MLT
INVERTER GUIDE

+ SETTINGS
+ COMMUNICATION
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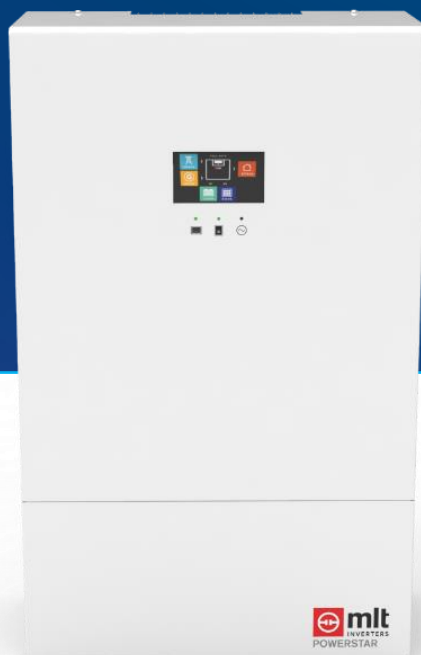
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HUBBLE ENERGY & MLT

The MLT inverters are fully compatible with the Hubble range of batteries.
The following field guide will assist with the correct battery settings you should use.

For further detailed information ensure you read the manual of the supplied battery regarding setup and installation instructions.

https://www.hubbleenergy.com/ for the latest version of this manual.

WARNING

Working with high-voltage systems is dangerous. Do not attempt to modify your inverter and battery setup unless you are certain you understand the risk. Speak to a qualified electrician if you are unsure.

INVERTER SETTINGS

Should you prefer to manually set your inverter voltage settings please use the table below.

Model	Voltage	Equalised	Float	Cutoff	Charge Amps	Max Discharge Current
S-SERIES	12V	14	14	12	30A	100A
X-100	48V	52.8	52.8	44	30A	100A
X-101	48V	53.8	53.8	44	30A	100A
X-200	36V	41.5	41.5	34	30A	100A
AM-2	48V	53.8	53.8	44	30A	100A
AM-3	48V	53.8	53.8	44	20A	50A
AM-4	24V	29	28.5	22	30A	100A
AM-5	48V	55.2	55.2	47	30A	100A
AM-10	48V	55.2	55.2	47	60A	150A
BLADE	48V	55.2	55.2	47	50A	200A

Setting up a Hubble with a MLT Powerstart is incredibly easy.
Simply plug in the Hubble master battery into the CAN bus port of the MLT Powerstart.

This will automatically setup the below values.
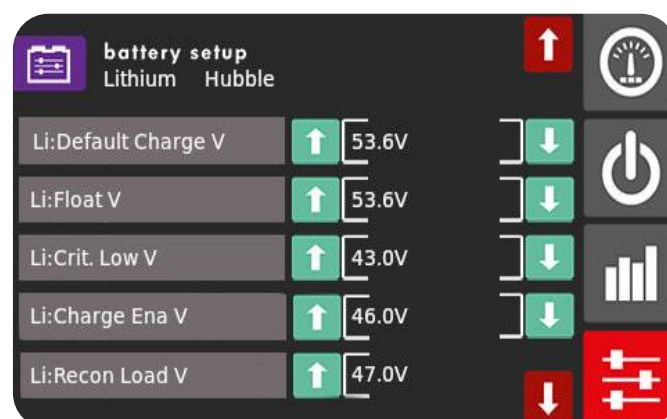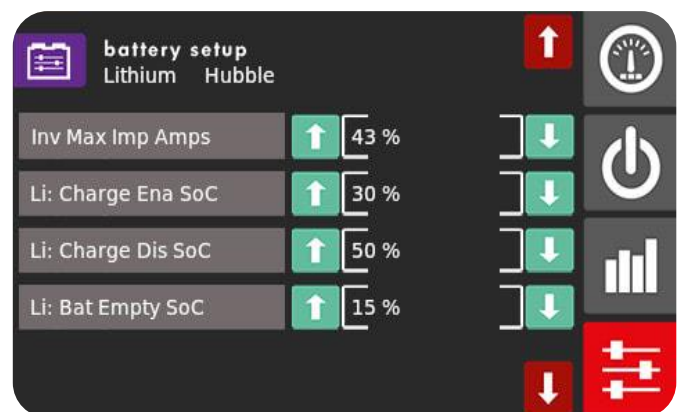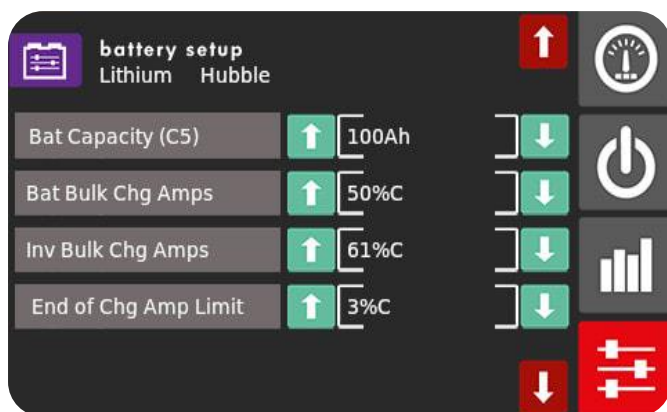
PIN LAYOUTS & CLOUDLINK

