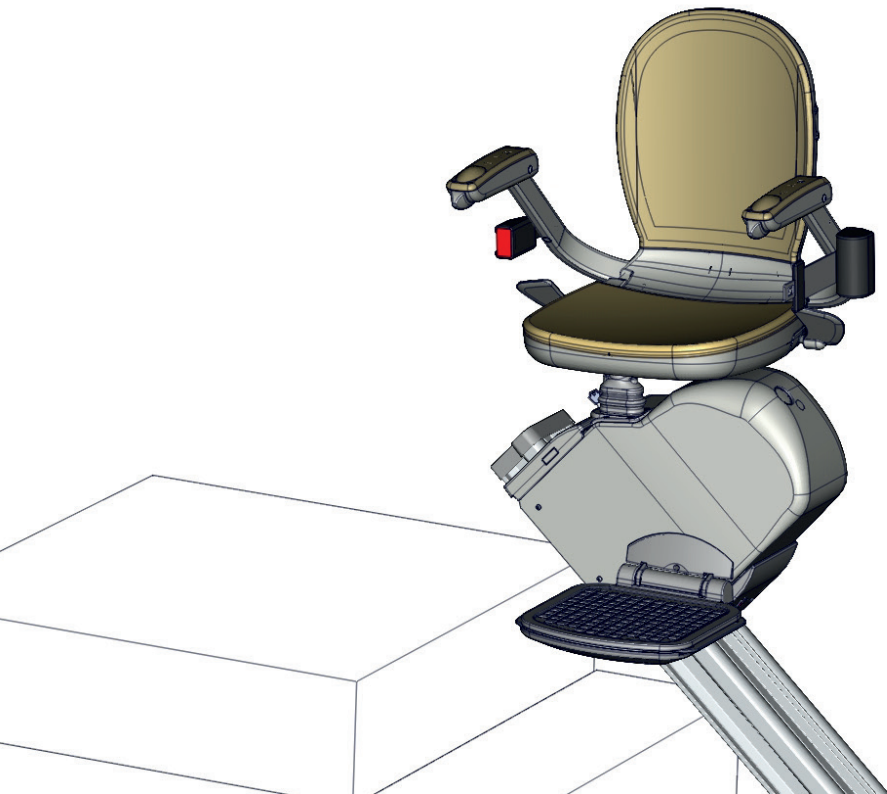


130 PCB CONTROLLER

T700

Operational Instructions



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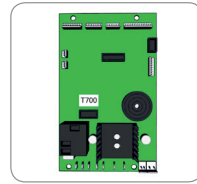
T700 - CONTROLLER INFORMATION

PCB CONVERSION

The T700 PCB is compatible with any previous 120/130 stairlift (post 2005).

Before converting your current PCB to a T700 Controller, ensure you have the following items:

- T700 PCB
- T700 1.5A 28DCv Power Supply
- T700 Digital Display PCB
- T700 Digital Display Lead
- T700 User Manual
- T700 12v Battery Monitoring Lead



POWER SUPPLY (PSU)

The T700 1.5A 28vDC power supply features Universal Input, which allows you to connect an AC power lead from any country.

This unified power supply will replace the 1.5A 15 ACV transformer used in the past (USA 2.5A 15 ACV).

Note: The T700 PCB CANNOT be used with the previous 15 ACV transformer.

CHARGING SYSTEM

The T700 uses 2x 12V / 7Ah Lead-Acid batteries.

Once the stairlift is parked on a charge point, the T700 charging system will re-charge the batteries, until reaching its maximum capacity.

T700 - CONTROLLER INFORMATION

LOW BATTERY PROCEDURE F5 - E7

In the event of the stairlift entering a low battery level during travel, you will experience the following:

- The lift will stop and display F5 (battery flat) with an audible warning, reverting to E7 after the arm toggle or remote is activated.
 - The stairlift will ONLY drive in the downwards direction displaying E7, until the bottom parking position is reached.
 - The display code E7 will remain and will automatically clear once the batteries have recharged to a safe level.
-

HIBERNATION MODE

The Stairlift will enter hibernation mode after 60 seconds, if the unit is positioned away from a charge point or in the event of a power cut. The display will turn off, which will reduce energy consumption.

In hibernation mode, the Stairlift will beep twice every approximately 40 seconds, only by pressing a directional switch from the arm or remote control will return the lift to normal operation.

REMOTE CONTROL OPERATION

The T700 operates using Infrared (IR). This is selected using the "Setting Mode" menu.



- **Infrared**

This technology requires line of sight with the stairlift to operate correctly. There are 4 operating channels available.

Note: RF technology is available when experiencing IR interferences

T700 - CONTROLLER INFORMATION

VOLUME CONTROL

The T700 features 3 volume settings.

FAULT CODES

The T700 PCB comes with Unified fault code system for easier diagnosis.

POWERED SWIVEL OPTION

The T700 has the powered swivel operating circuit integrated. No extra PCBs are required in the carriage when using this option.

Powered Swivel Operation:

- **Upwards movement using the directional switch on the arm**

When the lift reaches the top stopping position. The lift will stop, and after a short delay the seat will automatically swivel. (This short delay is for safety reasons)

- **Downwards movement using the directional switch on the arm**

When a call is made, the seat will swivel back to the travel position. After a short delay, the lift will automatically start its travel. (This short delay is for safety reasons)

- **Upwards movement using the remote control**

The lift will reach the top stopping position and stop. Release and press the remote again to start the swivel operation.

- **Downwards movement using the remote control**

When a call is made, the seat will swivel back to the travel position and stop. Release and press the remote again to start the lift operation.

