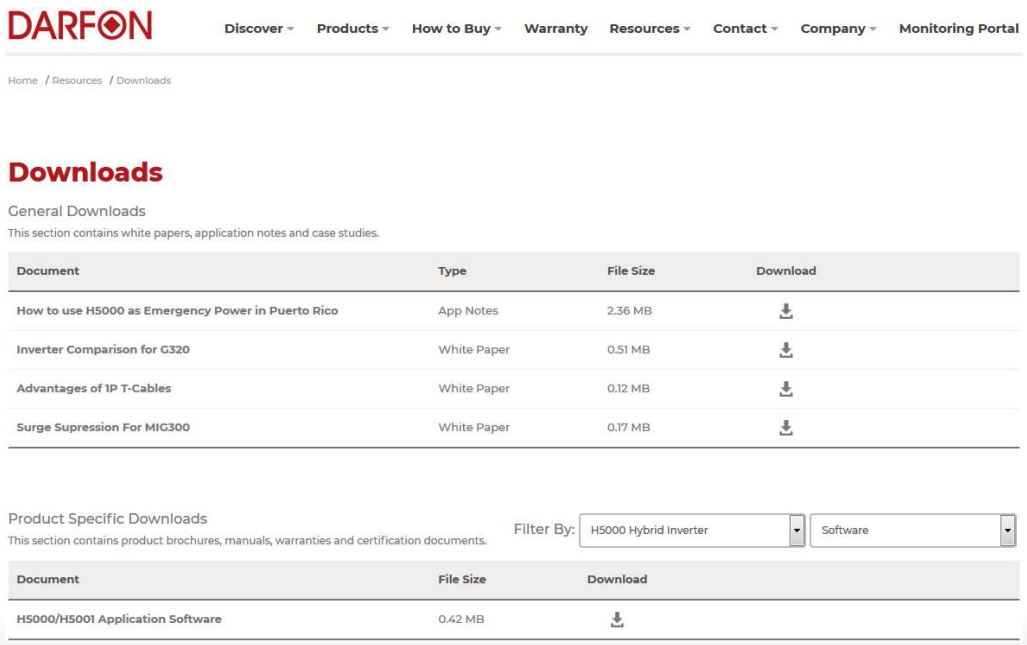
Downloading the software

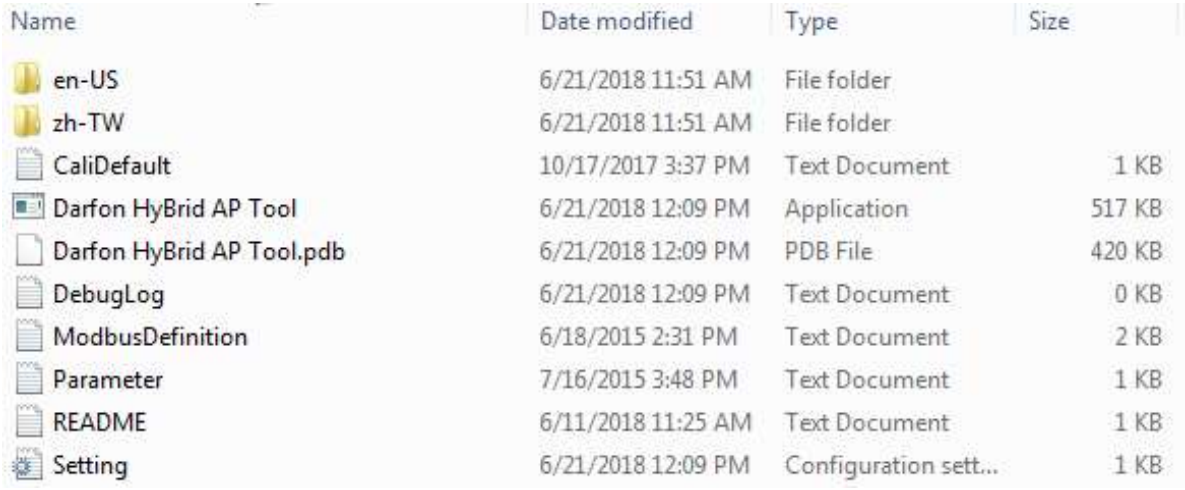
From the Darfon Solar website download the file “H5000/H5001 Application Software”. You can follow the link below.

