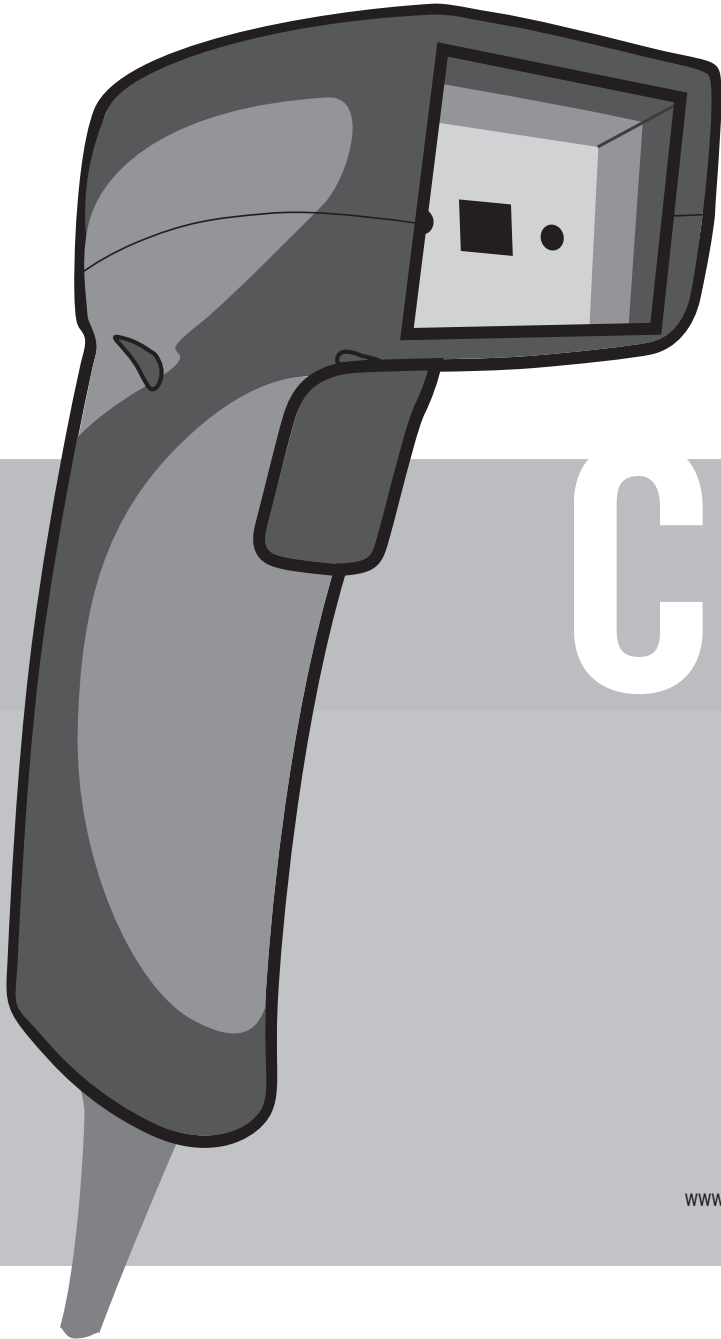


USER MANUAL
NORTH AMERICA: ENGLISH



CR6000

MANUAL VERSION 01
RELEASE DATE: JUNE 2014



www.codecorp.com



Configuration Guide



[YouTube.com/codecorporation](https://www.youtube.com/codecorporation)

code
ADVANCED BARCODE READERS

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

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The Code Reader software is based in part on the work of the Independent JPEG Group.

