So I finally got the communication to work to my m m 5000. It doesn't seem to be fetching stuff properly and now this is weird it worries me that I've disabled the mppt solar charge controller or something. I've had the doss program running for quite a while and I typed g 0x42 and it said DCDC Disable sent - DCDC Confirmed

At least I'm pretty sure it was a lowercase g.

That's not the commands to disable dc-to-dc conversion I'm not sure why it did that . now in the dc-to-dc section on the main screen it says stopped disabled.

So then I tried it with an uppercase g and it says SP 66 0x42 = 0x33:.

Typing FE says dc-dc enable sent but there's no confirmation in green and on the main screen it still says stopped disabled on the DC to DC section.

I reset the computer and ran the version 2 and then the das and it seems to be working better I was even able to type Fe and it says dc-dc enable sent and then it says in green dc-dc confirmed. Now when I look up in the DC DC section it says run enabled. Before my tech rights got timed out I typed P 0x68 0 which changed the tech time out to infinity so I rebooted the computer and confirmed I was able to change parameters without starting the windows software first.

I typed P 0x41 9 and I got a confirmation that I've lowered the incoming AC amperage to 9 amps which is a bit over a thousand Watts. I think that's just for the charging though and not the pass through. now I changed it to 21 amps because I'm going to use the 3000 watt generator and try and enable the equalization mode.

I also enabled the charger.

but I started the generator and connected it to the grid breaker and it's not charging the batteries although they are kind of full right now anyway. Gen breaker only you can damage the unit per manual. lou

I typed G 0x44 and it alluded to the result being 30 (It showed SP 30 right that is a setpoint # not the setpoint value. Happens when you type something wrong lou) probably because I typed an uppercase G. Seamed strange because that is the bulk charge voltage which should be 560. So I typed P 0x44 560 and it confirmed the change. Then I typed g 0x44 and it said equals 560 now.

this kind of worried me because i mistakenly thought it claims that it was 30 before.

 (You need to type download 0x00 enter to save your setpiont file in the mm5000 and print it. Never type upload as I have not figured out how to initialize the file. Remember you want to change the least amount of setpoints as possible as to not crash the flash chip. Figure on paper what you want to change then leave the inverter alone. Since you are offgrid you can change shutdown voltage from 42 to 40 with P 0x20 400 command = 40volts lou.)

Nov 5th 2019 I typed download 0x01 and push enter instead of 0x00 what's basically just name the file differently. so the next time I'll use number 2 and then number 3 and so on…

Changed 0x12 to 620 meaning high battery voltage of 62 volts is allowed.

Changed 0x17 from 30 to 720 so now that means 12 hours of float time before going to zero current mode. "**0x17 30 spZERO\_CURRENT\_HOLD\_TIME** Time after sun-up and achieving float voltage to hold in float mode before going to zero current mode. Minutes XXX."

Changed 0x28 form 108 to 105. That allows the incoming grid voltage to drop to 105 now before turning the inverter on.

Keeping an eye on value 37 I might want to lower it at some point. **0x37 1000 IBAT\_CHG\_MAX IBAT\_CHG\_MAX - Max Batt Chg Current (Initial val and upper limit of chg current command)** This is the initial value and upper limit of the battery charge current. Note that this is NOT the limit value for the DCDC converter – it controls the BATTERY maximum current. This value can be controlled dynamically via the ccSET\_BATTERY\_CURRENT\_LIMIT command in the range 0 - IBAT\_CHG\_MAX. Setting the dynamic limit to zero is functionally equivalent to changing battery mode to zero-current mode.

Changed 0x45 to 200 . **0x45 60 TIME\_BULK Minutes** Time for which the bulk voltage will be held.

Changed to 615

 **0x48 565 VBAT\_BOOST Volts x 10** Battery charging target voltage when the system is in boost (equalize) mode.

### **0x49 180 TIME\_BOOST TIME\_BOOST** Time for which the boost voltage will be held.

### **Change to 001 which I think pretty much just changed it to 1 0x4A 720 BOOST\_INTERVAL Hours** Time interval after which a periodic boost (equalize) cycle is initiated. (Typically 30 days).

48c

Changed to 11 so now fans reaches full speed at 123.8 degrees Fahrenheit. It still comes on at the factory setting of 102 Fahrenheit **0x71 16 FAN\_GAIN Units** Fan voltage is controlled by a PWM output that has a range of 0-255. For each degree C hotter than setpoint FAN\_TEMP, the PWM output is set to (FAN\_GAIN x Temp Difference). For example, if the gain is set to 16 and the fan temp is set to 140, the fan will run at full speed when the heat sink temperature is 16 degrees above 40C, or at 56C.

Changed to 170 **0x72 175 TEMP\_WARN Degrees C + 100** If heat sink temperature exceeds this value: 1/ a warning bit is set in the system status, 2/ in export mode, export current (or import current, if battery charging) is reduced until this temperature is maintained.

## **Changed to 180 0x73 185 TEMP\_SHUTDOWN Degrees C + 100**  If heat sink temperature exceeds this value, the unit goes into hardware shutdown; the inverter LED flashes 4 x RED, and the system status shows OVER Temperature. As with any hardware shutdown, the init will attempt to power loads from the grid.

Changed to 148. Which is 118.4 degrees Fahrenheit. **0x4C 170 VBAT\_TEMP\_MAX degC+100** Battery shutdown temperature. This presently “hard programmed” at 70 degrees C for safety. The low temp shutdown is at –47C (also hard programmed). Note if temp sensor is shorted, temp will show a very high number and this shutdown will occur.

Now I'm looking into the modes to try and stop it from exporting power to the generator. I have the generator hooked to the grid breaker because the generator breaker doesn't seem to work right and I'm not sure if it's even in the programming to enable the generator breaker to work right at all because they mentioned in the manual that generator support was not available for most models even though they may have had a generator breaker.

 so I decided to change the default mode and try and stop it from going into export mode.

## **I changed this to a 3 as an attempt to make the automatic mode switch to grid to load as default instead of export but it didn't work. It just simply stayed in stand-alone mode and wouldn't automatically switch to grid to load anymore so I changed it back to a 2.**

## **0x82 2 PP\_PRIMARY\_MODE Mode**

The primary operating mode of the inverter – typically grid export. See mode discussion.

## **0x83 3 PP\_SECONDARY\_MODE Mode**

The secondary operating mode of the inverter – typically stand-alone. See mode discussion.

## **0x85 0 DEFAULT\_MANUAL\_MODE Mode**

If the SET\_AUTO\_MODE setpoint is zero, the inverter will start in manual mode, and in the mode defined by this setpoint. For example, if zero, the inverter will start in OFF mode, if 3, the inverter will start in stand-alone mode.

## **0x86 0 SET\_AUTO\_MODE SET\_AUTO\_MODE**

If this value is non-zero, the inverter will start in automatic mode. The MODE-SELECTOR will operate, setting the inverter into one of Primary, Secondary, or Shutdown modes. (See mode section).

If this value is zero, the inverter will start in manual mode, with the actual mode being set by the DEFAULT\_MANUAL\_MODE setpoint.

Typing m and pushing enter tries to change the mode but since you didn't type a mode it says bad mode number and shows you a list of different modes and what they equal.

0 equals off

 1 equals grid to load

2 equals grid export

3 equals stand-alone

4 equals droop mode export

5 equals droop mode Gen