



# Metrologic MS1690 2D Scanner Installation Guide



# Revision History

1.0 04/17/2007 – Initial Release

The latest version of this document can be found in the following places:

- Internally for Cerner associates in the Cerner Knowledge Repository (KR) using the search function with the keywords: Metrologic or MS1690
- Internally for Cerner associates on “My Cerner” using the search function with the keywords: Metrologic or MS1690
- Externally for clients and Cerner associates on [www.cerner.com](http://www.cerner.com) under the Support tab, Millennium Infrastructure Documentation, Peripherals, Bar-Code Scanners, Metrologic.

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# Metrologic MS1690 2D Scanner Installation Guide



## Overview

This guide provides a Cerner-specific installation methodology for the following Metrologic scanner models.

Scanner Model	Kit Part Number	Description / Interface
MS1690-14	MK1690-61B14	MS1690 2D Barcode Scanner (RS232 Serial)
MS1690-38	MK1690-61A38	MS1690 2D Barcode Scanner (USB)
MS1690-47	MK1690-61B47	MS1690 2D Barcode Scanner (Keyboard Wedge)

Verify the scanners model number by comparing the “Model” and the type located on the bottom of the scanner to the ones listed above. You also can compare the number on the box the scanner came in with the kit part number above. If the numbers do not match then this document should not be used to set up the scanner.



*To determine your scanners model number see the above two circles.  
In this example the model number is: MS1690-47*

**Note:** Each scanner model is specifically designed for a particular interface. Do not mix scanners and interfaces.

This documentation should be used in place of the manufacturers’ documentation. The manufacturer’s documentation is provided with the scanner in the event that it might be needed at a later date. It is assumed that the reader understands how to attach peripheral devices and load software on Windows® based PCs. If you need additional assistance, contact your institution’s help desk, your Cerner account team or Cerner’s Client Care Team in Kansas City Missouri call 816-201-9800 or toll free at (866) 221-8877 for assistance.

## LED and Beep Meanings

The MS1690 has three LED indicators (yellow, white and blue) located on the top of the scanner. When the scanner is on, the flashing or stationary activity of the LED's indicates the status of the current scan and the scanner. The Beep also indicates the status of the scans.

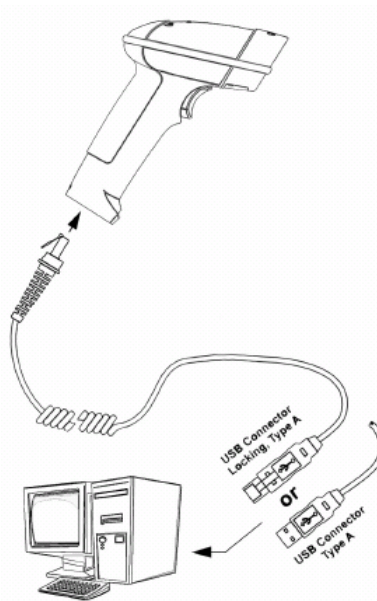
### Normal Operation Feedback

LED	Beep	Meaning
None	None	Scanner not powered on or no barcode being scanned.
Steady Yellow	None	Scanner is in the presentation stand.
Steady Blue	None	The blue LED is illuminated when the scanner is active and linear illumination is on or when the scanner is attempting to decode a barcode.
Steady Blue & Single White Flash	1 Beep	When the scanner successfully reads a bar code it will beep once and the White LED will turn on indicating data is being transmitted.
Steady White	1 Beep	When the scanner successfully reads a bar code it will beep once and the White LED will turn on indicating data is being transmitted. If the host is not ready to accept the information, the scanner's white LED will remain on until the data can be transmitted.
Alternating Flashing Blue and White	None	This indicates the scanner is in configuration mode. A short razzberry tone indicates that an invalid bar code has been scanned while in this mode.
Flashing Blue	None	The blue LED will flash if the trigger is pressed while the scanner is in the in-stand presentation mode. The blue LED will stop flashing after a brief period of time.
	Long Razzberry Tone – During Power Up	Failed to initialize or configure the scanner. If the scanner does not respond after reprogramming, return the scanner for repair.
	Short Razzberry Tone – Durring Scanning	An Invalid bar code has been scanned when in configuration mode or the trigger has been pulled too fast.
	3 Beep after power up	Scanner ready for use.
White LED Flash	3 Beeps in Configuration Mode	Scanner has entered configuration mode.
	3 beeps – Med / High / Low	When using single code configuring this 3 beeps indicate that the barcode successfully configured the scanner.
	3 Beeps in Normal Mode	Communication Error

