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> [Symcode 2D Embedded Barcode Scanner Fixed Mount Barcode Scanner Scan Engine, Ultra-Rugged Metal Cover 1D 2D QR Barcode Scanner with Auto Sensing, Black, MJ-5090 User Manual](#)

### symcode MJ-5090

# Symcode 2D Embedded Barcode Scanner MJ-5090 User Manual

Model: MJ-5090

## 1. INTRODUCTION

The Symcode MJ-5090 is a high-performance 2D embedded barcode scanner engineered for seamless integration into various systems, including automated production lines, kiosks, and self-service terminals. Its robust design and versatile scanning capabilities make it an ideal solution for efficient data capture. This manual provides essential information for setting up, operating, and maintaining your MJ-5090 scanner.

## 2. PRODUCT OVERVIEW

The Symcode MJ-5090 scanner features a compact, ultra-rugged metal housing designed for durability and easy embedding. It connects via a standard USB cable, ensuring broad compatibility with various host devices.

### 2.1 Components

- Symcode MJ-5090 Barcode Scanner Unit
- Integrated USB Cable

### 2.2 Key Features

- **Automatic Sensing:** Automatically scans barcodes when they enter the scanning area.
- **Manual Trigger Mode:** Allows scanning only when the trigger button is pressed.
- **Wide Compatibility:** Supports 1D, 2D, and QR codes, including UPC, Code 128, PDF417, and more.
- **Plug and Play:** No driver installation required for most operating systems.
- **Durable Construction:** Ultra-rugged zinc alloy metal cover for industrial-grade quality.



Figure 1: Symcode MJ-5090 Barcode Scanner with USB cable.

## Zinc Alloy

More durable than a plastic case,  
reaching industrial -grade quality



Plastic shell



Figure 2: The scanner's durable zinc alloy casing.

### 3. SETUP

The MJ-5090 scanner is designed for easy installation and use. Follow these steps to set up your device:

#### 3.1 Connecting the Scanner

1. Ensure your host device (e.g., laptop, desktop computer, KIOSK) is powered on.
2. Connect the USB cable of the MJ-5090 scanner to an available USB port on your host device.
3. The scanner will be recognized automatically by most operating systems as a keyboard device. No additional drivers are typically required.
4. Once connected, the scanner is ready for operation.



Figure 3: Plug & Play connection to a computer.

## 4. OPERATING

The MJ-5090 offers two primary scanning modes to accommodate various application needs.

### 4.1 Automatic Sensing Mode

In this mode, the scanner automatically detects and scans barcodes when they are presented within its field of view. This is ideal for high-throughput environments where items pass by the scanner continuously.

- Ensure the automatic scanning function is enabled (refer to programming guide if specific configuration is needed).
- Position the barcode within the scanner's reading window.
- The scanner will automatically illuminate and capture the barcode data, transmitting it to the connected device.

# Auto-sensing Scanning



Figure 4: Auto-sensing scanning in action.

## 4.2 Manual Trigger Mode

For applications requiring controlled scanning, the manual trigger mode allows the scanner to activate only when its physical trigger button is pressed.

- Ensure the manual scanning function is enabled (refer to programming guide if specific configuration is needed).
- Press the orange trigger button on the scanner.
- Position the barcode within the scanner's reading window while holding the button.
- Release the button after a successful scan.

