



Handicare 1000 Installation Manual Smart Seat

Pre-installation check list

- 1 Check that all of the required components are available. You should have 7 boxes. These are colour coded so that identification of any handed components is simple. The table below shows the colour of the boxes that you require.

COMPONENT	Left hand	Right hand
Smart Seat base	PURPLE	GREEN
Smart Seat back	BLACK	
Power pack		
Fitting Kit		
Smart Seat Upholstery		
Bottom Track Section		
Top Track Section		

e.g. a **left** hand lift comprises 1 purple and 6 black boxes; a **right** hand lift comprises 1 green and 6 black boxes.

2 Installation tools required

- Loading toggle
- Loading bar
- Shorting links
- 300mm screwdriver extension
- 10mm spanner
- 10mm socket
- Narrow nosed pliers
- 13mm socket
- 17mm socket
- Side cutters
- 8mm spanner
- 13mm spanner
- 17mm spanner
- No. 2 Pozi-drive
- No. 3 Pozi-drive
- Small flat head screwdriver
- 2 pieces of 100mm x 50mm x 600mm wood (4" x 2" x 24")
- 2.5mm Allen key
- 3mm Allen key
- 4mm Allen key
- 5mm Allen key
- 6mm Allen key (ball ended)
- 8mm Allen key
- Spirit level
- Handlamp

Note: The installation engineer must check with Handicare for the latest installation manual issue number.

Issue No of this manual is 0410-1



Figure 1

Track assembly

Before beginning the installation please ensure that the track is the required length. Refer to Appendix 4 for details.

Items required:

- Fitting kit
 - Splice bars x 2
 - 8 x grub screws
- Top track section x 1
- Bottom track section x 1
- Connector blocks x 2
- Red single core cable

Tools required:

- Small flat head screwdriver
- 5mm Allen key

- 1 Position the bottom section of the track on the stairs with the splice holes at the top **(Figure 1)**. The flat face of the track is always positioned against the wall.
- 2 Bolt in the splice bars to the bottom section of track extrusion **(Figure 2)**.

Note: There are 2 holes in the top and bottom rebated sections of the extrusion to accept the splice bars **(Figure 2)**. Torque setting 8–9Nm.

Note: Ensure that the splice bars are positioned in the track in the correct orientation. The splice bar has three flat faces and one sloping face. The sloping face **MUST** be positioned against the sloping face on the extrusion **(Figure 3)**.

