



# **Quick Start Guide**

# Rev. 2024-1

# MB48LI82.GW MB48LI50.GW & MtB GateWay





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# **Quick Start Guide**

### Inverter compability list

Victron Energy	All inverters compatible with a GX device		
Deye	All single and three phase LV Hybrid inverters		
Solis	RHI-(3-6)K-48ES-5G		
30113	S5-EH1P(3-6)K-L		

### 1. Pre-charge the inverter capacitors:

Based on your inverter, check the following table to determine which procedure to follow for the pre-charge.

Brand	Inverter Type	Procedure	
	Single-phase $\leq$ 5 kVA	Follow <b>procedure A</b>	
Victron	Single-phase >5 kVA		
	Three-phase		
	Single-phase		
Deye	Three-phase		
Solis	Single-phase	Follow <b>procedure A</b>	

# **Procedure A**

Start by waking up one and only one of the batteries (quick press the red switch) and then turn it ON (one sound signal while pressing the red switch). LED1 will turn yellow for some time and then change to green. When it becomes green, the battery is fully ON, and the MtB GateWay should also be ON (Power LED red).

# Procedure B

Start by first supplying power to the DC bus bar, either with the MPPT or by starting up the inverters with the grid or the generator so that the inverters' internal capacitors are charged and the MtB GateWay should also be ON (Power LED red).

**Warning:** If you have a Victron system and you are using the MPPT to turn on the system then make sure to reduce the "Max charge current" to 5 A using VictronConnect before turning on any battery.

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Now you can wake up one and only one of the batteries (quick press the red switch).

## 2. Pair batteries with the MtB GateWay:

Now that one battery is ON/awake (procedure A/procedure B) and the MtB GateWay is powered, it's time to pair the batteries with the MtB GateWay. Ensure that the Ethernet cable is not connected to the MtB GateWay, and connect your smartphone or computer to the Wi-Fi network whose name can be found on the MtB GateWay side sticker. Alternatively, you can scan the QR Code on the MtB GateWay. Go to the MtB GateWay web page at http://192.168.33.1 and enable the paring.

Once the paring is enabled, starting with the battery that is already ON/awake (procedure A/procedure B), press and hold the red switch until two sound signals are emitted. LED2 should become fixed magenta and then fast blinking magenta, and finally slow blinking magenta. This battery is now paired with the MtB GateWay.

Now wake up the rest of the batteries (quick press the red switch) and then press and hold the red switch until two sound signals are emitted on each of the remaining batteries.

### **3. Turn ON the rest of the batteries:**

When all batteries have LED2 slowly blinking magenta, press the red switch on the batteries that are not yet ON until one sound signal is emitted to turn them ON.

### 4. Finishing the batteries installation:

If you followed procedure A, the process is now finished.

If procedure B was followed, and if you have changed the "Max charge current" for the MPPT in step 1 restore the default value using VictronConnect, with this the process is now finished.

#### 5. Now follow the instructions specific to your inverter.





M E T E R B O O S T

#### Note: Venus OS 2.94 or newer must be used

1. To connect the MtB GateWay to a Victron system, a Victron VE.Can to CANbus BMS cable should be used. Both type A and type B can be used. Please do not use handmade cables, both MeterBoost and Victron don't support installations with handmade cables.

2. The CAN port of the MtB GateWay should be connected to the Battery side of the cable and the Victron VE.Can side should be connected to the VE.Can port of the GX device. A CAN terminator must be used on the leftover port of the GX device. The MtB GateWay already includes a CAN terminator on its CAN port.

3. On the GX device go to Setting $\rightarrow$ DVCC and make sure DVCC and Shared Voltage Sense are ON while all the other options are OFF.

4. On the GX device go to Settings $\rightarrow$ Services $\rightarrow$ VE.Can port and change the CAN-bus profile to CAN-bus BMS (500 kbit/s).

