

# Quick Start Guide

## MS-2 CCD Reader



**MICROSCAN.**

P/N 83-200002 Rev C

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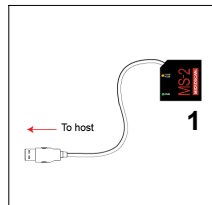
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### Step 1 — Check Hardware

**Caution:** Be sure that all cables are connected **BEFORE** applying power to the system. Always power down **BEFORE** disconnecting any cables.

#### USB Hardware

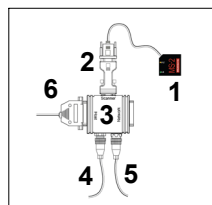
Item	Description	Part Number
1	MS-2 CCD Reader	FIS-0002-000XG



USB Hardware Required

#### RS-232 Hardware

Item	Description	Part Number
1	MS-2 CCD Reader	FIS-0002-000XG
2	IC-332 Adapter	FIS-0001-0035G
3	IB-131 Interface Box	99-000018-01
4	Power Supply	97-100004-15 (90-264 VAC, 24VDC, USA/Euro plug)
5	Object Detector	99-000017-01
6	Communication Cable	61-300026-03

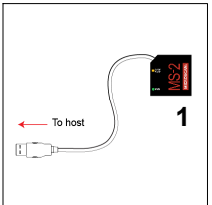


RS-232 Hardware Required

### Step 2 — Connect the System

#### Connecting by USB

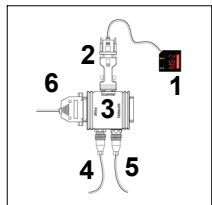
- Connect the reader (1) to the host computer. The reader is powered by the USB connection.



USB Hardware Configuration

#### Connecting by RS-232

- Connect the reader (1) to the IB-131/IC-332 interface (2) and (3).
- Connect the communication cable (6) to the host, and to the host port on the IB-131 (3).
- Connect the object detector (5) to the IB-131 (3).
- Connect the power supply (4) to the IB-131 (3).
- Apply power to the reader.



RS-232 Hardware Configuration

### Step 3 — Install ESP

ESP Software can be found on the Microscan Tools CD that is packaged with the MS-2.

- Follow the prompts to install ESP from the CD.
- Click on the ESP icon to run the program.



**Note:** ESP can also be installed from the **Download Center** at [www.microscan.com](http://www.microscan.com).

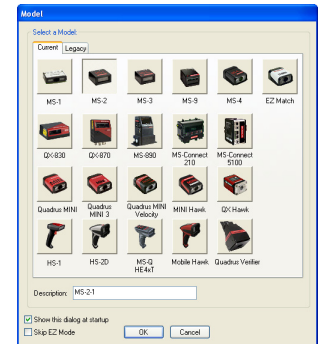
#### Minimum System Requirements

- 166 MHz Pentium processor (Pentium II processor recommended)
- Windows 7, Vista, XP, or 2000 operating system
- Internet Explorer 5.0 or higher
- 64 MB minimum RAM (128+ MB RAM recommended)
- 80 MB hard drive space
- 800 x 600 minimum 256 color display (1024 x 768 32-bit color recommended)

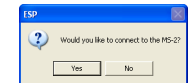
Refer to the *MS-2 CCD Reader User's Manual* for detailed information about using ESP to configure the MS-2.

### Step 4 — Select Model

When you start ESP, this menu will appear:



- Click the button showing the reader used in your application.
- Click **OK**.  
**Note:** You can also simply double-click the button showing your reader to make your selection.
- Click **Yes** when this dialog appears:

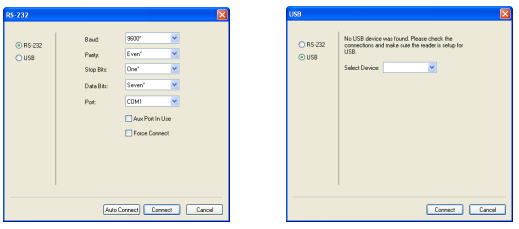


**Note:** If you need to select another model later, click the **Switch Model** button near the top of the screen or use **Model > New Model** in the menu toolbar.

