

CONDENSATION PARTICLE COUNTERS

MODELS: 3783, 3787 AND 3788

FIRMWARE UPDATE INSTRUCTIONS

The Condensation Particle Counter (CPC) Firmware Update application loads firmware onto a TSI® CPC instrument through a USB connection. The CPC Firmware Update runs on a computer with Microsoft Windows® XP (32-bit only), Windows® 7 (32-bit or 64-bit) or Windows® 8 (32-bit or 64-bit) operating system. This application is to be used with TSI CPC instruments only.

Obtaining the Latest CPC Firmware Update Program from the TSI Website

1. From your computer, access the TSI web site <http://www.tsi.com/SoftwareDownloads> and follow the instructions on the web page to locate firmware for your CPC.
2. Click on the resulting Firmware Update link to download the file to your computer.

Updating your CPC to the Latest Firmware

1. Once the firmware update application is on your computer (see above), the firmware can be transferred to your CPC.



Caution

Before updating the firmware on your CPC you must first disconnect any RS-232 connection to the CPC. Failure to do this can result in an inoperable instrument. If you have trouble upgrading the firmware in the unit, TSI recommends that you contact customer service at www.tsi.com, 1-800-874-2811 or email particle@tsi.com to resolve the issue before you send the unit back to TSI.

2. Before connecting your CPC to the computer for the first time, make sure you are connected to the internet as the system may need to download software from Windows Update.
3. Using a USB cable, connect to the Series B receptacle (square shape) on your CPC and a USB receptacle on your computer.
4. Turn on the CPC and allow it to complete its initialization sequence. If the New Hardware Wizard appears on your computer, simply follow the prompts to connect your instrument to your computer. Continue past any warnings and press **Finish**. If needed, the [Using the New Hardware Wizard](#) section provides additional information.
5. Run the firmware update application you downloaded to begin the CPC firmware update.



6. Your CPC will be automatically detected by the application.
 - i. If your instrument cannot be found, the following message appears (Figure 1):

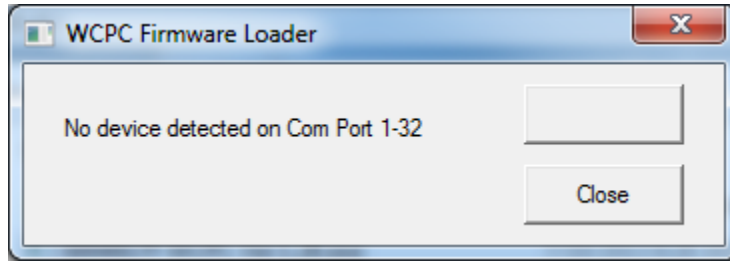


Figure 1

- ii. If your instrument is found, a message similar to the following appears (Figure 2). Click **Yes** to begin the firmware update or **Cancel** to cancel it.

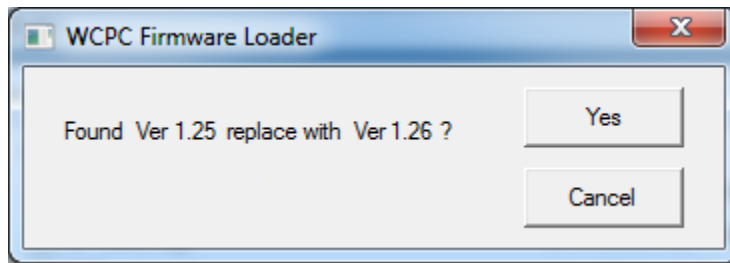


Figure 2

7. Once started, the firmware update process should take approximately 2 minutes. During this time, observe the progress shown by the firmware update application (Figure 3).

