



**Code Reader 1200™**  
**Manual Version 3**  
**Release Date: 1/22/09**



# Statement of Agency Compliance

The CR1200 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 equipment.



The CR1200 has been tested for compliance to CE standards and guidelines and was found to conform to applicable CE standards, specifically the EMC requirements EN 55022 Class B Radiated Emissions and Class B Conducted Emissions.

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

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

## Code Reader 1200 User Manual

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The software and/or products of Code Corporation include inventions that are patented or that are the subject of patents pending. U.S. Patents: 6997387, 6619547, 6736320.

The Code Reader 1200 runs a Linux-based operating system, which is distributed under the terms of the GNU Public License, version 2. The source code for the operating system is available at

**<http://www.codecorp.com/source/cr1200-linux>.** (If you would like to receive the the source code on CD, you may request it from your distributor within three years of your purchase of the Code Reader 1200, and it will be provided for only the cost of packaging and shipping the CD to you.)

The Code Reader software uses the Mozilla SpiderMonkey JavaScript engine, which is distributed under the terms of the Mozilla Public License Version 1.1. Source code for this version of Spider Monkey is available at:

**<http://www.codecorp.com/source/spidermonkey>.**

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

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# **Chapter 1 - Introduction**

## 1.1 - Introduction

Simple, affordable and fast, the Code Reader 1200™ (CR1200) provides two-dimensional CMOS imaging at a new low cost. Built for cabled applications, the CR1200 is Code Corporation's (Code's) low-cost addition to its family of the highest performing hand-held bar code readers available. The CR1200 is bar code reading simplicity redefined. It is rugged, lightweight, and flexible making it the ideal reader for all linear and two-dimensional bar code reading applications.

CR1200's wide angle lens captures and decodes all bar code types and symbologies. Working range and decode performance is increased with Code's Dynamic Optimization Technology (DOT). The CR1200 non-laser targeting function utilizes two converging LEDs that intersect to help the user quickly determine target range. Revolutionary audible, tactile and visual user feedback systems include an advanced speaker, a vibration motor, and LEDs for targeting and status. The CR1200 may be ordered with cables for USB, RS232, and PS2 host communications.

Code's software development kits provide programming tools that help you prepare decoded data to meet the requirements of existing software programs. While simple in design and function, the CR1200 is singularly adept in data capture and decoding performance.

The CR1200 includes the following features and benefits:

- Affordability—it is Code's least expensive bar code reader.
- Durable over-molded housing and secured cable improves drop-shock survivability.
- An exceptionally "smooth feel" trigger—good for more than 3 million activations.
- A vibration motor that provides tactile feedback in noisy or silent environments.
- A ruggedized design with a permanent lanyard hook.
- The ability to read and decode all symbologies.
- "Good read" feedback with vibration, audible tones and LED indicators.
- Field-upgradeable firmware; can be remotely managed from single location.
- DOT continuously improves reader performance by evaluation of reading environment.
- The JavaScript Application Development Suite, which allows program development to prepare captured data for integration with enterprise software.
- The Linux Kernel 2.6.11, which allows vast OEM application possibilities.

## 1.2 - Operational Overview

The CR1200 code-reading system consists of a 1.3-megapixel imager and 400-MHz processor. It communicates with the host computer via USB, RS232, and PS2 cables and protocols. It is preconfigured with Code's own DOT technology, which continuously adapts the resolution and illumination. Because of DOT, CR1200 units achieve decoding speeds with two-dimensional (2D) codes similar to speeds usually seen only in one-dimensional (1D) readers. CR1200 units can read all symbology types and sizes, as well as a variety of printed media, within a wide range of environmental factors including light (natural or ambient lighting). The CR1200 can be optimized further for higher performance in applications with more specific needs and consistent environments.

In response to capturing data after reading a bar code, the CR1200 imaging firmware analyzes the bar code image, decodes the image resulting in data, and encodes that data into USB, RS232, and PS2 protocol packets. It then writes that data to the output port of the CR1200 to which the cable is attached. A host computer application receives and processes the data packets.

In normal operation, the CR1200 is designed as a lightweight, rugged, hand-held device with a trigger and operator feedback operation. The CR1200 can be reconfigured to other operational modes to support other applications—for example, continuous read mode where a non-triggered device provides a better solution.

## 1.3 - About This Document

This document provides the IT professional the information required to install and configure the CR1200 for use in the workplace. Additional information required by System Engineering to integrate the CR1200 with enterprise software may be found in other documents provided by Code at: <http://www.codecorp.com/support/manuals.htm>.

This document is divided into the following sections:

1. Introduction (current section)
2. Getting Started—how to unpack, install, and configure the CR1200
3. Reading Bar Codes—techniques for using the CR1200
4. Optimizing the Read—performance optimization in unique environments
5. Setting Symbology—configuration codes for symbology specification
6. Setting Operational Features—configuration codes for specifying CR1200 features
7. Maintenance and Troubleshooting—maintenance of the CR1200 hardware and software

Throughout this document you will find codes that you can read with the CR1200 to configure it and to turn various features on or off.

**Cautions:** and **Notes:** provide important information about the use of CR1200 features.

Since any configuration changes are not saved when the CR1200 is powered down, a Save Settings code is provided at the bottom of each page.



## Chapter 2 - Getting Started



## 2.1 - Unpacking

Remove the CR1200 from its package and inspect it for damage. If the unit was damaged during shipping, call Code at (801) 495-2200.

