX>] [BAR CODE DATA]

Preamble None (*)



<STX>



It could be possible that you need other Preambles, in that case please use *VEGA* Utility tool or contact Scantech-ID Technical Support Department.

7.38.2 Postamble

The scanner can be programmed to output Barcode data According to the following format: [BAR CODE DATA] [POSTAMBLE STRING]

Example:

To send a <ETX> after of the Barcode, scan only programming code <ETX>.

As a result, the scanner will give the following barcode data output: [BAR CODE DATA] [<ETX>]

Postamble None



CR+LF (*)



CR



LF



<ETX>



It could be possible that you need other Postambles, in that case use **VEGA** utility Tool or contact Scantech-ID Technical Support Department.

Chapter 8 Operating Settings

8.1 SCANNING TRIGGERING

<Level>



A reading session begins (lighting and decode processing on) when beam is activated and stops when beam is deactivated.

Continuous Scanning



When the scanner is turned on a continuous reading session begins (lighting and decode processing on).

Note: The continue scanning mode doesn't support the V-1020BT.

Pulse



A reading session begins when beam is activated and stays on until a period of inactivity lasting the time specified by the timeout.

After the timeout, the scan engine turns off.

Note: The pulse mode doesn't support the V-1020BT.

Continuous + Flashing



When the scan engine is turned on, a reading session begins (no need to activate the beam).

After a period of inactivity lasting the time specified by the timeout, the scan engine starts flashing, checking for a barcode to be read.

When a barcode is detected, the lighting automatically turns on and stays on until another period of inactivity (timeout).

After the timeout the scan engine starts flashing again.

Level + Flashing



This mode allows you the switch between level and flashing mode.

When the scanner is turned on it is in flashing mode (see flashing mode for explanation).

You can automatically switch to level mode by activating the beam line.

After a period of inactivity lasting the time specified by the timeout the scan engine switches back to flashing mode.

Flashing



Flashing mode allows power up the lighting and decoding are on (no need to activate the trigger line) and after a period of inactivity lasting the time specified by the trigger timeout, the scanner starts flashing, checking for a bar code to be read.

When a bar code is detected, the lighting and decoding automatically turn on and stay on until another period of inactivity (timeout), after the timeout the scanner starts flashing again.

Autostand



This mode allows you to switch from Flashing trigger mode to Level trigger mode.

Autostand begins in flashing mode: At power up the lighting and decoding are on (no need to activate the trigger line) and after a period of inactivity lasting the time specified by the trigger timeout, the scanner starts flashing.

To switch to Level trigger mode activate the trigger line (press the trigger).

When in Level trigger mode, after a period of inactivity lasting the time specified by the trigger timeout, the scanner switches back to flashing mode.

Toggle



This mode allows lighting and decoding toggle when the trigger line is activated.

First trigger activation = lighting and decoding on, second trigger activation = lighting and decoding off.

Presentation



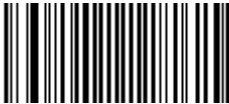
This mode allows power up lighting and decoding are on. After a period of inactivity lasting the time specified by the trigger timeout, the lighting turns off or is dimmed. When a new bar code is presented the lighting and decoding restart and stay on until another period inactivity.

8.2 TIME OUT

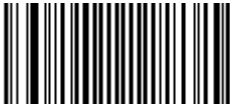
2 sec(*)



4 sec



6 sec

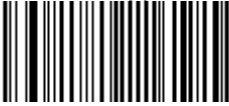


8.3 GOOD READ MODE

When active, the scan engine stops the reading session after a successful decoding.

- NOTE: this parameter is NOT used with continuous and continuous + flashing modes.

Active (*)



Not Active



8.4 BUZZER BEEP TONE

8.4.1 Beep Tone Setup

High (*)



Medium



Low



8.4.2 Good Read Beeps

One Beep (*)



Two Beeps



None



8.4.3 Beep Duration



8.4.4 Timing

During Transmission(*)



Before Transmission



After Transmission



8.5 GOOD READ DURATION

8.5.1 Good Read Led Duration

80 msec (*)



0.5 sec



1 sec



Off



8.5.2 Error Beep

On (*)



Off



8.5.3 Setup Beep

On (*)



Off



8.6 BAD READ MESSAGE SETTINGS

Default = "NOREAD" (*)



Active



Not Active (*)



Chapter 9 Imager settings

9.1 IMAGER MODE

You can set the best reading performance of your *VEGA* by adjusting certain imager parameters. To choose the best reading performance, depends on the environment, your used application and type of barcodes.