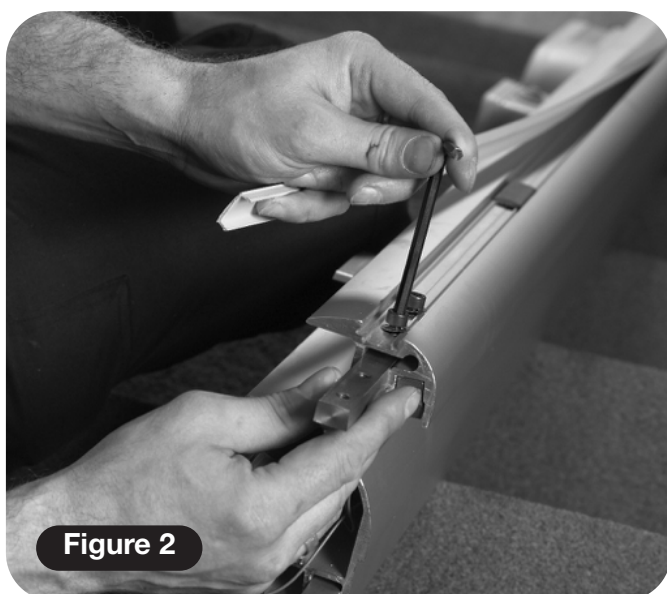


Figure 2

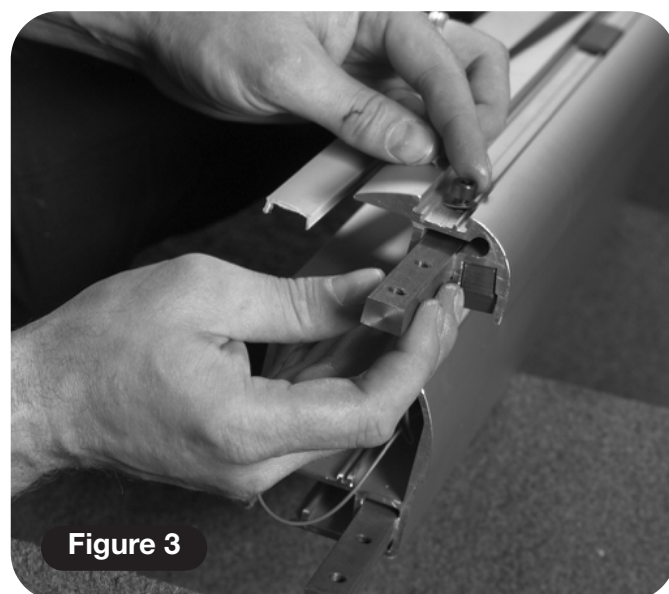


Figure 3

Track assembly

You should be able to locate the grub screws by hand. If this is not possible check the orientation of the splice bars.

- 3 Position the top section of track adjacent to the bottom section of track (**Figure 4**).

POWER HINGE TRACK ONLY

- Plug the connectors from the top and bottom sections of track together (**Figure 5**).

Note: See **Appendix 3** for hinge track settings.

MANUAL HINGE TRACK ONLY

- Please complete steps 6 and 7 before joining the two sections of track.
 - Insulate the bottom connector block with electrical tape and insert it into the track.
- 4 Offer up the adjacent track section.
 - 5 Bolt both sections of track together (**Figure 6**).
The bolts should be tightened in sequence:

i Inner top	iii Outer top
ii Inner bottom	iv Outer bottom

Repeat this sequence until the bolts are all secure (torque setting 8-9Nm).

Note: Ensure that the track is connected with all faces level so that no step is present in the joint (**Figure 7**).

- 6 Feed the twin core grey cable through the large hole in the assembled track (**Figure 8**).
NOT REQUIRED FOR POWER HINGE TRACK INSTALLATIONS.
- 7 Using the two way connecting blocks, wire up the charge contact flying leads to the plain grey cable from the twin core grey cable using the two way connector blocks supplied (**Figures 9 and 10**).
- 8 Repeat this at the bottom of the stairs.

Note: All mains wiring must comply with the standards in force at the time of installation. Do not fix the power supply to the stringer.