# Two Scan Modes

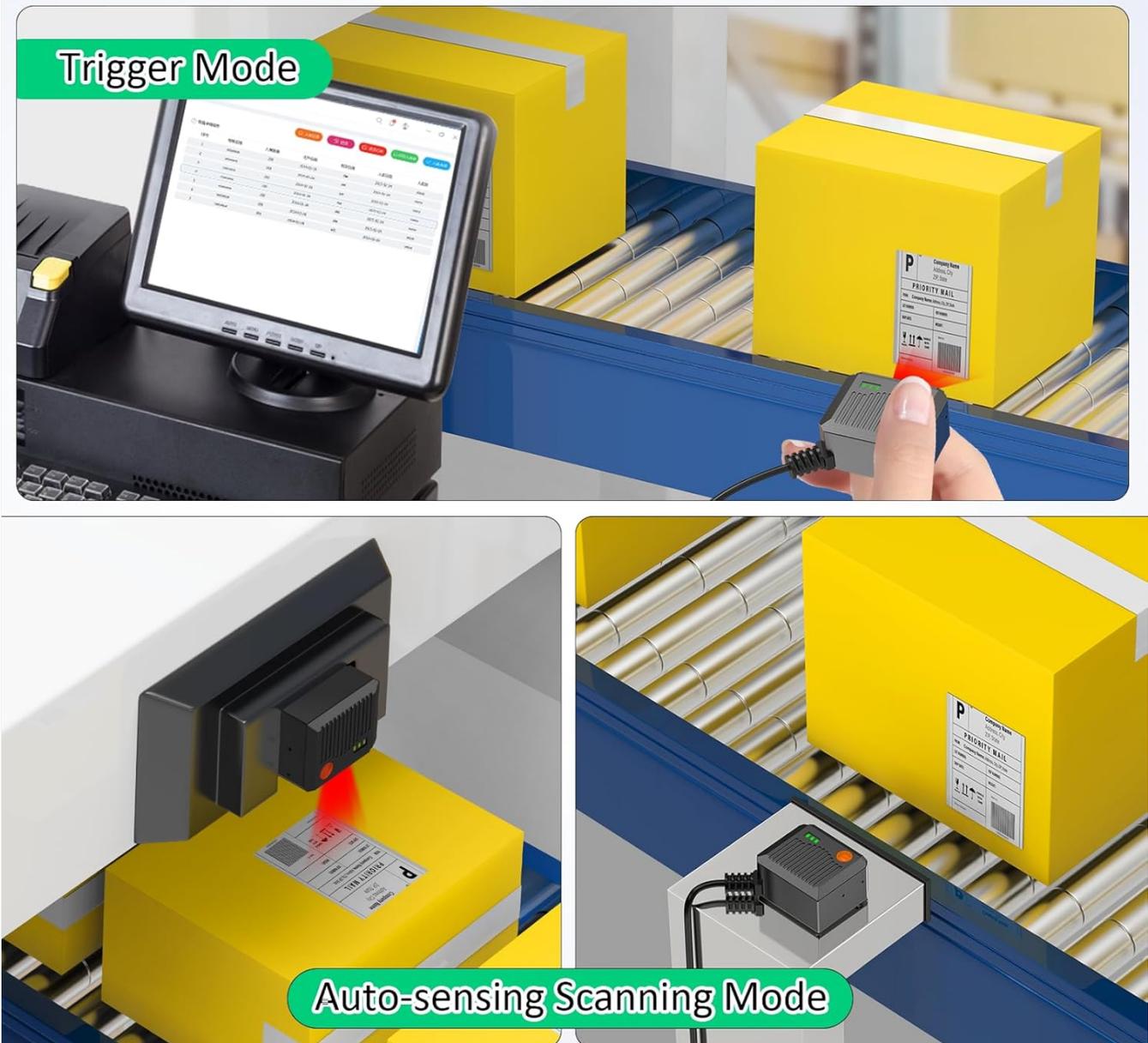


Figure 5: Comparison of Trigger Mode and Auto-sensing Scanning Mode.

## 4.3 Supported Barcode Types

The MJ-5090 is capable of decoding a wide array of 1D and 2D barcode symbologies, even those that are blurred or incomplete.

- **1D Codes:** UPC-A, UPC-E, EAN-13, EAN-8, Code 39, Code 93, Code 128, Codabar, Interleaved 2 of 5, ISBN, GS1 Databar, etc.
- **2D Codes:** QR Code, PDF417, Data Matrix, etc.

# 2D & 1D Super Decoding Ability

Even blurring, incomplete 2D & 1D codes can be decoded.



Figure 6: 2D & 1D Super Decoding Ability.

## 5. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your scanner.

- **Cleaning:** Use a soft, clean cloth slightly dampened with water or a mild, non-abrasive cleaner to wipe the scanner's exterior. Avoid harsh chemicals or abrasive materials that could damage the housing or scanning window.
- **Scanning Window:** Keep the scanning window clean and free of dust, smudges, or scratches. A dirty window can impair scanning performance.
- **Storage:** Store the scanner in a cool, dry place away from direct sunlight and extreme temperatures when not in use.
- **Handling:** Although rugged, avoid dropping the scanner or subjecting it to severe impacts.

