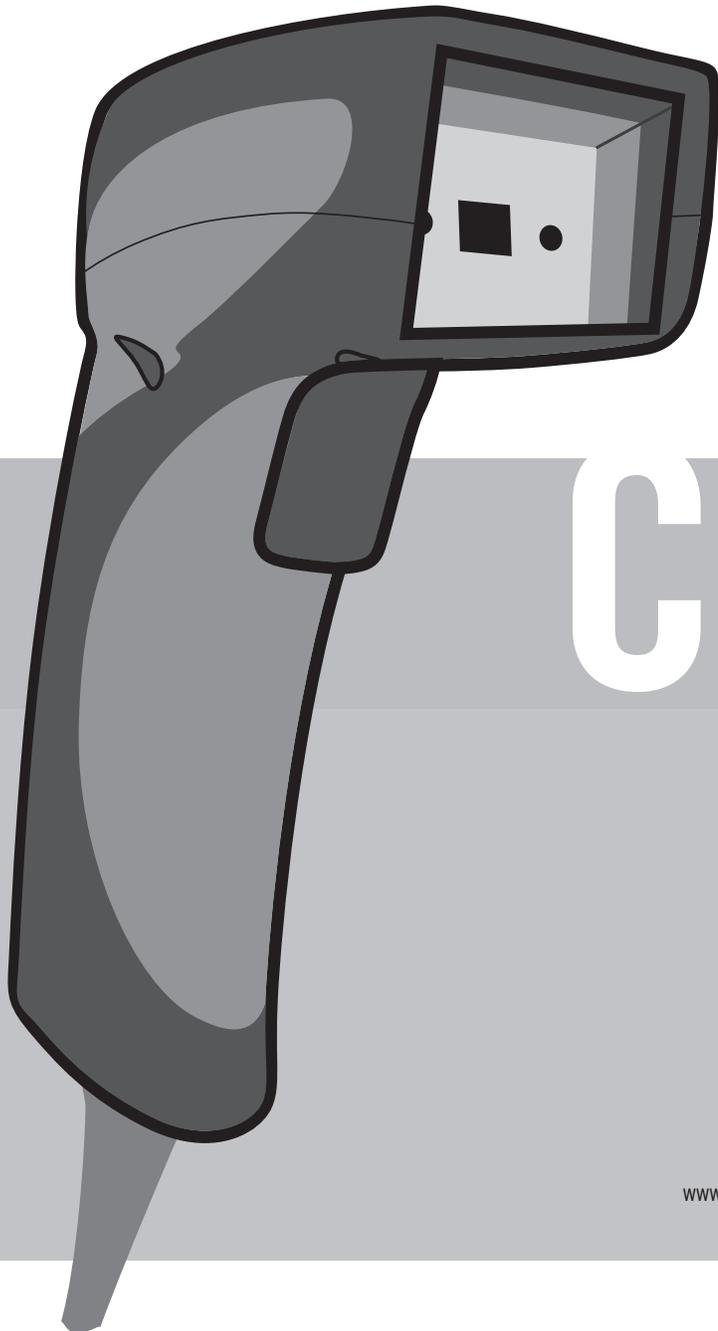# USER MANUAL
NORTH AMERICA:ENGLISH

CR6000

MANUAL VERSION 04
RELEASE DATE: NOVEMBER 2017

www.codecorp.com   Configuration Guide   YouTube.com/codecorporation

code ®

REVOLUTIONIZING BARCODE READING

Statement of Agency Compliance

The Code Reader™ 6000 (Model #: CR6022_01) has been tested for compliance with FCC regulations and was found to be compliant with all applicable FCC Rules and Regulations.

IMPORTANT NOTE: To comply with FCC RF exposure compliance requirements, this device must not be co-located or operate in conjunction with any other antenna or transmitter

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the CR6022_01 equipment.

The Code Reader 6000 has been tested for compliance to CE standards and guidelines and was found to conform to applicable CE standards, specifically the EMC requirements EN 55024, ESD EN 61000-4-2, Radiated RF Immunity EN 61000-4-3, PFMF EN 6100-4-8, EFT EN 61000-4-4, Conducted RF Immunity EN 61000-4-6, and EN 55022 Class B Radiated Emissions and Class B Conducted Emissions.

Code voids product warranty if the hard case has been opened or tampered with in any way.

External Power Supply: MFG: Group West. Model: 6UA-05-1200. Rating: 5VDC, 1.2A.