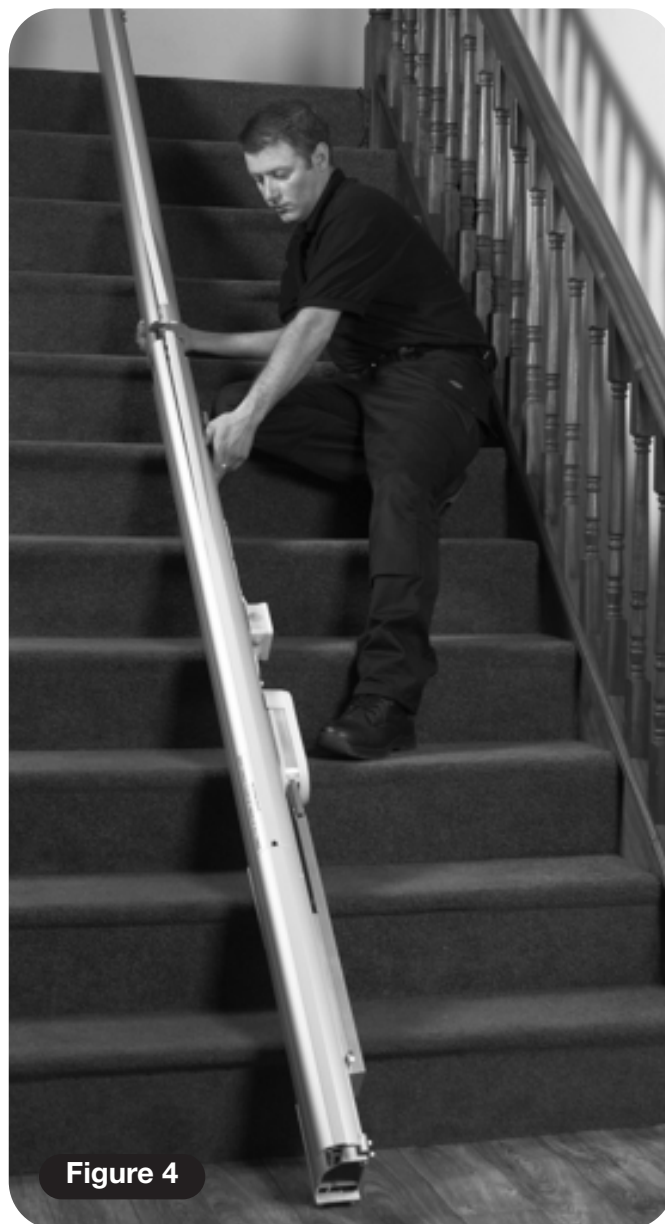


Figure 4

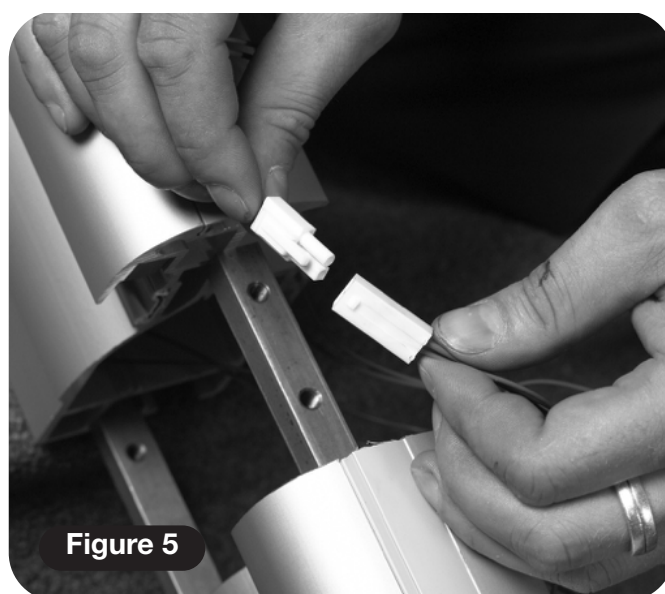


Figure 5

Track assembly

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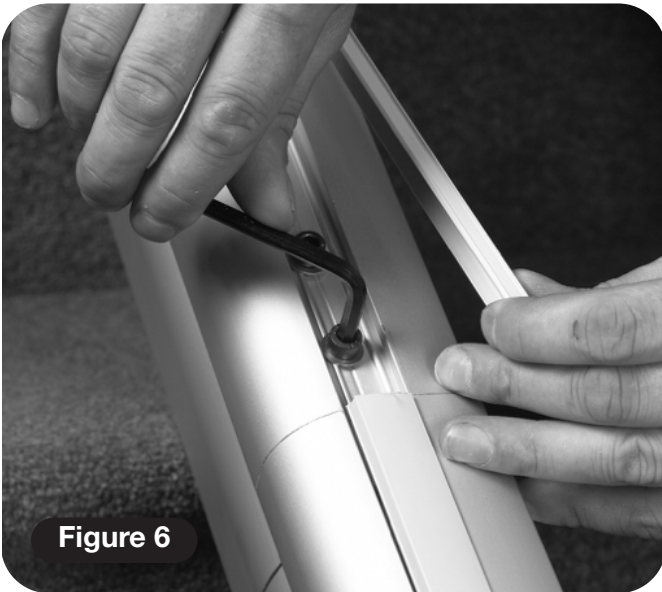