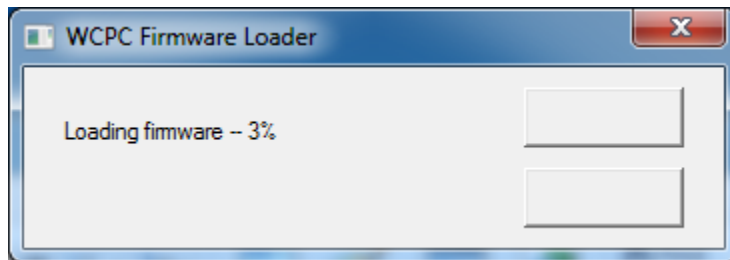


Figure 3

8. After the update is completed successfully, the CPC will reset itself and the firmware update application will display a "Done" button (Figure 4). Click the **Done** button to close the application.

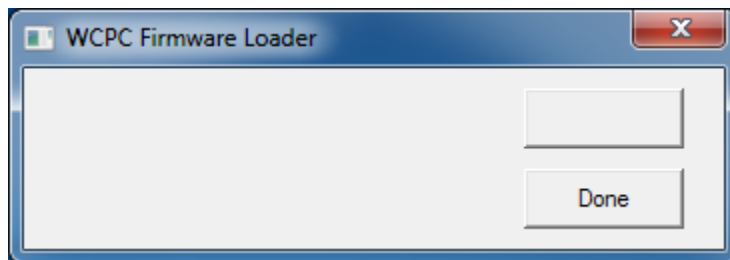


Figure 4

9. Verify that the Firmware Version reported by the CPC corresponds with the version you just uploaded to the instrument.

Using the New Hardware Wizard to connect to your CPC

1. The New Hardware Wizard screens may appear when your CPC is connected to your computer. Typically this will only happen the first time the CPC is connected to a Windows XP system.
2. Select **Yes, this time only** to search for software on the Windows® Update website. Then select the **Next >** button (Figure 5).



Figure 5

3. Select the **Install the software automatically** action. Then select the **Next >** button (Figure 6).

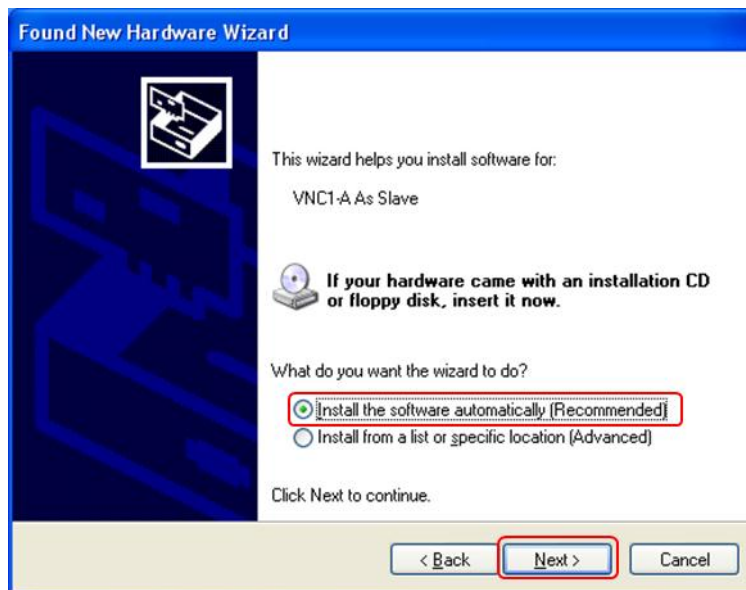


Figure 6

4. The wizard will now search for and install required software (Figure 7 and Figure 8).

This may take several minutes.

