USB Connectivity Checklist

April 24, 2018

The Universal Serial Bus (USB) is very popular and has added a tremendous level of convenience and flexibility to computer and peripheral controls, including test and measurement instrumentation.

As with all technology, it isn't always sunshine and blue skies.

Here are some common troubleshooting steps for USB connection issues:

– Is the instrument plugged in and powered ON?

– Is the USB port configured properly on the instrument? Some instruments feature USB ports that can be configured as TMC (Test and Measurement) or Printer communication ports. The USB port should be set to USBTMC or similar for remote control. See the instrument user's guide for more information.

– Try a direct connection from the instrument to the computer using a short USB cable (if the cable has RF chokes, even better). USB hubs or long cables may cause issues.

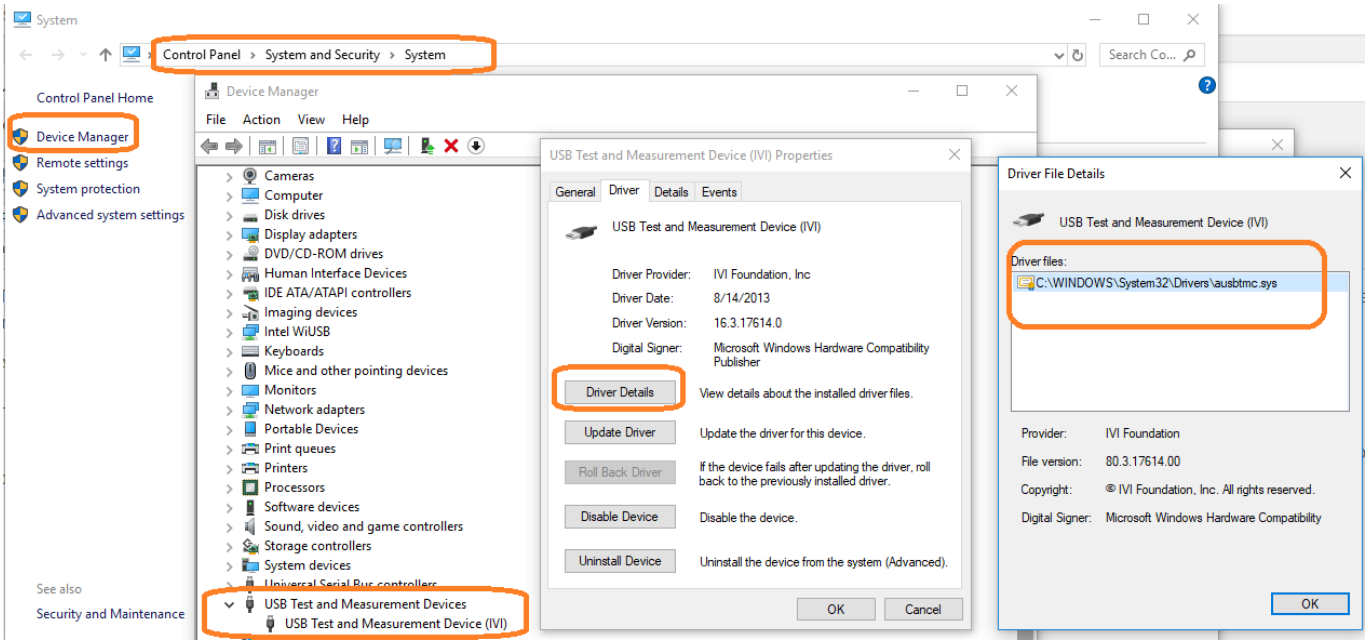
– Try a different USB cable

– Try a different USB port on the computer

– On machines running Windows, check the Device Manager. Test instrumentation should appear as USB Test and Measurement Device (IVI) and use the AUSBTMC.SYS driver

You can check the status by powering on the instrument, plugging it into a working USB port on the computer, and opening up the Device Manager. Here is the information path for a working USB connection on Win 10, 64 bit OS:

Open up the Control Panel > System and Security > System > Device Manager



As you can see, a correctly configured and working USB Test and Measurement device will use the AUSBTMC.SYS driver.