Figure 6

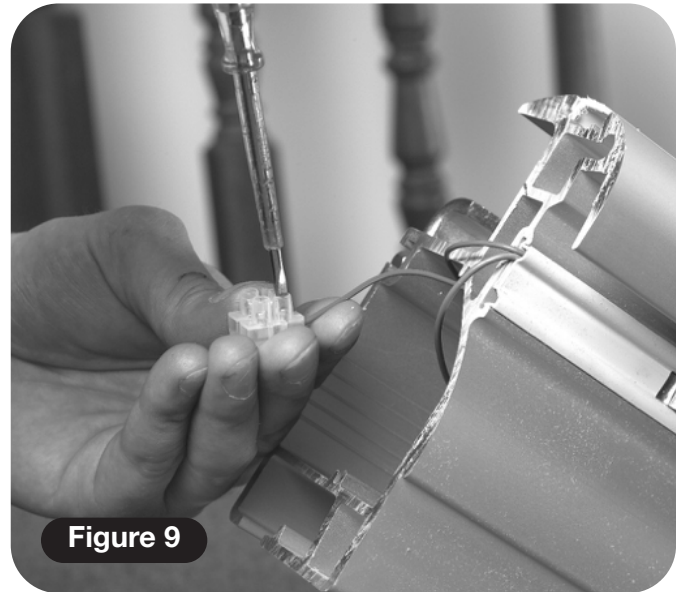


Figure 9

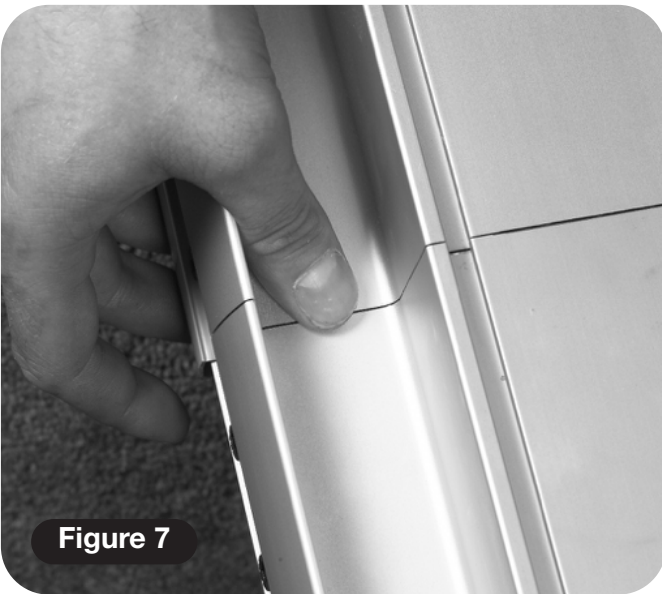


Figure 7

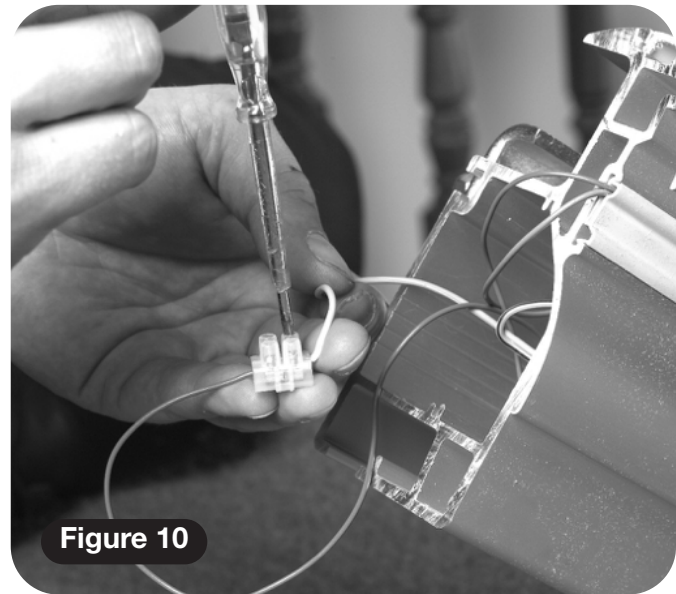


Figure 10

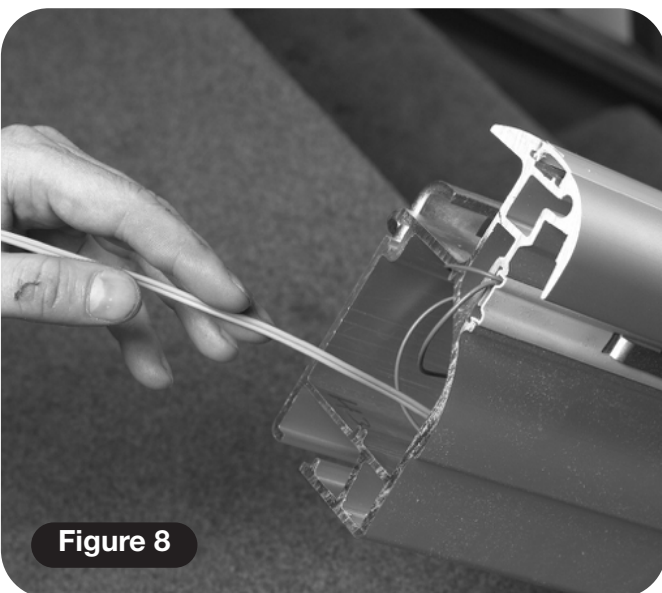


Figure 8

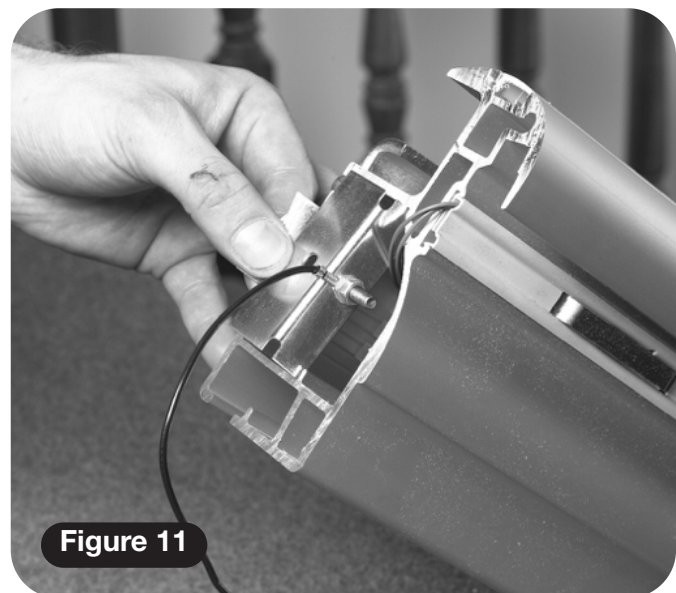


Figure 11

Track assembly

At the end of the track that the power supply will be connected:

- a** Insert the nut plate pressing with the negative connection **(Figure 11)**.
- b** Connect the negative flying lead (black) to the spare section of the two way connecting block **(Figures 12 and 12a)**.
- c** If the power supply connection is at the bottom of the stairs:
 - i** Connect the power supply to the two way connecting block **(Figure 13)**. Red to white and black to black.
- d** If the power supply connection is at the top of the stairs do not connect the power supply at this time.

If the power supply will be connected at the top of the stairs:

Insert the standard nut plate pressing at the bottom of the stairs without the negative connection **(Figure 14 shown at the top of the stairs for clarity)**.

- 9** Insulate the two way connecting block at the bottom of the stairs with electrical installation tape and carefully insert the block into the track **(Figure 15)**.
- 10** Fit the end cap at the bottom of the stairs, taking care that the end cap moulding retaining screw is not over tightened, and that it avoids the wiring **(Figure 16)**.

Note: For hinge track installations the power supply must be made at the top of the stairs.