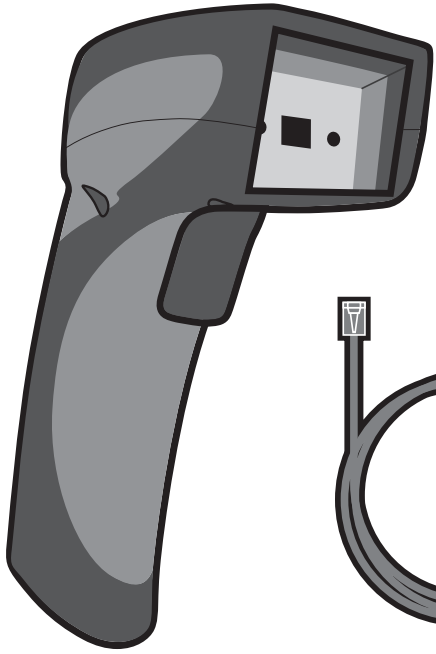
Code Corporation, 12393 S. Gateway Park Place, Ste. 600, Draper, Utah 84020

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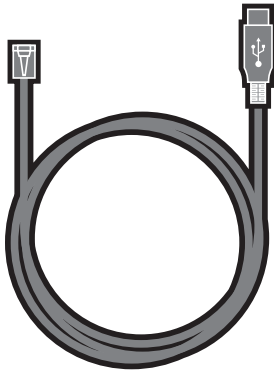
Table of Contents

| | |
|--|----|
| 1.0 - Included Items | 4 |
| 2.0 - Attaching and Detaching a Cable..... | 5 |
| 3.0 - Set Up..... | 5 |
| 4.0 - Using a CR6000 Out of a Stand | 6 |
| 5.0 - Using a CR6000 In a Stand | 6 |
| 6.0 - Optimizing DPM Reading..... | 6 |
| 7.0 - Reading Modes and Barcode Types..... | 6 |
| 8.0 - Reading Range | 7 |
| 9.0 - Reader Feedback | 7 |
| 10.0 - Symbologies Defaulted On | 8 |
| 11.0 - Symbologies Defaulted Off..... | 8 |
| 12.0 - Reader ID & Firmware Version..... | 8 |
| 13.0 - CR6000 Overall Dimensions | 9 |
| 14.0 - USB Cable Example with Pinouts | 9 |
| 15.0 - RS232 Cable Example with Pinouts..... | 9 |
| 16.0 - Reader Pinouts..... | 10 |
| 17.0 - CR6000 Maintenance | 10 |
| 18.0 - Warranty | 11 |

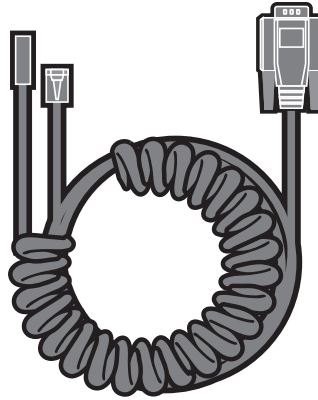
1.0 - Included if Ordered



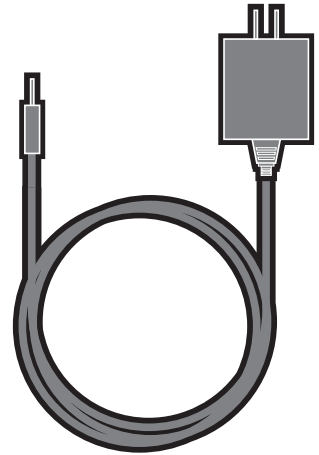
CR6000
(Model #: CR6022_01)



