Quick Start Guide
HS-21/HS-41X
Handheld Reader

MICROSCAN®

Step 1 — Check Required Hardware

The HS-21/HS-41X is shipped with one of the following cables:

6' USB Straight Cable **8' RS-232 Coiled Cable**

USB Hardware
1. HS-21/HS-41X Handheld Reader
2. USB cable

RS-232 Hardware
1. HS-21/HS-41X Handheld Reader
2. RS-232 Cable
3. RS-232 Power Supply

Detaching the Cable
The reader can be converted from USB to RS-232 or from RS-232 to USB by changing the cable and scanning the appropriate communications programming symbol below. To detach the USB or RS-232 cable from the reader, press a paper clip into the hole on the side of the handle and gently pull the cable out of the connector.

USB Interface   **RS-232 Interface**   M0166_01 **Save Settings**

Step 2 — Set Up Hardware (USB)
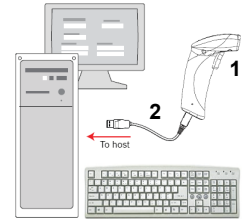
Note: The USB interface draws its power from the host.

Hardware for USB

1	HS-21 Handheld Reader	FIS-HS21-000XG
	HS-41X Handheld Reader	FIS-HS41X-000XG
2	USB Cable, 6' Straight	61-000224-01
	USB Cable, 8' Coiled	61-000224-02

USB Installation
To power on the reader, plug the USB cable into the reader's handle and into the host's USB port. After several seconds, the reader will beep twice and the LED will turn off. The reader will now be ready to use.

Important: If you use a USB hub, be sure that it is a powered hub.

USB Hardware

Q0001_2
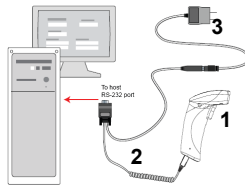**Default to USB (HID)**   **Test Symbol** (ABCDEFGHIJKLMNOP)   M0166_01 **Save Settings**

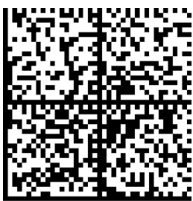# Step 2 — Set Up Hardware (RS-232)

Hardware for RS-232

1	HS-21 Handheld Reader	FIS-HS21-000XG
	HS-41X Handheld Reader	FIS-HS41X-000XG
2	RS-232 Cable, 8' Coiled	61-000224-03
3	RS-232 Power Supply, 8' Coiled, U.S.	20-000335-02
	RS-232 Power Supply, 8' Coiled, Euro	20-000336-02
	RS-232 Power Supply, 8' Coiled, UK	20-000337-02

RS-232 Installation
To power on the reader, plug the RS-232 cable into the reader's handle, plug the power supply into the AC outlet, plug the power supply cord into the barrel jack on the cable, and then connect the cable to the appropriate serial port on the host. The unit will beep twice and the LED will turn off. The reader will now be ready to use.

RS-232 Hardware

M0017_01
Reset to RS-232 Factory Defaults   **Test Symbol** (ABCDEFGHIJKLMNOP)   M0166_01 **Save Settings**

Step 3 — Install ESP

ESP Software is Microscan's configuration and testing software. Use ESP to set up your HS-21 and HS-41X Handheld Reader.

ESP can be found on the Microscan Tools Drive that is packaged with the reader.

1. Follow the prompts to install ESP from the Tools Drive.
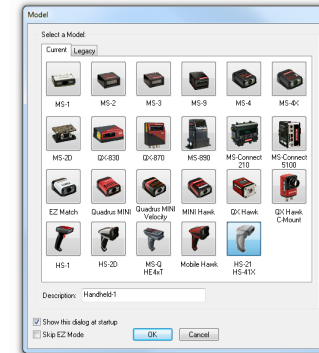2. Click on the ESP icon to run the program.

Note: ESP can also be installed from the **Download Center** at **www.microscan.com**.