- http://www.darfonsolar.com/downloads/?product_id=14&download_type_id=8



Adding the Software to your Computer

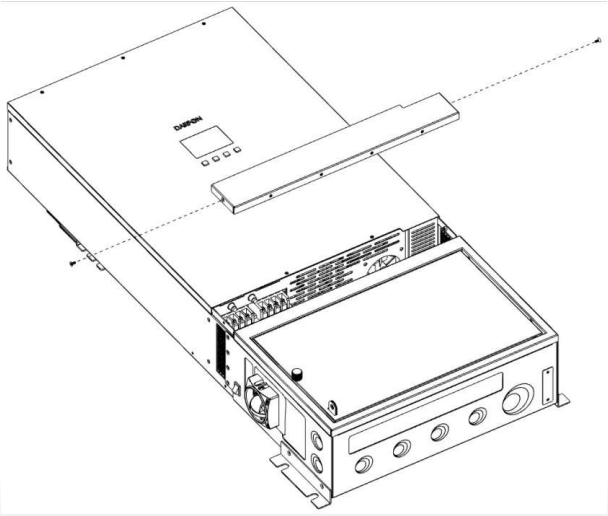
- Create a working directory for the software
- Unzip the download file in your working directory and you are done.
- Your folder contents should look like the one below.



Name	Date modified	Type	Size
en-US	6/21/2018 11:51 AM	File folder	
zh-TW	6/21/2018 11:51 AM	File folder	
CaliDefault	10/17/2017 3:37 PM	Text Document	1 KB
Darfon HyBrid AP Tool	6/21/2018 12:09 PM	Application	517 KB
Darfon HyBrid AP Tool.pdb	6/21/2018 12:09 PM	PDB File	420 KB
DebugLog	6/21/2018 12:09 PM	Text Document	0 KB
ModbusDefinition	6/18/2015 2:31 PM	Text Document	2 KB
Parameter	7/16/2015 3:48 PM	Text Document	1 KB
README	6/11/2018 11:25 AM	Text Document	1 KB
Setting	6/21/2018 12:09 PM	Configuration sett...	1 KB

Talking to the Inverter

- You will need a USB-A to USAB-B cable on hand before you start.
- Remove the access cover that is held in place by 2 philips screws

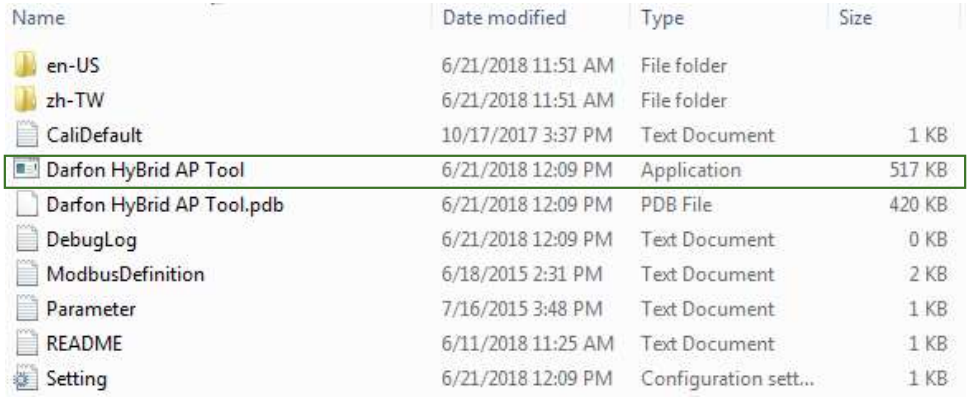


Talking to the Inverter (cont.)

- Connect the USB cable to the inverter as shown below.
- Connect the other end of the cable to a USB port on your laptop.

Talking to the Inverter (cont.)

Launch the Darfon Hybrid AP Tool



Name	Date modified	Type	Size
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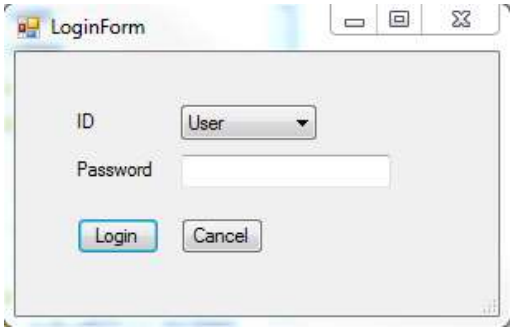
README	6/11/2018 11:25 AM	Text Document	1 KB
Setting	6/21/2018 12:09 PM	Configuration sett...	1 KB

Talking to the Inverter (cont.)