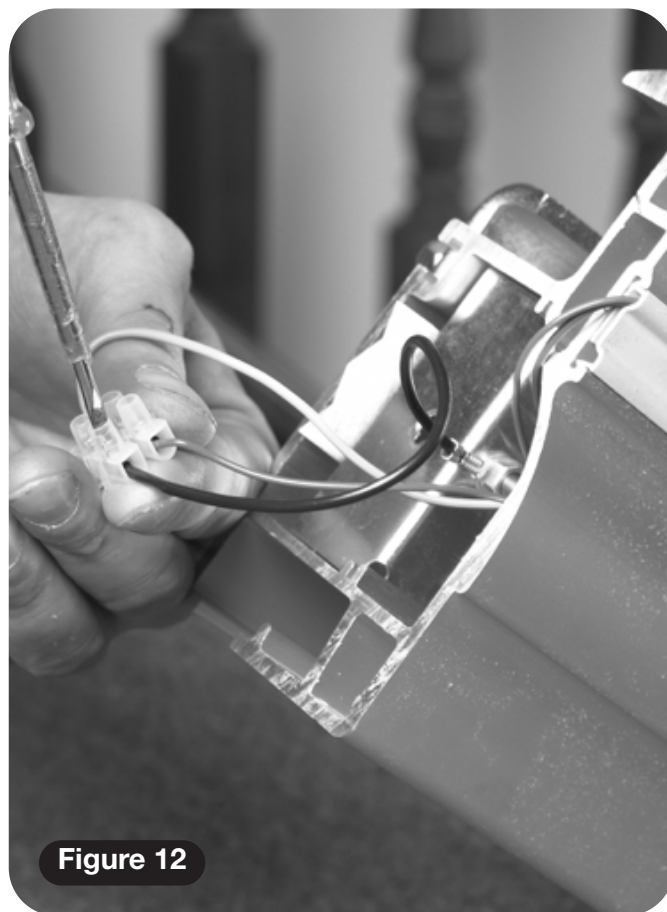


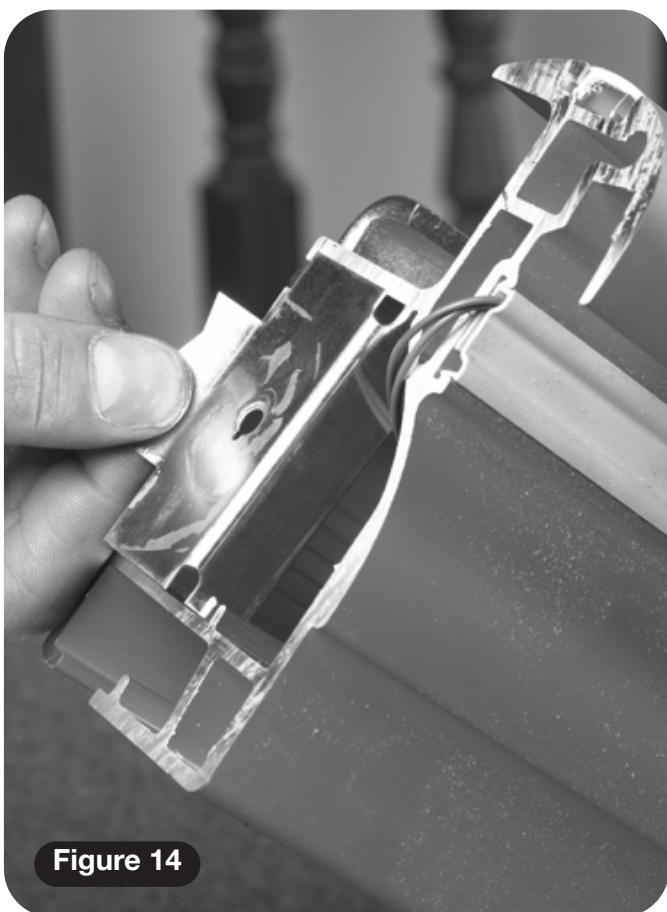
Figure 12



Figure 12a

Track assembly

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Feet positioning

Feet positioning

Tools required:

- 17mm Spanner
- 17mm Socket
- 300mm screwdriver extension

Items required:

- Mounting feet
- 2 pieces of 100mm x 50mm x 600mm wood (4" x 2" x 24")

Note: Ensure the track is the correct length before you commence assembly.

- 1 Turn the extrusion upside down. Slide the foot assemblies into the track. The foot retaining plate locates into the extrusion (**Figure 17**).

Note: The pressings can be assembled from the top or bottom of the track.

- 2 Only finger tighten the nuts at this stage, to allow the foot to be adjusted in position on the stair tread.

Note: The foot must be fitted with the straight edge (three hole side) against the wall.

- 3 Roughly position the feet. You should position one foot level to mount on the first tread, one for the last tread and one either side of the splice joint, as close to it as possible. Once this has been done rotate the track into its normal orientation.

FOR HINGE TRACK INSTALLATIONS

The lowest foot should be fitted as close to the hinge as possible (**Figure 18**). This may mean that the foot has to be positioned on the second riser.

- 4 To space the rail the correct distance from the nose of the risers of the staircase you will need two pieces of 100mm x 50mm (4" x 2") wood, approximately 600mm (24") in length. Place these between the two feet on each section of the track (**Figure 19**).
- 5 Stand the feet on to the stairs, with one foot on the top tread, and one foot on the first tread after the hinged section.
- 6 Position the track with the outside face 150mm from the stringer.