5. If you have an ESS system, on the GX device go to Settings $\rightarrow$ ESS and change the mode to either Optimized (without BatteryLife) or Optimized (with BatteryLife)

6. On the GX device go to Settings $\rightarrow$ System Setup and make sure that the Battery monitor is either configured as automatic or MeterBoost on CAN-Bus.

7. After this, you should see a new device listed in the main GX device menu named MeterBoost.



8. Using VEConfigure, set the parameters presented in the figures below.

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WE Configure 3 '\$7A174A3C'	(MultiPlus-II 48/15000/200-100 S/N: HQ2232JU6GT ) - >	💁 VE Configure 3 '\$7A174A3C' ( MultiPlus-II 48/15000/200-100 S/N: HQ2232JU6GT ) — 🛛 🗙
File Target Defaults Options	; Special Help	File Target Defaults Options Special Help
CE3	General Gid Inverter Charger Virtual swich Assistants Inverter output volage V Inverter Charger Virtual swich Assistants I PowerAssist Inverter output volage V Assistants I Assistants I Assistants I Operation of SOC DC input low shut-down 44.00 V DC input low shut-down 0.0 C DC input low shut-down 0.0 C DC input low shut-down 0.0 C I shut-down on SOC SOC Sovers 0.0 C I shut-do	Set according to Acceleration interval       100       Hr         Set according to Acceleration voltage       57.60       V       Repeated absorption time       1.00       Hr         Notad switch       Absorption voltage       57.60       V       Repeated absorption time       1.00       Hr         Notad switch       Absorption voltage       57.60       V       Repeated absorption time       1.00       Hr         Notad switch       Absorption voltage       57.60       V       Repeated absorption time       1.00       Days         Charge curve       Find       Absorption voltage       57.40       Repeated absorption time       1.00       Days         Charge curve       Find       Absorption time       1       Hr       Hr       Stop charge below       5.0       deg C         Victor Energy       Stop charge below       5.0       deg C       C       C       C
	Vetton Energy	Inverter Charger Vetual switch Assistants Inverter Charger Vetual switch Assistants witch usage: V5 Inclinal (sku) relay. VS on-open, VS off-close prote AC input IVS on-ignore: VS on-ignore: VS on-ignore is vetual spin of the second depresent depresent depresent depresent of the second depresent

# 9. In case of the ESS system, configure also the following parameters.

WE Configure 3         \$7A174A3C' (MultiPlus-II 48/15000/200-100 S/N: HQ2232JU6GT)         -         X           See VE Configure 3         \$7A174A3C' (MultiPlus-II 48/15000/200-100 S/N: HQ2232JU6GT)         -         X           File Turget Defaults         Optimizer 3         \$7A174A3C' (MultiPlus-II 48/15000/200-100 S/N: HQ2232JU6GT)         -         X			
NuliPlus-II	General Grid Inveter Charger Virtual switch Assistants Assistant Configuration Assistant Tools Assistant Setup	List         General         Grid         Inverter         Charger         Virtual switch         Assistants           MubiPlus-II         Assistant Configuration         Assistant Tools              Ses SES (Energy Storage System)         —         —         X          X	
	Aud astisters All assisters Lithium (non Hub system) • Relay Solar / Self-consumption • ESS (Energy Storage System) (0164)	Battery system Please select your system    System uses 0P25 or 0P2V batteries  System uses Gel or AGM batteries	
	PV Inveter support (1089) Self-consumption Hub-1 (1086) Self-consumption Hub-2 v3 (for xxy3zz / Ac Deprecated	System uses LFePoA batteries with a VM-signal BMS     System uses LFePoA batteries with a VM-signal BMS     System uses LFePoA with other type BMS     (This can be either a BMS connected via CAD bus or a BMS system in which the     batteries are protected from high/who cell voltages by external equipment.)     System use Reditive ZEID stateries	
Viction Energy	Used assistant: (1062 bytes used, 3030 bytes free) Start assistant Save assistant Load assistant	Cancel     Cancel     Summay     Load assistant	