The standard CR1200 was ordered and shipped with your choice of USB, RS232, or PS2 cable interface. The USB version is available in 6 foot or 12 foot cable lengths. RS232 cabled units include a power supply (US/Europe/SA/UK/Asia) designated at ordering. The connector to the power supply is integrated into the RS232 cable.

The CR1200 is shipped in an approved shipping container. Please keep your packing materials and use them if you need to return your equipment to Code for servicing.

## 2.2 - Installing

Figure 2.1 shows the connectors for the CR1200 cables. Cables are connected to the CR1200 with an 8-pin DIN connector. This section tells you how to attach the CR1200 to a host and configure the reader based on options available for each cable type.

After installation, the CR1200 will be ready to operate in the Dynamic Optimization Technology (DOT) mode described in Section 4.1.

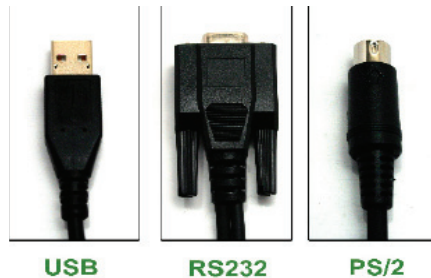


Figure 2.1

### 2.2.1 - USB Cable Connection and Settings

The USB Cabled CR1200 communicates with the host computer over a USB cable using the USB communications protocol.

#### 2.2.1.2 - USB Cable Instructions

To connect the CR1200 to your host computer via USB interface:

1. Attach the USB cable to CR1200.
2. There is no need to power of the computer. Connect the USB cable to a USB port on the computer (Figure 2.2).
3. Once properly connected, the CR1200 will power on and beep.
4. Scan the below code (M049\_03) for USB Keyboard Mode:

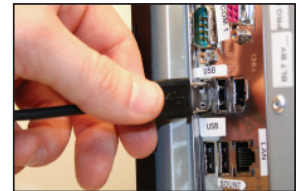


Figure 2.2

#### USB Keyboard Factory Reset



M049\_03

#### Save Settings



M188\_02

5. Scan the Save Settings Code (M188\_02)



Save Settings

M188\_02

### 2.2.1.2 - Additional USB Communication Settings

**USB Keyboard Mode** - Data is sent from the Reader and interpreted by the host just as if a USB keyboard was being used to enter data.

**USB Downloader** - This mode is used when downloading firmware.

**USB Native Two Way Mode** - This mode is utilized when there is a need for error-corrected communication between the CR1200 and an application through the USB port.

**USB Virtual COM 1 Way Mode** - This mode allows a USB-cabled CR1200 to function as a virtual COM port. To use the CR1200 in this mode, download the driver at [www.codecorp.com/downloads.html](http://www.codecorp.com/downloads.html).

**USB HID POS (Terminal ID 131)** - This mode allows a USB-cabled CR1200 to communicate as a USB HID POS (Terminal ID 131) device.

Scan the following codes to set the appropriate USB communication setting:

#### USB Keyboard



#### USB Downloader



#### USB Native Two Way Mode



#### USB Virtual COM 1 Way Mode



#### USB HID POS (Terminal ID 131)



### 2.2.1.3 - Keyboard Support

Scan the following codes to set appropriate keyboard mapping:

#### US English (Default)

No Leading 0  
for non-printable characters



US English - Leading 0  
for non-printable characters



US English - ctrl + char  
for non-printable characters



#### French



#### German



#### Japanese



#### Universal Keyboard



#### Custom Keyboard



*Requests map to  
be installed*

#### Alternative OS

(Windows CE/MAC/Unix/Linux)

Enable



Alternative OS Disable



Save Settings

## 2.2.2 - PS/2 Cable Installation Guide

CR1200 must have a serial number greater than 10050561 and a firmware version greater than 4126 to use a PS/2 cable.

1. Power off the computer. If you disconnect the computer's keyboard while it is powered on, your computer will lock up.
2. Attach the the PS/2 cable to the CR1200.
3. If you have a cabled keyboard, detach the keyboard cable from the computer and connect that same connector to the female connection on the CR1200 PS/2 cable (Figure 1.17).
4. Now connect the male CR1200 PS/2 connector into the keyboard port on the computer (Figure 1.18).
5. Power on the computer. The CR1200 is powered by the PS/2 port and does not require a power supply.



Figure 1.17



Figure 1.18

### PS/2 Factory Reset



M060\_03

### Save Settings



M188\_02

Code does not guarantee compatibility  
with all models of computers.



Save Settings

M188\_02

## 2.2.3 - RS-232 (Serial) Cable Installation Guide

1. Attach the RS-232 (Serial) cable to the CR1200.
2. Connect the RS-232 (Serial) cable to a serial port on the computer (Figure 1.19). There is no need to power off the computer.
3. The RS-232 (Serial) interface has an optional 5V/1.5A power supply (Figure 1.20). If you have a power supply, plug the power supply adapter into the RS-232 (Serial) cable and then plug the power adapter into a wall socket (Figure 1.21).



Figure 1.19



Figure 1.20



Figure 1.21

4. Once properly connected, the CR1200 will power on and beep.
5. For RS-232 (Serial) mode scan M418\_02 (below). If the power supply is not connected scan M074\_02 (below).
6. Scan the Save Settings Code (M188\_02).

### RS-232 (Serial) Factory Reset



M418\_02

### RS-232 (Serial) Mode No Power Supply



M074\_02

### Save Settings



M188\_02

### RS-232 Factory Default Settings

**Mode:** RS-232 One Way Mode

**Baud Rate:** 57600

**Stop Bits:** 2

**Data Bits:** 8

**Parity:** None

**Warning:** Code Corporation approved power adapter must be used. Reader failure due to use of incorrect power adapter will void warranties.

