# TP-SC-MPPT Solar Station Monitor Software Guide

This guide is designed to help you install and use the Solar Station Monitor PC software for Tycon's MPPT charge controllers: TP-SC24-20-MPPT, TP-SC24-40-MPPT, TP-SC48-60-MPPT.

Using a Tycon TP-SC-USB-RS232 adapter cable it is possible to connect a Windows PC to the MPPT solar charge controllers to be able to setup and monitor the controllers from the PC.

1. Download the MPPT Solar Station Monitor software from tyconsystems.com and install to your computer. Allow the computer to continue install if you see any warnings.

2. Power up the TP-SC-MPPT controller by connecting it to batteries. Make sure it is powered on by looking at the LCD display.

3. Using a Tycon TP-SC-USB-RS232 cable, connect the RJ11 connector to the controller RS232 port and the USB side to one of your computers USB ports.

4. Open the "Device Manager" on your Windows Computer. Navigate to "Ports (COM & LPT)". Expand the section to see the various active ports on your PC. One port should say "USB Serial Port(COMx)" where "x" equals a whole number. This is the active COM port that has been assigned to your interface cable. ie; COM3, COM4, COM5, etc.

5. Navigate to the Solar Station Monitor Icon on your desktop. Right Click on it and select "Run As Administrator".

    a. *Note: You can set this permission permanently by right clicking on the icon and selecting Properties | Compatibility and check the box that says "Run this program as an administrator" then save the setting.*

6. In the Station Monitor authentication popup, select "Administrator" and enter the password. The default password is "111111" and it can be changed in System | Change Password.

7. Open Communication | Port Configuration

    a. Delete any ports showing in the right-side configuration box. COM7 is the program default and should be deleted unless that is your active COM port.

    b. On the left-side select the COM port that you found earlier in the device manager and click on "Add" to add it to the configuration box. Press OK to exit the box and save the setting. **Note: Baud rate is fixed at 9600 and should not be changed.**

   c. The new COM port should now show in the upper left of the screen under "Station Explorer"
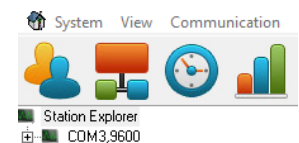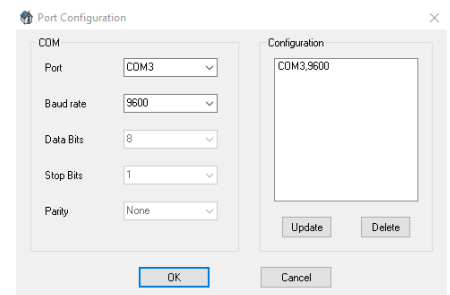
8. Highlight the COM port in the Station Explorer and right click, then select "Add Station".

    a. Enter the Station Name. This can be any ASCII characters.

    b. Device ID should be set to 1. This is the default.

    c. Port should be the COM port you just added.

    d. Other information is optional and not necessary. It is for your info only.

    e. Click "Add", then Cancel.
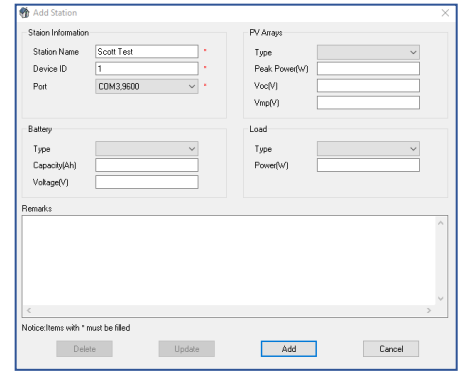
9. If the new station has a home icon that is normal, it means that the software is successfully communicating with the controller.

    a. If the new station has a home icon with a red X it means that the computer cannot communicate with the device.

        i. Check the MPPT controller is powered on.

        ii. Check the cable is connected to the MPPT controller properly.

        iii. In the Solar Station Monitor software, navigate to Parameter | Device Parameter | Device ID Setting.

            1. Select the COM port of the unit and click "Read ID". The software will return the DEVICE ID of the unit. If the device ID was changed from the default of "1" you need to go back and edit the Station to change its Device ID.
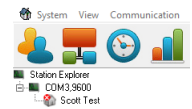
        iv. If you still have a problem, please see the troubleshooting section at the end of this guide.

10. On the main screen of the Solar Station Monitor select the "Station Name" that you want to display. All the fields will populate.