Code Reader™ 6000 User Manual

Table of Contents

CR6000
(Model #: CR6022_01)

USB 2.0 Cable

RS232 Cable
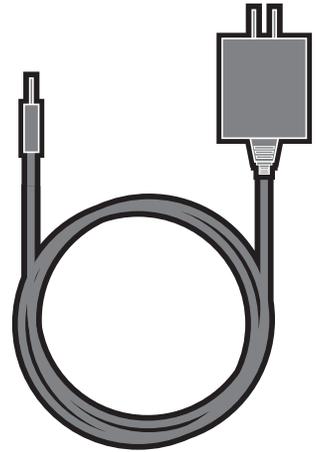
5VDC
Power Supply
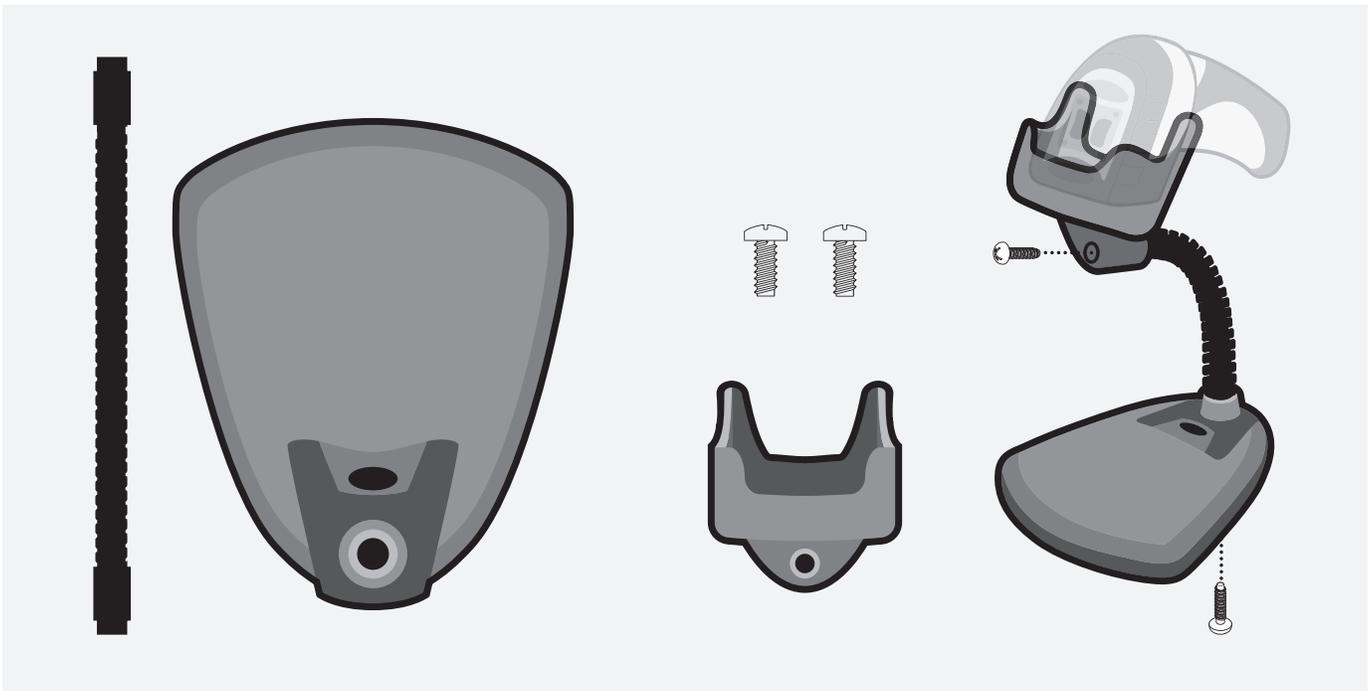
2.0 - Attaching and Detaching a Cable

3.0 - Set Up

① 10 Sec.