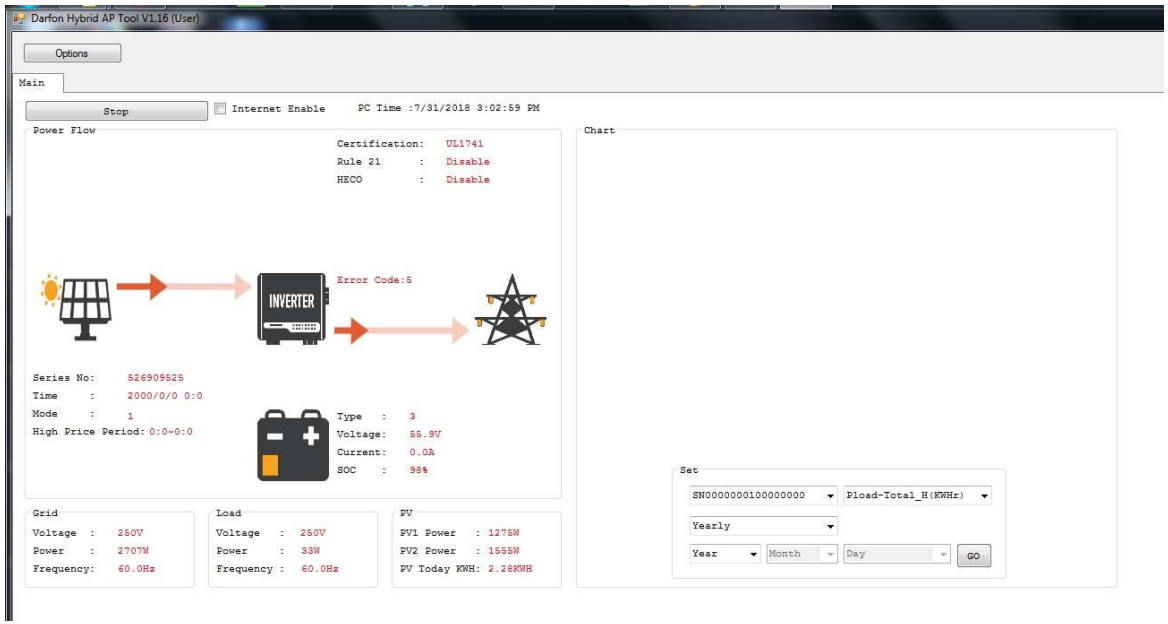
A user level login requires no password.

You can see a nice amount of what is happening with your inverter very easily. Nothing can be changed from this login level.



Talking to the Inverter (cont.)

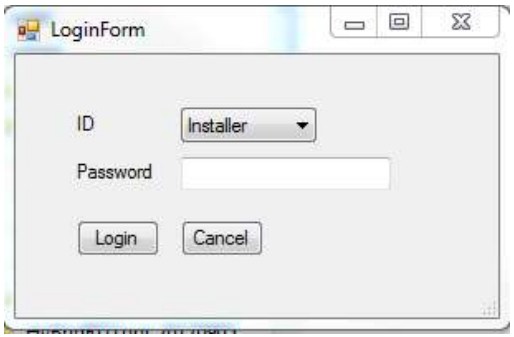
You must set the Serial COM Port. The Baudrate is 9600 and the computer will assign the COM port. In this case, my computer allocated COM15. Click on OK.

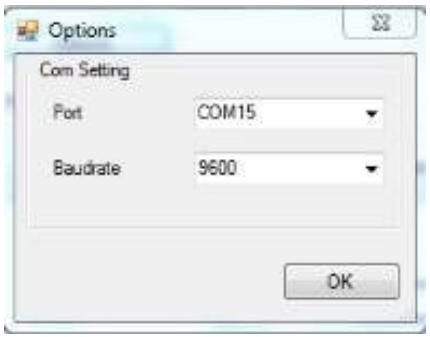


This is the default screen for the User login.

Talking to the Inverter (cont.)

- An installer level login requires the password “Installer1234”. The password is case sensitive. Also, please note that we do NOT publish this password in the manual.
- You will also need to set the COM port for this login as you did with the User login.

