

Service Call:

Programming the Navitas Top Charger

Tools Required:

PC Probit II Software*

Connecting Cables*

Model(s):

48V HyPower™ Systems

*Contact [Jason Julius](#) for information on software and cable availability

Tech Tip Safety Rules



Danger

Failure to obey the instructions and safety rules in the appropriate Operator's Manual and Service Manual for your machine will result in death or serious injury. Many of the hazards identified in the operator's manual are also safety hazards when maintenance and repair procedures are performed.

Do Not Perform Maintenance Unless:

- You are trained and qualified to perform maintenance on this machine.
- You read, understand and obey:
 - manufacturer's instructions and safety rules
 - employer's safety rules and worksite regulations
 - applicable governmental regulations
- You have the appropriate tools, lifting equipment and a suitable workshop.

The information contained in this tech tip is a supplement to the service manual. Consult the appropriate service manual of your machine for safety rules and hazards.

Step 1

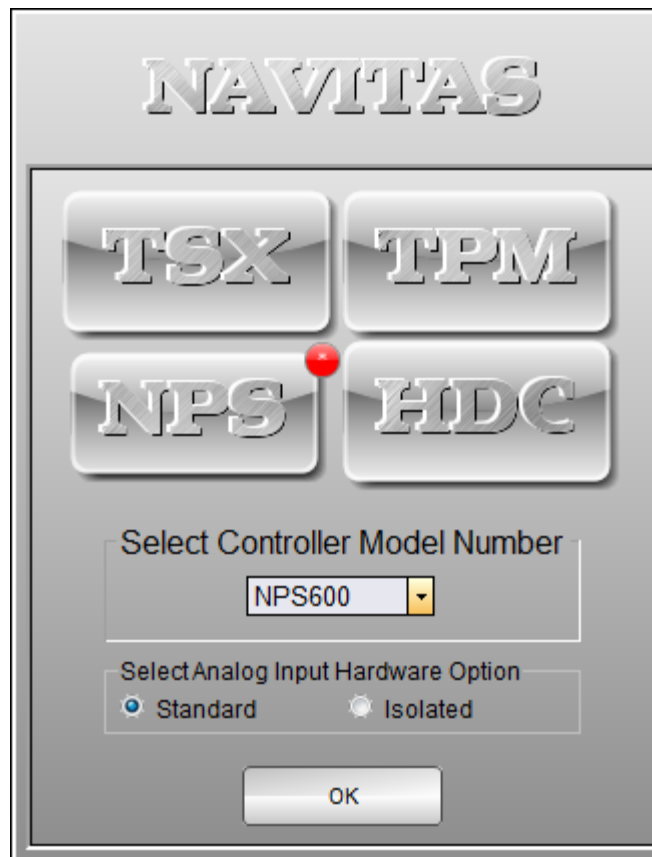
Connect your laptop to the Navitas Top Charger using the USB to Serial connecting cable. Once connected, start the PCProBitII Software.

***Note:** The Top Charger must be powered up with the flashing green light visible to connect. Depending on installation wiring, it may only be powered up during an engine charge.



