

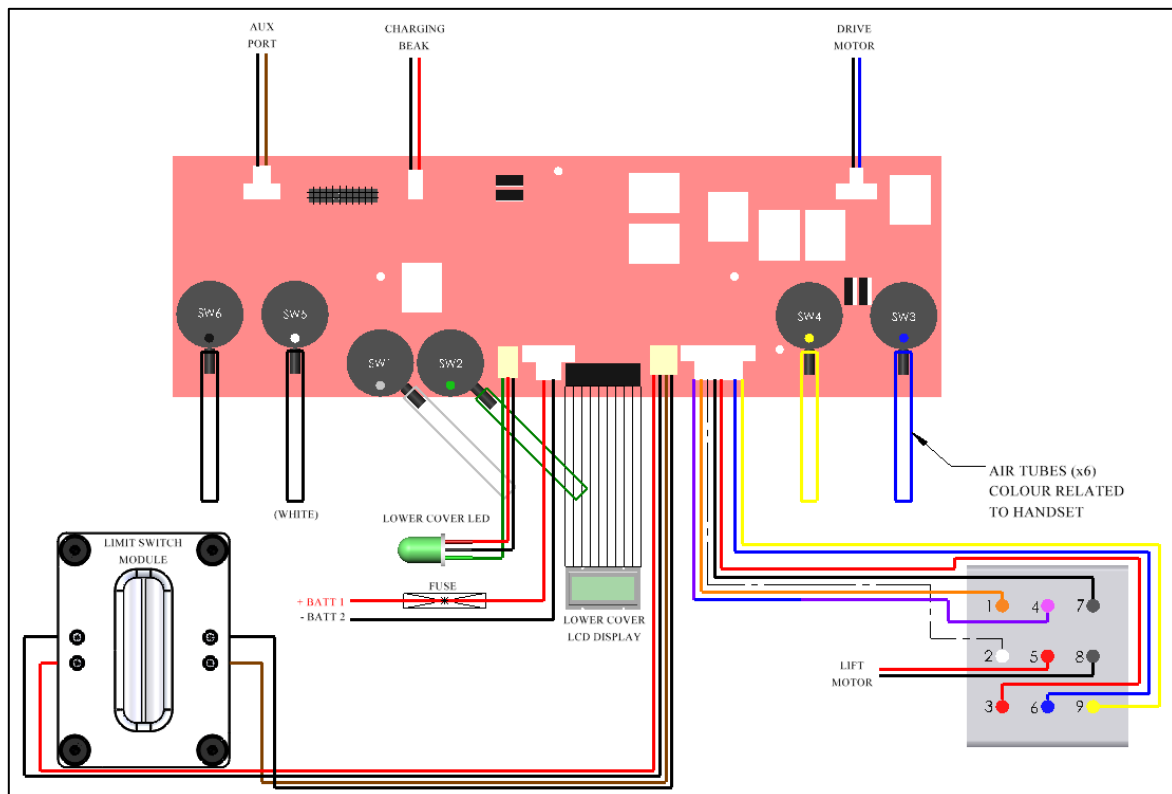
PCB and Battery Testing Guide

(Ceiling Lift is not charging)

Covering All TX Advanced Models

This document will guide you on how to determine a fault with the PCB or any direct components when the ceiling lift is not charging. Follow the steps below to determine if the PCB and direct components are functioning correctly. To do this, the ceiling lift covers must be removed, for details on how to remove the covers, refer to the service manual for the correct removal procedure.

The diagram below shows each connection port found on the PCB and what component plugs into each port. Ensure that each port is plugged in (where applicable).



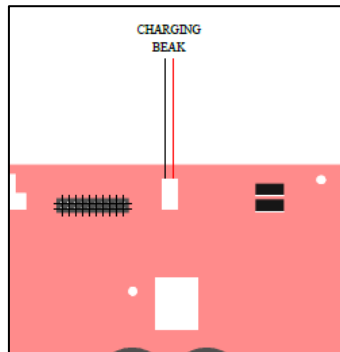
Each of the below troubleshooting guides requires a multi-meter to test power inputs and outputs from the board. Prepare the multi-meter by setting it to read DC volts, the red lead (positive) should be plugged into the voltage port, and the black lead (negative) should be plugged into the COM port. The display screen should show a reading of 0.0 volts.



Is the PCB receiving charge from the charging beak?

Step 1

Determine the location of the charging beak port, this is located at the top left-hand side of the board.