PLEASE NOTE

Axpert type inverters require a Cloudlink to access full CAN-BUS communication with a Hubble Energy battery, it is however not required, and the system will be functional on user defined voltage control.

CLOUDLINK

The Cloudlink will connect to an MLT Inverter via:

Cloudlink's (Serial/RJ12 Port) to the MLT Inverter (RS232 Port)

(Black Cable) - RJ12 to RJ45 (450mm) cable.

The Cloudlink will connect to the Battery via:

Cloudlink's (CAN Port) to the Battery (CAN Port)

(Blue Cable) - Standard RJ45 to RJ45 (1500mm) cable.

RJ45 PIN LAYOUTS

Ensure that the clip is pointed away from you when counting the pins.

Pin	X-101/AM-4/AM-2	AM-5/AM-10
1	-	-
2	GROUND	-
3	-	-
4	CANH	CANH
5	CANL	CANL
6		-
7	-	-
8	-	-

2, 4 & 5 Pin Layout image reference seen below: (Blue Cable)
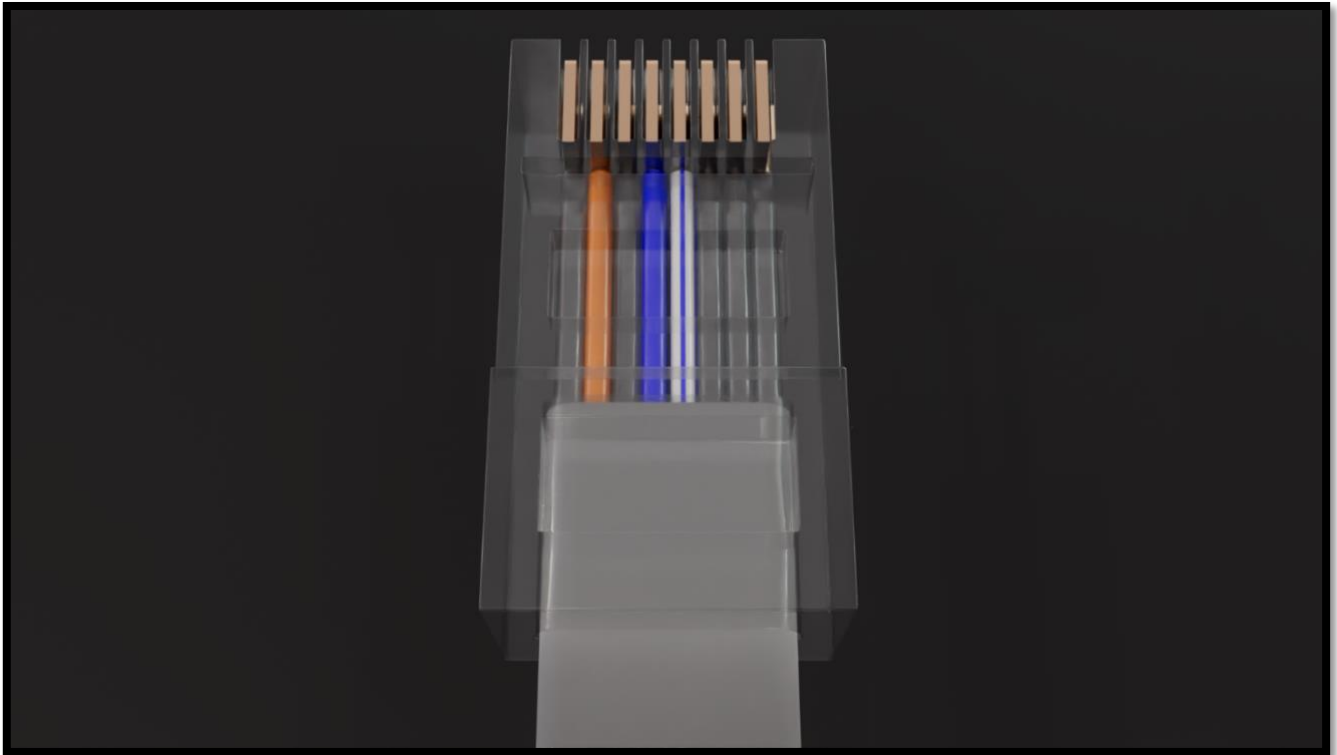
4 & 5 Pin Layout image reference seen below: (Blue Cable - Modified)