## 6. TROUBLESHOOTING

If you encounter issues with your Symcode MJ-5090 scanner, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Scanner does not power on or respond.	Loose USB connection; Faulty USB port; Power issue with host device.	Ensure USB cable is securely connected. Try a different USB port or host device.
Scanner does not read barcodes.	Barcode damaged or poor quality; Incorrect scanning mode; Dirty scanning window; Unsupported barcode type.	Check barcode quality. Ensure correct scanning mode (auto-sensing or manual trigger). Clean the scanning window. Verify barcode type is supported.
Barcode data is incorrect or incomplete.	Partial scan; Incorrect symbology settings; Data formatting issue.	Ensure the entire barcode is within the scanning area. Refer to the programming guide for symbology and data formatting settings.
Scanner is slow to respond.	Interference; Host device performance.	Ensure no obstructions or strong light sources interfere with scanning. Check host device performance.

If the problem persists after attempting these solutions, please contact Symcode customer support for further assistance.

## 7. SPECIFICATIONS

Technical specifications for the Symcode MJ-5090 barcode scanner:

Feature	Detail
Model Number	MJ-5090
Dimensions	5.31 x 4.25 x 2.13 inches (Package)
Item Weight	6.4 ounces
Connectivity Technology	USB Cable
Power Source	Corded Electric
Compatible Devices	Desktop, Laptop
Scan Rate	900 32nds
Manufacturer	Symcode

# Mini size, easy to embed

Easily realize industrial automation



Mini compact



Strong and sturdy



38mm



46mm

1500mm

Barcode Scanner Dimension : **1.8inx1.5inx1in** (46mmx38mmx25mm)

Figure 7: Scanner dimensions and cable length.

## 8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation included with your purchase or visit the official Symcode website. Keep your purchase receipt as proof of purchase for warranty claims.

**Contact Information:** Please refer to the Symcode official website or your product packaging for the most up-to-date contact details for customer service and technical support.

	<p><a href="#">2.4G Wireless Barcode Scanner User's Guide   Symcode</a></p> <p>Comprehensive user's guide for the Symcode 2.4G Wireless Barcode Scanner, detailing features, performance parameters, operating modes, setup options, and specifications.</p>
<p>2D Barcode Scanner User Manual</p> <p>BROCHURE</p> 	<p><a href="#">Symcode MJ-340 2D Barcode Scanner User Manual</a></p> <p>Comprehensive user manual for the Symcode MJ-340 2D Barcode Scanner, covering setup, performance specifications, communication modes, and configuration options.</p>
<p>Bluetooth/2.4G Wireless Barcode Scanner</p> <p>User's manual</p> <p>BROCHURE</p>	<p><a href="#">Bluetooth/2.4G Wireless Barcode Scanner User Manual</a></p> <p>Comprehensive user manual for the Bluetooth/2.4G Wireless Barcode Scanner, covering features, setup procedures, operating modes, troubleshooting, and indicator explanations.</p>
<p>TFT Screen Intellectual Wireless Barcode Scanner</p> <p>User's manual</p>  <p>BROCHURE</p>	<p><a href="#">TFT Screen Intellectual Wireless Barcode Scanner User Manual</a></p> <p>User manual for the TFT Screen Intellectual Wireless Barcode Scanner, detailing its features, applications, and operating instructions. Learn about its triple-mode connectivity, large storage capacity, and ergonomic design.</p>
<p>1D Barcode Scanner User Manual</p> <p>Barcode Scanner Quick Set-up V2.0</p>	<p><a href="#">1D Barcode Scanner User Manual V2.0</a></p> <p>This user manual provides comprehensive instructions for the 1D Barcode Scanner, version 2.0. It covers setup, installation, scanning modes, configuration options, and technical specifications. Learn how to efficiently use the scanner in various commercial and industrial applications.</p>
	<p><a href="#">Shenzhen Alacrity MJ-X5 Mini Bluetooth Barcode Scanner User Guide</a></p> <p>Comprehensive guide for the Shenzhen Alacrity MJ-X5 Mini Bluetooth Barcode Scanner, covering features, performance parameters, connection methods, wireless pairing (2.4GHz and Bluetooth), and various operational settings for efficient data capture.</p>