②

③ 2X

④
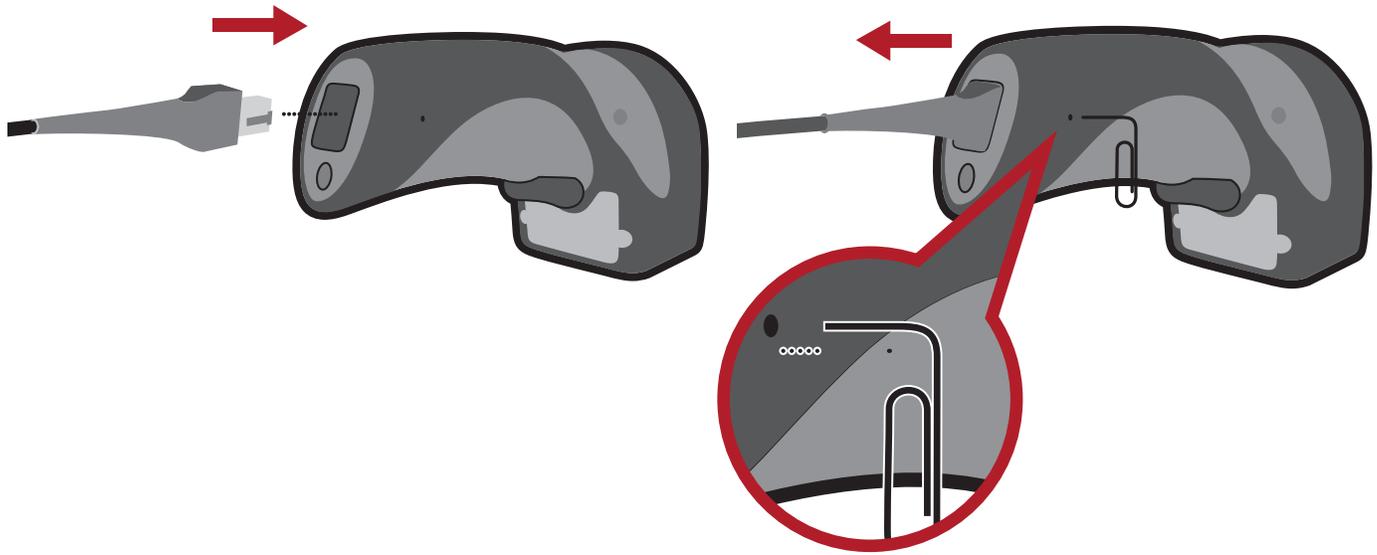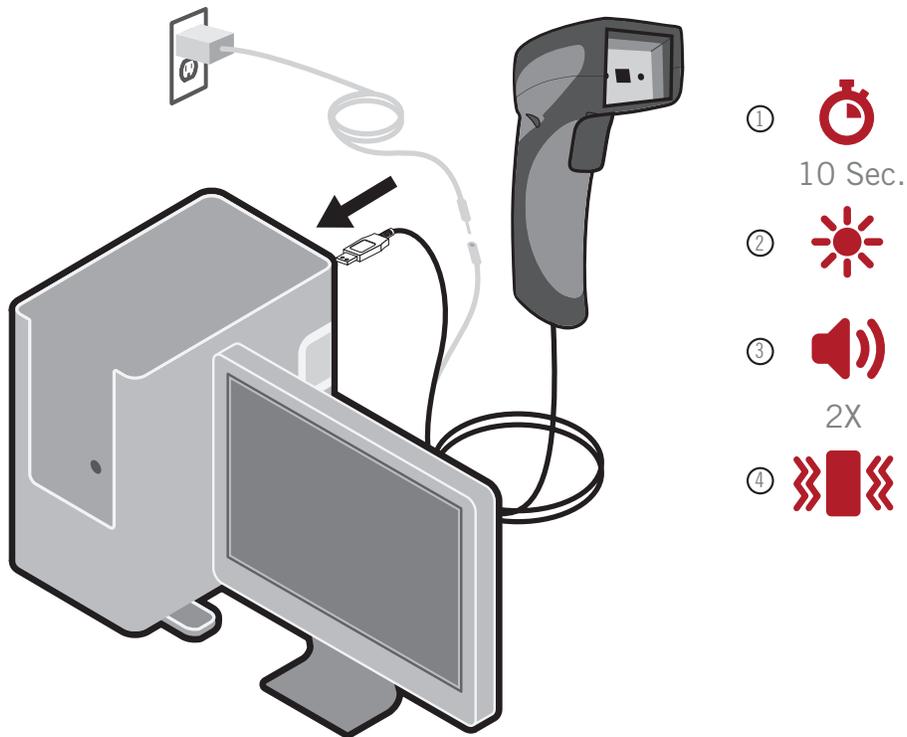
4.0 - Using a CR6000 Out of a Stand