HUBBLE DIP SWITCH SETTINGS

FOR MULTIPLE BATTERY INSTALLATION

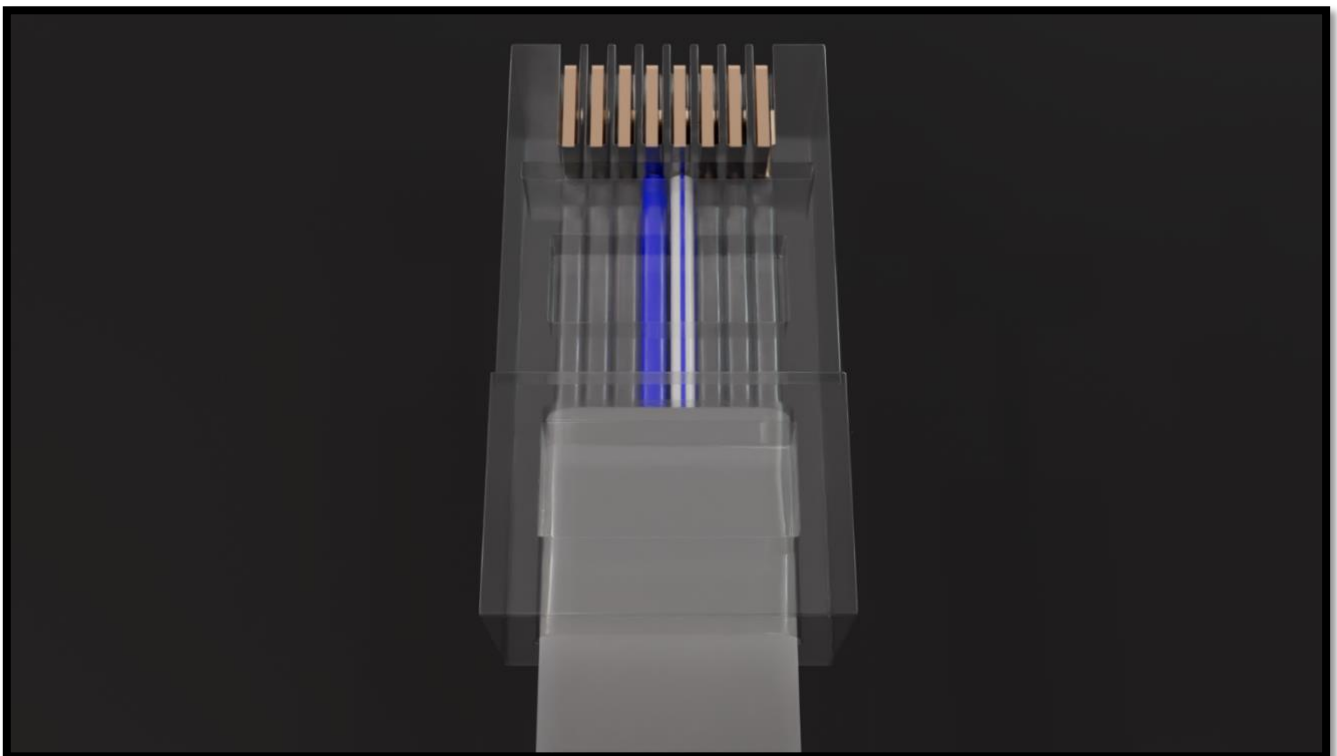For correct setup and communication, each battery needs a unique serial address to communicate. If you are only using one battery in your setup, consider this the master battery and ensure you set it to address 1.