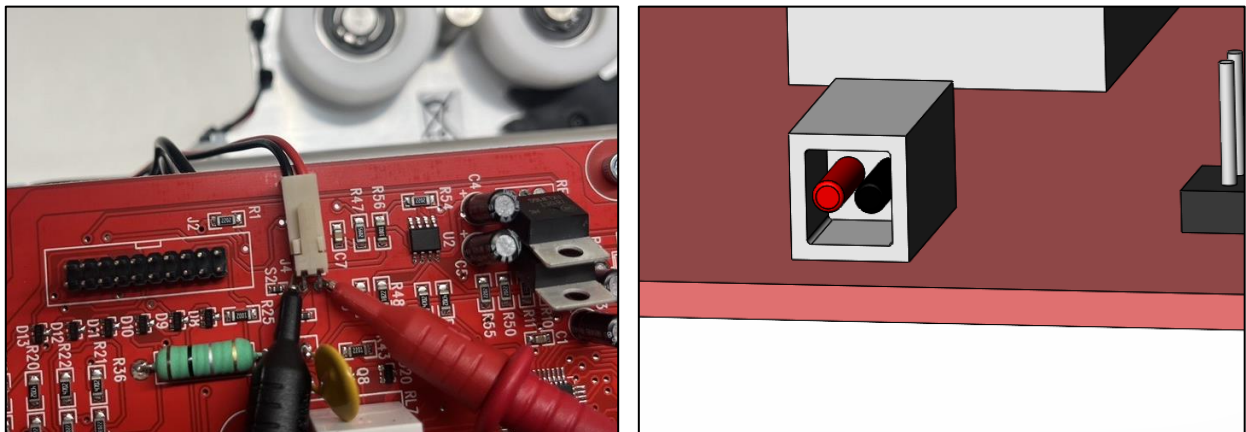


Step 2

Ensure that the batteries are charged, if unsure of battery status, allow the batteries to charge for at least 20 minutes for sufficient power prior to testing.

Step 3

To determine if the voltage is running through the port. Touch the black (negative) lead onto the black lead connection point, and the red (positive) lead onto the red lead connection point. This should display between **26 and 27.5v**.



If the PCB is not receiving at least **26v**, the charging beak or charging dock is broken. See charging dock troubleshooting guide to determine any faults with the dock. If none arise, then replace the charging beak.

If the port is receiving the correct voltage, see next step.

Test Complete

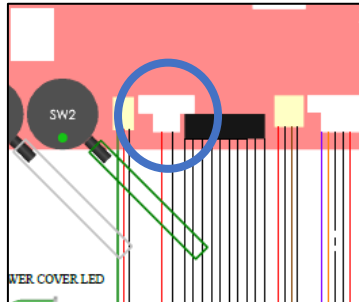
Are Batteries receiving charge from the PCB?

Step 1

You must first complete all actions for "is the PCB receiving charge?" before beginning this section.

Step 2

Determine the location of the main power connector, this is located at the bottom centre of the board.



Step 3

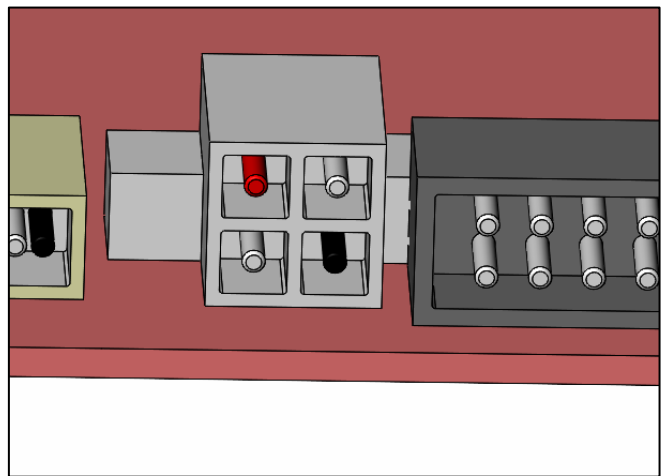
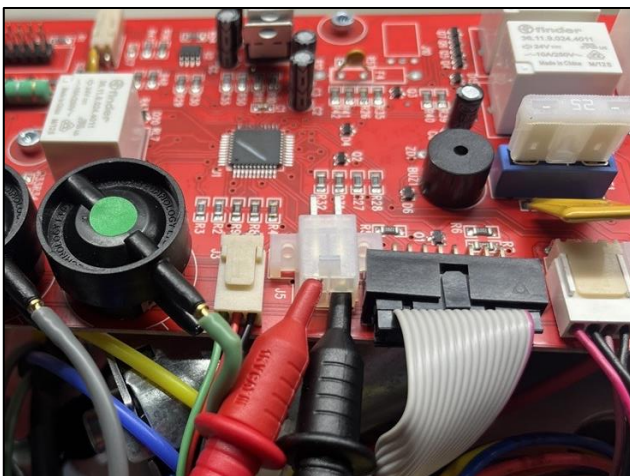
Ensure that the batteries are charged, if unsure of battery status, allow the batteries to charge for at least 20 minutes for sufficient power prior to testing.

Step 4

Disconnect the main power lead (battery lead) from the PCB.

Step 5

To determine if the voltage is running through the port. Touch the black (negative) lead into the bottom right terminal, and the red (positive) lead into the top left terminal (See image for reference). This should display between **26 and 27.5v**.



If the Port is not receiving at least **26v**, then the power is being lost in between the charging port and the main power port, this means that the PCB is broken and needs replacement.

If the port is receiving the correct voltage, see next step.