90°

25 mm
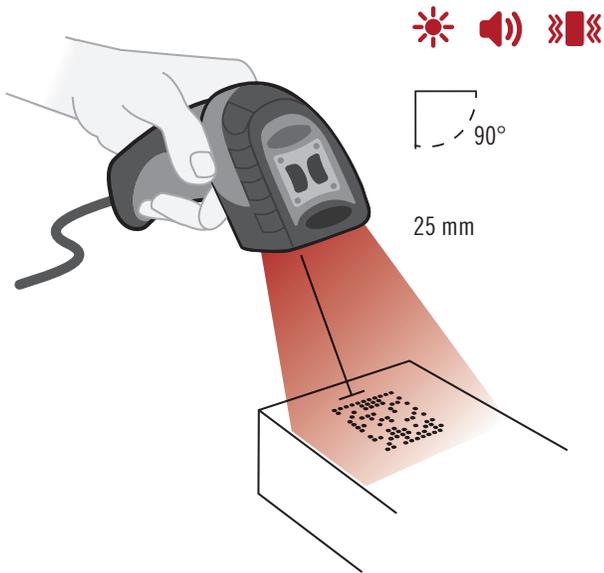
5.0 - Using a CR6000 In a Stand

90°

25 mm
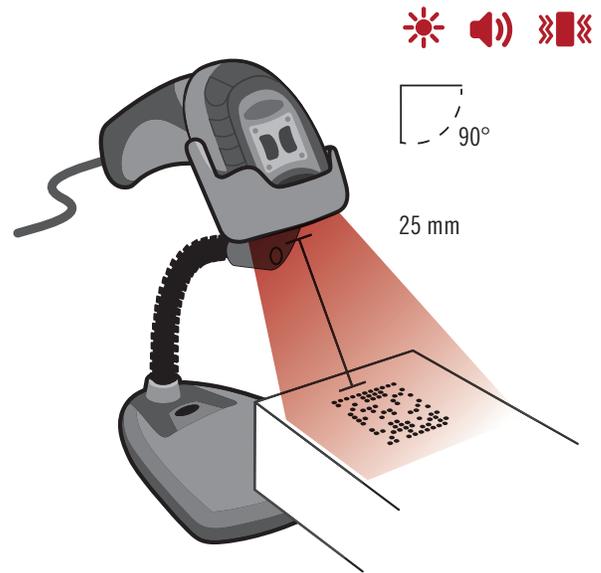
6.0 - Optimizing DPM Reading

The CR6000 reader defaults to Auto Mode. The Reading Mode automatically adjusts to optimize performance on various DPM barcodes. If your application involves only one type of DPM barcode, the CR6000 can be further enhanced by enabling the specific Reading Mode that works best for your barcode. To optimize DPM reading, please refer to the CR6000 Configuration Guide located at www.codecorp.com/files.php.

7.0 - Reading Modes and Barcode Types

Barcode reading performance will vary depending on mark and surface type. Refer to the CR6000 Configuration Guide located. To change Reading Modes, please refer to the CR6000 Configuration Guide located at www.codecorp.com/files.php.

Reading Mode	Barcode Types
Auto (Default)	Reads dot peen and laser-etched marks by automatically adjusting the illumination for optimal reading of a variety of DPM barcodes.
Dark Field	Options: 1. Reads dot peen marks at a 15-45° angle, or 2. Reads laser-etched marks at a 90° angle, or 3. Reads dot peen marks at a 15-45° angle, and laser-etched marks at a 90 angle.
Diffuse Bright	Options: 1. Reads dot peen marks at a 90° angle, or 2. Reads laser-etched marks at a 90° angle, or 3. Reads both dot peen and laser-etched marks at a 90° angle.
Direct Bright	Reads barcodes printed on paper.
Curved Surface	Reads dot peen and laser-etched marks printed on curved surfaces at a 90° angle.