### 2.2.3.1 - Additional RS-232 (Serial) Communication Data Bit Settings

Scan the following codes to set the appropriate data bit:

#### 7 Data Bits



#### 8 Data Bits (Default)



### 2.2.3.2 - Additional RS-232 (Serial) Communication Baud Rate Settings

Scan the following codes to set the appropriate baud rate:

#### 1200



#### 2400



#### 4800



#### 9600



#### 19200



#### 38400



#### 57600 (Default)



#### 115200



### 2.2.3.3 - Additional RS-232 (Serial) Communication Parity Settings

Scan the following codes to set parity:

#### Even



#### Odd



#### None (Default)



## 2.3.1 - Cabled Reader - Time Out Settings

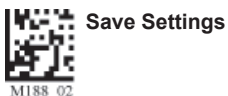
Scan one of the codes below to set the amount of time a cabled CR1200 will be enumerated before entering sleep mode.

**Note:** These settings will only work in versions 2098 and above.

#### Cabled Reader Time Out: 2 hours



#### Cabled Reader Time Out: Never (Default)



## Chapter 3 - Optimization and Trigger Programming



## 3.1 - Specifying Feedback

The CR1200 features one LED on the top of the unit. The LED gives visual feedback based on the operation of the CR1200 (see Table 3.1). The LED may display Red, Amber, or Green. Configurable sound and vibration features provide audible and tactile feedback.



Figure 3.1

Condition	Sound/Vibration	LED
Successful Power Up	1 Beep/Vibration	Sequence: Amber Green Amber
Successful connection with the host via USB cable	1 Beep/Vibration	None
Successful decode and data transfer to the host	1 Beep/Vibration	Flash Green
Configuration Code successfully decoded and processed	2 Beeps/Vibrations separated by a slight pause	Flash Green

Table 3.1 LED Feedback Conditions

Read the following codes to set the beep and vibration modes:

Vibration On / Beep On (Default)



M107\_01

Vibrate On / Beep Off



M109\_01

Vibrate Off / Beep On



M108\_01



Save Settings

M188\_02



## 3.2 - Targeting

The CR1200 targeting implementation projects two LED-generated images to aid you in properly positioning and focusing the reading operation.

Figure 3.2 graphically displays the field of view of the CR1200 reader and shows the areas of that field of view where various codes can be read. Targeting the code becomes more important as the size of the code decreases and the density increases.

The optimal distance to read a code is 3.8" (9.7 centimeters). The LED targeting guides projected by the CR1200 help to detect this optimal reading distance.

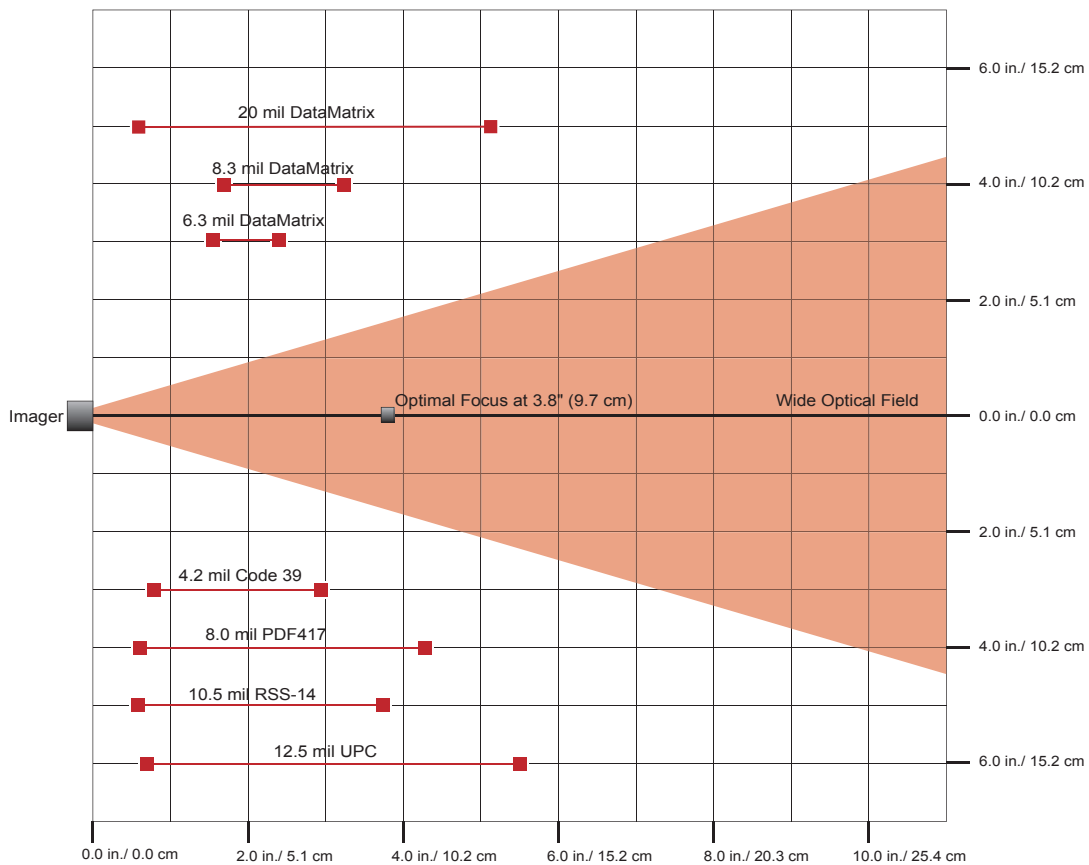


Figure 3.2



The CR1210 targeting implementation projects two LED-generated images to aid you in properly positioning and focusing the reading operation.

