

# BluScan™ Barcode Scanner

Quick Start Manual



**IDTECH®**

Value through Innovation

## **FCC WARNING STATEMENT**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

## **FCC COMPLIANCE STATEMENT**

This device complies with Part 15 of the FCC Rules. Operation of this device is subject to the following conditions: this device may not cause harmful interference and this device must accept any interference received, including interference that may cause undesired operation.

## **CANADIAN DOC STATEMENT**

This digital apparatus does not exceed the Class B limits for radio noise for digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

## **CE STANDARDS**

Testing for compliance to CE requirements was performed by an independent laboratory. The unit under test was found compliant to class B limits of part 15 of the FCC rules.

## LIMITED WARRANTY

ID TECH warrants to the original purchaser for a period of 36 months from the date of invoice that this product is in good working order and free from defects in material and workmanship under normal use and service. ID TECH's obligation under this warranty is limited to, at its option, replacing, repairing, or giving credit for any product which has, within the warranty period, been returned to the factory of origin, transportation charges and insurance prepaid, and which is, after examination, disclosed to ID TECH's satisfaction to be thus defective. The expense of removal and reinstallation of any item or items of equipment is not included in this warranty. No person, firm, or corporation is authorized to assume for ID TECH any other liabilities in connection with the sales of any product. In no event shall ID TECH be liable

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# Section 1

## INTRODUCTION

The BluScan long Range Cordless Imager provides a high performance scanning with a rapid scan rate (450 scans/sec) and superior depth of field (up to 40 inches on 40-mil codes). Utilizing IDTECH's unique wireless-communication technology, the BluScan operates with a 100-meter data transmission range.

Accompanying with a long-lasting Li-ion battery pack and IP42 sealing level design, the BluScan offers the freedom of mobility of barcode scanning and outstanding durability in a wide range of applications including business offices for shipping / receiving, supermarkets, warehouses and manufacturing.

- Light Weight, Ergonomic Design
- General Purpose reader - a single device covering the broadest range of application
- Durable - without any moving parts to wear out
- Operate with a 100-meter data transmission range.
- Excellent Scanning Performance starting at 0.1mm (4 mil)
- Readable Under Sun Light
- Support GS1 databar (RSS) & CS ( Composite Symbology) barcodes
- Reliability
  - (1) Trigger: 1,000,000 times
  - (2) Cable: 320,000 times (90°)
  - (3) Drop: 1.5 meter

## **Section 2**

### **INSTALLATION AND OPERATION**

#### **Installation- Keyboard Wedge**

1. First of all, you must switch off power for the terminal/computer.
2. Disconnect the keyboard cable from the back of the terminal/computer and connect to the interface cable of the scanner.
3. Connect the interface cable of the scanner to the terminal/computer.
4. Turn the terminal/computer power on.

#### **Installation- RS-232**

1. Disconnect power to the terminal/computer.
2. Connect the external power supply (DC adapter) to the interface cable of the scanner.
3. Plug the serial connector into the serial port on the back of your computer/terminal. Tighten the two screws to secure the connector to the port.
4. Plug the power pack into power source.
5. Once the scanner has been fully connected, turn the terminal/computer power back on.

#### **Installation- USB (Simulate with keyboard wedge)**

1. Connect the USB cable between to the terminal/computer.
2. Windows will automatically detect the USB device.

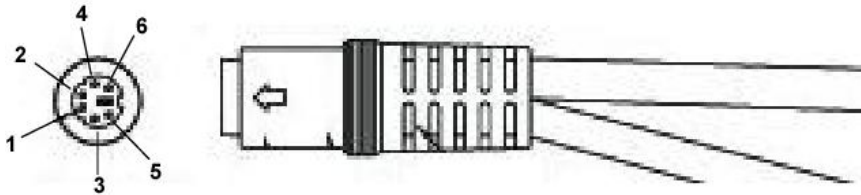
**Note:** If any of the above operation is incorrect, turn off the power immediately and checking any improper connections. Go through all above steps again.