8.0 - Reading Ranges

CR6000 High Contrast Label and DPM Performance		
Test Barcode	Min Inches (mm)	Max Inches (mm)
3 mil Code 39	1.0" (25 mm)	2.0" (50 mm)
7.5 mil Code 39	0.8" (20 mm)	5.9" (150 mm)
10.5 mil GS1 DataBar	0" (0 mm)	5.9" (150 mm)
13 mil UPC	0.6" (15 mm)	7.9" (200 mm)
4.2 mil DM	0.6" (15 mm)	1.8" (45 mm)
5 mil DM	0.6" (15 mm)	2.4" (60 mm)
6.3 mil DM	0.2" (5 mm)	3.0" (75 mm)
10 mil DM	0" (0 mm)	3.9" (100 mm)
20.8 mil DM	0.4" (10 mm)	7.9" (200 mm)
CR6000 Low Contrast Data Matrix DPM Performance		
Test Barcode	Min Inches (mm)	Max Inches (mm)
Laser-Etched Marks	0" (0 mm)	1.4" (35 mm)
Dot Peen Marks	0" (0 mm)	2.8" (70mm)

Note: Working ranges may vary based on barcode quality and reading environment.

9.0 - Reader Feedback

Scenario	Top LED Light	Sound	Vibration
CR6000 Successfully Powers Up	Green LED Flashes	1 Beep	Handle Vibrates
CR6000 Successfully Enumerates with Host (via cable)	Green LED Light is Off	2 Beeps	Handle Vibrates
Attempting to Decode	Green LED Light is Off	None	No Vibration
Successful Decode and Data Transfer	Green LED Flashes	1 Beep	Handle Vibrates
Configuration Barcode Successfully Decoded and Processed	Green LED Flashes	2 Beeps	Handle Vibrates
Configuration Barcode Successfully Decoded but wasn't Successfully Processed	Green LED Flashes	4 Beeps	Handle Vibrates

10.0 - Symbologies Defaulted On

In addition to dot peen and laser-etched barcodes, the following symbologies are defaulted ON. To turn symbologies on or off, scan the symbology barcodes located in the CR6000 Configuration Guide located on our website at http://www. codecorp.com/files.php.

Aztec
Codabar
Code 39
Code 93
Code 128
Data Matrix
Data Matrix Inverse

Data Matrix Rectangle
All GS1 DataBar
Interleaved 2 of 5
PDF417
QR Code
UPC/EAN/UPC-E

11.0 - Symbologies Defaulted Off

The following are symbologies that have a default of OFF. To turn symbologies on or off, scan the symbology barcodes located in the CR6000 Configuration Guide located on our website at http:// www.codecorp.com/files.php.

Codablock F
Code 11
Code 32
Code 39 Extended Full ASCII
Code 39 Checksum
Composite
Han Xin Code
Hong Kong 2 of 5
IATA 2 of 5
Maxicode
Matrix 2 of 5

Micro PDF417
MSI Plessey
NEC 2 of 5
Pharmacode
Plessey
Standard 2 of 5
Telepen
Trioptic
Postal Codes
UPC-E Expansion

12.0 - Configuring a CR6000

The online Configuration Guide Generator found at www.codecorp.com/configguide may be used to quickly configure a CR6000 to desired settings.

13.0 - Reader ID and Firmware Version

To find out the Reader ID and Firmware version, open a text editor program (i.e., Notepad, Microsoft Word, etc.) and read the Reader ID and Firmware configuration barcode.

Reader ID and Firmware

M10157_01

A text string indicating the firmware version and CR6000 ID number will be displayed.
example: Xap/i08080808none0020309971A06000000760000016006200002 cd(13.2.18) (see below):

String output	Firmware version	Boot firmware version	Radio firmware version	Reader serial number (ten digits)	Current execution state	OEM identifier

Xap/i08080808none0020094903A0600000 076000001600620002   cd(13.2.18)

Display type — Flash file system version number — Hardware revision — Hardware type identifier — Boot application version — Operating system kernel version — Root file system version — ASCII TAB character — Decoder version

Note: Code will periodically release new firmware for CR6000 readers. For information on latest firmware visit our website at http://www.codecorp.com/codesupport.php.

14.0 - CR6000 Overall Dimensions

2.08"
(53 mm)

3.12" (72 mm)

5.95" (151 mm)