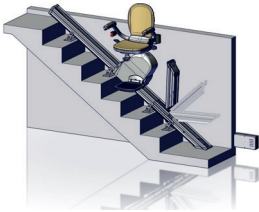
T700 - CONTROLLER INFORMATION

POWERED FOOTREST OPTION

The T700 has the powered footrest operating circuit integrated. No extra PCBs are required in the carriage when using this option.

Powered Footrest Operation:

At the top or bottom of the stairs, after the stairlift comes to a stop, use the buttons located along both sides of the seat to lower or raise the footrest as required.



AUTO HINGE OPTION

When the Auto Hinge setting has been selected in the T700 system, it will require the addition of a limit ramp to activate the operation of the hinge .

The T700 Hinge Controller features:

- RF Technology, no umbilical cable require
- Arm rest toggle and remote control operation
- No call stations required
- Battery backup power supply, allowing operation of the hinge in the event of a power cut
- Coded communication protocol, reducing interference
- Manual hinge activation (for engineer or emergency use only)
- External LED power ON display
- Universal Input, which enables you to connect AC power leads from different countries.

T700 - CONTROLLER INFORMATION

Hinge Operation

- **Using the directional switch on the arm**

When the lift reaches the hinge activation ramp, the stairlift will stop and the auto hinge will be automatically raised or lowered. This will allow the user to operate the hinge safely.

- **Upward movement using the remote control**

When the lift reaches the activation ramp, the stairlift will park and the auto hinge will be automatically raised. Release and press the remote again if a journey to the top is required.

- **Downward movement using the remote control**

When the lift reaches the activation ramp, the stairlift will park. Release and press the remote again if a journey to the bottom is required.

MANUAL HINGE OPTION

- AUTO PARKING FUNCTION

When a manual hinge is used with the T700 system, it will require the addition of a limit ramp to assist parking the lift.

Operation:

- **Using the remote control**

When the lift reaches the activation ramp, the stairlift will park. Release and press the remote control again if a journey to the top or the bottom is required.

- **Using the directional switch on the arm**

The lift will drive through the hinge ramp without stopping.

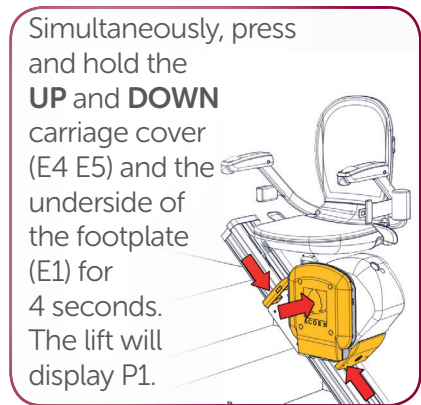
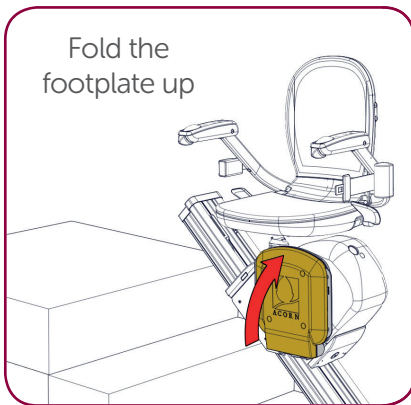
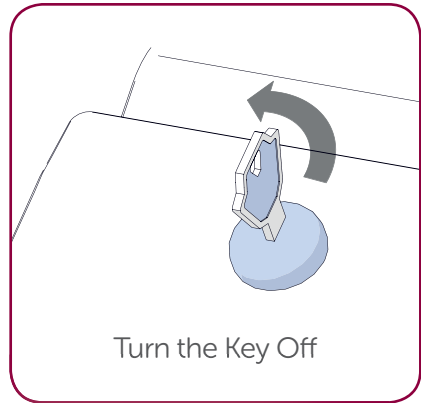
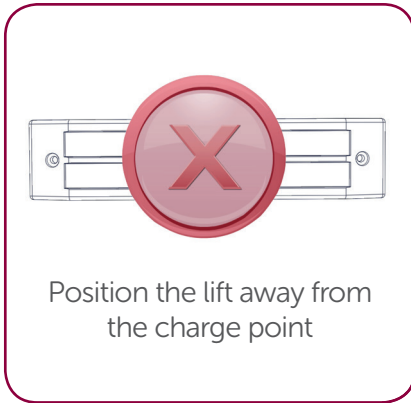
SETTING MODE

ACCESSING SETTING MODE

Accessing to "Setting Mode" is required to:

1. Select RH or LH installation
2. Select IR or RF remote operation
3. Select Auto Hinge or complete setting process

To access "Setting Mode":



SETTING MODE

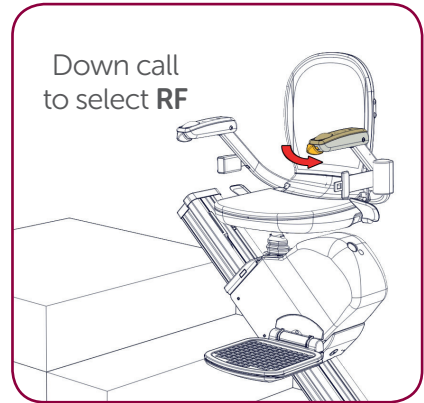
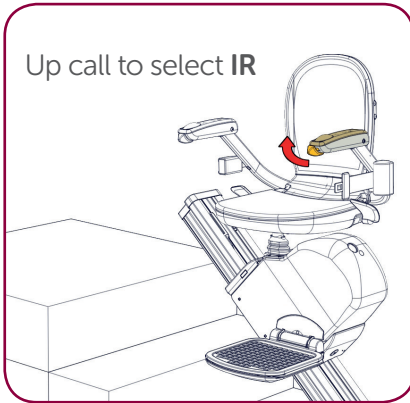
STEP 1 - SETTING THE HAND OF THE POWERED SWIVEL



The lift will display **RH** or **LH**, continue to step 2

STEP 2 - SETTING THE REMOTE CONTROL TYPE

With **RH** or **LH** showing on the display, use the arm toggle to select the remote control type.

