



TELONICS TSC-5A VIRTUAL COM PORT DRIVER INSTALLATION GUIDE

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Background

The Telonics TSC-5A is a data cable that is typically used to connect a TSUR-400 (Telonics Uplink Receiver) to a Windows PC or laptop via USB. TDC (Telonics Data Converter) software is used to monitor TSUR-400 output and provide decoding and/or logging services. During the TDC installation, a proprietary TSC-5A driver is installed into the operating system. When the TSC-5A cable is connected to the computer, Windows completes the installation for that specific cable. TDC is then able to communicate with the TSUR-400 via the TSC-5A and its proprietary driver. When TDC is opened, users wishing to log TSUR-400 data can simply select TSC-5A in the Log Uplink Messages dialog (log only), or in the Connected Uplink tab (decode/log).

Alternative TSC-5A Uses

If you want to log TSUR-400 data using programs other than TDC, this is possible by installing a Virtual COM Port driver for the TSC-5A. This driver creates a device interface that can be used by any Windows program capable of communicating over a standard serial COM port.

Supported Operating Systems

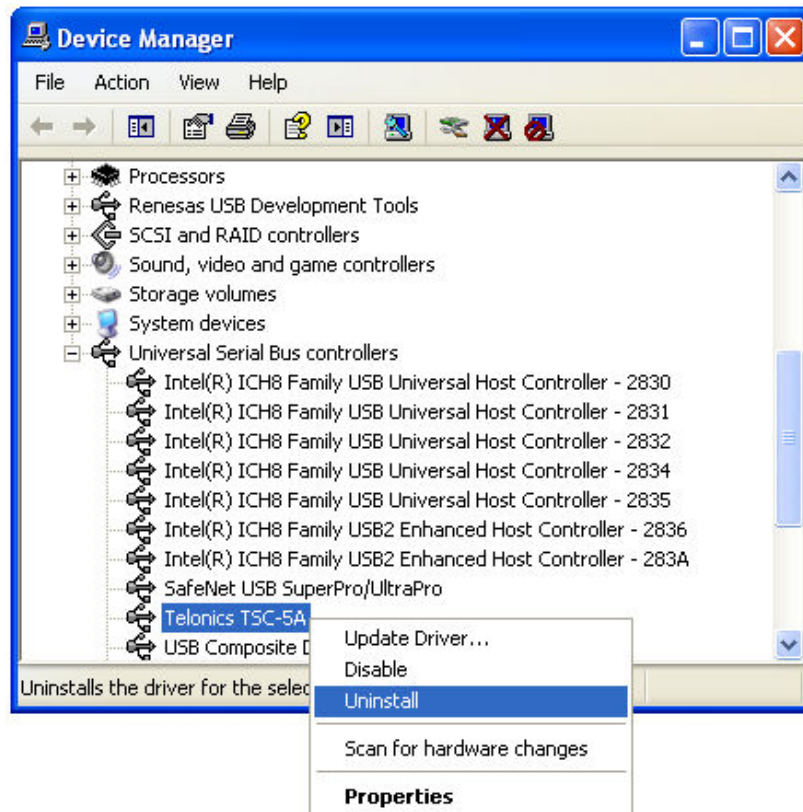
The Virtual COM Port driver discussed in this document can be installed only on Windows XP, Windows Vista (32 and 64-bit), and Windows 7 (32 and 64-bit).

Virtual COM Port Driver Installation

1. You will need Windows administrator level privileges to perform this procedure. If your logon does not provide administrator privileges, contact your IT department for assistance.
2. If TDC (V1.40.1232 or newer) is installed on the computer you plan to use with the Virtual COM Port driver and TSC-5A, then the proprietary TSC-5A driver installed by TDC must be uninstalled before installing the Virtual COM Port driver. To uninstall the proprietary driver:
 - a. Plug the TSC-5A cable into an available USB connector on your computer.
 - b. If your system is running Vista or Windows 7 and this is the first time connecting the cable, the operating system will complete the proprietary device driver installation. This is normal and not a problem. Continue at step **2.d** below.
 - c. If your system is running Windows XP and this is the first time connecting the cable, the **Found New Hardware Wizard** will start. Click the **Cancel** button and go to step **2.i** below. If the Wizard does not display within a few seconds, continue at step **2.d** below.