1.82"
(46 mm)
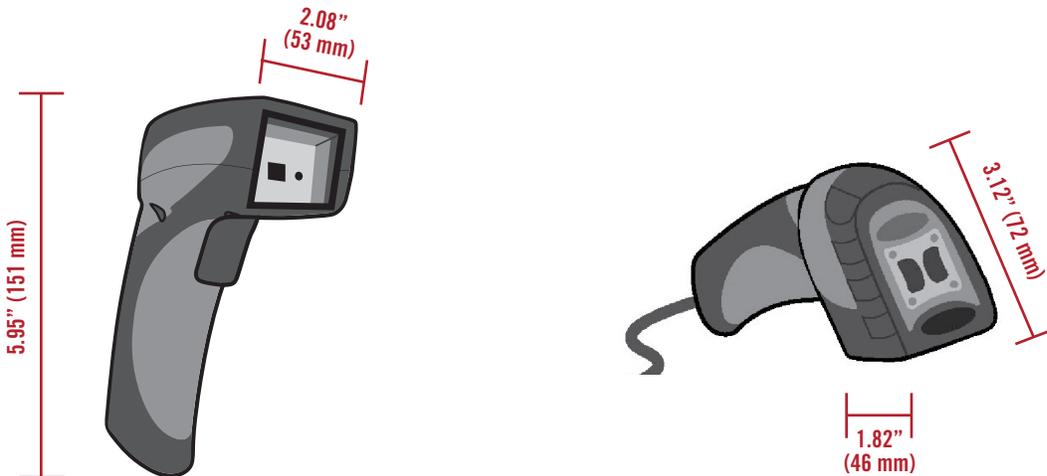
15.0 - USB Cable Example with Pinouts

NOTES:
1. Part to be ROHS and Reach compliant.
2. Maximum Voltage Tolerance = 5V +/- 10%.
3. Caution: Exceeding the maximum voltage will void manufacturer warranty.

CONNECTOR A	NAME	CONNECTOR B
1	VIN	1
2	D-	2
3	D+	3
4	GND	10
SHELL	SHIELD	N/C

Connector A

CONNECTOR A

CONNECTOR B
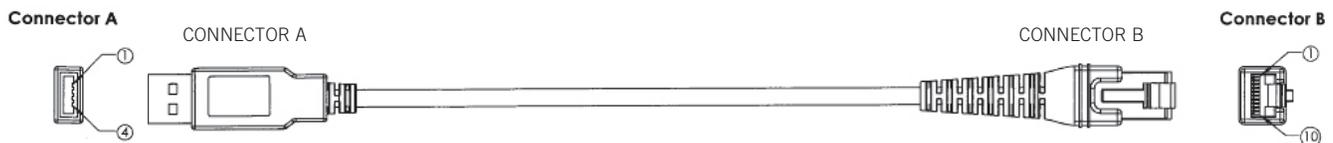
Connector B

16.0 - RS232 Cable Example with Pinouts

NOTES:
1. Part to be ROHS and Reach compliant.
2. Maximum Voltage Tolerance = 5V +/- 10%.
3. Caution: Exceeding the maximum voltage will void manufacturer warranty.

CONNECTOR A	NAME	CONNECTOR B	CONNECTOR C
1	VIN	9	TIP
4	TX	2	
5	RTS	8	
6	RX	3	
7	CTS	7	
10	GND	5	RING
N/C	SHIELD	SHELL	

Connector C

6.50 IN ± 0.5 IN

Connector A
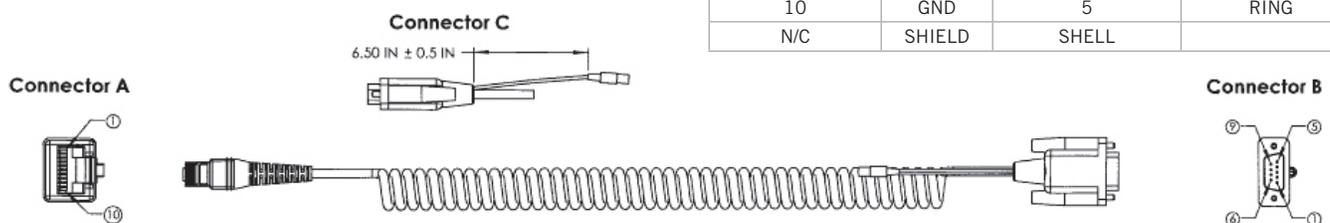
Connector B

17.0 - Reader Pinouts

The connector on the CR6000 is an RJ-50 (10P-10C). The pinouts are as follows:

Pin 1	+VIN (5v)
Pin 2	USB_D-
Pin 3	USB_D+
Pin 4	RS232 TX (output from reader)
Pin 5	RS232 RTS (output from reader)
Pin 6	RS232 RX (input to reader)
Pin 7	RS232 CTS (input to reader)
Pin 8	External Trigger (active low input to reader)
Pin 9	N/C
Pin 10	Ground

18.0 - CR6000 Maintenance

The CR6000 needs only a minimum of maintenance to operate. A few tips are given below for maintenance suggestions.