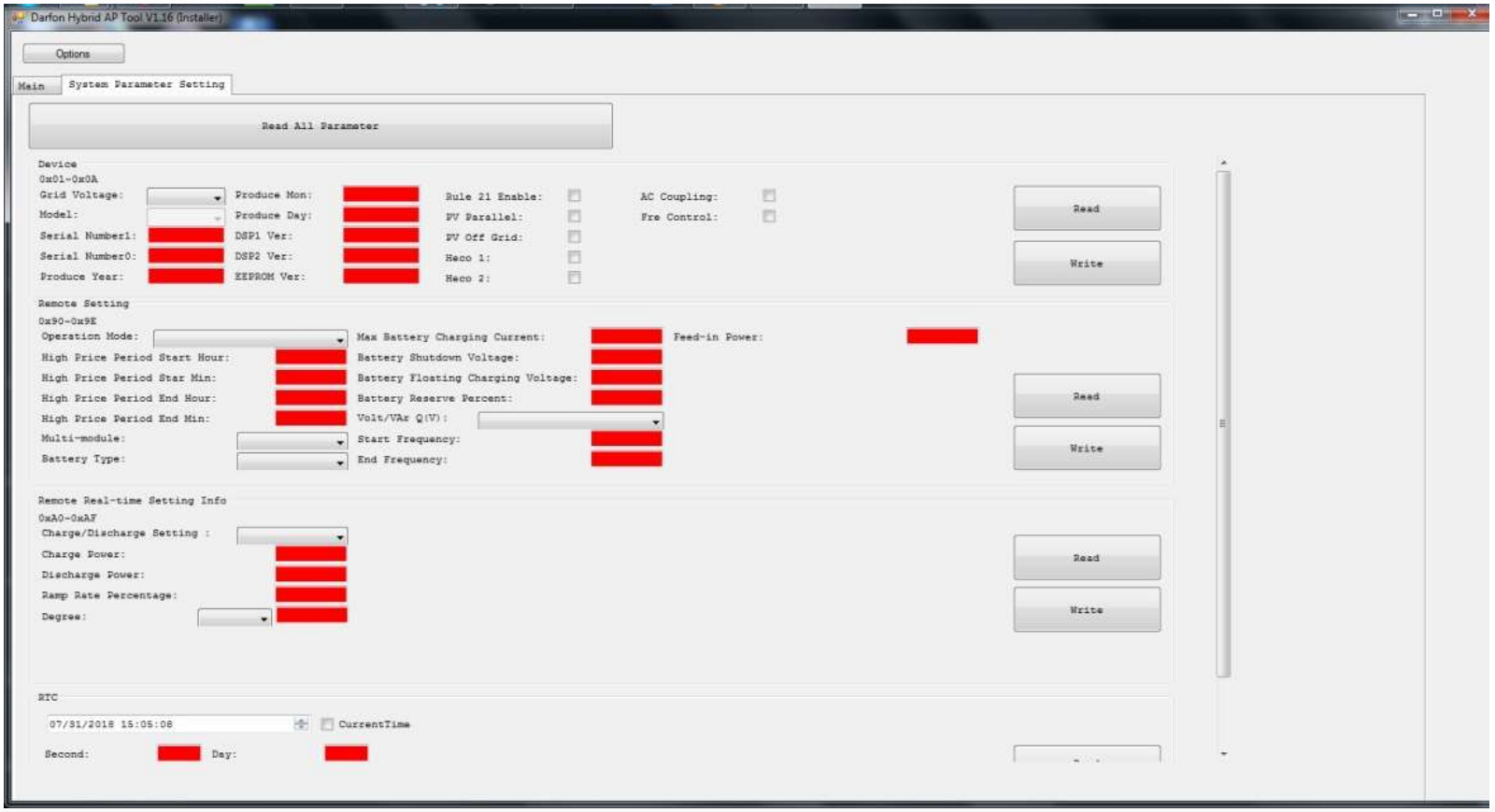




- From this login you can make substantial changes to the way the H5000 works.