## Pin Assignments

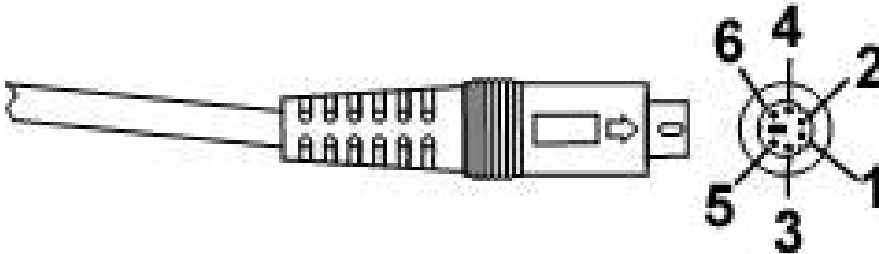
### Keyboard Wedge Connector (To Host Side):

Pin	Mini-DIN 6P Male	Mini-DIN 6P Female
1	DATA / PC	CLK / KB
2	NC	GND
3	GND	DATA / KB
4	VCC (+5V)	VCC (+5V)
5	CLK / PC	NC
6	NC	NA

### Mini-DIN 6P Female Connector

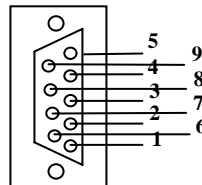


### Mini-DIN 6P Male Connector



### RS-232 DB-9F Connector (To Host Side):

Pin	Definition
1	NC
2	TXD
3	RXD
4	NC
5	GND
6	NC
7	CTS
8	RTS
9	VCC (+5V)



## Interface Selection

This cradle comes in one model and supports interfaces such as keyboard wedge, RS232 serial wedge, and USB interface. In most of the cases, simply selecting an appropriate cable with a device code will work for a specific interface.

**Interface selection:** You can change factory interface default for other type interface. By plugging different cables, setting right interface, then the cradle will be changed to another interface. However, you must make sure which cable you need.

**Keyboard/RS232/UBS Auto detection:** By setting this function, it will automatically select the Keyboard wedge or RS-232 or UBS interface for user.



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Program

















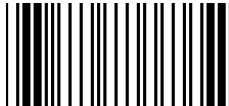
<i>Option Bar Code</i>	<i>Option</i>	<i>Alphanumeric Entry</i>
<p>*1AA*</p> <p>Interface selection</p>	Keyboard Wedge RS-232 USB Keyboard /RS232/USB Auto detection }	00 01 03 04 *

**Note:** \* -Default



\*%\$\$\*

Exit

0	 */0*	A	 */A*
1	 */1*	B	 */B*
2	 */2*	C	 */C*
3	 */3*	D	 */D*
4	 */4*	E	 */E*
5	 */5*	F	 */F*
6	 */6*		
7	 */7*		
8	 */8*		
9	 */9*		
<b>Finish</b>  */%/%*			



## Scanning mode:

**Good-read off**-The trigger button must be pressed to activate scanning. The light source of imager stops scanning when there is a successful reading or no code is decoded after the Stand-by duration elapsed.

**Momentary**-The trigger button acts as a switch. Press button to activate scanning and release button to stop scanning.

**Alternate**-The trigger button acts as a toggle switch. Press button to activate or stop scanning.

**Timeout off**-The trigger button must be pressed to activate scanning, and imager stops scanning when no code is decoded after the Stand-by duration elapsed.

**Continue**-Imager always keeps reading, and it does not matter when trigger button is pressed or duration is elapsed.

**Test only**-For test of scan performance only. It is improper to be utilized to check the accuracy of transmitted data.

**Double read timeout:** The imager will require a several times successful decoding to confirm the data when enabled. The more confirming times required, the more inhibitive miss-reading code will be shown. The Multi field scan Enable function won't be able to work if set Double confirm.

**Double confirm:** If the barcode has been scanned twice, then only the first barcode will be accepted.

**Supplement Check Counter:** It will be more reliable to read the barcode with extension (supplement) like UPCE/A or EAN-8/13, but slow down the decoding speed when this counter is set more.