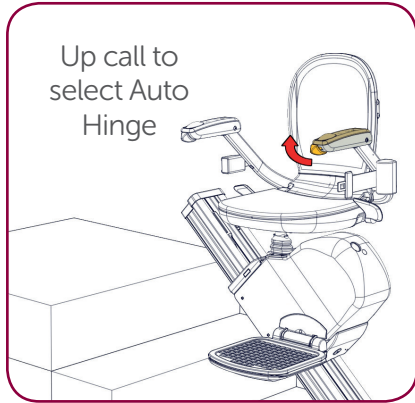


The lift will display **IR** or **RF**, continue to step 3

SETTING MODE

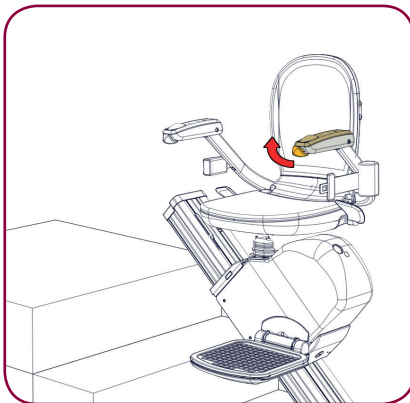
STEP 3 - SETTING THE AUTO HINGE / MANUAL HINGE

With **IR** or **RF** showing on the display, use the arm toggle to select if the lift has or not an Auto Hinge section.



The lift will display **AH** or **E9**, continue to step 4 if **AH** has been selected

STEP 4 - SAVING THE SETTINGS



Press **UP** to save the settings. The lift will beep twice to confirm acceptance.

SETTING THE AUTO HINGE

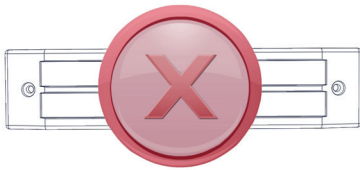
WIRING THE HINGE CONTROL BOX

See wiring diagram in page 22 for reference.

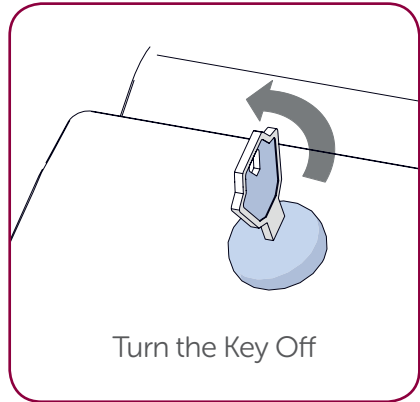
Remove plastic protection cap from the red battery terminal inside the hinge control box and connect the **Red** wire to the battery.

Connect the hinge control box to the main supply socket in the wall.

PAIRING THE HINGE CONTROL BOX TO THE T700 PCB



Position the lift away from the charge point

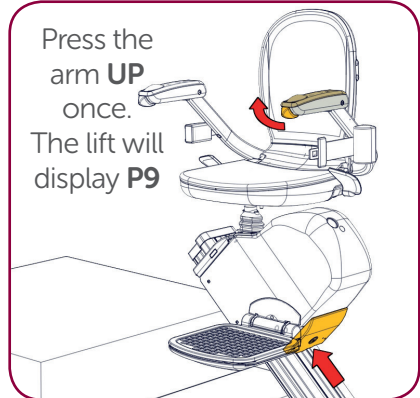


Turn the Key Off

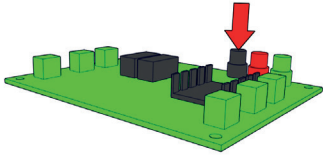
Press and hold the **DOWN** cover safety (E4)



Press the arm **UP** once. The lift will display **P9**



SETTING THE AUTO HINGE

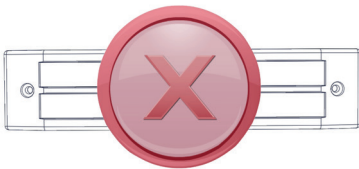


Press the Black Button and hold until **LED 3** flash rapidly

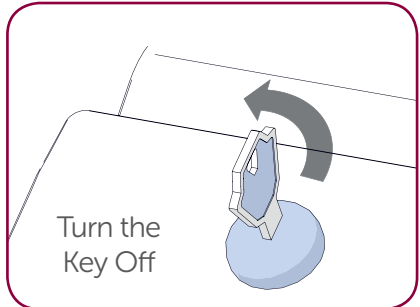
The lift will clear **P9** automatically

CHANGES / ALTERATIONS

CHANGING THE VOLUME ON BEEPER

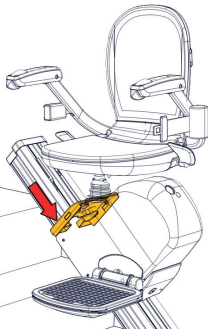


Position the lift away from the charge point

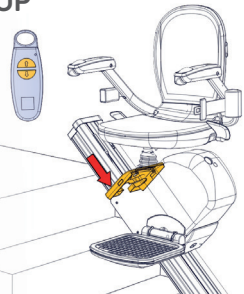


Turn the Key Off

Press and hold the up cover safety edge (**E5**)

