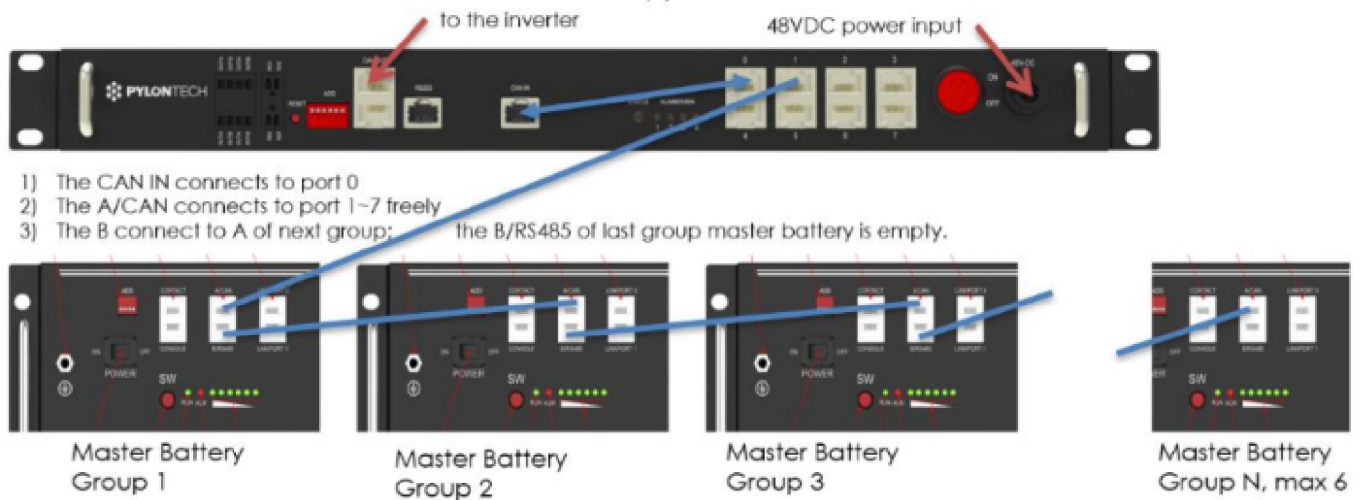# LV-Hub Connection for Pylontech US5000 under CAN bus with Victron

The LV-Hub is capable of connecting up to 96 US5000 batteries in full closed-loop communication with a Victron Cerbo GX. The LV-Hub can connect up to 6 groups of batteries, with each group containing a maximum of 16 units.

*Reference Page 8 of the Pylontech LV-HUB Product Manual

Multiple Battery Groups CAN Communication Cable Connection

Each Communication HUB connects maximum 6 battery piles.

1) The CAN IN connects to port 0
2) The A/CAN connects to port 1~7 freely
3) The B connect to A of next group;   the B/RS485 of last group master battery is empty.

Master Battery Group 1   Master Battery Group 2   Master Battery Group 3   Master Battery Group N, max 6

1. Prepare the LV-HUB for operation by connecting the power cable to the inverter, connecting Port 0 to CAN IN with the included small jumper cable and CAN OUT to the Cerbo with a VE.Can to CAN-bus BMS type A Cable.

2. Prepare your battery groups. Each group can have a maximum of 16 batteries connected as usual from Link Port 0 to Link Port 1 with the master having an open Link Port 0. Once your groups are set up, start by connecting B/RS485 of Master Battery Group 1 to A/CAN of Master Battery Group 2 with a WI0SCAN35RJ3 cable from the Pylontech cable kit. Repeat this process with B/RS485 of Master Battery Group 2 connecting to A/CAN of Master Battery Group 3, and so on down the line.

3. Make sure all battery dip switches are set to X0XX and that Master Battery Group 1 has an empty A/CAN port, then turn ON the batteries by pressing the start button on Master Battery Group 1.

4. After all the batteries are running, the buzzer of Master Battery Group 1 will ring 3 times to signal that the connection is successful.

5.Change the dip switch of Master Battery Group 1 to X1XX.

6. Now connect the WI0SCAN30RJ1 communication cable between LV-HUB and master battery in group 1.

7. Change the dip switch of the LV-HUB to 000001, then turn on the LV-HUB.

8. Confirm the number of groups connected by checking the LED indicator lights on the LV-HUB (reference the LED Indicators Instructions below).

*Reference Page 5 of the Pylontech LV-HUB Product Manual

2.3 LED Indicators Instructions

Status				•	Only the HUB is turned ON, it lights once.
				• (red)	No battery connected or at least one group is off line. When battery group is reduced it will alarm (in red), but when battery group is added in it will no alarm.
1	2	3	4		Green flash; connected battery groups number
•					1 group
	•				2 groups
•	•				3 groups
		•			4 groups
•		•			5 groups
	•	•			6 groups
•	•	•			7 groups

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Guide to Cables

The following two coms cables are used in an LV-HUB setup.

An 8 pin direct-pin cable or the WI0SCAN35RJ3 from the external cable kit:
1. Between master battery modules.
2. between LV-HUB Port 0 to LV-HUB CAN IN (use the small jumper cable included).

A 3 pin NULL or the WI0SCAN30RJ1 cable from the external cable kits:
1. Between Group 1 Master Battery A/CAN and LV-HUB Port 1.

Troubleshooting

The process of setting up the LV-HUB depends on following the proper sequence of steps. Follow and complete each step before proceeding to the next one.

Issue 1: The slave batteries and groups fail to power on when pressing the start button of Master Battery Group 1.

- Make sure the batteries' power switches are all on.
- Check that the cables connecting each master battery to the next group are 8-pin direct cables.
- Turn on the slave stacks manually by pressing the power button on each master battery. If Master Battery Group 1 beeps after this then proceed as normal.

Issue 2: Master Battery Group 1 does not beep 3 times once all batteries are running.
- Make sure that Master Battery Group 1 has an empty A/CAN port. If this was the issue, turn everything off and restart with this port empty.

Issue 3: You get through step 8 with no issues but the Cerbo GX won't recognize the batteries.
- Check the dip switches on the LV-HUB.

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