Minimum System Requirements
- 233 MHz Pentium PC
- Windows 8, 7, Vista, or XP operating system (32-bit or 64-bit)
- Internet Explorer 6.0 or higher
- 128 MB RAM or greater
- 160 MB free disk space
- 800 x 600 256 color display (1024 x 768 32-bit color recommended)
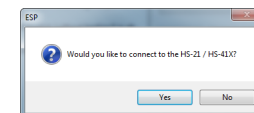

Step 4 — Select Model

When you start **ESP**, the following menu will appear:

1. Click the HS-21/HS-41X button and then click **OK**. If you do not want to make this selection every time you start **ESP**, uncheck "Show this dialog at startup". If you need to select another model later, click **Switch Model** at the top of the screen.
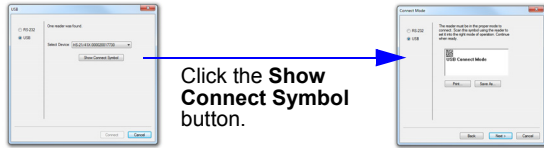
   Note: You can also type a name of your choice in the **Description** text field and click **OK**.

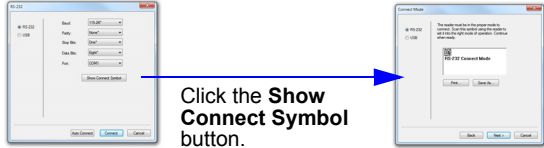2. Click **Yes** when this dialog appears:

Step 5 — Select Interface

USB

Click the **Show Connect Symbol** button.

1. Print and decode the **USB Connect Mode** symbol to ensure that you are in the correct communications mode. Keep the printed symbol in a convenient place for future use. Click **Next** when you are finished.
2. You will then see your reader's ID in the **Select Device** field. The Reader ID number should match the serial number next to the trigger under the optical head of the reader. Click **Connect**.

RS-232

Click the **Show Connect Symbol** button.

Print and decode the **RS-232 Connect Mode** symbol and decode it with the reader to ensure that you are in the correct communications mode. Keep the printed symbol in a convenient place for future use. Be sure the correct communications port is selected. Click **Next**, and then **Connect**.

Step 6 — Connect to ESP

USB

Once you have clicked **Connect** in the USB **Select Device** field, the **CONNECTED** message will appear in a green box in the status bar at the bottom right of the screen.

CONNECTED   USB HID

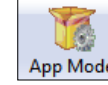You are now ready to configure the USB HS-21/HS-41X using **ESP**.

RS-232

Once you have selected RS-232 settings and communications port and clicked **Connect**, the **CONNECTED** message will appear in a green box in the status bar at the bottom right of the screen.

CONNECTED   Point-to-Point COM1

You are now ready to configure the RS-232 HS-21/HS-41X using **ESP**.

Step 7 — Configure the Reader

Click the **App Mode** button to make configuration changes.

The following modes are accessible by clicking the buttons in the first row of **App Mode** icons:
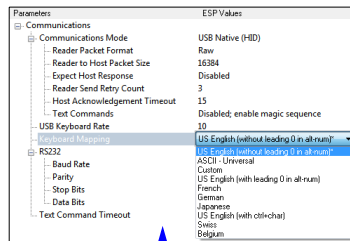
- Click the **EZ Mode** button to return to the EZ Mode view.
- Click the **Autoconnect** button to establish communication.
- Click the **Send/Recv** button to send or receive commands.
- Click the **Switch Model** button to open the model menu.
- Click the **Parameters** button to show the tabbed tree controls for Communication, Read Cycle, Symbologies, and I/O Parameters.
- Click the **Imager** button to capture and decode symbols and to use Window of Interest for Near Field and Far Field.
- 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 show the tabbed interfaces for Device Control, Differences from Default, Firmware, and Advanced settings.

For further details, see **ESP Help** in the dropdown Help menu or refer to the *HS-21/HS-41X Handheld Reader User Manual*.

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 reader.

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