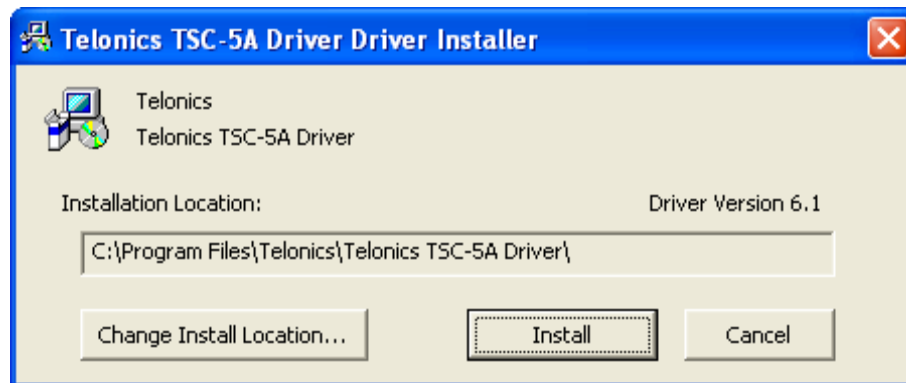
- d. Open the Windows **Device Manager**:
 - 1) Click **Start**.
 - 2) Right-click **My Computer** and then click **Properties**.
 - 3) Click the **Hardware** tab in the **System Properties** dialog.
 - 4) Click the **Device Manager** button.
- e. In Device Manager, locate the **Universal Serial Bus controllers** entry and then click the **+** icon (XP) or **>** icon (Vista or Windows 7) to expand the list of devices in the category.
- f. Locate the Telonics TSC-5A entry, right-click to open a context menu, and then select **Uninstall**.



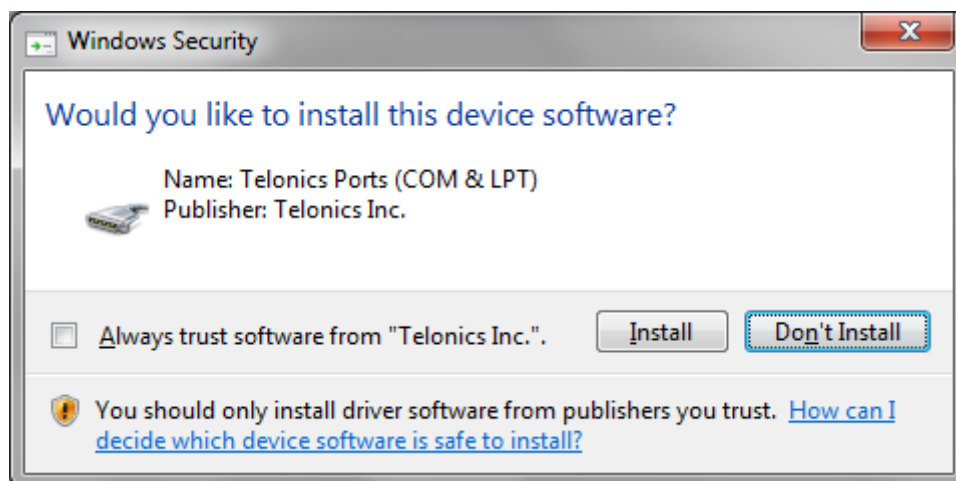
- g. The **Confirm Device Removal** dialog will display as shown below. Click the **OK** button to remove the TSC-5A device driver. Windows will then remove the driver and update the Device Manager to show that the device is no longer present.