Cleaning the CR6000

The CR6000 window should be clean to allow the best performance of the device. The window is the clear plastic piece inside the head of the reader. Do not touch the window. Your CR6000 uses CMOS technology that is much like a digital camera. A dirty window may stop the CR6000 from reading barcodes. If the window becomes dirty, clean it with a soft, non-abrasive cloth or a facial tissue (no lotions or additives) that has been moistened with water. A mild detergent may be used to clean the window, but the window should be wiped with a water moistened cloth or tissue after using the detergent.

Technical Support and Returns

For returns or technical support visit http://www.codecorp.com/codesupport.php.

19.0 - Warranty

Visit www.codecorp.com/warranty to view the CR600 warranty period.

Limited Warranty. Code warrants each Code product against defects in materials and workmanship under normal use for the Warranty Coverage Term applicable to the product as described at www.codecorp.com/legal/warranty/term.php. If a hardware defect arises and a valid warranty claim is received by Code during the Warranty Coverage Term, Code will either: i) repair a hardware defect at no charge, using new parts or parts equivalent to new in performance and reliability; ii) replace the Code product with a product that is new or refurbished product with equivalent functionality and performance, which may include replacing a product that is no longer available with a newer model product; or ii) in the case of failure with any software, including embedded software included in any Code product, provide a patch, update, or other work around. All replaced products become the property of Code. All warranty claims must be made using Code's RMA process.

Exclusions. This warranty does not apply to: i) cosmetic damage, including but not limited to scratches, dents, and broken plastic; ii) damage resulting from use with non-Code products or peripherals, including batteries, power supplies, cables, and docking station/cradles; iii) damage resulting from accident, abuse, misuse, flood, fire or other external causes, including damage caused by unusual physical or electrical stress, immersion in fluids or exposure to cleaning products not approved by Code, puncture, crushing, and incorrect voltage or polarity; iv) damage resulting from services performed by anyone other than a Code authorized repair facility; v) any product that has been modified or altered; vi) any product on which the Code serial number has been removed or defaced. If a Code Product is returned under a warranty claim and Code determines, in Code's sole discretion, that the warranty remedies do not apply, Code will contact Customer to arrange either: i) repair or replace the Product; or ii) return the Product to Customer, in each case at Customer's expense.

Non Warranty Repairs. Code warrants its repair/replacement services for ninety (90) days from the date of shipment of the repaired/replacement product to the Customer. This warranty applies to repairs and replacements for: i) damage excluded from the limited warranty described above; and ii) Code Products on which the limited warranty described above has expired (or will expire within such ninety (90) day warranty period). For repaired product this warranty covers only the parts that were replaced during the repair and the labor associated with such parts.

No Extension of Term of Coverage. Product that is repaired or replaced, or for which a software patch, update, or other work around is provided, assumes the remaining warranty of the original Code Product and does not extend the duration of the original warranty period.

Software and Data. Code is not responsible for backing up or restoring any of software, data, or configuration settings, or reinstalling any of the foregoing on products repaired or replaced under this limited warranty.

Shipping and Turn Around Time. The estimated RMA turn-around time from receipt at Code's facility to shipment of the repaired or replaced product to Customer is ten (10) business days. An expedited turn-around time may apply to products covered under certain CodeOne Service Plans. Customer is responsible for shipping and insurance charges for shipping Code Product to Code's designated RMA facility and repaired or replaced product is returned with shipping and insurance paid by Code. Customer is responsible for all applicable taxes, duties, and similar charges.

Transfer. If a customer sells a covered Code Product during the Warranty Coverage Term, then that coverage may be transferred to the new owner by written notification from the original owner to Code Corporation at:

CodeOne Service Center

12393 South Gateway Park Place, Suite 600

Draper, UT 84020

Limitation on Liability. Code's performance as described herein shall be Code's entire liability, and the Customer's sole remedy, resulting from any defective Code product. Any claim that Code has failed to perform its warranty obligations as described herein must be made within six (6) months of the alleged failure. Code's maximum liability related to its performance, or failure to perform, as described herein shall be limited to the amount paid by Customer for the Code product that is subject to the claim. In no event will either party be liable for any lost profits, lost savings, incidental damage, or other economic consequential damages. This is true even if the other party is advised of the possibility of such damages.

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