

MUST INVERTER GUIDE

- + SETTINGS
- + COMMUNICATION
- + TROUBLESHOOTING



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HUBBLE ENERGY & MUST

The Must 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

| 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 |

PIN LAYOUTS & CLOUDLINK

PLEASE NOTE

Apert 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 a Must Inverter via:

Cloudlink's (Serial/RJ12 Port) to the Must Inverter (RS232 Port)
(Black Cable) - Serial/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.

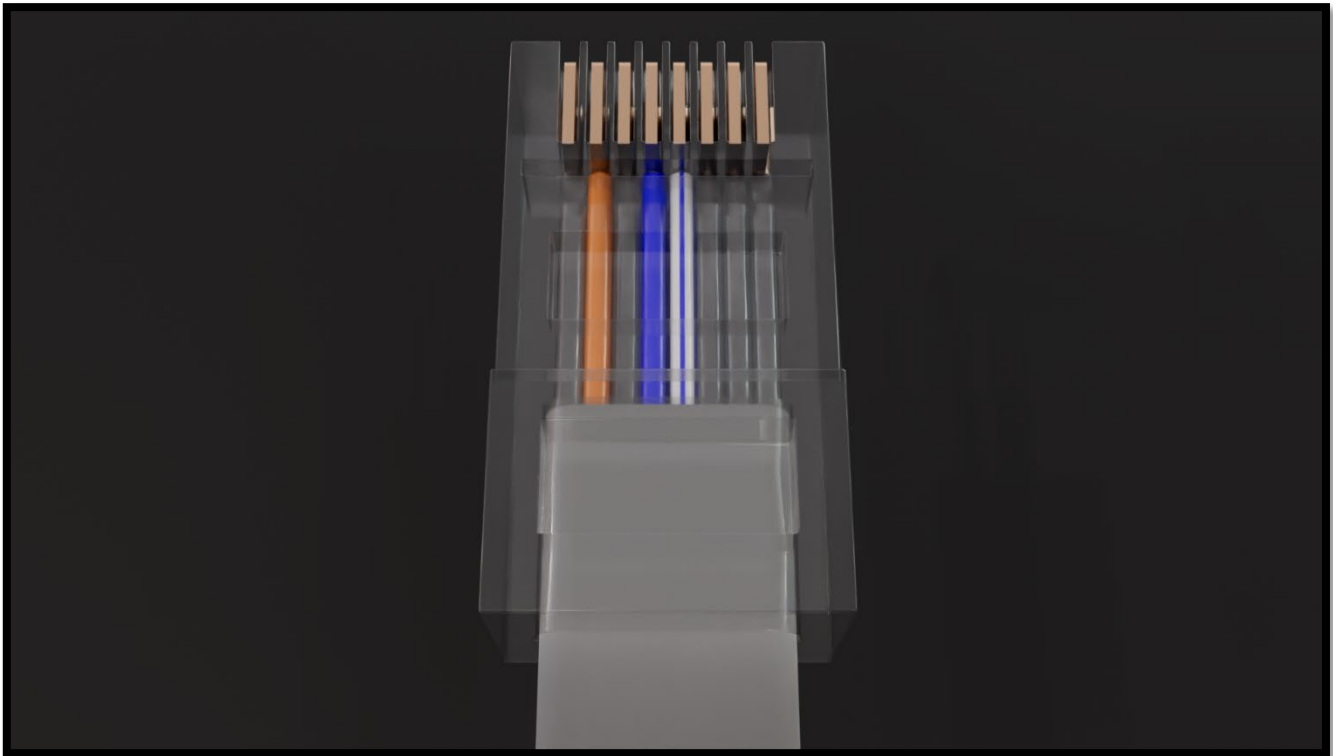
RJ45 PIN LAYOUTS

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 | - | - |

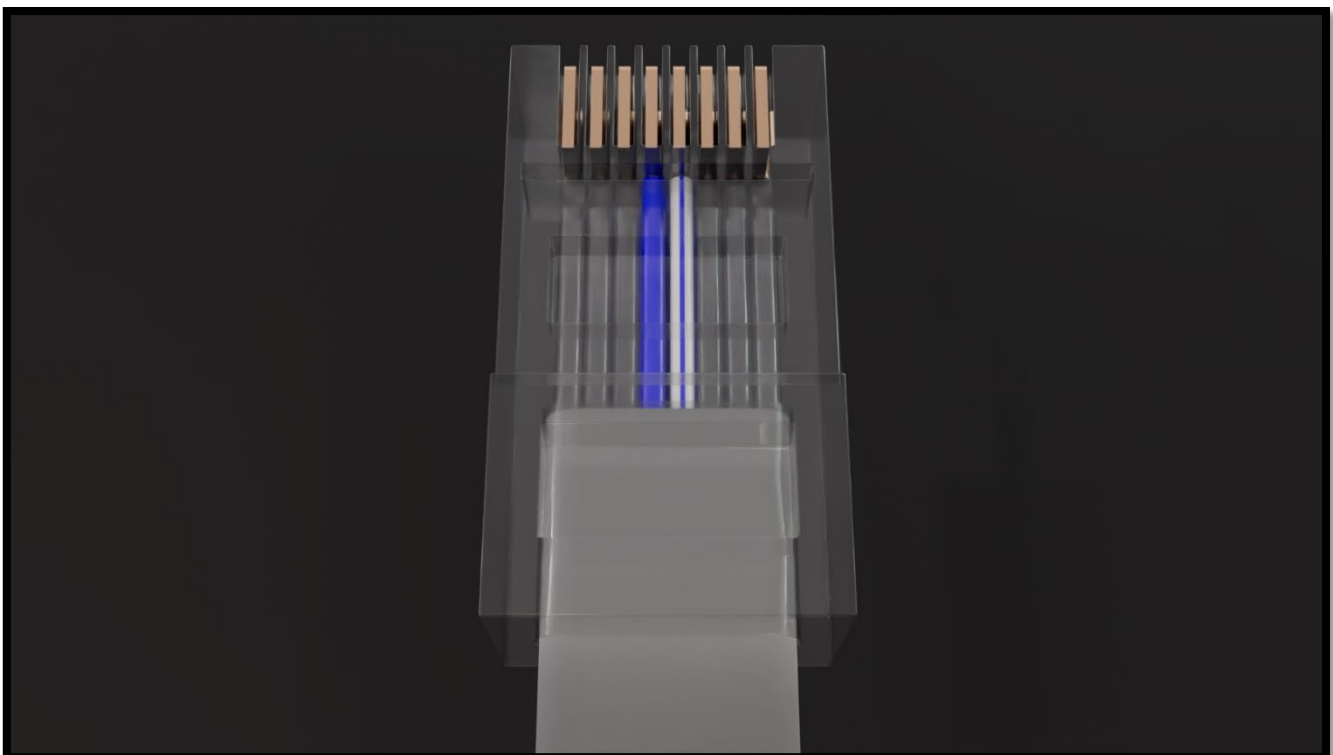
2, 4 & 5 Pin Layout image reference seen below:

(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 & 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 | ON |
| 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 |
| 9 | OFF | OFF | OFF | ON |
| 10 | ON | OFF | OFF | ON |
| 11 | OFF | ON | OFF | ON |
| 12 | ON | ON | OFF | ON |
| 13 | OFF | OFF | ON | ON |
| 14 | OFF | ON | ON | ON |
| 15 | ON | ON | ON | ON |

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

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.