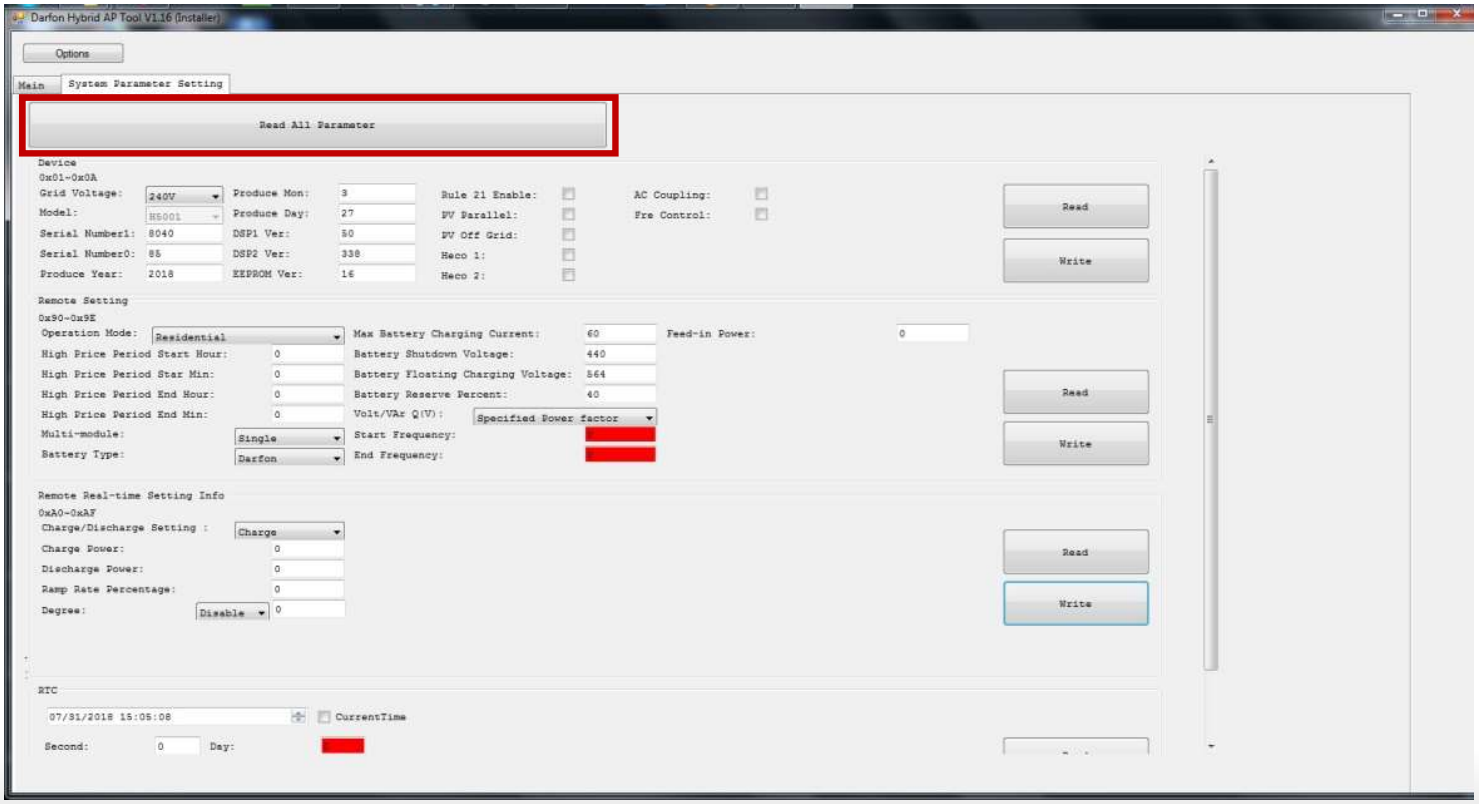
Caution: You can make the system perform better or a lot worse depending on what you do here.

Talking to the Inverter (cont.)