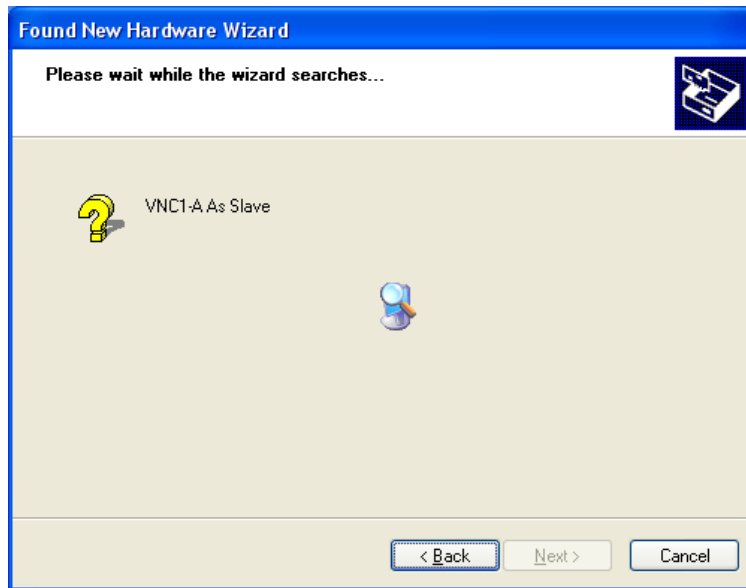


Figure 7

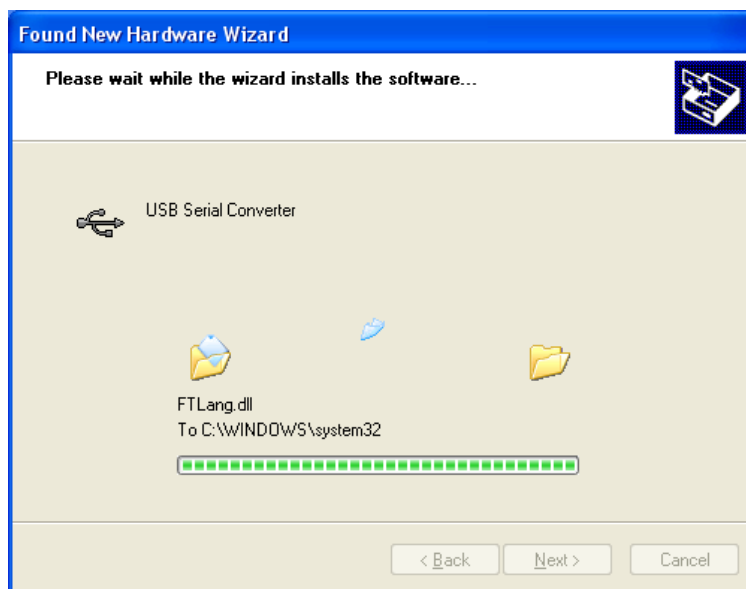


Figure 8

5. Make sure that the device installed without any errors. Select the **Finish** button to complete the device installation and exit the dialog (Figure 9).

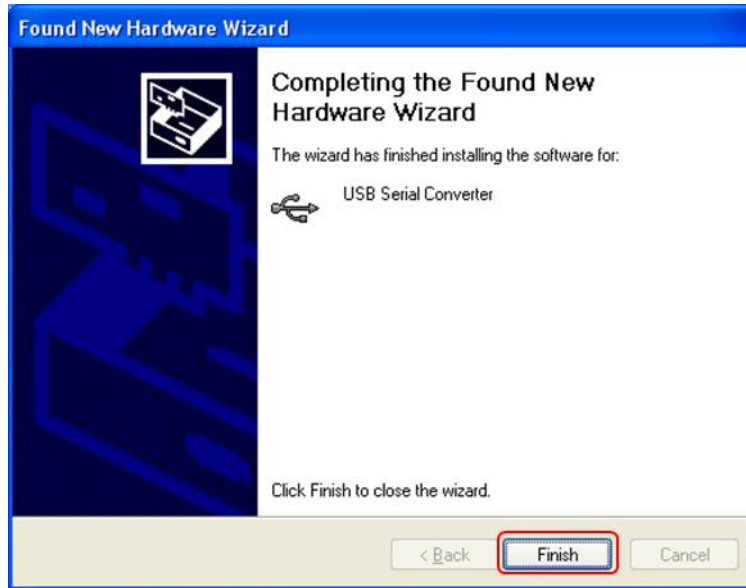


Figure 9

6. The installation will continue with another **New Hardware Wizard**.
7. Again, select **Yes, this time only** to search for software on the Windows® Update website. Then select the **Next >** button (Figure 10).