# USB Scanner Setup

If you are installing your MS1690 scanner using the USB port on your PC please perform the following steps. If you are installing your MS1690 scanner using PS/2 or RS-232 style connection please move to that section of this document as the instructions in this section are not designed for your scanner.

1. Connect the USB interface cable to the base of the scanner and to an unused USB port on the PC. Wait for the 3 beeps indicating that the scanner is ready.
2. The scanner should be pre-configured for use with a USB interface. You should not have to scan any barcodes to configure this interface.



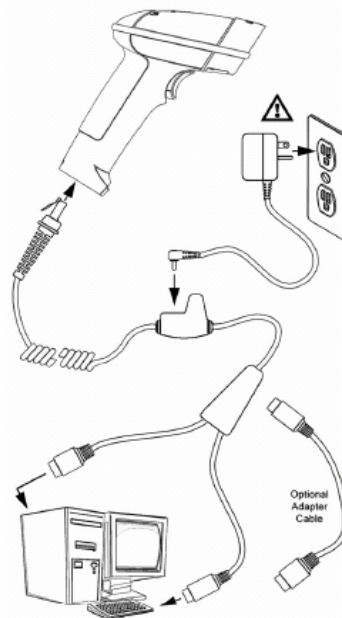
**USB Connections**

Please proceed to the section titled “**Symbology Selection**”

# PS/2 (Keyboard Wedge) Scanner Setup

If you are installing your MS1690 scanner using the PS/2 Mini-Din keyboard port on your PC please perform the following steps. If you are installing your MS1690 scanner using USB or RS-232 style connection please move to that section of this document as the instructions in this section are not designed for your scanner.

1. Shut down the PC or thin client.
2. Unplug the keyboard from the back of the PC or thin client.
3. Mate the DIN to Mini DIN adapter cable (P/N: 45988) to the interface cable.
4. Connect the PS/2 Interface cable to the scanner and connect the male PS/2 connector to the keyboard port on the PC or thin client.
5. Plug the keyboard into the female PS/2 cable on the interface cable.



**PS/2 Cable Connections**

6. Once the scanner and the computer are fully connected, power up the computer.
7. The scanner should be pre-configured for use with a Keyboard Wedge (PS/2) interface. You should not have to scan any barcodes to configure this interface.

Please proceed to the section titled “**Symbology Selection**”

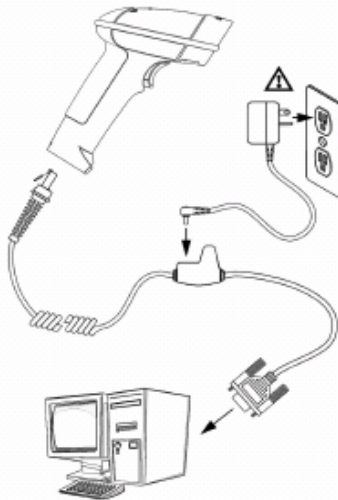
# RS-232 (Serial) Scanner Setup

If you are installing your MS1690 scanner using the serial RS-232 port on your PC please perform the following steps. If you are installing your MS1690 scanner using USB or PS/2 style connection please move to that section of this document as the instructions in this section are not designed for your scanner.