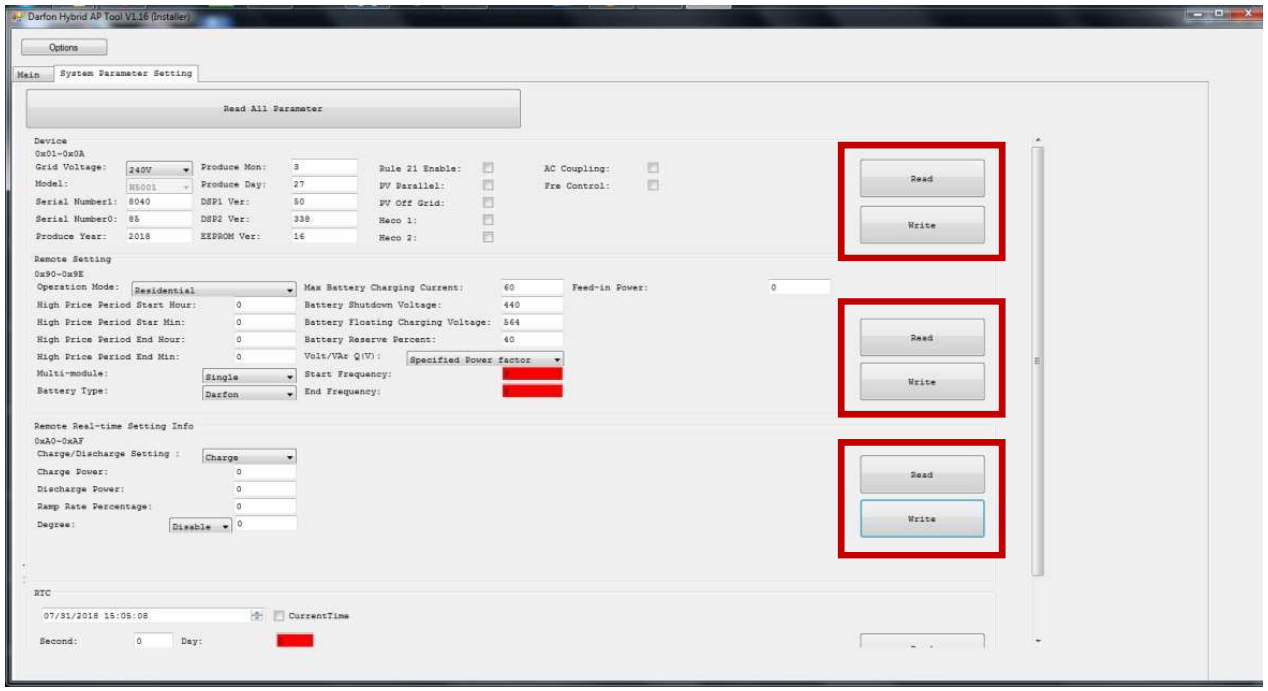


Talking to the Inverter (cont.)

Clicking on “Read All Parameters” will collect the current register contents from the inverter.



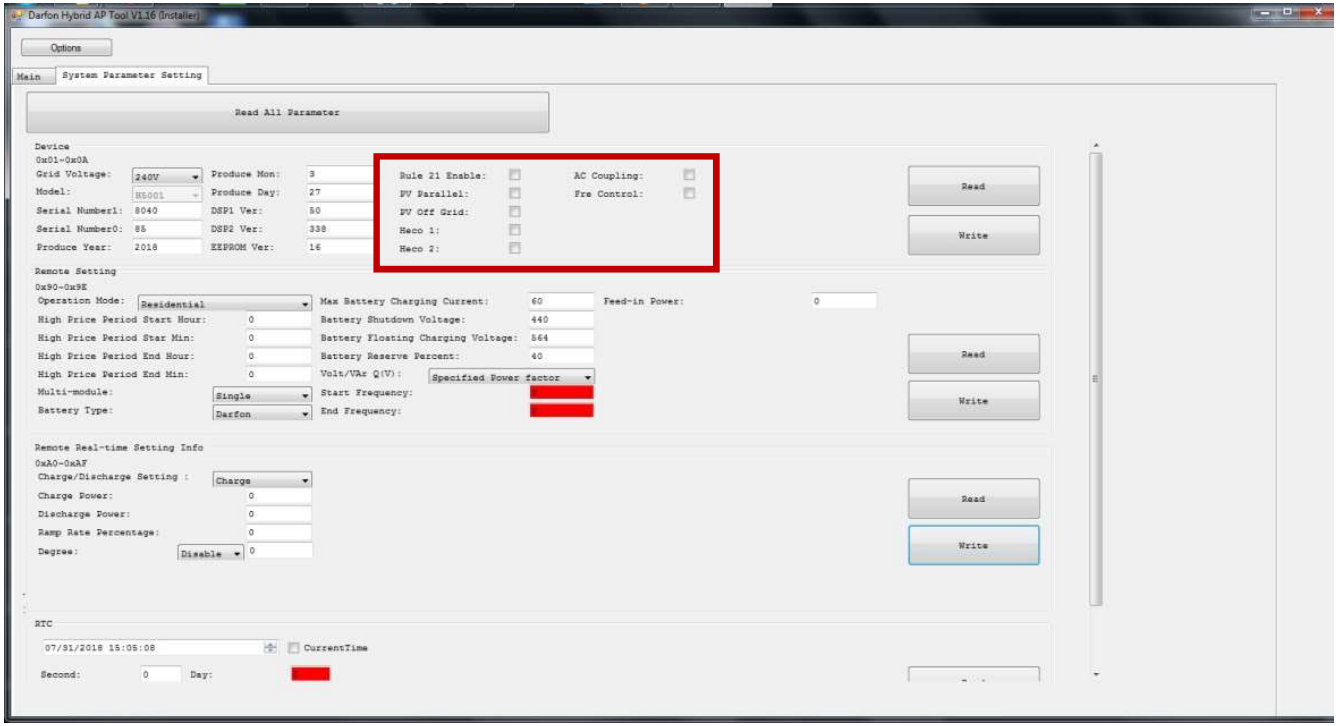
Talking to the Inverter (cont.)