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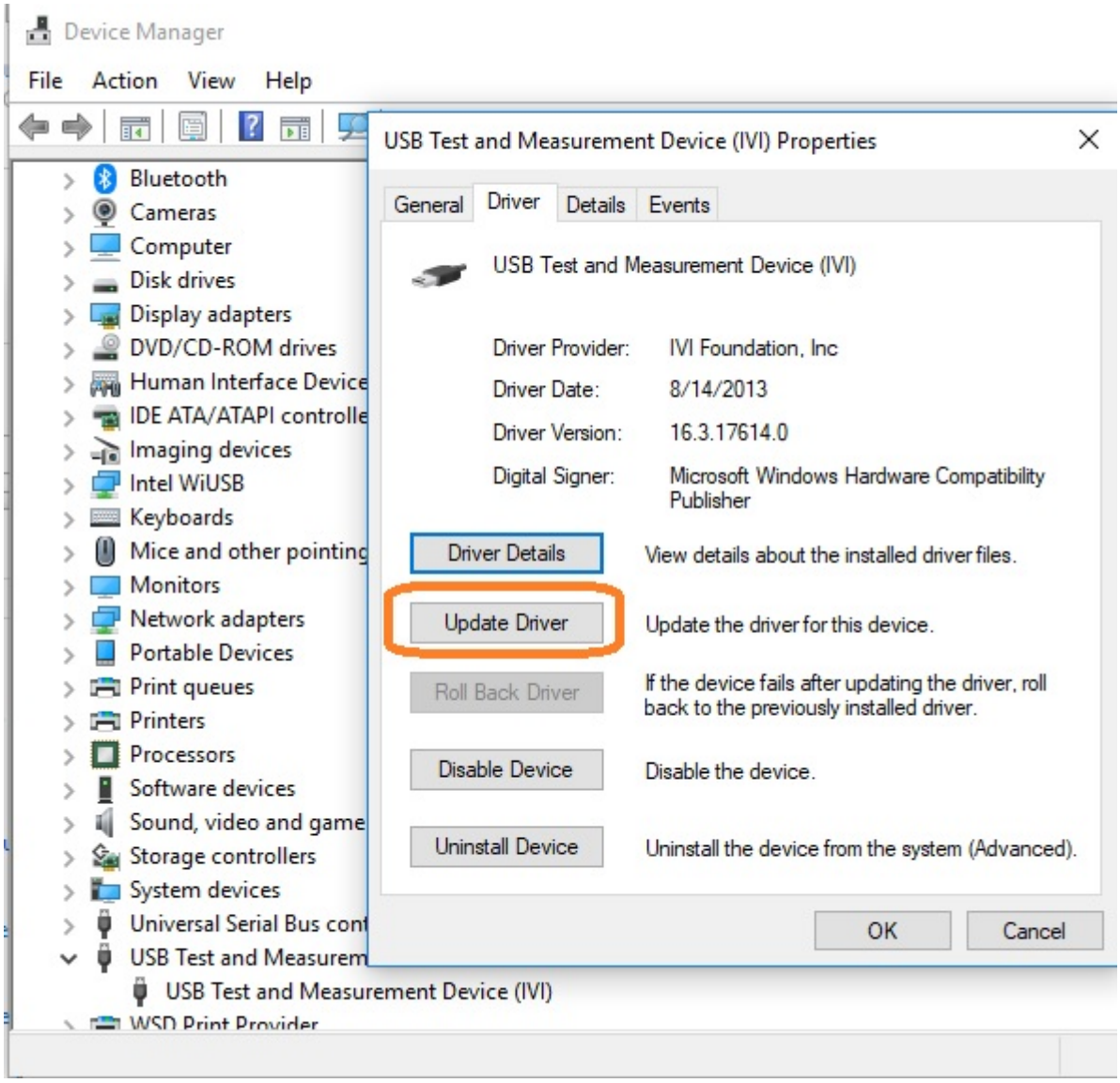
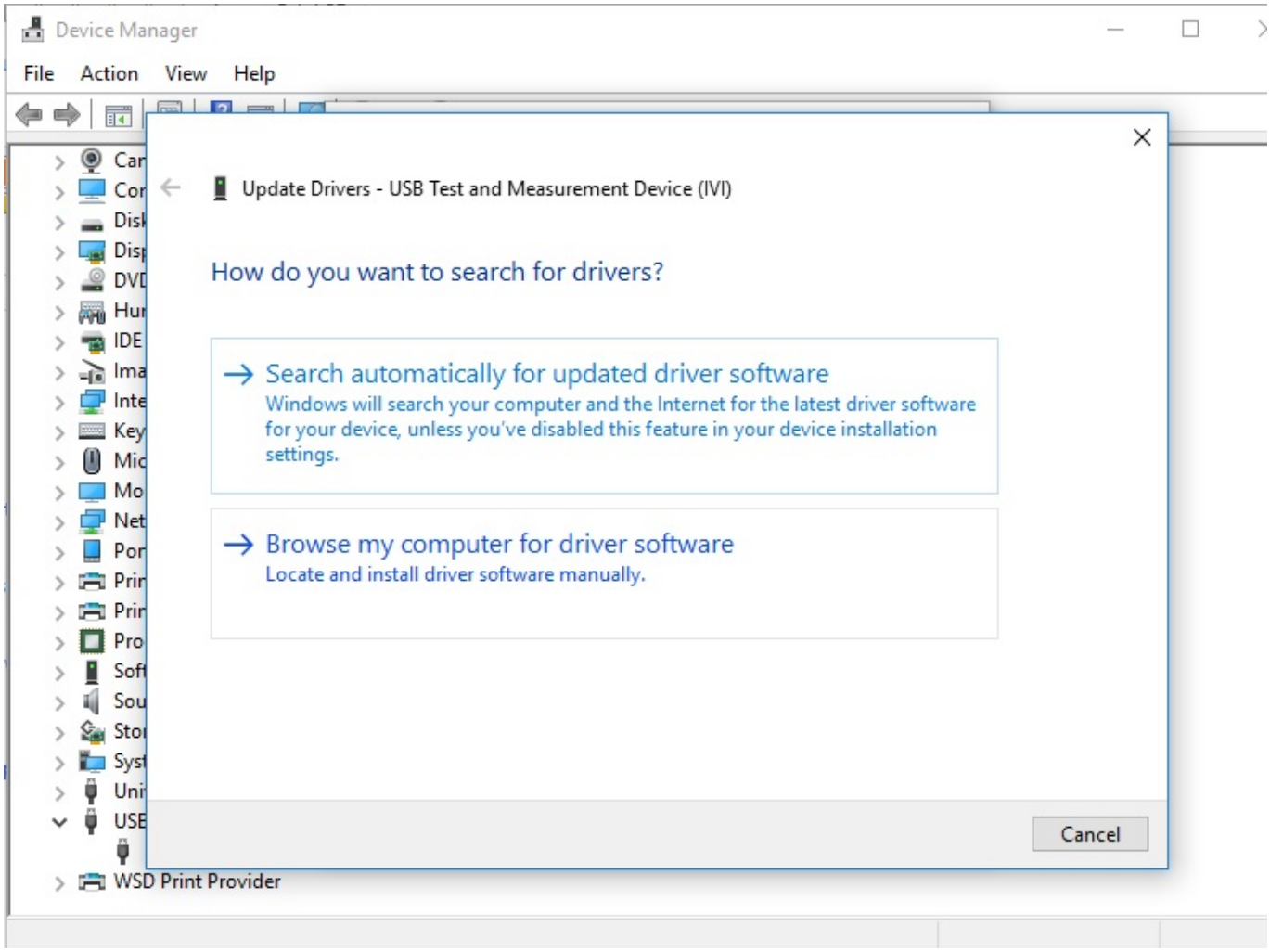
If you don’t see your test instrument appearing as a USB Test and Measurement Device, you can try the following:

– Update the driver and select the “AUSBTMC.SYS” driver manually, or through the “suggested drivers” listed.. recall that the typical path for the correct driver is C:\WINDOWS\System 32\Drivers\AUSBTMC.SYS:


Device Manager
File Action View Help
Bluetooth
Cameras
Computer
Disk drives
Display adapters
DVD/CD-ROM drives
Human Interface Device
IDE ATA/ATAPI controlle
Imaging devices
Intel WiUSB
Keyboards
Mice and other pointing
Monitors
Network adapters
Portable Devices
Print queues
Printers
Processors
Software devices
Sound, video and game
Storage controllers
System devices
Universal Serial Bus cont
USB Test and Measurem
USB Test and Measurement Device (IVI)
WSD Print Provider
USB Test and Measurement Device (IVI) Properties
General
Driver
Details
Events
USB Test and Measurement Device (IVI)
Driver Provider:
IVI Foundation, Inc
Driver Date:
8/14/2013
Driver Version:
16.3.17614.0
Digital Signer:
Microsoft Windows Hardware Compatibility Publisher
Driver Details
View details about the installed driver files.
Update Driver
Update the driver for this device.
Roll Back Driver
If the device fails after updating the driver, roll back to the previously installed driver.
Disable Device
Disable the device.
Uninstall Device
Uninstall the device from the system (Advanced).
OK
Cancel



-Disable or Uninstall the driver, unplug the USB cable, wait a few seconds for the computer to recognize the change on the USB bus, re-connect the USB cable and check to see if the “AUSBTMC.SYS” driver has correctly been assigned to your device

The USBTMC driver is part of the IVI Shared Components package. Various VISA packages may contain this crucial driver, but you can also find downloads for it here on the IVI Web page:

http://www.ivifoundation.org/shared_components/

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