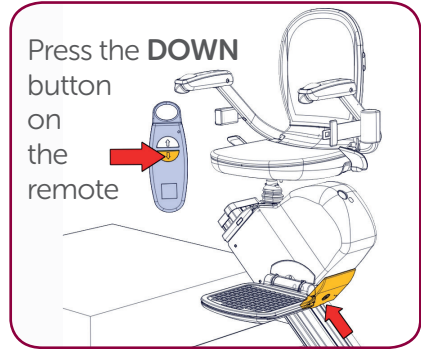
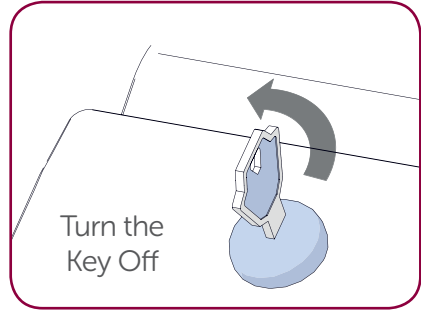
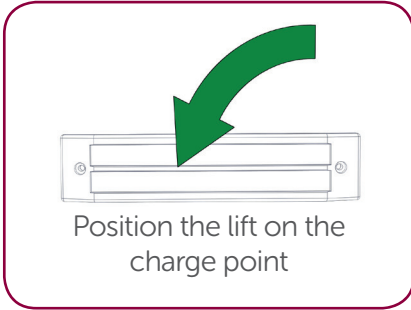


Press the **UP** or **DOWN** on the remote to control the beeper volume

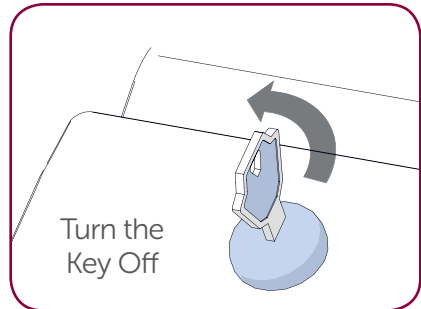
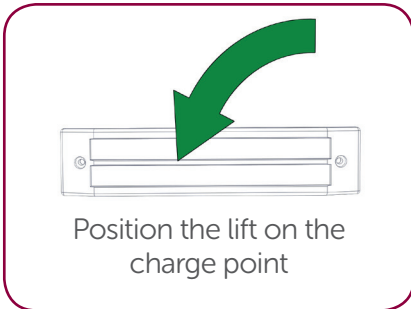


CHANGES / ALTERATIONS

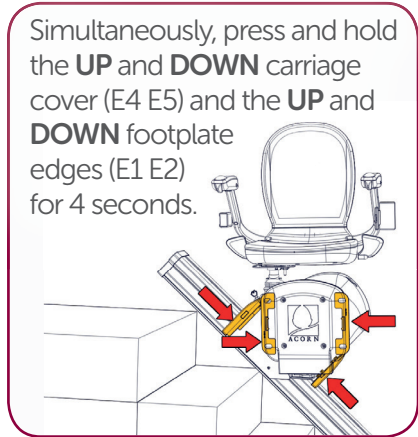
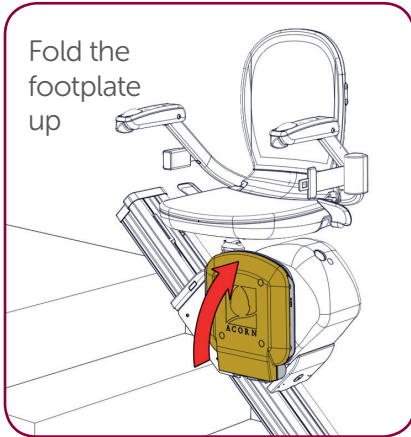
ACCEPTING ANOTHER REMOTE



CLEARING REMOTES AND THE HINGE ADDRESS



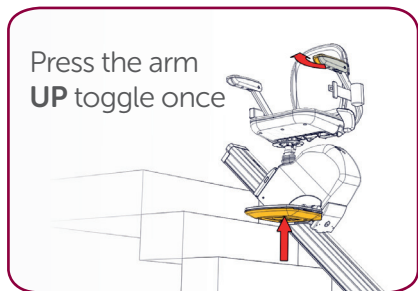
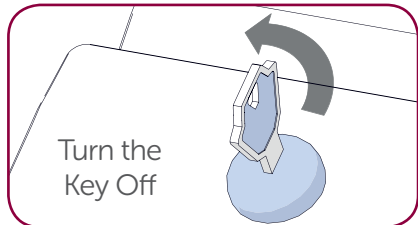
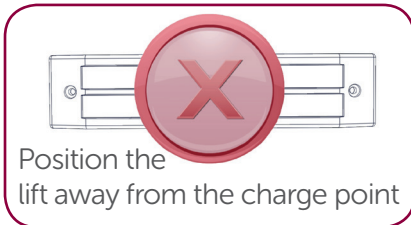
CHANGES / ALTERATIONS