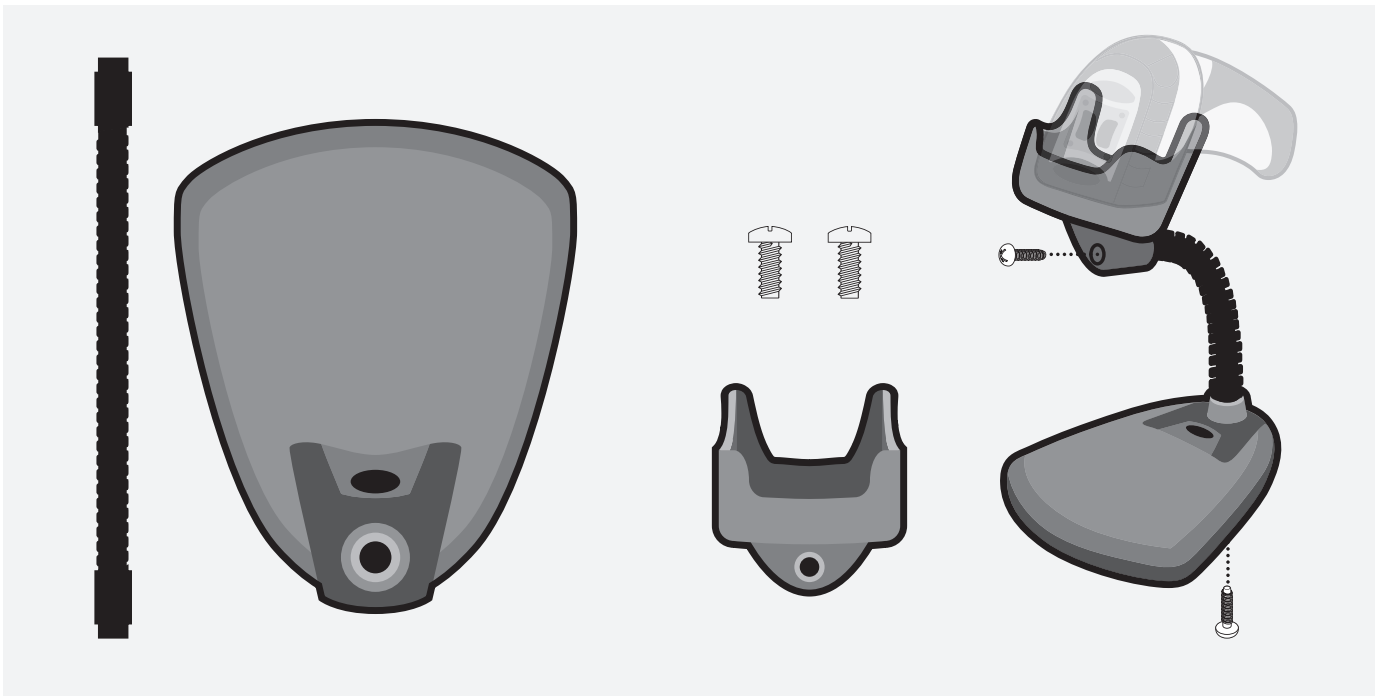
USB 2.0 Cable



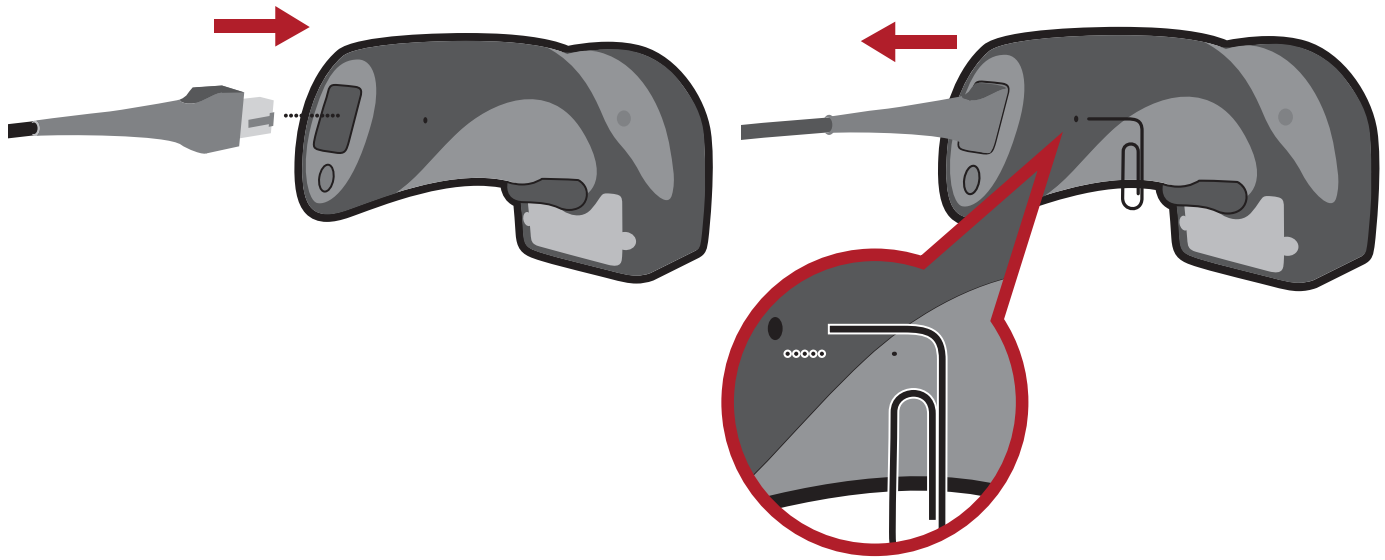
RS232 Cable



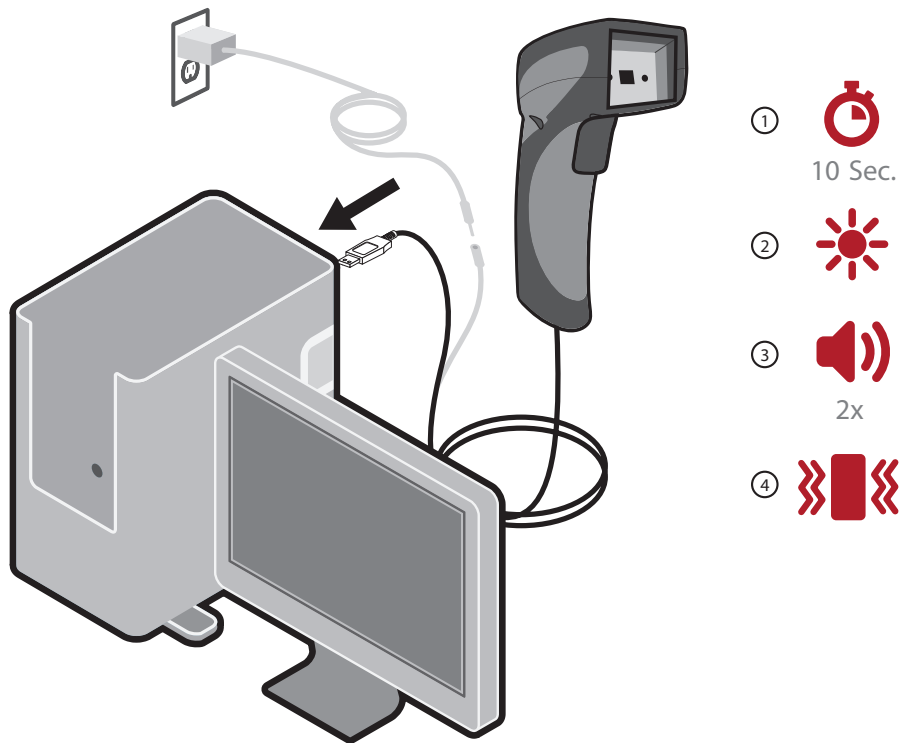
5VDC
Power Supply



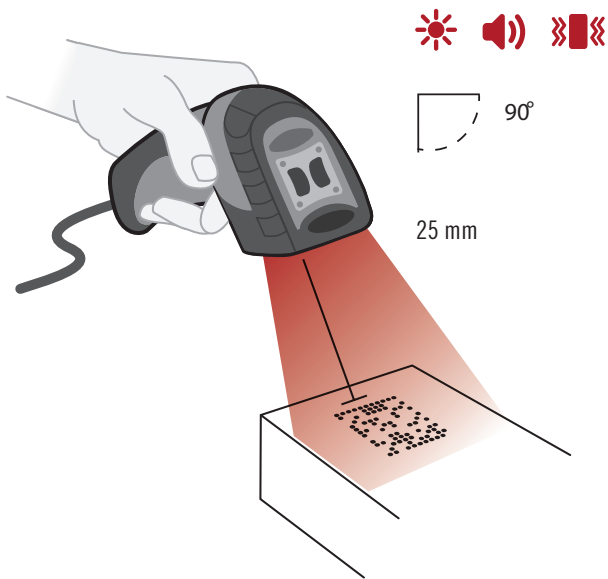
2.0 - Attaching and Detaching a Cable



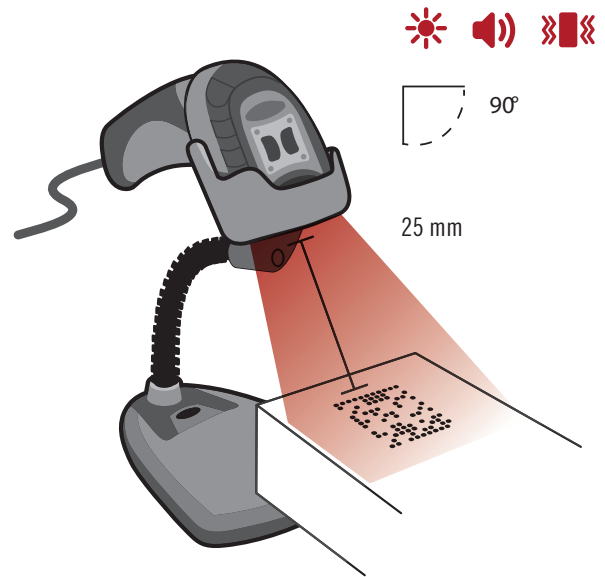
3.0 - Set Up



4.0 - Using a CR6000 Out of a Stand



5.0 - Using a CR6000 In a Stand



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 | Data Matrix Rectangle |
| Codabar | All GS1 DataBar |
| Code 39 | Interleaved 2 of 5 |
| Code 93 | PDF417 |
| Code 128 | QR Code |
| Data Matrix | UPC/EAN/UPC-E |
| Data Matrix Inverse | |

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 | Micro PDF417 |
| Code 11 | MSI Plessey |
| Code 32 | NEC 2 of 5 |
| Code 39 Extended Full ASCII | Pharmacode |
| Code 39 Checksum | Plessey |
| Composite | Standard 2 of 5 |
| Han Xin Code | Telepen |
| Hong Kong 2 of 5 | Trioptic |
| IATA 2 of 5 | Postal Codes |
| Maxicode | UPC-E Expansion |
| Matrix 2 of 5 | |