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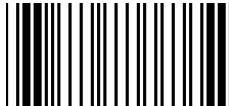
### Program

<i>Option Bar Code</i>	<i>Option</i>	<i>Alphanumeric Entry</i>
 *7AA* Scanning mode	Good-read off Momentary Alternate Timeout off Continue Test only	00 01 * 02 03 04 05
 *7AB* Stand-by duration	01-99 (second)	00-99 06 *
 *7AC* Double read timeout	01-99 (10 msec)	01-99 50 *
 *7AD* Double confirm	00-09 (00: no double confirm)	00-09 00 *
 *7AE* Supplement Check Counter	00-64 (verifications)	00-64 30 *



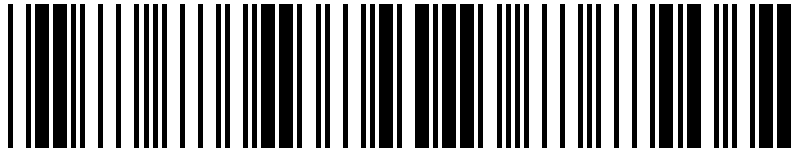
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### Exit

0	 */0*	A	 */A*
1	 */1*	B	 */B*
2	 */2*	C	 */C*
3	 */3*	D	 */D*
4	 */4*	E	 */E*
5	 */5*	F	 */F*
6	 */6*		
7	 */7*		
8	 */8*		
9	 */9*		
<b>Finish</b>  */%/%*			

## Reset cradle to factory default settings

If you wish to return the IDBA-42x3LRB imager to all the factory default settings, scan the below barcode will perform the feature. However, the cradle will be set to factory default settings at the same time.

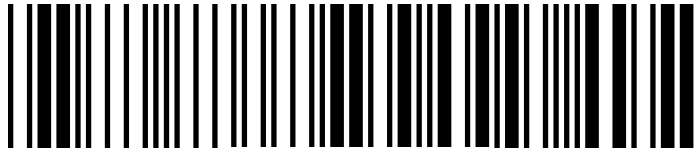


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## Firmware version list

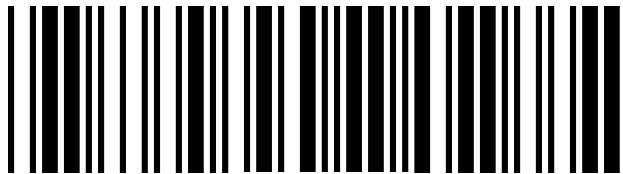
If you wish to display the firmware version, scan the Firmware version list.

### Step 1. Program



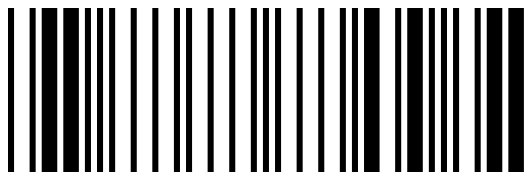
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### Step 2. Version list



\*!VR\*

### Step 3. Exit



\*%\$\$\*

## Section 3

### TROUBLESHOOTING

Troubleshooting assistance for common problems:

- **The data from the Scanner is not as expected.**

**ANS:** Please read User's Manual and follows up all instruction

- **The Scanner does not output data.**

**ANS:** Check basic operation: well connect the cable; examine that if the barcode type is enabled.

- **The Scanner does not function with the computer.**

**ANS:** Verify the interface cable is securely connected to the host computer. Consult your technical support personnel or refer to your host system manual to verify the proper connection for the imager.

- **I have a scanner with keyboard wedge, but after changing interface to RS-232, the scanner beeps continuously but I fail to reset it to factory default, what can I do?**

**ANS:** Sometimes scanners with keyboard wedge cable but set to RS-232 interface. The only solution is to find out a RS-232 cable with adapter powered, connect the scanner with scanner RS-232 cable and perform factory reset.