READING THE BATTERY VOLTAGE, SOFTWARE VERSION AND SERIAL NUMBER OF THE T700 PCB

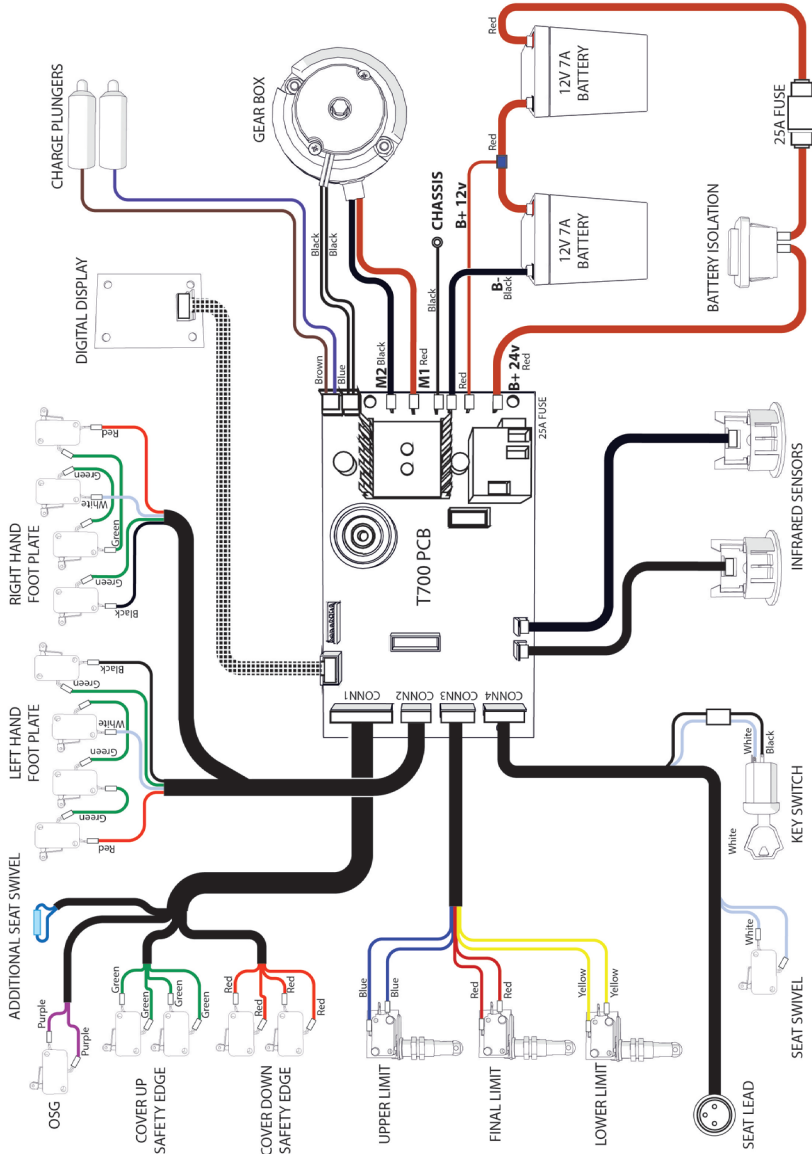
The display will relay diagnostics in the following order:

1. Higher battery voltage
2. Lower battery voltage
3. U1 software version
4. U2 software version
5. U8 software version
6. PCB serial number



