## How to reset the BMS (Battery Management System) of the iTECH120X Lithium Battery.

If the low voltage protection of the iTECH120X lithium battery has been triggered, the output voltage on the terminals will be showing either a few volts or even 0 volts and not allow anything connected to be powered. Some smart chargers will not be able to start charging the battery if BMS has tripped as they require some voltage to be present in the battery. You can use jump starter cables to rest the iTECH120X, along with other iTECHWORLD products such as the iTECH2000A jump starter, 30Amp battery charger and the lithium bypass cable.



*Figure 1 iTECH120X with the BMS in safe mode and not allowing any current flow*

**Jumper cable reset method.**

1. Connect the red coloured jumper lead to the (+) positive terminal of the battery that has gone into safe mode and the other end of the red jumper lead to the (+) positive terminal of another 12V battery (this can be an AGM, Gel or lead acid as it is only a temporary connection)



*Figure 2 Resetting iTECH120X BMS with jumper cables*

2. Connect the black jumper lead to the (-) negative terminal of the charged battery and the other end of the black jumper lead to the (-) negative terminal of the flat battery, take care as some sparking may occur. Leave the batteries connected for maximum of 60 seconds. **Then disconnect the negative clamps from both batteries, followed by the positive clamps, do not allow the positive and negative clamps to touch and cause a short circuit.** Once the battery has reached approximately 10.8 volts, the BMS will reset and allow current to flow and be detected by your charger.



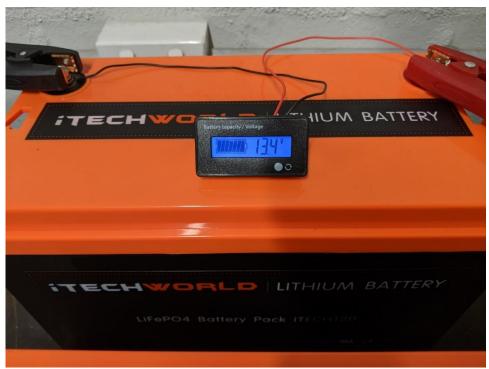*Figure 3 iTECH120X battery connected in parallel with jumper cables*

*Figure 4 iTECH120X BMS successfully reset and allowing current to flow*

**iTECH2000A Jumpstarter.**

The iTECH120X can also be reset using our iTECH2000A jump starter by following these steps below. You can purchase our iTECH2000A jump starter [here](#).

1. Connect the jump starter clamps into the iTECH2000A jump starter, then locate the jump start button on the clamps and press and hold the button until the countdown timer is initiated.



*Figure 5 Jump start button on iTECH2000A*



*Figure 6 Countdown initiated on the iTECH2000A*

2. Within the 60 second countdown, connect the positive clamp to the positive terminal of the iTECH120X then followed by the negative clamp to the negative terminal, take care as some sparking may occur. Leave the jump starter connected until the countdown timer ends. Repeat these steps if the battery was not successfully reset.



*Figure 7 iTECH120X BMS successfully reset and allowing current to flow*

iTECHWORLD Battery charger.
The iTECH120X can also be reset with our 30Amp battery charger by following the steps below.
You can purchase out 30Amp battery charger here.

1. Connect the charger positive battery clamp to the iTECH120X positive terminal and the negative battery clamp to the negative terminal, then turn on the battery charger.
The battery charger may not start charging when turned on, this would be indicated on the charger by only a Green led illuminating and the ammeter on 0 proceed to step 2 if this is the case.



*Figure 8 Battery charger connected but not charging*

2. With the charger still powered on, remove the negative battery clamp from the iTECH120X battery momentarily then reconnect it take care as some sparking may occur. The charger will now turn on and start charging.



*Figure 9 Temporarily removing the negative charger clamp*



*Figure 10 Reconnected charger clamp and charger is now outputting power*

With the bypass switch, this allows the reset mechanism to be permanently wired to your iTECH120X and allows for remote BMS resetting, both batteries must be on the same negative ground:

You can purchase the lithium battery bypass switch [here](#).

1. Install the bypass switch connecting only the positive terminals of the iTECH120X battery and your main starting battery, or any other battery.
2. Both batteries must share the same negative ground. Once the cable is installed you can simply press and hold the button for a few seconds to reset the BMS.