Figure 3.3 graphically displays the field of view of the CR1210 reader and shows the areas of that field of view where various codes can be read. Targeting the code becomes more important as the size of the code decreases and the density increases.

The optimal distance to read a code is 2.3." (5.8 centimeters). The LED targeting guides projected by the CR1210 help to detect this optimal reading distance.

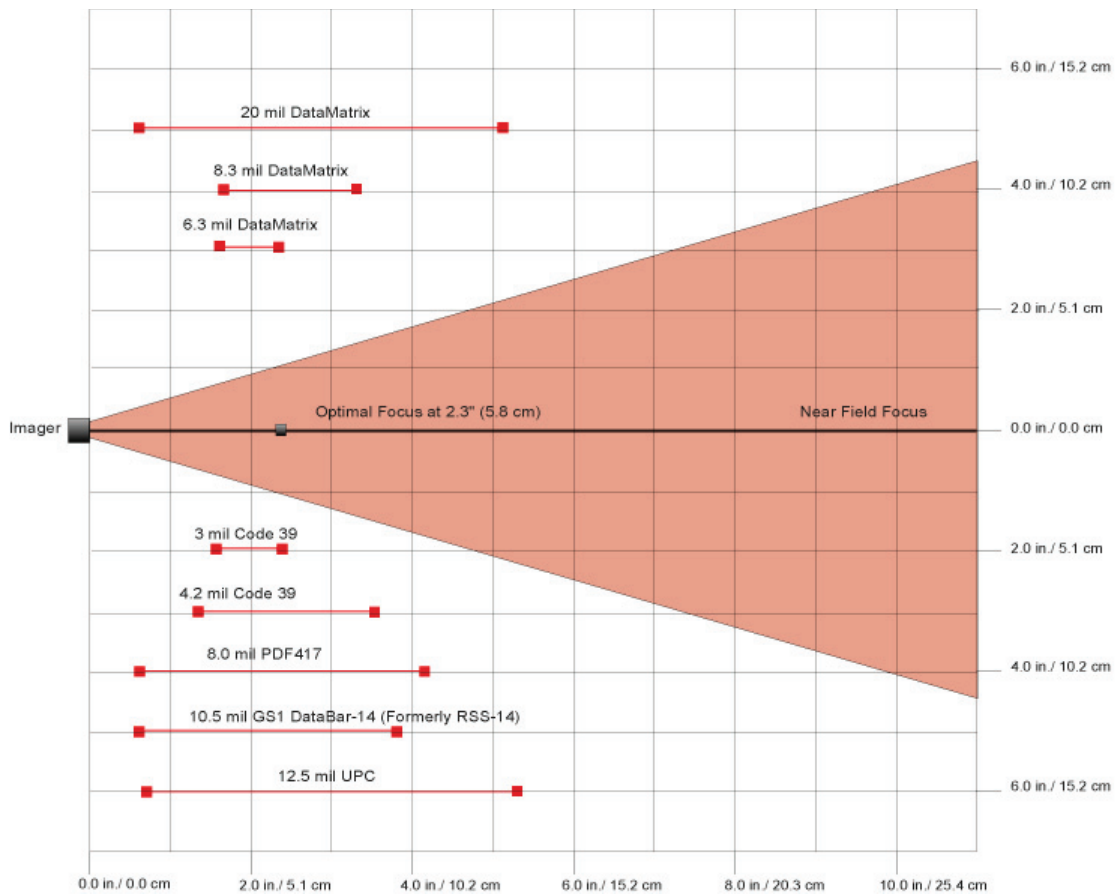


Figure 3.3

## 3.2 - Targeting

As shown in Figure 3.4, the red targeting LED identifies the center of the reading operation and aids in centering a code in the reader's field of view. The green LED provides focusing assistance to aid in positioning the CR1200 at the optimum distance for a read. Center the CR1200's red LED display on the code and then move the unit closer to or farther away from the bar code until the green LED image merges with the red LED image.

Correct positioning of the CR1200 is essential to reduce reading time. For optimal reading conditions, the red and green LED images must converge at the center of the code.