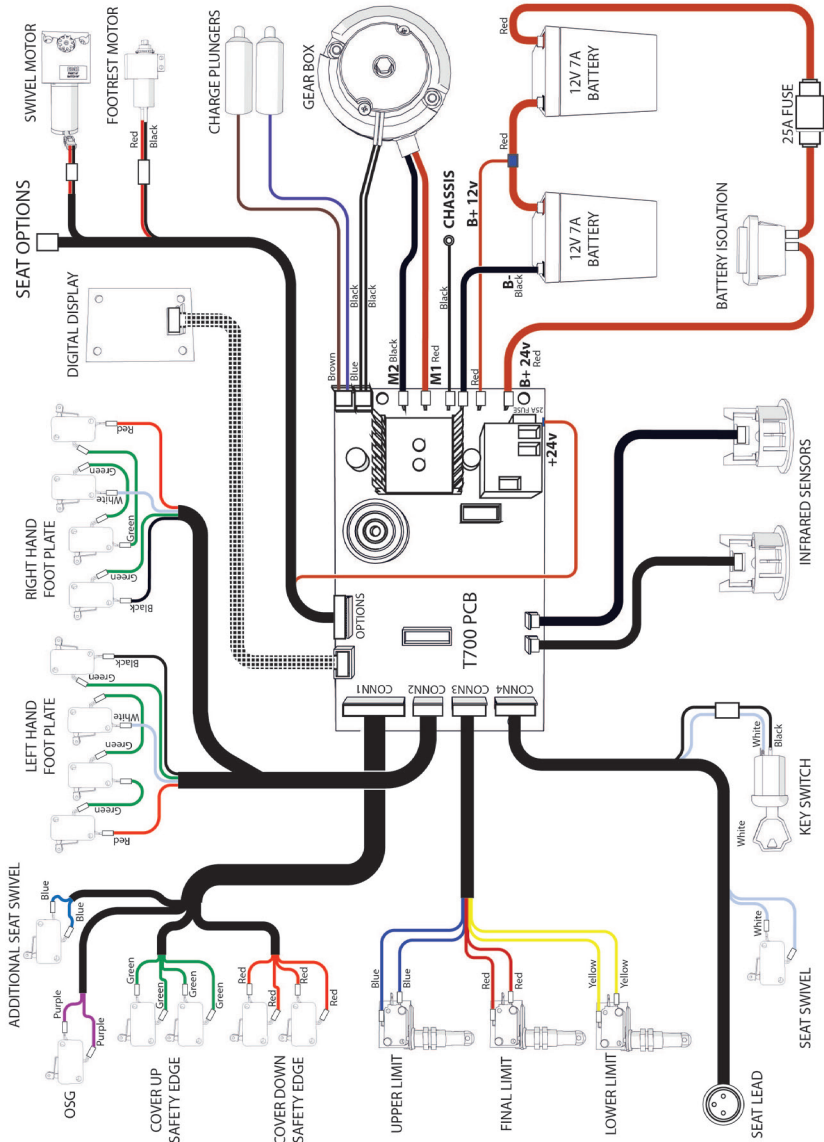
T700 PCB WIRING DIAGRAMS

T700 PCB STANDARD WIRING DIAGRAM



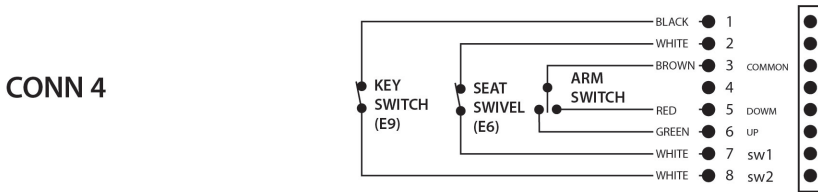
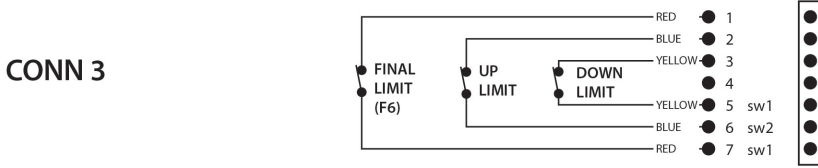
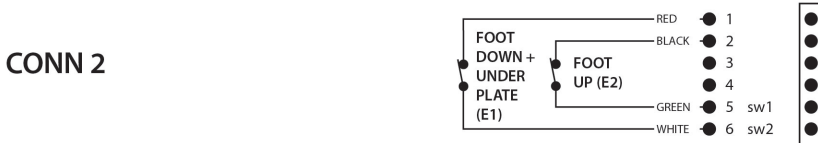
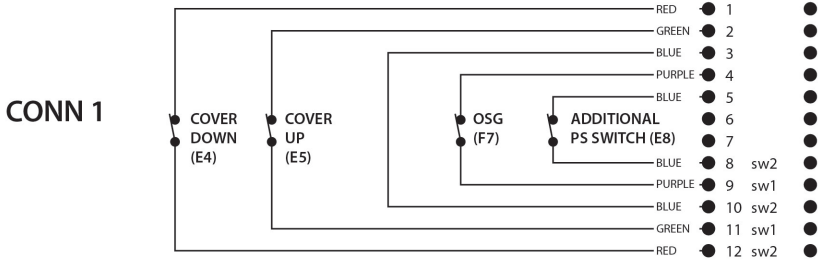
T700 PCB WIRING DIAGRAMS