- h. Close Device Manager.
 - i. Unplug the TSC-5A cable from the computer.
 - j. Open the Windows **Control Panel** and then double-click **Add or Remove Programs** (XP) or **Programs and Features** (Vista and Windows 7).
 - k. Scroll down the list until you find **Telonics TSC-5A Driver**. Click **Telonics TSC-5A Driver** to select and then click **Remove** (XP) or **Uninstall** (Vista or Windows 7).
 - l. A dialog will display asking you if you want to completely remove Telonics TSC-5A Driver and all of its components. Click **Yes**. The driver will be uninstalled and then a dialog will be displayed to indicate completion. Click **OK** to dismiss the dialog.
3. If a TSC-5A cable is plugged into the computer, remove it now.
 4. Install the Virtual COM Port driver by double clicking **TSC-5AVCPInstaller.exe**. When installing on Vista or Windows 7, a **User Account Control** message will be displayed asking if you want to allow the program to make changes to the computer. Click the **Yes** button to allow the installation to continue. The driver installer will then display a dialog as shown below. Click the **Install** button to begin driver installation.



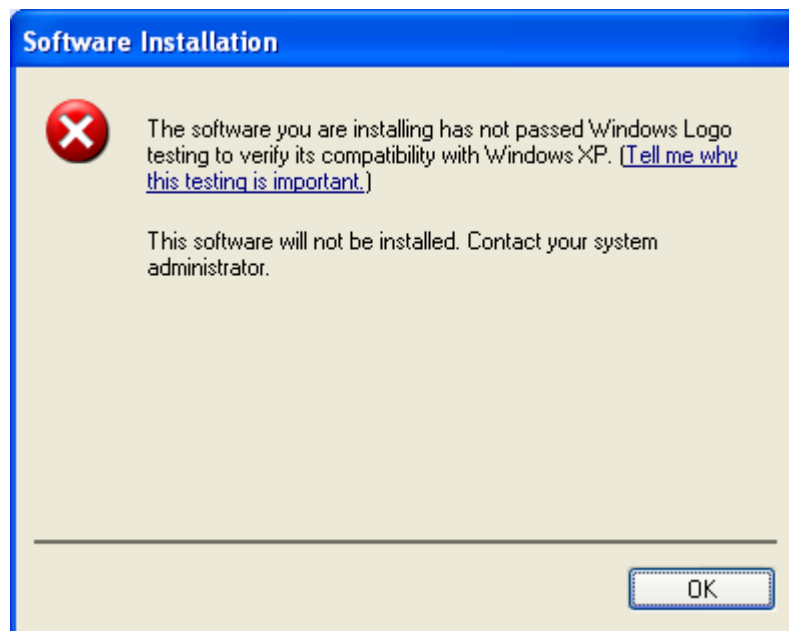
5. If your computer is running Vista or Windows 7, the following dialog will be displayed. Click the **Install** button to continue with the installation.



6. If your computer is running Windows XP and the **Driver Signing Options** are set to **Warn**, then you will see the following message. Click the **Continue Anyway** button and then proceed to step 8.