11. You can do historical monitoring of the station by clicking on start monitoring. Note: This only works as long as the PC is connected to the controller and the Solar Station Monitor software is running.

12. You can display a graph of the collected data by navigating to Monitoring | Daily Monitoring.

13. You can turn the load on/off by clicking on the Load control buttons.
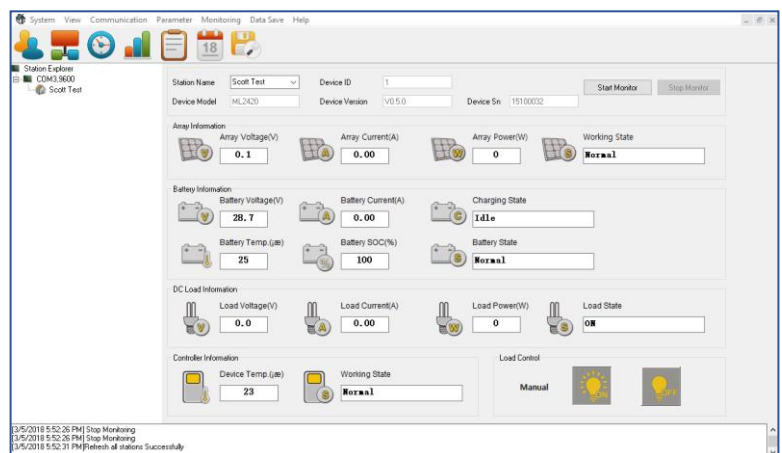
14. You can read and change the MPPT solar controller parameters by navigating to Parameter | Control Parameter

    a. Select the Station Name, Click on Read

    b. Make any desired changes and then click on Update

15. You can also Export Settings and Import Settings if you are provisioning multiple controllers and you want the same settings for each controller.

16. Troubleshooting

    a. If you are having Windows related trouble with the Solar Station Monitor software, right click on the Solar Station Monitor icon, select Properties, then Compatibility. Select "Run This Program in Compatibility Mode For" and "Windows XP (Service Pack 3)", then save settings.

    b. If you are having other issues with COM ports, navigate to the Solar Station Monitor install folder. C:\Program Files (x86)\Solar Station Monitor, find the file "OcxDllInstall.exe", right click on the file and "Run As Administrator". This will re-register the software with windows.

    c. If you still are having COM port issues or problems with Windows recognizing the USB to RS232 interface cable, unplug the USB cable and re-load the USB to RS232 drivers available at TyconSystems.com, then plug in the cable. You should be able to see the USB to Serial device in the Windows Device Manager.

    d. If the USB to RS232 cable won't show in the Windows Device manager and you've tried the above ideas, it's possible the USB to RS232 cable is damaged.

    e. If the USB to RS232 cable shows in the Windows Device Manager but you can't communicate with the unit after trying all ideas in this guide, it's possible the RS232 port on the controller is damaged.

    f. If nothing seems to be working, send an email to rma@tyconsystems.com to request a return authorization.

Control Parameter

Station Name	Scott Test			Device ID	1	
Rated Voltage(V)	12/24(V)	Rated Load Current(A)	20	Rated Charge Current(A)	20	

	Reference	Current		Reference	Current
Type	Sealed	Sealed	Rated voltage Level	Auto	Auto
Over Volt.Disconnect Volt.(V)	16.00	16.00	Charging Mode	Volt.Comp.	Volt.Corr
Equilibrium Charging Volt.(V)	14.60	14.60	Equalizing Change Interval(day)	30	30
Boost Charging Volt.(V)	14.40	14.40	Equilibrium Duration(m)	120	120
Float charging Volt.(V)	13.80	13.80	Boost Duration(m)	120	120
Boost Recon.Charg.Volt.(V)	13.20	13.20	Temp.Cm\ompensation Coefficient(mV/jæ/2V)	-3	-3
Low Volt.Reconnect Volt.(V)	12.60	12.60	Battery Capacity(Ah)	200	200
Under Vol.Warning Volt.(V)	12.00	12.00	LVD Delay Time(s)	5	5
Low Volt.Disconnect Volt.(V)	11.10	11.10	Battery Charge(%)	100	100
Discharging Limit Volt.(V)	10.60	10.60	Battery Dischage(%)	30	50

Read   Update   Restore default   Export Settings   Import Settings