AM-2, AM- 4, AM-10+, AM-16+ & BLADE DIP SWITCHES

ADDRESS	SWITCH POSITIONS			
	#1	#2	#3	#4
1	ON	OFF	OFF	OFF
2	OFF	ON	OFF	OFF
3	ON	ON	OFF	OFF
4	OFF	OFF	ON	OFF
5	ON	OFF	ON	OFF
6	OFF	ON	ON	OFF
7	ON	ON	ON	OFF
8	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON
10	OFF	ON	OFF	ON
11	ON	ON	OFF	ON
12	OFF	OFF	ON	ON
13	ON	OFF	ON	ON
14	OFF	ON	ON	ON
15	ON	ON	ON	ON

AM-5 & AM-10 DIP SWITCHES (4-DIP VERSION)

ADDRESS	SWITCH POSITIONS			
	#1	#2	#3	#4
1	OFF	OFF	OFF	OFF
2	ON	OFF	OFF	OFF
3	OFF	ON	OFF	OFF
4	ON	ON	OFF	OFF
5	OFF	OFF	ON	OFF
6	ON	OFF	ON	OFF
7	OFF	ON	ON	OFF
8	ON	ON	ON	OFF

AM-10 (8-DIP VERSION)

ADDRESS	SWITCH POSITIONS						
	#1	#2	#3	#4	#5	#6	Mark (#7 & #8)
0	ON	ON	OFF	OFF	OFF	OFF	Mastery Battery/Enable CAN BUS Port - ON
1	OFF	OFF	OFF	OFF	OFF	OFF	Slave 2 - OFF
2	OFF	ON	OFF	OFF	OFF	OFF	Slave 3 - OFF
3	OFF	OFF	ON	OFF	OFF	OFF	Slave 4 - OFF
4	OFF	ON	ON	OFF	OFF	OFF	Slave 5 - OFF
5	OFF	OFF	OFF	ON	OFF	OFF	Slave 6 - OFF
6	OFF	ON	OFF	ON	OFF	OFF	Slave 7 - OFF
7	OFF	OFF	ON	ON	OFF	OFF	Slave 8 - OFF
8	OFF	ON	ON	ON	OFF	OFF	Slave 9 - OFF
9	OFF	OFF	OFF	OFF	ON	OFF	Slave 10 - OFF
10	OFF	ON	OFF	OFF	ON	OFF	Slave 11 - OFF
11	OFF	OFF	ON	OFF	ON	OFF	Slave 12 - OFF
12	OFF	ON	ON	OFF	ON	OFF	Slave 13 - OFF
13	OFF	OFF	OFF	ON	ON	OFF	Slave 14 - OFF
14	OFF	ON	OFF	ON	ON	OFF	Slave 15 - OFF

FREQUENTLY ASKED QUESTIONS

Are there communications between the MLT Powerstar inverter and Hubble Lithium batteries?

The Hubble range of batteries communicate to inverters using the CAN port. The Axpert inverter range does not have a CAN bus communications port. Although it does have a Modbus port, we do not support Modbus. CAN bus communication is optional for Hubble and Axpert and the Hubble range of batteries work very well without communications. This is made possible by our internal BMS DC/DC converter and current limiting module. Our BMS will limit the current to the cells when requires through hardware instead of communications. Thus, making the Hubble a great fit for inverters without CAN bus.

If you would like full communications between the Axpert and the Hubble battery, you can invest in the Hubble Cloudlink device. The Cloudlink will enable remote monitoring, 2-way BMS integration and remote management of the Axpert through your free cloud account. Officially we recommend installing a Cloudlink with the Hubble on a Axpert inverter so you can monitor, control and troubleshoot your solar system and Hubble lithium batteries remotely.

How do you set up multiple batteries?

You will have to set dip switch settings per battery to give them a unique address. You also must connect the included RJ45 battery link cables into the "Battery Link" port of each battery. Ensure your master battery dip switch 1 is on, 2,3,4 is OFF. Only the master battery CAN Bus will be enabled. You can then connect the Hubble Cloudlink into the CAN port of the master battery for communications to work.

Do I have to use the communication battery link cables if I don't want to monitor or have communications?

Yes.