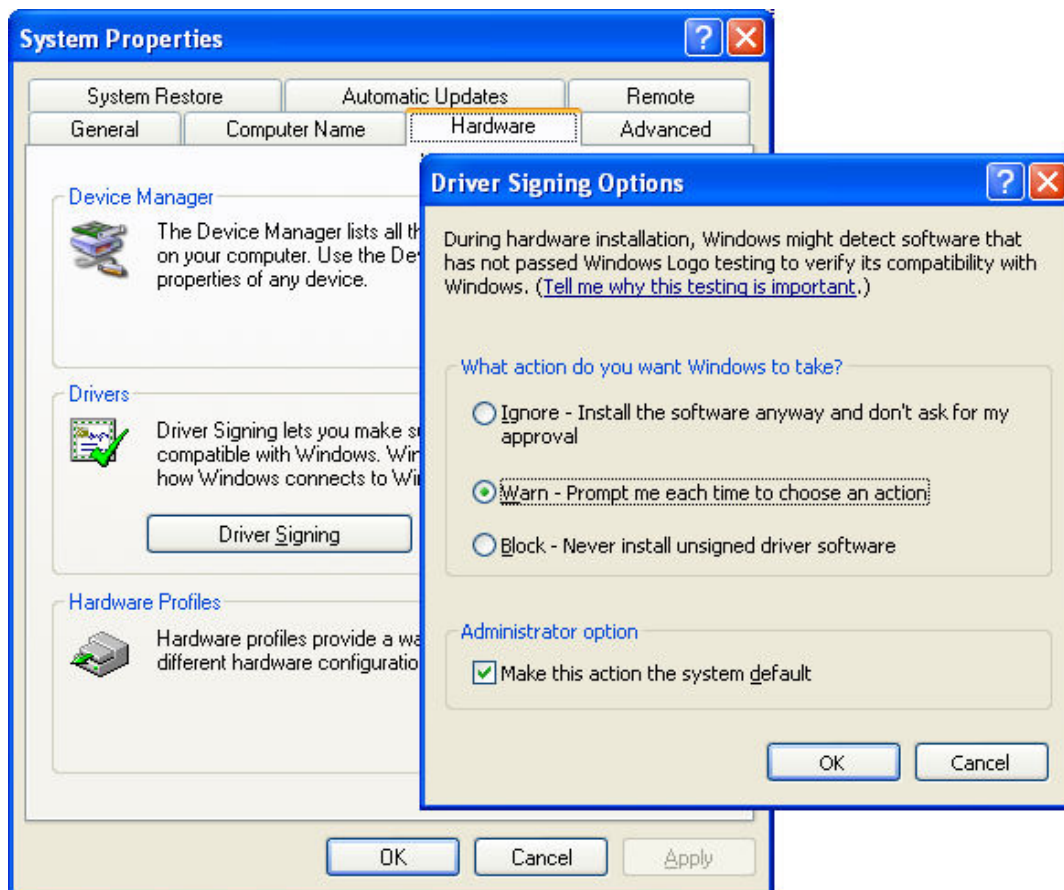


7. If your computer is running Windows XP and you see the following message during installation, you will need to modify the Driver Signing settings (see below) and then restart the TSC-5A USB driver installation.

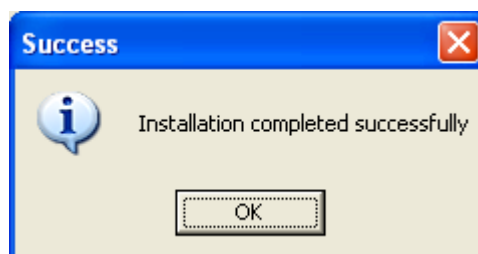


To change the driver signing settings:

- a. Click **Start**.
- b. Right-click **My Computer** and then click **Properties**.
- c. Click the **Hardware** tab in the **System Properties** dialog.
- d. Click the **Driver Signing** button.
- e. In the **Driver Signing Options** dialog, select **Ignore** or **Warn**.
- f. Click **OK** to close the **Driver Signing Options** dialog and then click **OK** to close the **System Properties** dialog.
- g. Restart the TSC-5A USB driver installation (go back to step 4).



8. Once the installer gets past the driver signing checkpoint, the actual driver installation may take up to a few minutes. The installer will indicate when the process is complete. Click **OK** to dismiss the completion message.

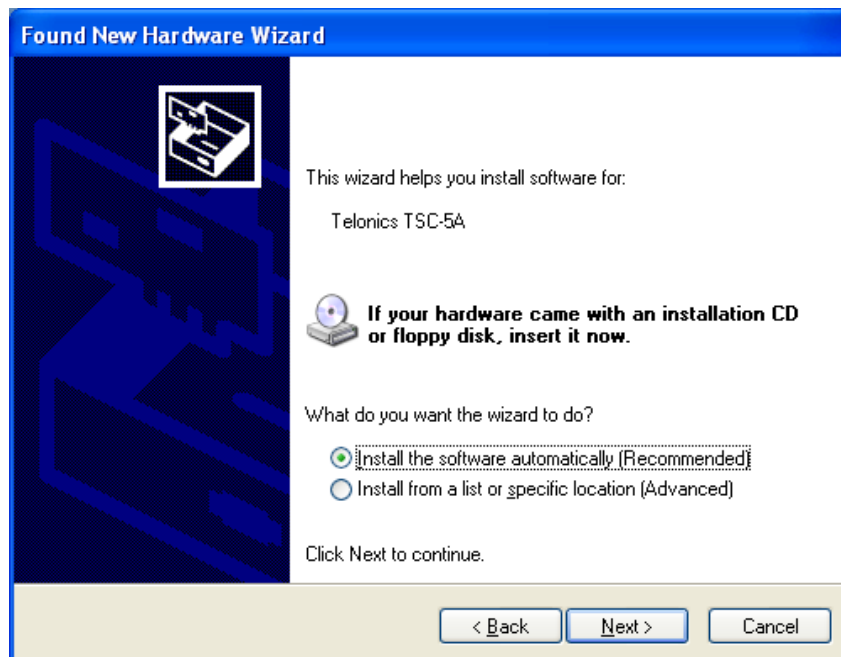


Configuring the Telonics TSC-5A Data Cable USB Device Software:

1. After a successful driver installation, plug the TSC-5A into an available USB connector on your computer. If your computer is running Vista or windows 7, the installation will complete automatically and you can continue at step 6 below.
2. If your computer is running Windows XP, the **Found New Hardware Wizard** will launch automatically. As shown below, click **No, not this time**, and then click the **Next >** button. For some users, the hardware wizard will skip this page.



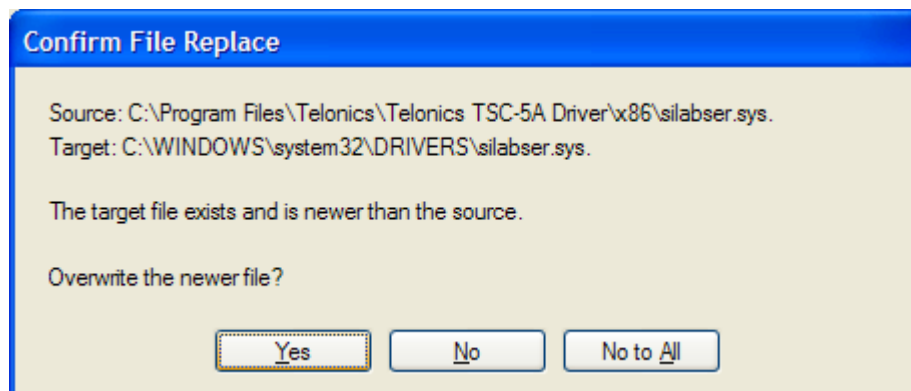
3. The next wizard page will be displayed. As shown below, click **Install the software automatically (Recommended)**, and then click the **Next >** button.



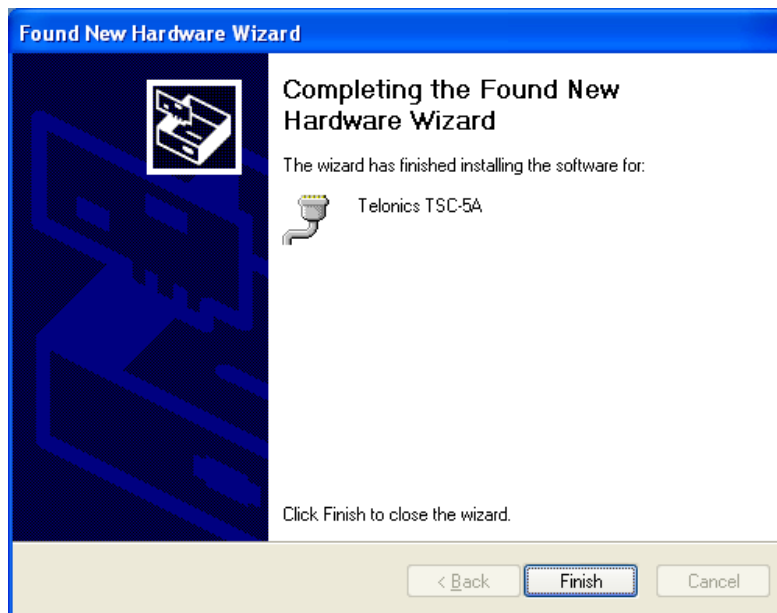
4. If your computer is running Windows XP and the **Driver Signing Options** are set to **Warn**, then you will see the following message. Click the **Continue Anyway** button.



5. If you see the following dialog, then this indicates that a newer version of the driver is already installed on your computer (in support of some other USB device you have previously installed). Click the **No** button to retain the use of the newer driver (the TSC-5A will use it instead of the driver supplied during this installation).