T700 PCB POWERED OPTIONS WIRING DIAGRAM



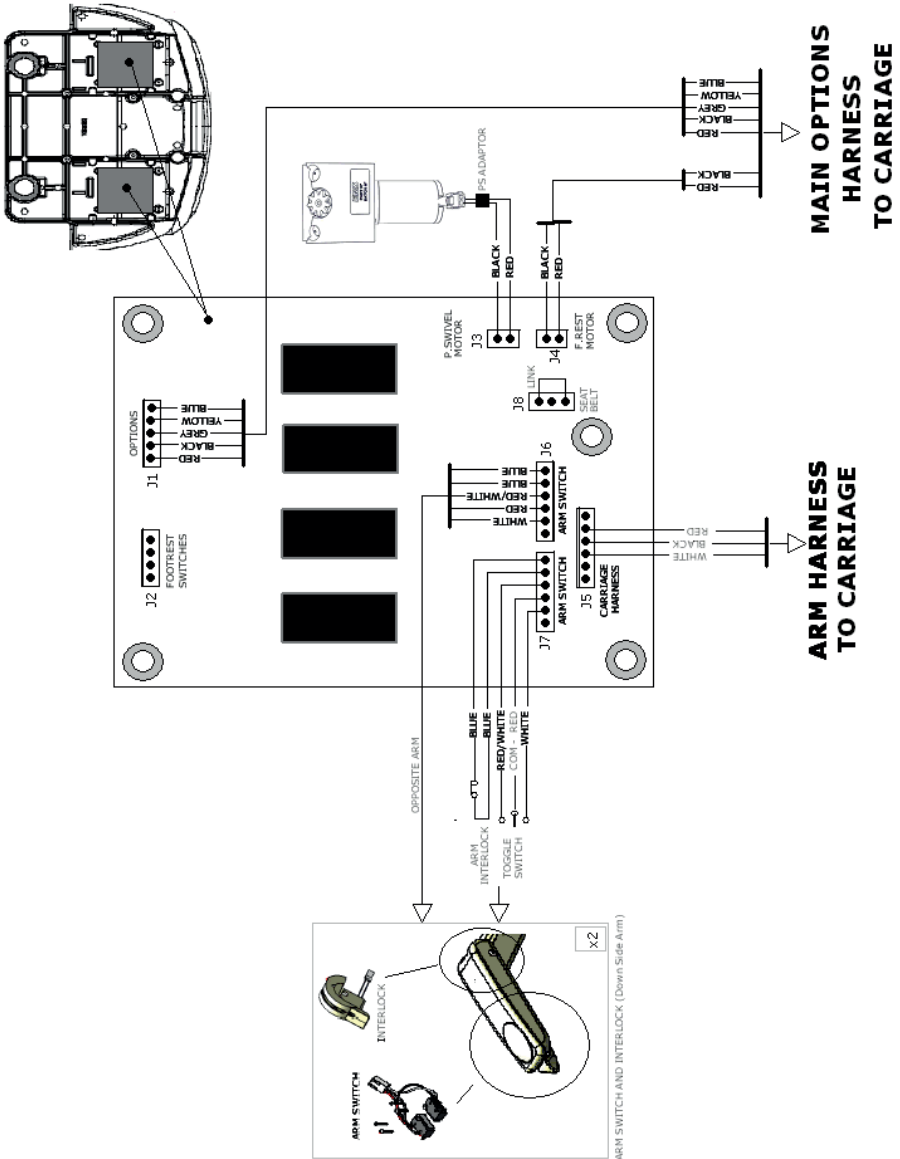
T700 PCB WIRING DIAGRAMS

T700 PCB CONNECTORS WIRING DIAGRAM



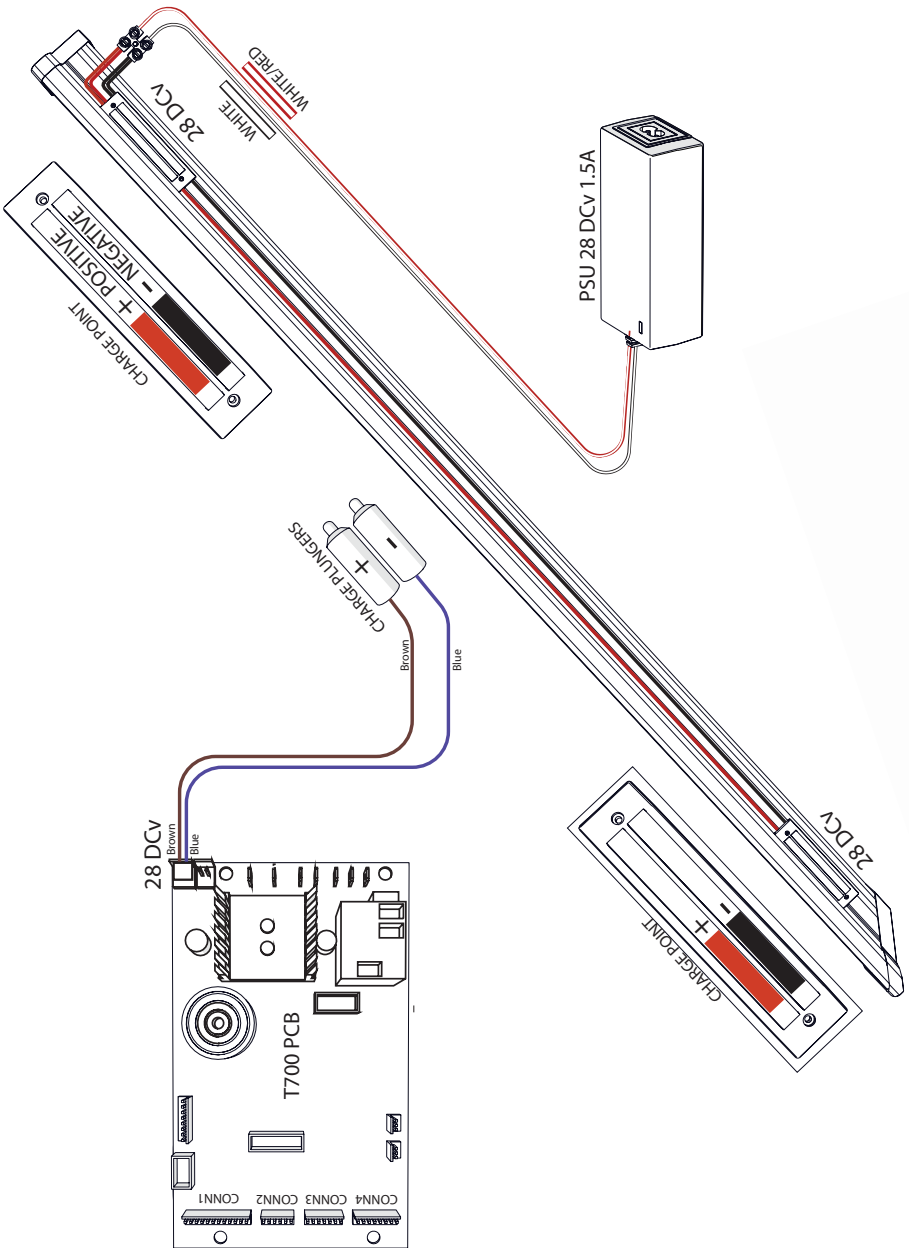
T700 PCB WIRING DIAGRAMS

T700 SEAT POWERED SWIVEL WIRING DIAGRAM



T700 PCB WIRING DIAGRAMS

T700 PCB RAIL WIRING DIAGRAM



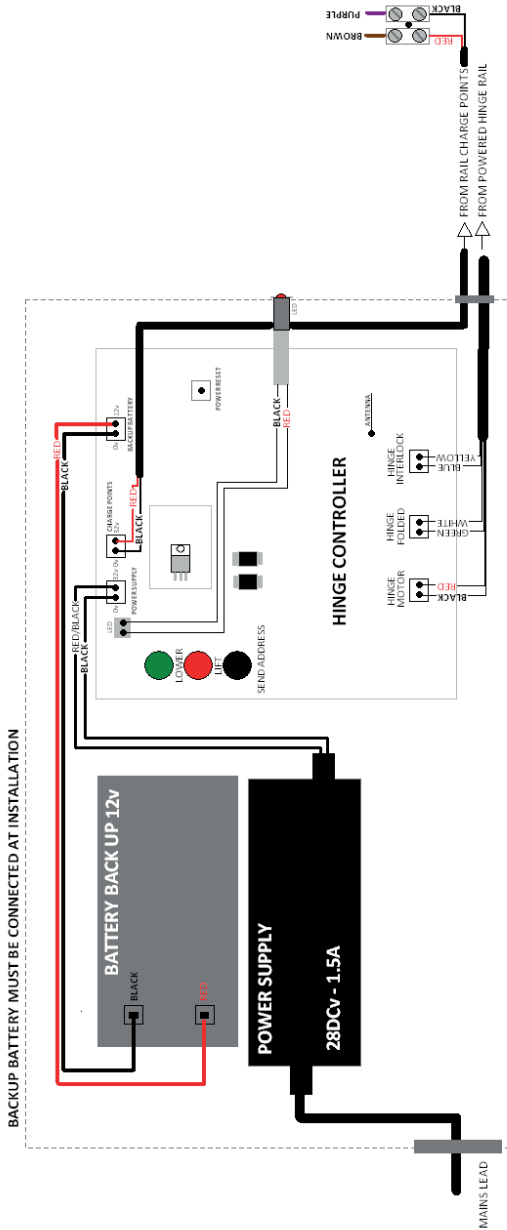
T700 PCB WIRING DIAGRAMS

T700 HINGE RAIL TO HINGE CONTROL BOX DIAGRAM



T700 PCB WIRING DIAGRAMS

T700 HINGE CONTROL BOX WIRING DIAGRAM



NORMAL OPERATION

Feature	T700 A130
Lift ready to use (beeping as no charger present)	A1
Lift moving up (arm)	A2
Lift moving down (arm)	A3
Lift moving up (remote)	A4
Lift moving down (remote)	A5
Lift waiting for auto hinge to operate	A9

AT CHARGING POINTS

Feature	T700 A130
Low battery voltage level- trickle charge active	C1
Low battery voltage level - half charge active	C2
Medium Battery voltage level - full charge active	C3
Medium battery voltage level - half charge active	C4
High battery voltage level - Sustained charge active	C5
Battery full - No charge active	C6
Power Supply voltage too low	C7
<i>Check charge point internal wiring and power supply.</i>	
Power Supply voltage too high	C8
<i>Check charge point internal wiring and power supply.</i>	
Battery fault	C9
<i>Check batteries connection and reset PCB. If persistent, replace the batteries.</i>	

FAULT CODES

ERROR REPORTS

Feature	T700 A130
Safety edge activated (footrest down/under plate)	E1
<i>Check for obstructions or footrest wire connections.</i>	
Safety edge activated (footrest up)	E2
<i>Check for obstructions or footrest wire connections.</i>	
Safety edge activated (cover down)	E4
<i>Check for obstructions or wire connections.</i>	
Safety edge activated (cover up)	E5
<i>Check for obstructions or wire connections.</i>	
Seat not in place (swivelled)	E6
<i>Place the seat back in the travelling position. Check switch positioning or wire connection.</i>	
Battery low, upward movement inhibited	E7
<i>Drive the lift down the rail to the closest charge point and leave to recharge. E7 will clear automatically once the lift has reached a safe battery charge to drive.</i>	
Aux switch operated while seat is not swivelled (powered swivel units only)	E8
<i>The additional seat swivel switch circuit has opened, when the lift was in the travel position. Check the operation of the additional switch. The circuit should remain close during travel.</i>	
Key switch off	E9