# Section 4

## SPECIFICATION

<b>BluScan™</b>	
Specification	
<b>Operational</b>	
Light Source	630 nm Visible Red LED
Optical System	2048 pixel CCD (Charge-coupled device)
Depth of Scan Field	Up to 600mm (CODE 39, PSC=90%, 20mils)
Scanning Width	160mm
Scan Speed	450 scans/sec
Resolution	0.1mm (4mils) Code39,PCS=90%
Print Contrast	25% or more
Scanning Angle	Front: 60° Rear: 60° Yaw: 70°
Decode Capability	Auto-discriminates all standard barcodes and some 2D symbologies including PDF-417 and GS1 DataBar Omnidirectional code; Other symbologies can be ordered optionally
Beeper Operation	7 tones or no beep
Indicator on imager	Green & Red led
<b>Mechanical</b>	
Length	164 mm
Width-handle	30 mm
Width-head	78 mm
Depth-handle	56 mm
Depth-head	35 mm
Cradle	210 (L) x 109 (W) x 51 (H) mm
Weight	Less than 250g (with a battery)
Case material	ABS (over molded at contact points)
Cushion material	Double injection
Cradle interface	RS232, Keyboard wedge, USB
<b>Electrical</b>	
Input Voltage (Cradle)	5 VDC ± 10% VDC
Power - Operating (Cradle)	550 mW
Power – Standby (Cradle)	400 mW
Current – Operating (Cradle)	110 mA
Current – Standby	80 mA

(Cradle)	
Charge Current (Cradle)	510 mA
Input Voltage (Imager)	3.4V ~ 4.2V
Power - Operating (Imager)	851 mW
Power – Standby (Imager)	67 mW
Current – Operating (Imager)	230 mA
Current – Standby (Imager)	18 mA
Current – Sleep (Imager)	2 mA
Light Level	Up to 70000 Lux
Shock (Imager)	1.5m drop onto concrete
Shock (Cradle)	90cm drop onto concrete
Contaminants	Seals to resist airborne particulate contaminants (IP42)
Ventilation	None required
<b>Programming</b>	
Programming method	Manual (Reading special barcode), Windows configuration program
Program upgrade	Enabled by built-in flash memory
Programmable characteristics	Code type selection, check digit selection Decoding option Decoding option Transmitted character delay, Header selection, trailer selection, message suffix, good read beep tone and volume, scanner trigger selection Keyboard emulation type (intermessage delay, keyboard type and keyboard language) Serial interface type (ACK/NAK, Xon/Xoff, RTS/CTS, good read LED control, start/stop bits)

**Remark.** Current are marked as RMS (Root mean square)

## Indications of BluScan™

	Status	Green LED	Red LED	Orange LED	Beeper
LED	Link established	Blink once			A special beep
	Hardware fail		Flash		
	Program download	Flash			
	Program checksum fail		Flash		
	Data transmitting	ON			High freq. Beep for 300msec
	Data trans. Fail			ON for 300msec	Error beep

	Data trans. OK	ON for 200msec			Good beep
	Low battery (<3.2V) (Trigger is pressed)			Flash	

**Cradle:**

	Status	Green LED	Red LED	Orange LED	Beeper
RF status LED	Inquiry			Blink	Beeps once a second
	Connecting			Blink	
	Link established	ON			
	Hardware fail		Flash		
	Data receiving from the scanner			ON for 0.5sec	
	Barcode data proof or transmitted				Good beep
	Data send to the host Fail				Error beep
	Program download	Flash			
	Program checksum Fail		Flash		
Battery LED	Idle				
	Charging	Blink			
	Battery full	ON			
	Battery/charger Fail		Blink		



## Section 5

### READING MODE SETTINGS

Default setting

For each barcode shown as below:

V = Enabled as default setting

- = Not supported

Empty space = Download User's Manual ;

Please visit IDTECH website : [www.idtechproducts.com](http://www.idtechproducts.com)

Code Type	Read Enable	Checksum Verification Enable	Checksum Transmission Enable	Code ID
UPC-A	V	V	V	A
UPC-E	V	V	V	E
EAN-13	V	V	V	F
EAN-8	V	V	V	FF
Code-39	V			*
Interleaved 2 of 5	V			i
Industrial 2 of 5		-	-	i
Matrix 2 of 5				B
Codabar				%
Code-128	V	V		#
Code-93		V two digits		&
Code-11		V one digit		O
MSI/Plessey		V		@
UK/Plessey		V		@
Telepen				S
Standard 2 of 5		V	V	i
China Post				t
Italian Pharmacode.				p
Code-16K		-	-	
PDF417	V	-	-	
EAN UCC Composite		-	-	RC
GS1 Databar Omnidirectional				R4
GS1 Databar Limited				RL
GS1 Databar Expanded				RX
Micro-PDF		-	-	U

## Section 6 TESTING CODES



**Full User's Manual is available for download on  
[www.idtechproducts.com](http://www.idtechproducts.com)**

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