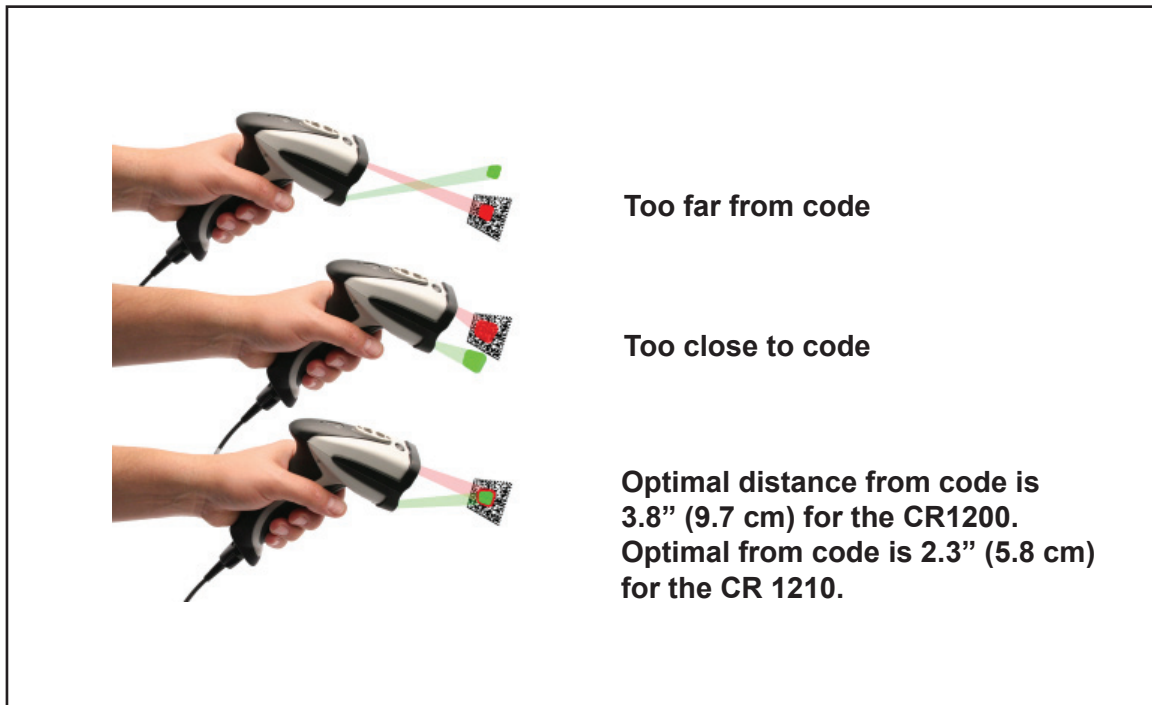


Figure 3.4

Read the appropriate code below to turn the targeting features on/off for Red and Green LEDs:

### Red Targeting LED On



### Red Targeting LED Off



### Green Targeting LED On



### Green Targeting LED Off



## 3.3 - Reading Techniques

The CR1200 uses digital imaging technology to take a picture of a symbol. Once an image is captured, the CR1200 uses advanced decoding algorithms to extract data from the captured image.

To read a symbol with the CR1200:

1. Target the CR1200 on the center of the code. (See section 3.2).
2. Hold the CR1200 still. Do not swipe or move the reader.
3. Press the trigger until the CR1200 beeps and vibrates, indicating the code has been successfully read.



Save Settings

# Chapter 4 - Optimization and Trigger Programming



# 4.1 - Operational Modes

The CR1200 can operate in either of two modes:

- Triggered (default mode)
- Continuous Read

In Triggered mode, the CR1200 reads a code in response to a trigger press. In Continuous Read mode the CR1200 continuously attempts to read a code without operator intervention. Continuous Read mode includes options to specify delays between attempts to read and to limit the duplicate readings of the same code.

## 4.2.1 - Continuous Read Mode

Read the following codes to turn continuous reading on or off:

### Continous Scan - On



### Continous Scan Off (Default)



### 4.2.1.1 - Read Delays

Read the following codes to set delay time between reads:

#### 0 Seconds (Default)



#### 1 Second



#### 3 Seconds



### 4.2.1.2 - Duplicate Rejection Period

The Duplicate Rejection Period defines a time interval. If a read during this interval duplicates the immediately preceding code, the read will be rejected. Read the following codes to set the delay time before the reader accepts a duplicate code:

#### 0 Seconds (Default)



#### 1 Second



#### 3 Seconds



## Chapter 5 - Setting Symbology



This section describes how to change the symbology settings on the CR1200. Use the codes in this section to specify the set of symbologies that you want the CR1200 to check for during a code read. Careful selection of your symbology set improves CR1200 performance.

## 5.1 - Aztec Symbology

Scan the following codes to enable/disable Aztec symbology settings:

**Aztec On**



M273\_01

**Aztec Off (Default)**



M272\_01

**Sample Aztec Code**



## 5.2 - Codabar Symbology

Scan the following codes to enable/disable Codabar symbology settings:

**Codabar On (Default)**



M275\_01

**Codabar Off**



M274\_01

**Sample Codabar**



## 5.3 - Codablock F Symbology

Scan the following codes to enable/disable Codablock F symbology settings:

**Codablock F On**



M277\_01

**Codablock F Off (Default)**



M276\_01

**Sample Codablock F Code**



**Note:** When Codablock F and Code 128 decoding are enabled, there is some risk of mistakenly decoding a damaged Codablock F symbol as a Code 128 symbol. Therefore, Code 128 decoding should be disabled when Codablock F decoding is enabled.



Save Settings

M188\_02

## 5.4 - Code 11 Symbology

Scan the following codes to enable/disable Code 11 symbology settings:

**Code 11 On (Default)**



M394\_01

**Code 11 Off**



M393\_01

**Code 11 Checksum 1 digit**



M395\_01

**Code 11 Checksum 2 Digit & Stripped from Result**



M396\_01

**Code 11 Checksum 1 Digit & Stripped from Result**



M397\_01

**Code 11 Sample**



## 5.5 - Code 39 Symbology

Scan the following codes to enable/disable Code 39 symbology settings:

**Code 39 On (Default)**



M235\_01

**Code 39 Off**



M234\_01

**Enable Checksum**



M237\_01

**Disable Checksum (Default)**



M236\_01

**Enable Checksum and Strip From Result**



M238\_01

**Code 39 Extended Full ASCII On**



M233\_01

**Code 39 Extended Full ASCII Off (Default)**



M232\_01

**Sample Code 39 Code**



12345678

**Code 39 Short Margin On (Default)**



M390\_01

**Code 39 Short Margin Off**



M389\_01

**Code 39 Trioptic On**



M671\_01

**Code 39 Trioptic Off**



M670\_01

**Sample Trioptic Code 39**



123456



Save Settings

M188\_02



## 5.6 - Code 93 Symbology

Scan the following codes to enable/disable Code 93 symbology settings:

Code 93 On (Default)



M281\_02

Code 93 Off



M280\_01

Sample Code 93 Code



123456789

## 5.7 - Code 128 Symbology

Scan the following codes to enable/disable Code 128 symbology settings:

Code 128 On (Default)



M283\_01

Code 128 Off



M282\_01

Code 128 Short Margin On (Default)



M392\_01

Code 128 Short Margin Off



M391\_01

Sample Code 128 Code



12345678912345

**Note:** When Codablock F and Code 128 decoding are enabled, there is some danger of mistakenly decoding a damaged Codablock F symbol as a Code 128 symbol. Therefore, Code 128 decoding should be disabled when Codablock F decoding is enabled.