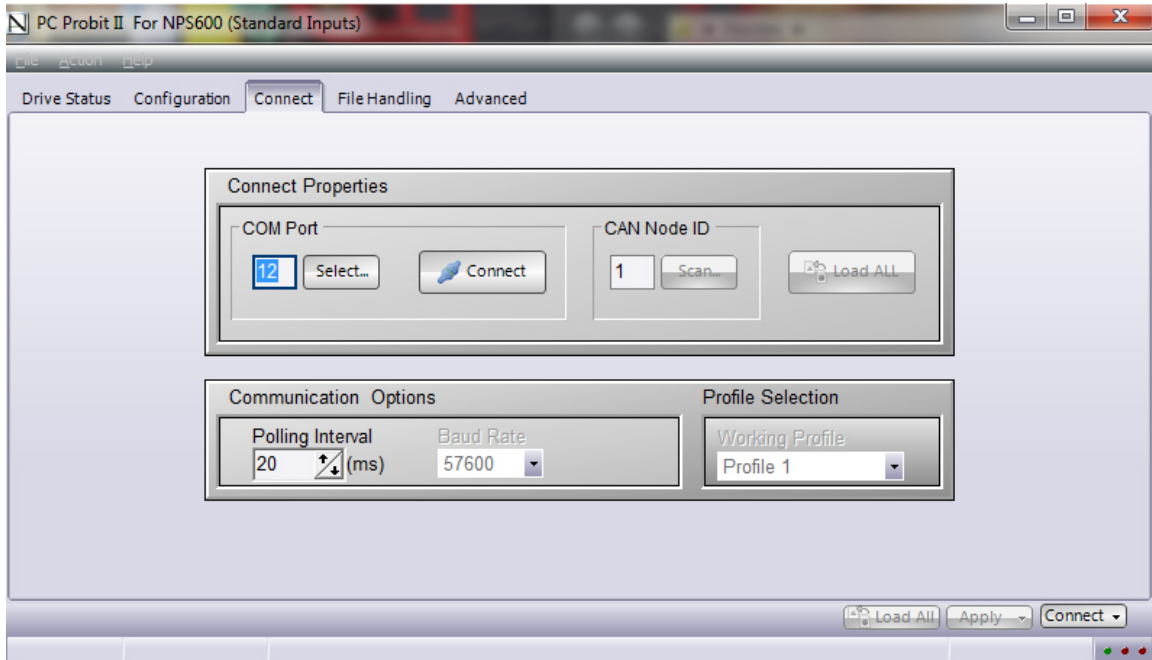
Step 2

The program will open to the initial menu shown below. Make sure the Controller Model Number is set to NPS600 before clicking on the OK button.



Step 3

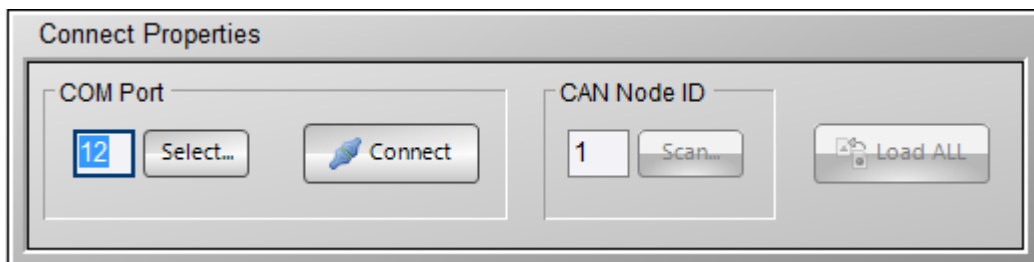
To communicate with the Navitas Top Charger, click on the *Connect* menu shown below.



Step 4

In the COM Port section, click the Select button to choose the correct port. Choose the port named: CP210x USB to UART.