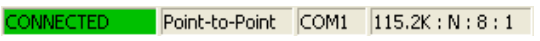
# Step 5 — Connect

To connect using the Connection Wizard:

- Select **RS-232** or **USB** to activate the appropriate display.
- Configure settings as required by the application, and click **Connect**.



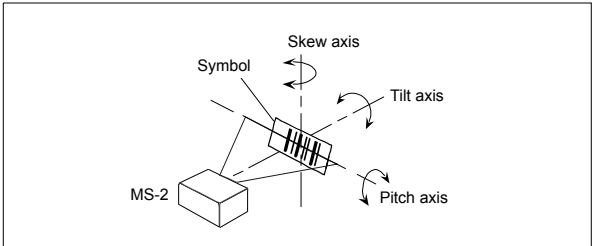
- When a connection is established, the green indicator in the status bar at the bottom right of the screen will be visible:



**Important:** The reader is in **Continuous Read Mode** by default. For best connection results, be sure that no decodable symbols are within the field of view while attempting to connect.

# Step 6 — Position Reader

- Set up a symbol at the distance you will be using in your application. Refer to the read range data for your MS-2 model (High or Low Density) in the *MS-2 CCD Reader User's Manual*.  
**Note:** If you are using an Interleaved 2 of 5 symbol, verify that the number or characters being scanned matches the symbol length enabled for Interleaved 2/5 (default is 10 and 6).
- Avoid bright light or infrared light from other sources, including other readers.
- Pitch the reader or symbol at a minimum of  $\pm 15^\circ$  to avoid specular reflection (the return of direct, non-diffused light).
- Avoid excessive skew or pitch. Maximum skew is  $\pm 30^\circ$ ; maximum pitch is  $\pm 30^\circ$ .



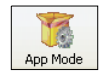
Reader / Symbol Positioning

**Note:** Code 39 is the default symbology enabled. If you are uncertain of your symbology, perform the following steps:

1. Enable all symbologies using **ESP**.
2. Enable **Symbology Identifier** at the bottom of **ESP's Symbologies** tree control.
3. Decode the symbol and compare the symbology identifier character to the list on page 5-20 of the *MS-2 CCD Reader User's Manual* to determine your symbology.
4. Disable all other symbologies.

# Step 7 — Configure the Reader

To make setup changes to the reader, click the **App Mode** button.



The following modes are accessible by clicking the buttons at the top of the screen:

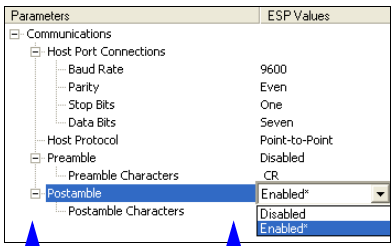


- Click the **Autoconnect** button to establish communications between **ESP** and the reader.
- Click the **Send/Recv** button to send or receive commands.
- Click the **Parameters** button to show the tree controls for Communication, Read Cycle, and Symbologies.
- Click the **Terminal** button to display decoded symbol data and to send serial commands to the reader using text or macros.
- Click the **Utilities** button to test Read Rate, request or clear Counters, enable or disable the reader or send output pulses in Device Control, determine the Differences from Default in the current settings, add or remove master symbol data in Master Database, and verify or update the reader's Firmware.

# Step 8 — Save Changes in ESP

To make changes to a configuration setting:

1. **Left click** on the **+** to expand the desired tree.
2. **Double click** on the desired parameter and click once in the selection box to view options.
3. Place your cursor in the selection box, scroll down to the setting you want to change, and **click** once on the setting.



4. **Left click** on the open screen to complete your selection.
5. **Right click** on the open screen and select **Save to Reader** to implement the command in the imager.

- **Send, No Save.** Changes will be lost when power is re-applied to the imager.
- **Send and Save.** This activates all changes in current memory *and* saves to the imager for power-on.