Read and write registers by sections to reduce the potential of changing a register you didn't mean to.

- Press "Read" to get the current values form the inverter.
- Make your changes.
- Then Press "Write" to implement the changes.
- Turn off the inverter with the rocker switch. Wait for 15 seconds before turning the system back on.
- Press "Read" to confirm the new values are set in the EEPROM.

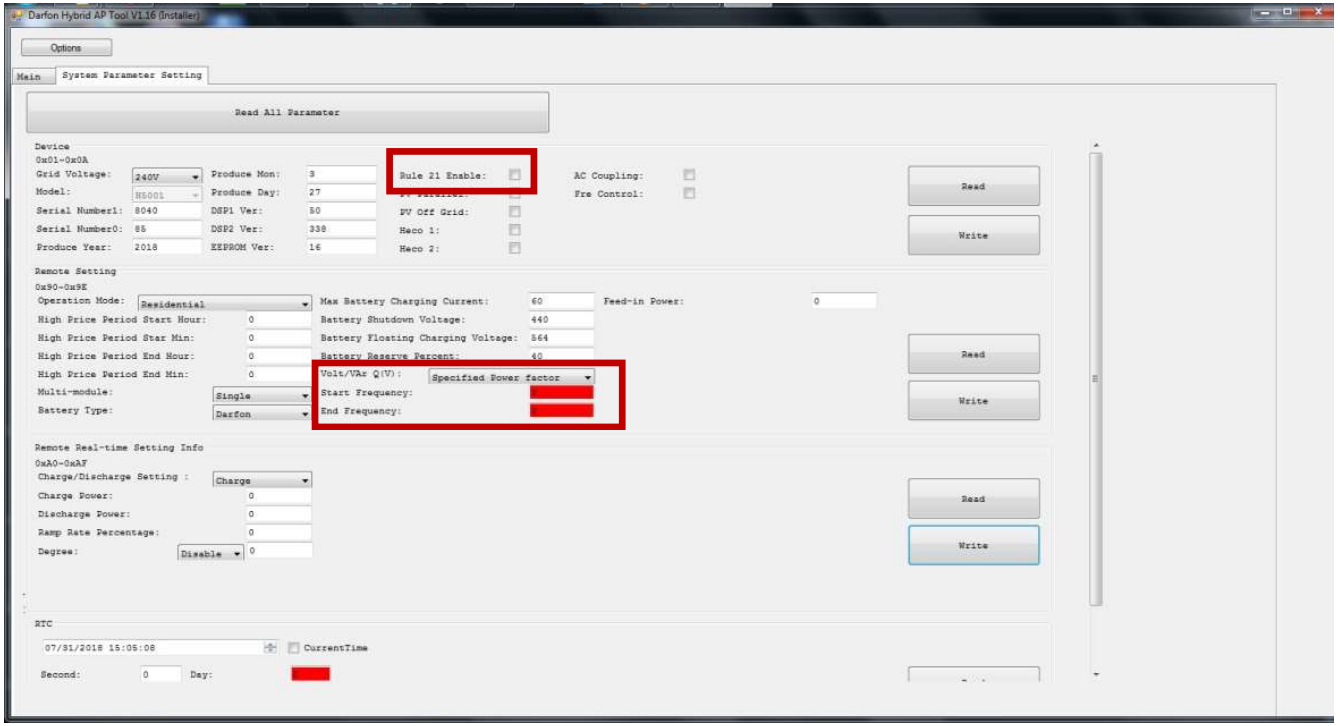
Talking to the Inverter (cont.)