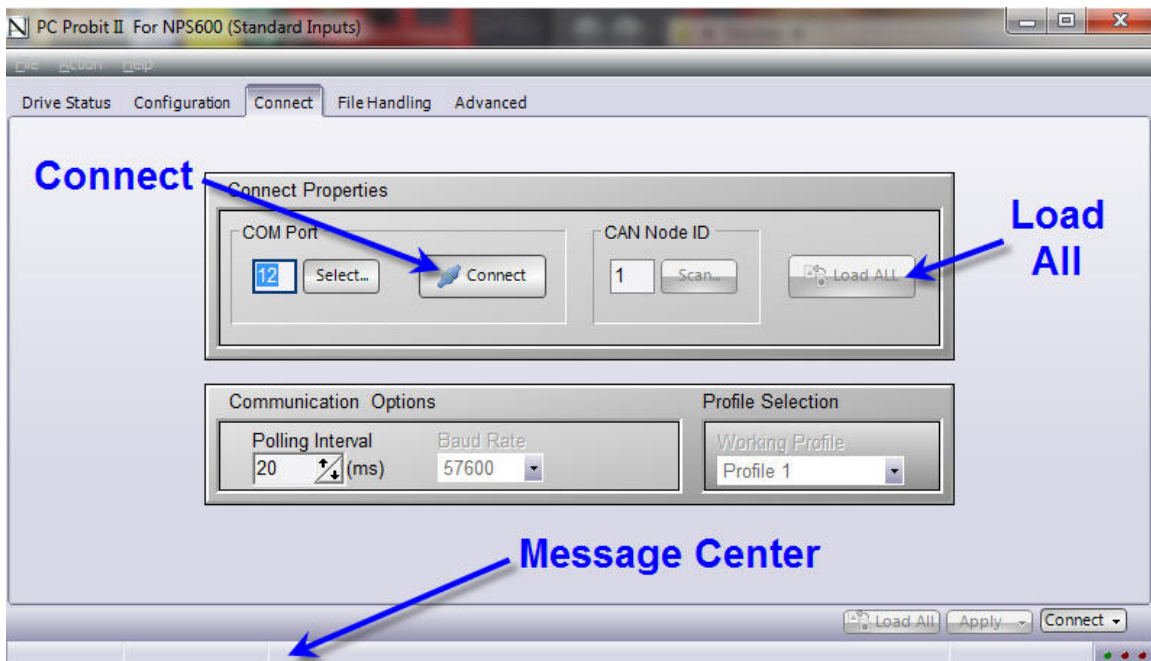
Verify that the CAN Node ID is set to 1.



Step 5

Click on the *Connect* button to initialize the connection. Once the connection has been established, click on the *Load ALL* button to retrieve all the system variables from the Top Charger.

The program will provide feedback about the progress or any errors encountered in the message center at the bottom.