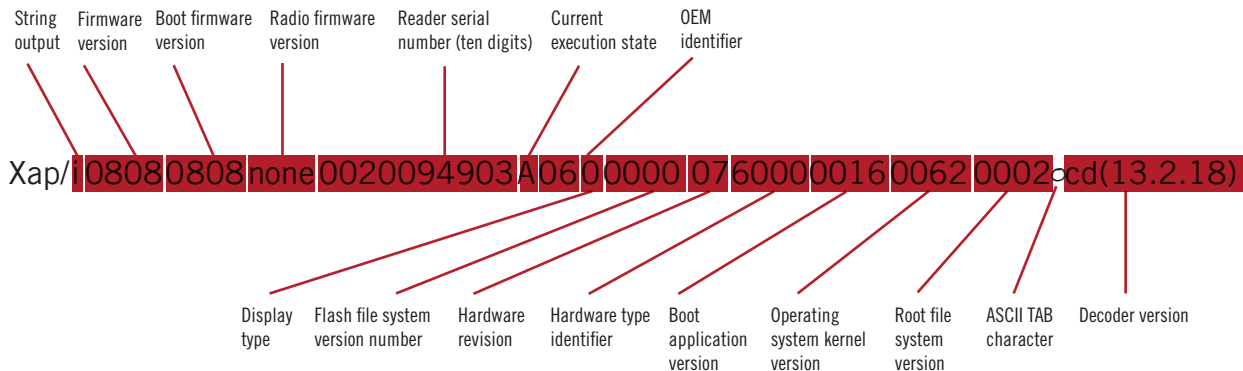
12.0 - Reader ID and Firmware Version

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

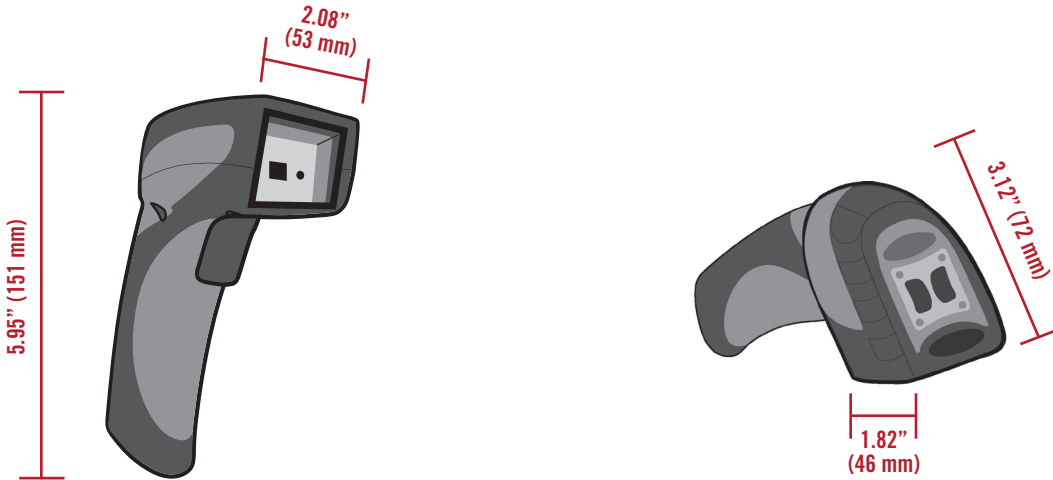


A text string indicating the firmware version and CR6000 ID number will be displayed.
example: Xap/i08080808none0020309971A0600000076000001600620002␣cd(13.2.18) (see below):



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>.

13.0 - CR6000 Overall Dimensions



14.0 - 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 | WIRE | COLOR | CONNECTOR B |
|-------------|------|--------|-------|-------------|
| 1 | VIN | 24A WG | RED | 1 |
| 2 | DM | 28A WG | WHITE | 2 |
| 3 | DP | 28A WG | GREEN | 3 |
| 4 | GND | 24A WG | BLACK | 10 |
| SHELL | - | SHIELD | BARE | SHELL |



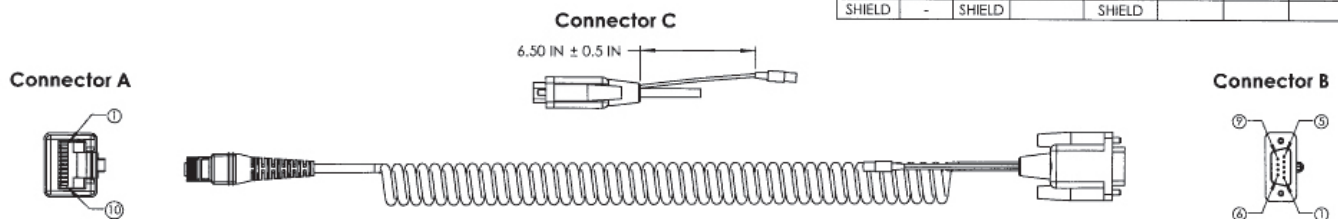
15.0 - RS232 Cable Example with Pinouts

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.

WIRING TABLE:

| CONN A | NAME | WIRE | COLOR | CONN B | WIRE | COLOR | CONN C |
|--------|------|--------|--------|--------|-------|-------|--------|
| 1 | VIN | 24AWG | RED | 9 | 24AWG | RED | TIP |
| 4 | TX | 28AWG | BROWN | 2 | | | |
| 5 | RTS | 28AWG | ORANGE | 8 | | | |
| 6 | RX | 28AWG | YELLOW | 3 | | | |
| 7 | CTS | 28AWG | GREEN | 7 | | | |
| 10 | GND | 24AWG | BLACK | 5 | 24AWG | BLACK | RING |
| SHIELD | - | SHIELD | | SHIELD | | | |



16.0 - 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_DM |
| Pin 3 | USB_DP |
| 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 |

17.0 - 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>.

18.0 - Warranty

The CR6000 carries a five year limited warranty as described herein. The Universal Stand and Cable have a 30 day 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 iii) 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

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