There are check boxes that activate specific features.

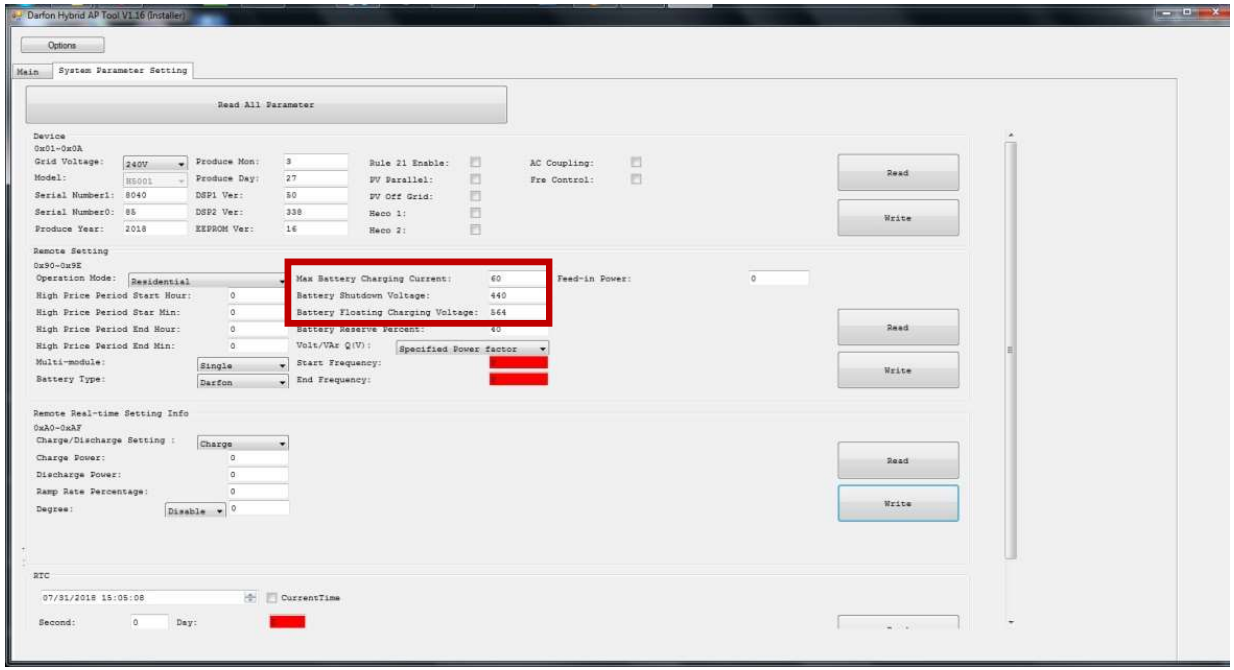
- The 2 most commonly used are PV Off Grid and Rule 21.
- Check “PV Off Grid”, if your system is a true off grid installation. Several changes are made to power flow and how deeply the battery is discharged.
- Check “Rule 21 Enable”, if you are in California or any state that requires Rule 21 compliancy.

Talking to the Inverter(cont.)



- For Rule 21, you will need to know what the local utility values are.
- Check “Rule 21 Enable”
- Set the Volt/Var, Start Frequency and End Frequency values.
- Press “Write”, then restart the inverter.

Integrate Fortress Battery to H5001/H5000



A) Select Battery type: Lead Acid

B) The most common fields that need to be adjusted are

- Max Battery Charging current: 50A
- Battery Shutdown Voltage: 50.7V
- Battery Floating Charging Voltage: 54.4V

<u>Please refer the parameter for Fortress Batteries in the next page!</u>

Note: Voltage values are read as if there is a decimal point between the two rightmost digits. So 446 is 44.6V and 564 is 56.4V.

Fortress Lithium Battery Parameters

Make Sure you select Battery Type: Lead Acid!

Battery Type:	**Lead Acid**	
Battery Parameters	80% DoD, 6000 cycles	90% DoD, 3000 cycles
Max Battery Charging current	50A per Battery	60A per Battery
Battery Shutdown Voltage	50.7V	48.4V
Battery Floating Charging Voltage	54.4V	