## 5.8 - Composite Symbologies

Scan the following codes to enable/disable Composite symbology settings:

Composite On



M285\_02

Composite Off (Default)



M284\_02



Save Settings

M188\_02

## 5.9 - Data Matrix Symbology

Scan the following codes to enable/disable Data Matrix symbology settings:

### Rectangular Data Matrix On



### Rectangular Data Matrix Off (Default)



### Data Matrix Inverse On



### Data Matrix Inverse Off (Default)



Enable improved reading capability for hard to decode datamatrix symbols.



Disable improved reading capability for hard to decode datamatrix symbols. (Default)



### Sample Data Matrix Code



### Sample Rectangular Data Matrix Code



## 5.10 - GoCode Symbology

GoCode is a miniature, two-dimensional (2-D) symbol. Developed to fit within a line of text, GoCode features a multi-dimensional, adaptable matrix pattern that may be reproduced on virtually any surface. GoCode is a private symbology and may be utilized by purchasing a runtime license through Code. GoCode has many significant advantages over all common linear barcodes and 2-D symbols. Please contact Code for more information on the benefits of utilizing a private symbology.

### Sample GoCode



## 5.11 - Interleaved 2 of 5 Symbology

Scan the following codes to enable/disable Interleaved 2 of 5 symbology settings:

### Int 2 of 5 On (Default)



### Int 2 of 5 Off



### Int 2 of 5 Two Digits On



### Int 2 of 5 Two Digits Off



### Int 2 of 5 Four Digits On



### Int 2 of 5 Four Digits Off



### Sample Int 2 of 5 Code



Save Settings

## 5.12 - Maxicode Symbology

Scan the following codes to enable/disable Maxicode symbology settings:

Maxicode On



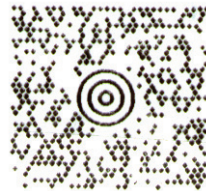
M289\_04

Maxicode Off (Default)



M288\_01

Sample Maxicode



## 5.13 - Matrix 2 of 5 Symbology

Scan the following codes to enable/disable Matrix 2 of 5 symbology settings:

Matrix 2 of 5 On (Default)



M675\_01

Matrix 2 of 5 Off



M674\_01

Matrix 2 of 5 Sample



## 5.14 - Micro PDF417 Symbology

Scan the following codes to enable/disable micro PDF 417 symbology settings:

MicroPDF417 On



M301\_01

MicroPDF417 Off (Default)



M300\_01

Sample MicroPDF417



## 5.15 - MSI Plessey Symbology

Scan the following codes to enable/disable MSI Plessey symbology settings:

MSI Plessey On



M291\_01

MSI Plessey Off (Default)



M290\_01

Sample MSI Plessey



## 5.16 - NEC 2 of 5 Symbology

Scan the following codes to enable/disable NEC 2 of 5 symbology settings:

NEC 2 of 5 On



M673\_01

NEC 2 of 5 Off (Default)



M672\_01



Save Settings

M188\_02

## 5.17 - Optical Character Recognition (OCR)

The Code Reader can read Optical Character Recognition (OCR) texts. The following codes can be used to enable/disable this feature. Fonts supported include Passport, ISBN, Price, MICR13, and a user defined template:

### Disable OCR (Default)



M712\_01

### Enable OCR



M713\_01

Purchase of OCR license required.

## 5.18 - PDF 417 Symbology

Scan the following codes to enable/disable PDF 417 symbology settings:

### PDF 417 On (Default)



M293\_01

### PDF417 Off



M292\_01

### Macro PDF 417 On



M287\_01

### Macro PDF 417 Off (Default)



M286\_01

### Sample PDF 417 Code



## 5.19 - Pharmacode

For an explanation of Pharmacode settings and all programming codes please refer to Appendix G of the CR1200 User Manual. You may download Appendix G at: <http://www.codecorp.com/manuals.html>

## 5.20 - Postal Symbologies

All postal code default settings are OFF. Scan the following codes to enable the appropriate Postal symbology:

### Australian Post On



M252\_01

### Japan Post On



M253\_01

### KIX On



M254\_01

### Planet On



M256\_01

### Postnet On



M257\_01

### Postnet and Planet On



M255\_01

### Royal Mail On



M258\_01

### Disable All Postal Codes (Default)



M259\_01

### Sample Postnet Code



### 4-State CB On (Intelligent Mail)



M748\_01



Save Settings

M188\_02

## 5.21 - QR Code Symbology

Scan the following codes to enable/disable QR Code symbology settings:

**QR Code On**



**QR Code Off (Default)**



**Enable Checksum**



**Disable Checksum (Default)**



**QR Code Inverse On**



**Both Inverse and Standard On**



**All QR On (includes Micro QR)**



**Inverse QR and Micro QR On**



**Sample QR Code**



**Sample Micro QR**



## 5.22 - GS1 data bar (formerly RSS) Symbology

Scan the following codes to enable/disable GS1 data bar (formerly RSS) symbology settings:

**GS1 data bar Limited On**



**Truncated On**



**GS1 data bar 14 Stacked On**



**GS1 data bar Expanded On (Default)**



**All GS1 data bar On**



**All GS1 data bar Off**



**Sample GS1 data bar Limited Code**



**Sample GS1 data bar 14 Code**



**Sample GS1 data bar 14 Truncated Code**



**Sample GS1 data bar 14 Stacked Code**



Save Settings

## 5.23 - Telepen Symbology

Scan the following codes to enable/disable Telepen symbology settings:

**Telepen On - Default**



**Telepen Off**



**Sample Telepen**



## 5.24 - UPC/EAN/JAN

Scan the following codes to enable/disable UPC/EAN/JAN symbology settings:

**UPC On (Default)**



**UPC Off**



**UPC Short Margin Enabled (Default)**



**UPC Short Margin Disabled**



**UPC Extension On**



**UPC Extension Off**



**Sample UPC A Code**



Save Settings

## **Chapter 6 - Setting Operational Features**

This section discusses the configuration of various operational features of the CR1200 including:

- Settings Lock—Lock the CR1200 to prevent inadvertent changes to the current configuration.
- Mirror Decoding—Set the CR1200 to read mirror images of codes.
- Adding Prefixes or Suffixes—Add prefix or suffix strings to the communications packet sent to the host application.
- Text Commands—Set the CR1200 to accept text commands from the host application.

## 6.1 - Settings Lock

To lock or unlock the current settings on your reader, read the codes below:

### Reader Settings Locked



### Reader Settings Unlocked



**Note:** This feature does not lock the following commands:

- Prefix and Suffix programming codes
- Clear All CodeXML Rules
- Suffix Erase/None commands

## 6.2 - Mirror Decoding

Scan the following codes to enable/disable the mirroring feature:

### Mirroring On



### Mirroring Off (Default)



**Note:** The Mirroring feature allows the CR1200 to read codes as they are seen through a mirror (inversed 180°). If the Mirroring feature is enabled, non-mirrored reading ability will be disabled.

## 6.3 - Adding Prefix Settings

Some applications may require specific characters be present at the front or back of decode packets sent to the host. The Add Prefix and Add Suffix options allow you to add the characters required by the host application.



Save Settings



### 6.3.1 - Prefix Settings

If you scan the following codes, you will lose any unsaved settings. Make sure to save settings on your reader before scanning the prefix codes. If you scan more than one prefix you will receive each scanned prefix in your scanned data; (i.e., if you scan comma prefix twice, you will get two comma prefixes). Scan the following codes to set appropriate prefix:

#### Prefix - Comma



M159\_02

#### Prefix - Space



M164\_02

#### Prefix - Tab (USB Keyboard Mode)



M166\_01

Use only with keyboard applications

#### Prefix - Tab (RS-232)



M218\_02

Use only with serial applications

#### Prefix - Erase



M404\_01

#### Prefix - Carriage Return Line Feed (RS-232)



M214\_02

Use only with serial applications

**Note:** If you require a special configuration, please contact Code at (801) 495-2200.

### 6.3.2 - Suffix Settings

If you scan the following codes, you may lose your current settings. Make sure to save settings on your reader before scanning the Suffix codes. If you scan more than one suffix you will receive each scanned suffix in your scanned data; (i.e., if you scan comma suffix twice, you will get two comma suffixes). Scan the following codes to set appropriate suffix:

#### Suffix - Carriage Return (RS-232)



M168\_04

#### Suffix - Comma



M160\_04

#### Suffix - Line Feed



M169\_04

Use only with serial applications

#### Suffix - Carriage Return Line Feed (RS-232)



M170\_04

Use only with serial applications

#### Suffix - Space



M165\_04

#### Suffix - Enter (USB Keyboard Mode)



M161\_04

Use only with keyboard applications

#### Suffix - Tab (Keyboard Mode)



M167\_04

Use only with keyboard applications

#### Suffix - Tab (Serial)



M219\_04

Use only with serial applications

#### Suffix - Erase



M405\_02



Save Settings

M188\_02

## 6.4 - Erase Prefix and Suffix Settings

Scan the following codes to erase all prefix and suffix data.

### Erase Prefix & Suffix Data



## 6.5 - Reader Text Commands

Enabling Reader Text Commands allows the CR1200 to accept text commands via serial communications. Scan the following codes to enable/disable reader text commands:

### Reader Text Commands On



### Reader Text Commands Off - Default



**Note:** Text commands can only be sent to the reader when it is active. Refer to Reader-Host Interface Control Document for more information. [www.codecorp.com/readericd.html](http://www.codecorp.com/readericd.html).

## **Chapter 7 - Maintenance and Troubleshooting**

## 7.1 - Reset Reader to Factory Defaults

Scan the following codes to reset reader:

### Reset to USB Factory Default Settings



M049\_03

### Reset to PS/2 Factory Default Settings



M060\_03

### Reset to RS232 Factory Default Settings



M418\_02

### Clear All CodeXML Rules Prefix & Suffix



M052\_01

**Note:** If you read this Code you will lose any unsaved settings. Make sure to save the settings on your reader before reading the codes.

### Save Settings



M188\_02

## 7.2 - General Safety Information

**Repairs and Adjustments**—Only those individuals authorized by Code should attempt to make repairs or adjustments to CR1200 equipment. If the reader casing is opened the warranty is voided.