- Area mode for decode 1D and 2D barcodes.
- Linear mode for decode 1D Barcodes.

Area mode allows you to set the position of the *VEGA* in any direction regardless of the orientation of the barcode, and perform a good read on 1D and 2D barcodes.

Linear mode allows you to increase your decoding speed while scanning 1D barcodes. But, you need to position the beam so that it falls across all bars in the 1D barcode.

1D Codes Only



Standard 1D and 2D Codes



1D and 2D Codes, Bright Environment



1D and 2D Codes With
Reflective Surface













Note: The imager mode function doesn't support V-1020BT.



























Appendixes

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A.DECIMAL VALUE TABLE

0	
1	
2	
3	
4	
5	
6	
7	
8	
9	

B.ASCII TABLE

	A		B		C	
	D		E		F	
	G		H		I	
	J		K		L	
	M		N		O	
	P		Q		R	
	S		T		U	
	V		W		X	
	Y		Z			

C.READABLE SYMBOLOGIES

1D Symbolologies

Symbology	Default	Enable	Note
Codabar	Off		
Code 11	Off		
Code 39	On		
Code 93 / 93i	Off		
Code 128	On		
EAN 8 / EAN 13	On		
EAN 128 / UCC	On		
GS1 DataBar (RSS)	Off	Omni, Expanded, limited	
Interleaved 2 of 5	Off		
Industrial	Off		
ISBN	Off		
ISSN	Off		
Matrix	Off		
MSI Code	Off		
Plessey	Off		
Postal codes	Off		
Standard 2 of 5	Off		
Telepen	Off		
UPC A / UPC E	On		

2D Symbolologies

Symbology	Default	Enable
Aztec	Off	
Datamatrix	On	
PDF417	On	
MicroPDF417	Off	
Maxicode	Off	
QR	Off	
UCC/ EAN Composite	Off	

D.TECHNICAL SPECIFICATIONS

Physical Characteristics

Scanner Weight	V-1020 Approx. 133g V-1020BT Approx. 180g
Cradle Weight	Approx. 145g
Charger Weight	Approx. 135g
Material	ABS Plastic
Connector	RJ 45C 10Pins
Scanner Dimension	186.8 mm x 81.6 mm x 63.9 mm
Cradle Dimension	123.9mm x 120mm x 71.4mm

Operational

Light source	Visible Red light 650nm + 10nm
Scan rate	200scans/sec auto adaptive in linear mode. 56 images/sec auto adaptive in 2D mode.
Optical resolution levels.	752 Horizontal x 480 Vertical pixels, 256 gray
Scan angle	38° Horizontal, 25° Vertical
Interface	RS-232,USB(HID or Virtual),PS/2 KBW
Scanner	
V-1020 Indicator led	Green = good read
V-1020BT Indicator leds	Green = good read Red = low battery,alarm Blue = Bluetooth functions
Cradle Indicator leds	Green = good read Blue = Bluetooth functions Green/Red= charge full/charging

Electrical Characteristics

Operation Voltage	5 VDC \pm 5%
Current Operating	450 mA (max) @ 5 VDC
Current Standby	37 mA typical @ 5 VDC
AC transformers	5.2 VDC @ 650 mA / Input AC 100-240V

Radio Characteristics

Bluetooth Module	Bluetooth V2.0 Standard
Frequency Band	2.402GHz ~ 2.480GHz
Modulation Method	GFSK for 1Mbps
RF Output Power	Class 2 (under 4 dBm)
	Class 1 (under 20dBm)
Bluetooth distance range	Class 2 up to 10M(33")
Bluetooth distance range	Class 1 up to 100M(330")