1. If Data Technologies “Keyport version 4.3 or higher is not installed please install it now. The procedure can be found in the following location:

## Data Technologies Keyport Installation Guide

- Internally for Cerner associates in the Cerner Knowledge Repository (KR) using the search function with the keywords: Keyport
  - Internally for Cerner associates on “My Cerner” using the search function with the keywords: Keyport
  - Externally for clients and Cerner associates on [www.cerner.com](http://www.cerner.com) under the Support tab, Millennium Infrastructure, Peripherals, Bar-Code Scanners, Data Technologies.
2. Shut down the PC or thin client.
  3. Connect the RS-232 Interface cable to the bottom of the scanner and connect the serial RS-232 (DB9) connector to the PC or thin client and tighten the screws.
  4. Plug the power supply into the power jack on the cable and then into a wall power outlet.



## RS-232 (Serial) and Power Connections

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## RS-232 (serial) Scanner Setup (Continued)

**Note:** The scanner will start to initialize. All LED's (yellow, white, and blue) will light for approximately 2 seconds then start to alternately flash and then beep 3 times.

5. Power on the computer or thin client.
6. Bring up the Keyport software and click the start button to activate the software.

**Note:** make sure that your communication settings in the Keyport software are set properly (9600 Baud, Even Parity, 7 Data Bits, 1 Stop Bit).

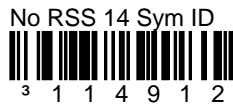
7. Scan the following bar codes.



Please proceed to the section titled “Symbology Selection”

# Symbology Selection

Scan the following bar codes in the order in which they appear.



## Symbology Selection (Continued)

Enable ISBT 128



Enable Aztec



Enable Data Matrix



Enter/Exit Config Mode

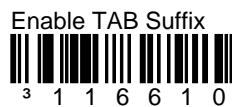


Please proceed to the section titled “**Set Postamble for Cerner Classic & Cerner Millennium Applications**”

## Setting up the Scanner for Cerner Millennium Applications

**Note:** If you are not running Cerner Millennium applications skip this section.

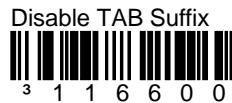
Scan the following barcodes to sets up the scanners suffix to a “**Horizontal TAB**” for most Cerner Millennium applications. If this does not work for your application try scanning the configuration barcodes for Cerner Classic.



## Setting up the Scanner for Cerner Classic Applications

**Note:** If you are not running Cerner Classic applications skip this section.

Scan the following barcodes to set up the scanners suffix to a “**Carriage Return**” for Cerner Classic applications.



Please proceed to the section titled “**Symbology Selection**”

# Miscellaneous Optional Setup Procedures

## Hands Free (Presentation) Mode

To use the MS1690 scanner in presentation mode place the scanner in the presentation stand. Placing the scanner in the stand automatically configures the scanner into presentation mode. Once the scanner is in the stand and the IR sensor detects an object in the IR activation range the scanner's light automatically starts to flash as it attempts to scan the bar code. The scanner continuously attempts to scan the bar code until either it succeeds or the bar code is removed from the scanner's field of view. When scanner successfully reads the bar code it will beep once, the white LED will flash and the decoded data will be transmitted to the host.



## Setting “Beep” Tone

To adjust the beepers frequency and volume scan the appropriate bar code(s).



## Show Firmware Revision

Follow this procedure to display the firmware revision of your scanner.

1. Bring up Microsoft Word, WordPad or Notepad and make sure your cursor is in the editors window.
2. Scan the following barcode.



**Note:** be careful not to open or click any other windows after you enter scan count mode.

You should now be seeing something that looks like this:

```
118016 1 2127 2127 15370
0 0 0 15370
0 0 0 15370
0 0 0 15370
0 0 0 15370...
```

**Note:** The last block of numbers is the firmware revision level. In this case it would be: 15370.

Scan the following barcode to turn off Scan Count.



## Reset to Factory Defaults

Scan the following barcode to reset the scanner back to factory defaults.



# Sample Bar Codes

Use these bar codes to test your imager using Microsoft Word or WordPad.

## “Linear” Sample Bar codes



## “2D” Sample Bar codes

PDF417



This is a sample of the “PDF417” symbology. This symbology can store a lot of information in a small space.

Aztec Code



This is a sample of the 2D "Aztec Code" symbology. This symbology can store a lot of information in a small space.

Data Matrix



This is a sample of the 2D "Data Matrix" symbology. This symbology can store a lot of information in a small space.

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