**Power Supply**—Use only the power supply provided for use with each specific unit when operating Code equipment.

**Accessories**—Only those accessories approved by Code should be utilized with Code equipment.

**Non-compliance with any of the above may result in:**

- Injury to individuals handling the equipment;
- Damage to the equipment; or
- Voiding of the maintenance contract.



Save Settings

M188\_02

## 7.3 - 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 following code:

### Reader ID and Firmware



You will see a text string indicating your firmware version and CR1200500 ID number (see below):

Xap/iVVVVWWWWXXXXSSSSSSSSSSPXX-XX+XXX

Xap/i - Code Internal ID (not applicable)

VVVV is the application firmware version number

WWWW is the bootloader firmware version number

XXXX is the radio firmware version number

SSSSSSSSSS Reader's serial number (ten digits)

P is "A" if running firmware is the application, "B" if BootLoader

XXX-XX+XX - Internal ID (not applicable)

**Example:** Xap/i3000300006040010002363A06D-SD+SQ

**Note:** Code will periodically release new firmware for CR1200 readers. For information on latest firmware versions, call Code at (801) 495-2200. To upgrade firmware, please visit our website at <http://www.codecorp.com/codesupport/html> and follow instructions provided.

## 7.4 - Downloading to the CR1200

Firmware and other files can be downloaded using a USB or RS232 cable. You cannot download to the CR1200 over a PS2 cable because of the limitations in PS2 technology. Firmware updates may be found on the Code website at:

<http://www.codecorp.com/downloads.html>

Download files include PDF documents detailing the download process.



## **7.5 - Warranty**

Code Corporation's Code Reader 1200 carries a three-year limited warranty as described herein.

Customers may purchase an extension to this warranty. Contact a Code representative for more information.

### **Limited Warranty**

Code manufactures its hardware products in accordance with industry-standard practices. Code warrants its products will be free from defects in materials and workmanship, provided that the products are used under normal operating condition intended by the Manufacturer. This warranty is provided to the original owner only and is not transferable to any third party. This warranty is subject to any and all accompanying disclaimers, limitations and other terms of this section. Non-serialized items, such as but not limited to cables, stands will carry a 90-day limited warranty.

### **Exclusions**

No warranty herein contained or set out shall apply to any product (i) which has been repaired, altered or tampered with unless done or approved by Code, (ii) which has not been maintained in accordance with any operating or handling instructions supplied by Code, (iii) which has been subjected to unusual physical or electrical stress, immersion in fluids, puncture, crushing, misuse, abuse, power shortage, improper power supply such as incorrect voltage or wrong polarity, negligence or accident, or (iv) which has been used other than in accordance with the product operating and handling instructions. Preventive maintenance is the responsibility of the customer and is not covered under this warranty.

### **Warranty Coverage and Procedure**

During the warranty period, Code will repair or replace defective products returned to Code's service center in the US. For worldwide warranty service call Code Warranty Support at 1-801-495-2200.

If warranty service is required, Code will issue a Return Material Authorization Number. Products must be shipped in the original or comparable packaging, with shipping and insurance charges prepaid. Code will ship the repaired or replacement product freight and insurance prepaid in North America. Shipments from the US or other locations will be made F.O.B. Code's manufacturing plant. Code will use new or refurbished parts at its discretion and will own all parts removed from repaired products. Customer will pay for any pre-shipped replacement product in case it does not return the replaced product to Code within 7 days of receipt of the replacement product. The process for return and customer's charges will be in accordance with Code's Exchange Policy in effect at the time of the exchange.

Customer accepts full responsibility for its software and data including the appropriate backup thereof. Repair or replacement of a product during warranty will not extend the original warranty term. Code's Customer Service organization offers an array of service plans, such as on-site, depot, or phone support, that can be implemented to meet customer's special operational requirements and are available at a substantial discount during warranty period.

### **General**

EXCEPT FOR THE WARRANTIES STATED ABOVE, CODE DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, ON PRODUCTS FURNISHED HEREUNDER, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. The stated express warranties are in lieu of all obligations or liabilities on part of Code for damages, including without limitation, special, indirect, or consequential damages arising out of or in connection with the use or performance of the product. Seller's liability for damages to buyer or others (regardless of the form of action, whether by contract, warranty, tort, malpractice, and/or otherwise) resulting from the use of any product, shall in no way exceed the purchase price of said product. In no event shall Code be liable for any consequential, special, indirect, incidental or punitive damages, or for any loss of profits, revenue or data, even if Code has been advised of the possibility thereof.



## **7.6 - CR1200 Accessories**

Please visit [www.codecorp.com](http://www.codecorp.com) for more information on Code accessories.

## **7.7 - Frequently Asked Questions**

For a complete list of Frequently Asked Questions, please visit: <http://www.codecorp.com/faq.html>

## **7.8 - CR1200 Maintenance**

The CR1200 device operates efficiently and reliably and needs only a minimum of maintenance to operate. A few tips are given below for maintenance suggestions.

### **Cleaning the CR1200 Window**

The CR1200 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 CR1200 uses CMOS technology that is much like a digital camera. A dirty window may stop the CR1200 from reading codes.

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.

The CR1200 display screen and housing may be cleaned in the same way. For applications that require cleaning with disinfectant, please use products with the following ingredients:

- Isopropyl Alcohol
- Ethyl Alcohol (Denatured Grade)

Note: Code does not recommend using bleach.

### **Technical Support and Returns**

For returns or technical support call Code Technical Support at (801) 495-2200; or email [support@codecorp.com](mailto:support@codecorp.com)

For all returns Code will issue an RMA number which must be placed on the packing slip when the reader is returned.