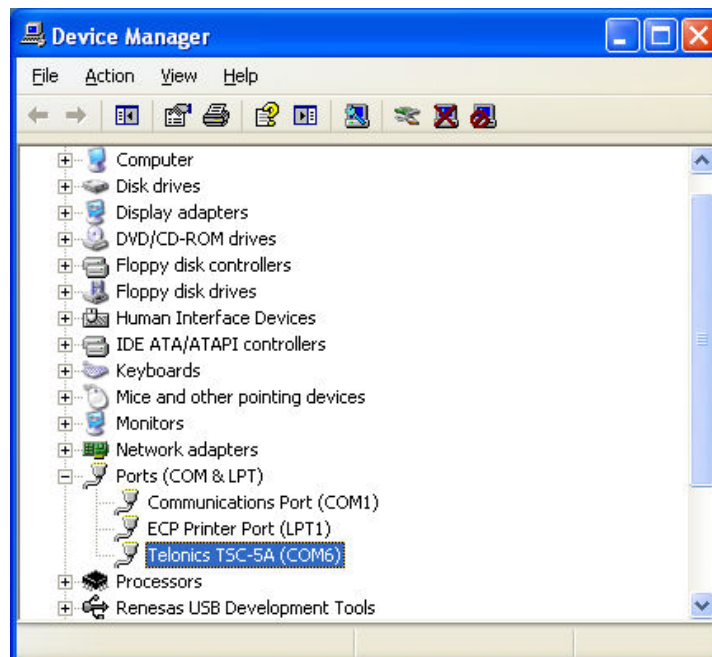


6. When the driver installation completes, the following dialog will be displayed. Click the **Finish** button to dismiss.



7. Determine the COM device name assigned to the TSC-5A data cable. This is done by accessing Windows Device Manager. To open Device Manager:
- Click **Start**.
 - Right-click **My Computer** and then click **Properties**.
 - Click the **Hardware** tab in the **System Properties** dialog.
 - Click **Device Manager**.

In the **Ports (COM and LPT)** section, locate the entry titled “**Telonics TSC-5A (COMx)**” and then note the COM port assigned (the number will vary depending on how many COM ports have been previously assigned).



From this point forward, you will use the indicated COM port when configuring programs that log TSUR-400 data. You may now close the **Device Manager** and **System Properties** dialogs.

8. Usage Notes:

- a. TDC (Telonics Data Converter) is capable of monitoring the TSUR-400 using the Virtual COM Port driver. The manner in which you select the communications port (in TDC) will depend on the TDC version that you are using:
 - 1) If you are using TDC versions prior to 1.40, then be sure to select the COM device that was noted in step 7 above. These TDC versions provide communication support using COM devices only (no support for TSC-5A via the proprietary driver).
 - 2) If you are using TDC versions 1.40 to 1.64, then be sure to select the COM device that was noted in step 7 above. TDC will still offer TSC-5A as a choice; however selecting TSC-5A will not work because these versions of TDC attempt to use the (now uninstalled) proprietary driver when the TSC-5A entry is selected.
 - 3) If you are using TDC version 1.65 and later, you may select TSC-5A or the COM device that was noted in step 7 above. Either selection will work when the TSC-5A is interfaced using the Virtual COM Port driver.
- b. The COM port assigned to the TSC-5A data cable exists only when the TSC-5A is plugged into the computer. When the TSC-5A is removed from the computer, Windows unloads the device driver (this behavior can be observed by viewing the Device Manager when inserting/removing the TSC-5A).
- c. **When using the Virtual COM Port driver to interface the TSC-5A, you must be very careful not to remove the TSC-5A from the computer while the communication port is open.** If you remove the TSC-5A from the computer while the communication port is open, there is a possibility that Windows will experience a fatal error (blue screen), requiring you to reboot your computer.
 - 1) If you are using TDC, the communication port is opened when you click the **Start** button in the **Log Uplink Messages** dialog or in the **Connected Uplink** tab. The communication port remains open until you click the **Stop** button.
 - 2) If you are using software other than TDC, then the communication port will likely be opened when you initiate a logging or capturing process. The port is likely to remain open until the logging or capturing process has been terminated. Consult the software documentation or vendor as required to determine the conditions under which the communication port is open.