Figure 10

8. Select the **Install the software automatically** action. Then select the **Next >** button (Figure 11).

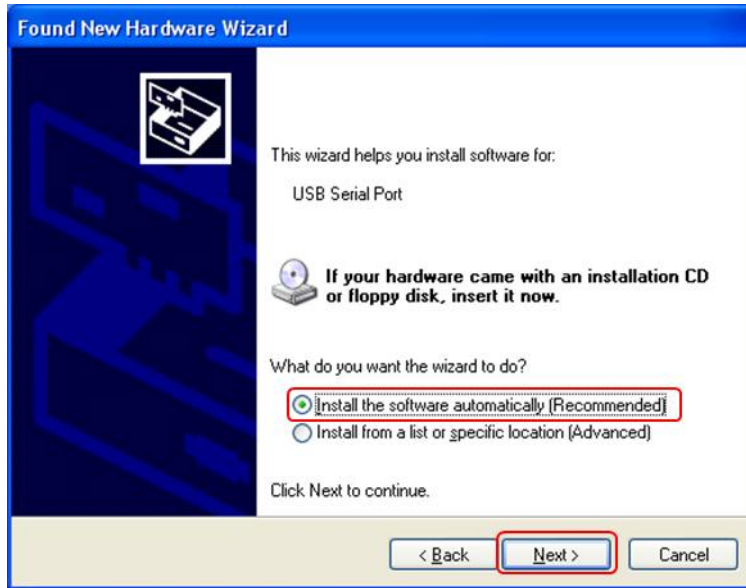


Figure 11

9. The wizard will now search for and install required software (Figure 12 and Figure 13).



Figure 12

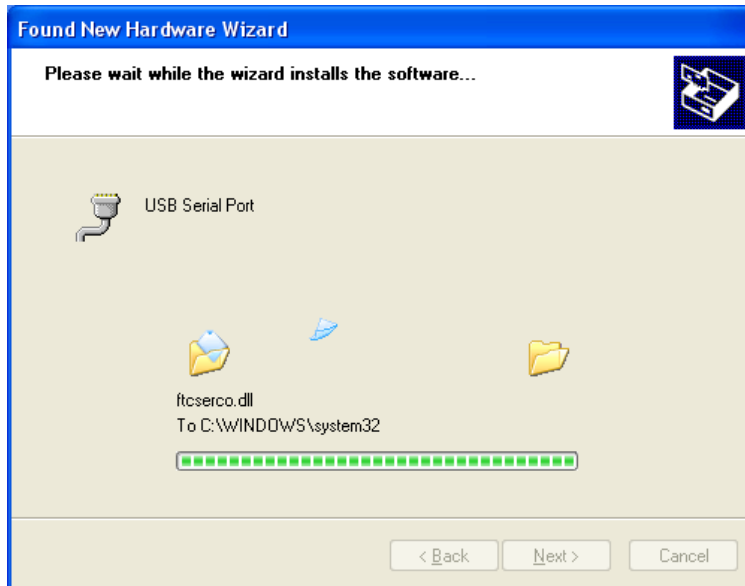


Figure 13

10. Make sure that the device installed without any errors. Select the **Finish** button to complete the device installation and exit the dialog (Figure 14).



Figure 14

11. The CPC instrument is installed on the system and is ready to have new firmware uploaded.



TSI Incorporated – Visit our website www.tsi.com for more information.

USA	Tel: +1 800 874 2811	India	Tel: +91 80 67877200
UK	Tel: +44 149 4 459200	China	Tel: +86 10 8219 7688
France	Tel: +33 4 91 11 87 64	Singapore	Tel: +65 6595 6388
Germany	Tel: +49 241 523030		