<i>Check the key is in and turned to on position.</i>	

FATAL ERRORS

Feature	T700 A130
Relay fault	F1
<i>Remove power supply and Isolate batteries from the PCB to reset the controller. If persistent, replace PCB. Tapping the relay could temporarily clear the fault.</i>	
Brake fault	F2
<i>Check battery voltage and brake connections.</i>	
Motor over current fault	F3
<i>The current demanded by the motor has exceeded the threshold set. Check the rail for obstructions or debris</i>	

FATAL ERRORS - CONTINUED

Battery flat during upward movement	F5
<i>Check battery voltage individually. Press directional switch to change F5 to E7, and drive down to the closest charge point to recharge the batteries. E7 will clear automatically once the batteries has reached a safe charge to drive.</i>	
Final limit switch overrun	F6
<i>If the lift has over travel its parking position at the top or bottom of the rail, check the Up or Down limit switch operation. Check for obstructions or debris.</i>	
OSG switch activated	F7
<i>Hand wind lift up to reset OSG (see hand winding instructions in the user manual).</i>	

HARDWARE ERRORS

Feature	T700 A130
Safety grounded to chassis (SW1 safety circuit)	H1
<i>One or more switches from the SW1 safety circuit is grounded to chassis. Check continuity between every switch in the SW1 safety circuit and chassis</i>	
Safety grounded to earth (sw2 safety circuit)	H2
<i>One or more switches from the SW2 safety circuit is grounded to chassis. Check continuity between every switch in the SW2 safety circuit and chassis</i>	
Auto Hinge communication fault	H3
<i>Reset the hinge control box using the reset button. Check power supply and battery back up in the hinge control box. Paired PCB and hinge control box again. If the problem persists, replace the hinge control box.</i>	
Secondary processor U2 not responding	H4
<i>Reset PCB. If the problem persists, replace the PCB.</i>	
Memory store not responding (EEPROM)	H5
<i>Reset PCB. If the problem persists, replace the PCB.</i>	
Auto Hinge end limits not found (timeout)	H6
<i>After 60 seconds operating, the folded switch or the interlock switch circuit remained open. Check every connections between the hinge and hinge control box and the operation of the micro switches.</i>	
Heat sink over temperature	H8
<i>Allow the lift to cool down. If the problem persists, replace the PCB.</i>	
Main Motor PWM fault	H9
<i>Reset PCB. If the problem persists, replace the PCB.</i>	