Environmental

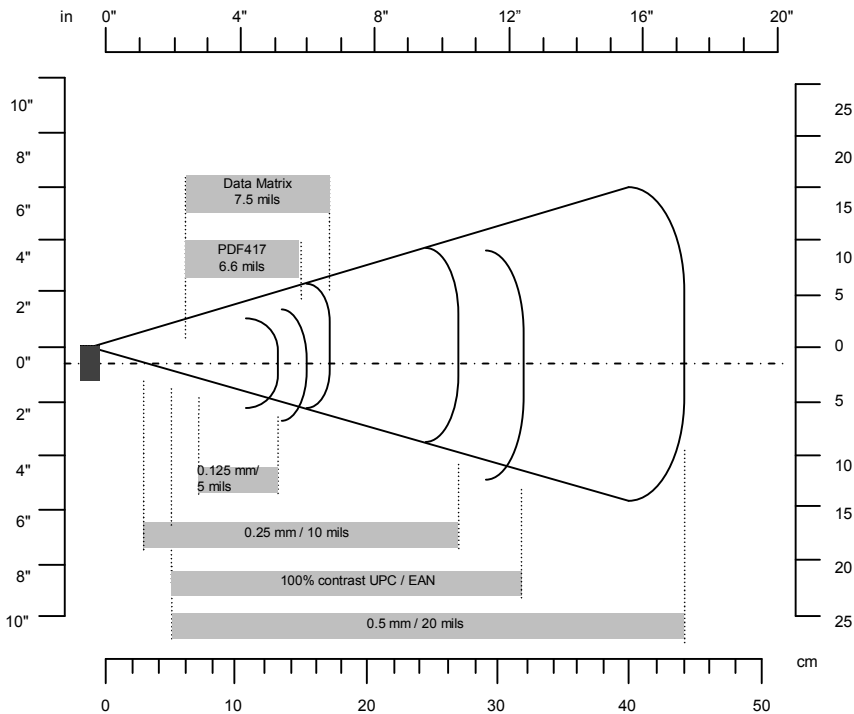
Operating Temp.	0°C to 50°C (32°F to 122°F)
Storage Temp.	-20°C to 70°C (-4°F to 158°F)
Relative Humidity	0 to 95% non-condensing
Ambient light	Works in lighting conditions from 0 to 100,000 lux

Regulatory of Compliance

FCC
CE
RoHs

E.SCAN MAP

Typical Reading Distances



VEGA Typical Reading Distance: These distances are measured in an office environment (250 lux).

VEGA Typical Reading Distances (centimeters)

Symbology	Density	Minimum Distance	Maximum Distance
Code 39	0.125 mm	7.2 cm	13.1 cm
	0.20 mm	3.8 cm	22.5 cm
	0.25 mm	3.4 cm	27 cm
	0.5 mm	5 cm	44 cm
	1 mm	8 cm	83 cm
UPC / EAN	0.33 mm	5 cm	32 cm
Data matrix	0.191 mm	6.3 cm	17.2 cm
	0.254 mm	4.8 cm	22 cm
	0.381 mm	*	29 cm
PDF417	0.16 mm	6.2 cm	15.4 cm
	0.254 mm	4.5 cm	23 cm
	0.381 mm	4 cm	37 cm

*Minimum distance depends on symbology length and scan angle.

VEGA Typical Reading Distances (inches)

Symbology	Density	Minimum Distance	Maximum Distance
Code 39	5 mils	2.8 Inch	5.1 Inch
	8 mils	1.5 Inch	8.8 Inch
	10 mils	1.3 Inch	10.5 Inch
	20 mils	2 Inch	17.2 Inch
	40 mils	3.1 Inch	2.4 Inch
UPC / EAN	13 mils	2 Inch	12.5 Inch
Data matrix	7.5 mils	2.5 Inch	6.7 Inch
	10 mils	1.9 Inch	8.6 Inch
	15 mils	*	11.3 Inch
PDF417	6.6 mils	2.4 Inch	6 Inch
	10 mils	1.8 Inch	9 Inch
	15 mils	1.6 Inch	14.4 Inch

*Minimum distance depends on symbology length and scan angle.

F.OVERVIEW MODEL NUMBERS

VEGA with Area Imager

Version with RS232 interface:

- 1. A273002 VEGA V-1020-02**
- 2. A274002 VEGA V-1020BT C2 -02**
- 3. A276002 VEGA V-1021BT C1 -02**

Version with KBW interface:

- 4. A274004 VEGA V-1020BT C2 -04**
- 5. A276004 VEGA V-1021BT C1 -04**

Version with USB (HID KBW) interface:

- 6. A273004 VEGA V-1020-04**
- 7. A274003 VEGA V-1020BT C2 -03**
- 8. A276003 VEGA V-1021BT C1 -03**

Version with USB (virtual com port) interface:

- 9. A273003 VEGA V-1020-03**

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