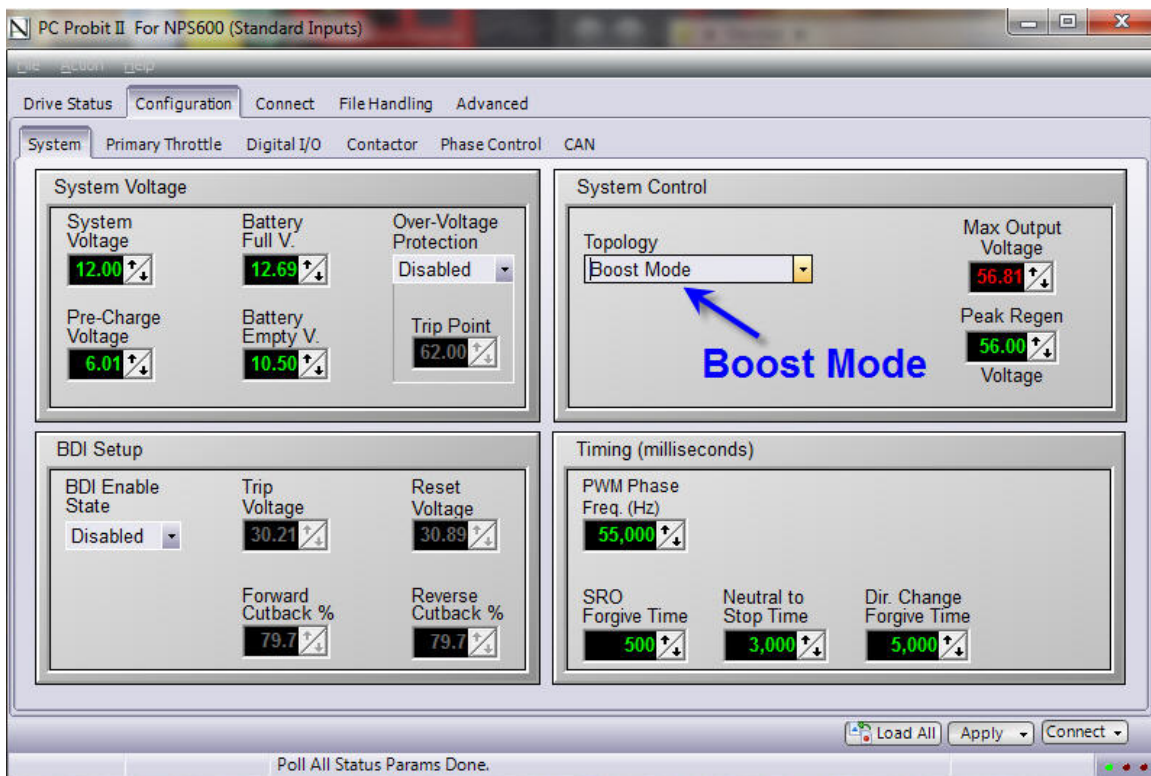


Step 6

Once all of the parameters have been loaded, switch to the *Configuration* tab and select the *System* sub-tab.

In the *System Control* pane, the topology must be set to **Boost Mode**. Depending on which mode is selected, different options in the program are hidden or shown.

If **Boost Mode** is selected by default, switch the mode to **Motor Control** and then back to **Boost Mode** to verify you have access to the correct settings.



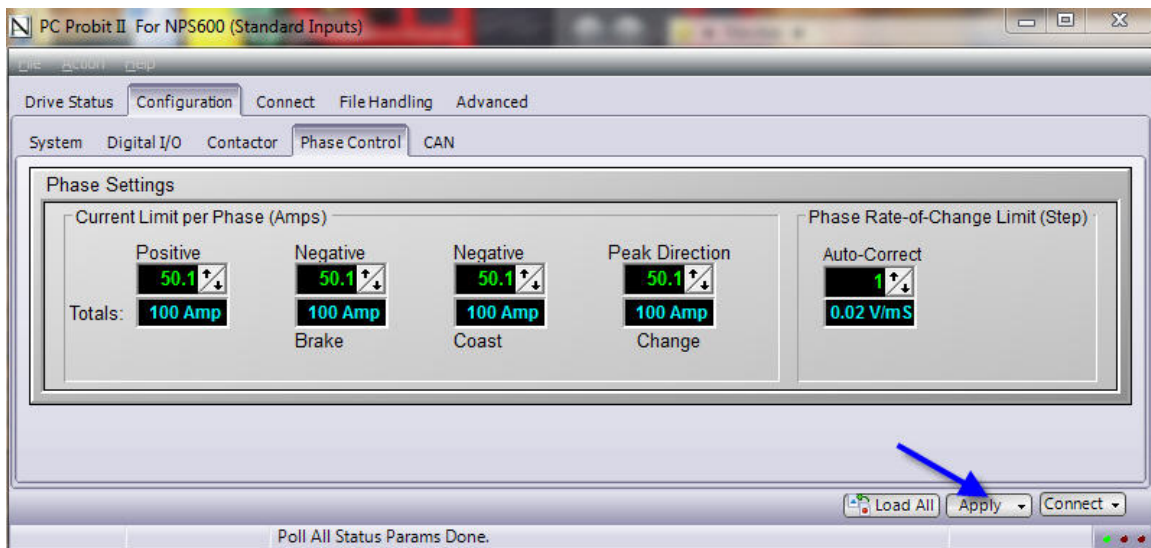
Step 7

To change the maximum current draw on the Navitas Top Charger, switch to the *Phase Control* sub-tab under *Configuration*.

The maximum current draw for the Top Charger should be set to 100 amps for:

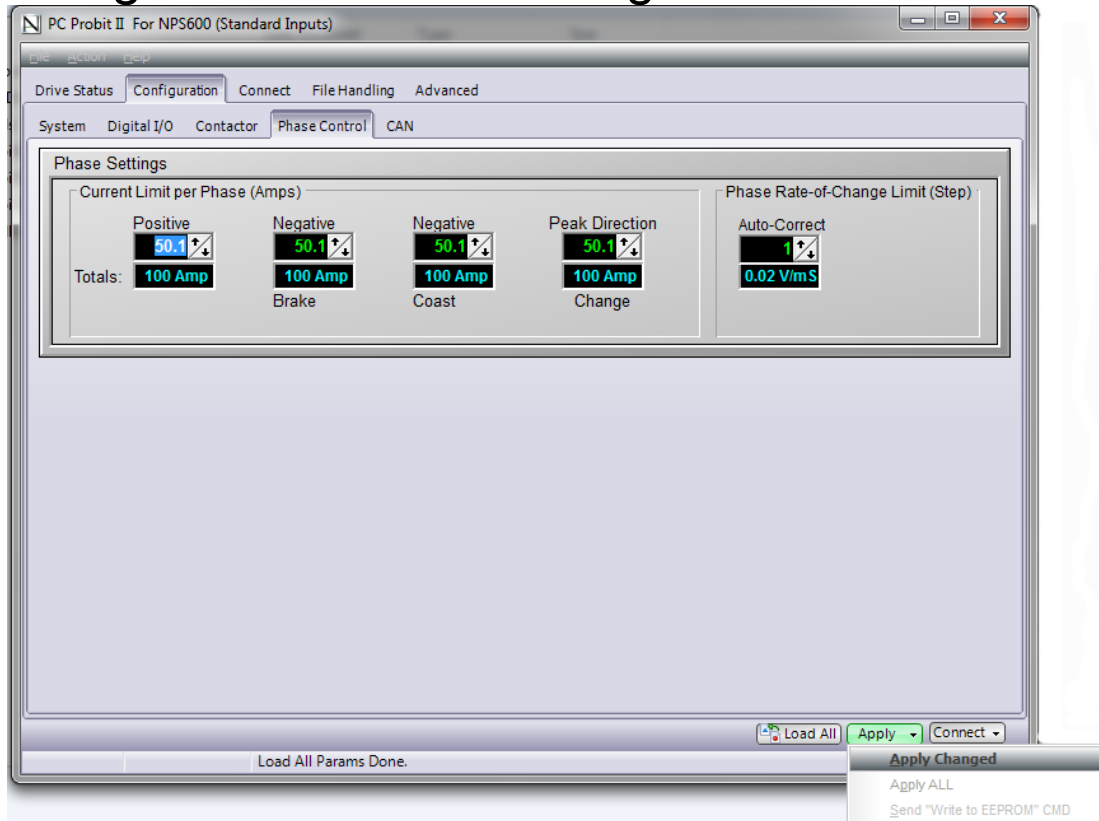
- Positive
- Negative – Brake
- Negative – Coast
- Peak Direction

Use the arrows by each setting to make any necessary adjustments. Each setting controls the positive and negative phases – set each value down to 50.1 to get an accumulative 100 amps.



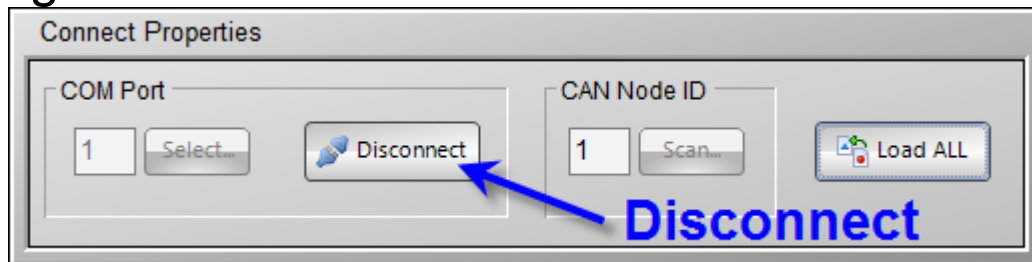
Step 8

Once all the settings have been changed, click on the *Apply* button and choose “*Apply Changed*” to save the changes.



Step 9

Once all of the Current Limit settings have been saved, switch back to the Connect tab and press the Disconnect button before closing out the program.



Additional Resources

- [NPS600 Hardware Manual](#)
- [NPS600 PCProbitII Manual](#)