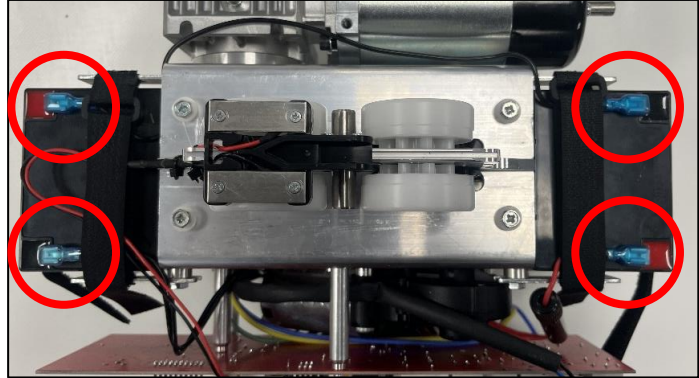
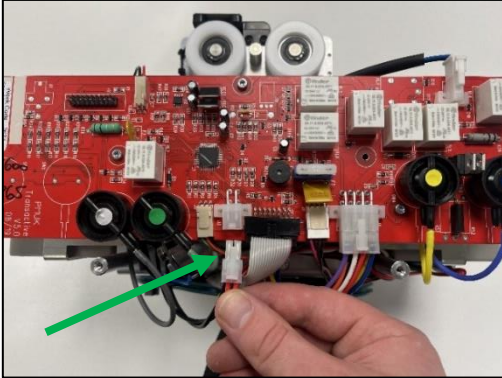
Test Complete

Are the batteries holding charge?

To determine if the batteries are holding charge, the above steps must be completed first, then the batteries can be tested with a battery tester as shown below.

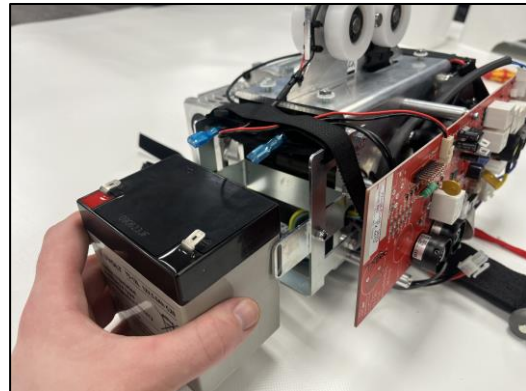
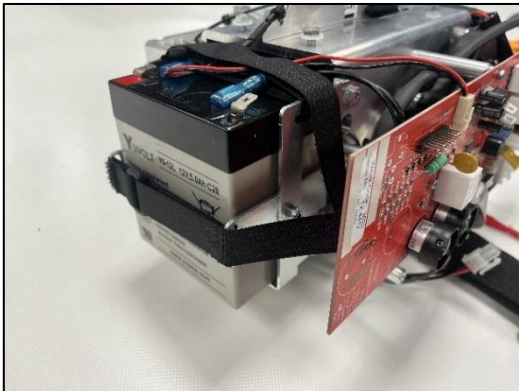
Step 1

Disconnect the batteries from the ceiling lift by disconnecting the battery connection leads, the first lead to disconnect is the power lead from the board.



Step 2

If you require better access to the batteries, remove both batteries from the ceiling lift by releasing the hook and loop straps from either side.



Step 3

An ACT battery tester is required, place the unit by the batteries ready for testing.



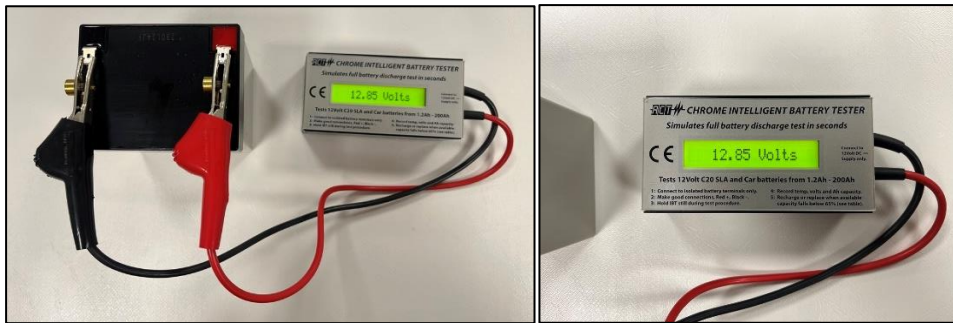
Step 4

Attach the red (positive) lead to the positive terminal on the battery, then attach the black (negative) lead to the negative terminal on the **same** battery.



Step 5

The battery tester will display the recorded voltage measured across the two terminals. This must be between **12-13.5 volts**. If the voltage has dropped below 12v, the battery may require charging. If the batteries have been charged, then the battery is damaged and cannot hold charge. Battery replacement is required.



Step 6

The battery tester will also display the recorded ampere hour (Ah) measured across the two terminals; this must not drop below **3.0 Ah**. If the ampere hour has dropped below 3.0Ah, then the battery is damaged and must be replaced.



Step 7

Repeat **step 4, 5 and 6** for the other battery. The same procedure applies.

Test complete.

Disconnect the battery tester from the batteries and refit the batteries to the ceiling lift (or fit new batteries). Follow the service manual for correct assembly instructions if required.