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💊 VE Configure 3 🛭 \$7A174A3C' ( MultiPlus-II 48/15000/200-100 S/N: HQ2232JU6GT ) 🛛 📃 🗙 File Target Defaults Options Special Help
State
General Grid Inverter Charger Virtual switch Assistants
Wattheat MultiPlus-II Network Storage System) - 0 × Restart offset to low battery, the battery voltage must rise above a certai When inverting is stopped due to low battery, the battery voltage must rise level before inverting is allowed again. This level is determined as an offset to cut-off(0). (cut-off(0) is the cut-off voltage corresponding with a DC discharge of 0A.) 1 Note: This same value is used as an offset to the cut-off voltage to determine the low ba Pre-Alarm indication) ¥ Inverting is allowed again when voltage rises 4.00 V above cut-off(0). X Cancel << >> istant ((I))) Summary Load assistant

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10. If Solar Chargers are on the system, set the following parameters using Victron Connect. The charge current should be set to the lowest value between  $Ah/2 \times$  number of batteries or the maximum solar charger current.

M E T E R B O O S T

Battery voltage	48V	
Max charge current	100A	
Charger enabled		
Battery preset	User defined 🔻	
Remote Mode	Remote on/off 🔻	
Expert mode		
BMS controlled	Yes >	
Charge voltages		
Absorption voltage	57.70V	
Float voltage	57.50V	
Equalization voltage	55.00V	
Equalization		
Automatic equalization	Disabled	
Manual equalization	START NOW	
Voltage compensation		
Temperature compensation	Disabled	
Battery limits		
Low temperature cut-off	5°C	

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# Note: HMI version 1001-C037 for three phase and C3FA for single phase inverters must be used

1. The first step is to click on the gear in the top right corner of the display from the main screen and then click on Device Info. As shown in the image below, make sure that the HMI version matches the requirement above.

Device Info			
SUN-12K Inverter ID: 220 HMI: Ver 1001-C037 MAIN: Ver	8197944 Flash er 2005-1116-1807		
Alarms Code	Occurred	Dourioo	
F31 AC_SlaveContactor_Fault	2023-05-03 11:35	Info.	
F56 DC_VoltLow_Fault	2023-04-28 03:19		
W31 Battery_comm_warn	2023-04-21 17:47		
W31 Battery_comm_warn	2023-04-21 17:20		
W31Battery_comm_warn	2023-04-21 17:15		
W31Battery_comm_warn	2023-04-21 15:44		
W31Battery_comm_warn	2023-04-14 09:16		
W31 Battery_comm_warn	2023-04-13 17:47		

If your inverter does not respect the conditions mentioned above, please contact MeterBoost for support.

2. Connect the GateWay's CAN port to the inverter's BMS port using the yellow Ethernet cable provided with the inverter.

3. The next step is to click on the gear on the top right corner of the display from the main screen and then click on Battery Setting. The parameters should be set as shown in the images below. The **Batt Capacity, Max A Charge and the Max A Discharge** parameters should be multiplied by the number of batteries in the installation.



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Battery Sett	ing		Battery Se	tting	
Start 10%	10%		Lithium Mode	00	
A 10A	10A	Batt set2	Shutdown	10%	Batt set3
Gen charge	Grid Charge		Low Batt	12%	
Gen Max Run Ti	me 24.0 hours	*	Restart	30%	*
Gen Down Time	0.0 hours	<b>~</b>			✓

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4. The following step is from the main screen to click on the gear located in the top right corner of the display and then click on System Work Mode. The parameters should be set as shown in the images below.



5. The final step is to click on Battery Icon from the main screen and then click on Li-BMS in the bottom right corner. Make sure that after **LiBms** field appears MeterBoost.

Li-BMS	
	LiBms: MeterBoost
Battery Voltage: 57.00V	
Battery Current: 19A	Battery Charge Voltage: 57.4V
Battery Temp.: 28.4C	Charge Current limit: 43A
SOC: 86%	Discharge Current limit: 43A
	Alarms: 0x0000 0x0000

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