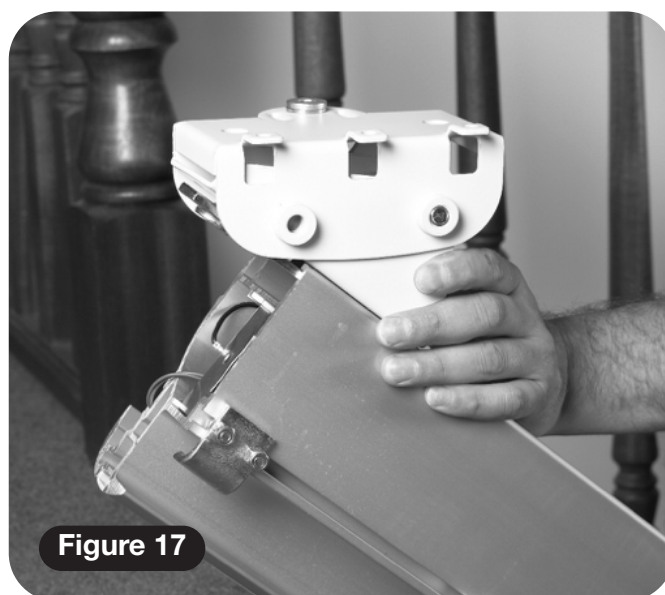


Figure 17



Figure 18



Figure 19

Note: If the minimum clear width of the staircase is above 750mm and the client's weight is above 120kg the track should be positioned 200mm from the stringer if possible.

HINGE TRACK INSTALLATIONS ONLY

The track must be positioned 20mm further from the stringer than a standard installation, i.e. 170mm minimum (**Figure 20**).



Figure 20

Note: When positioning the track ensure that any obstacles, such as window ledges, will not obstruct the travel of the stairlift when fitted. It may be necessary to position the track further into the staircase to ensure that the stairlift clears these obstacles. Heavy duty units may also necessitate the track being positioned further into the staircase (up to an additional 50mm).

Feet positioning



Figure 21

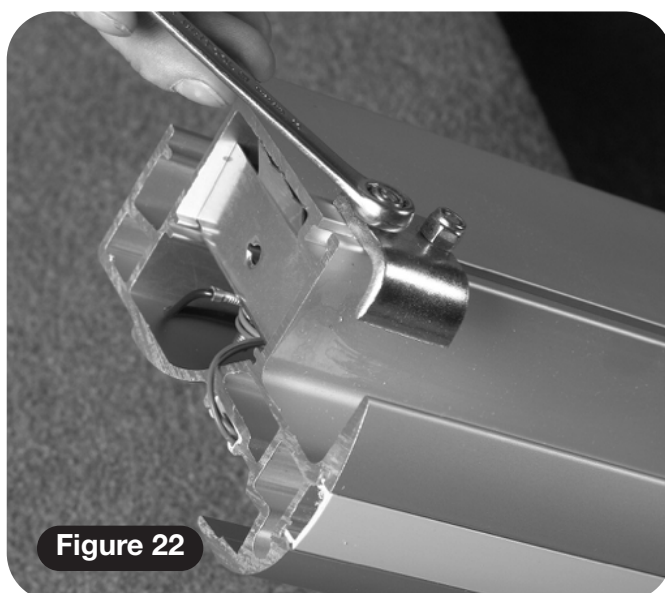


Figure 22

7 Tighten all feet to the track, using a 17mm socket on the single front adjuster on each foot (**Figure 21**).

8 Rotate the track 180° and then tighten the other foot mounting bracket nut using the 17mm socket.

9 Mark the position of the final limit stop (at the top of the track) then remove the end stop, final limit stop and magnets from the top end of the track (**Figures 22, 23 and 24**).

10 Return the track to its correct orientation on the staircase.

11 Reposition the track the appropriate distance from the stringer and then fit one screw from the foot to the staircase on the first tread and last tread only.

Note: A long shaft Pozidrive screwdriver will be required for this operation (**Figure 25**).



Figure 23

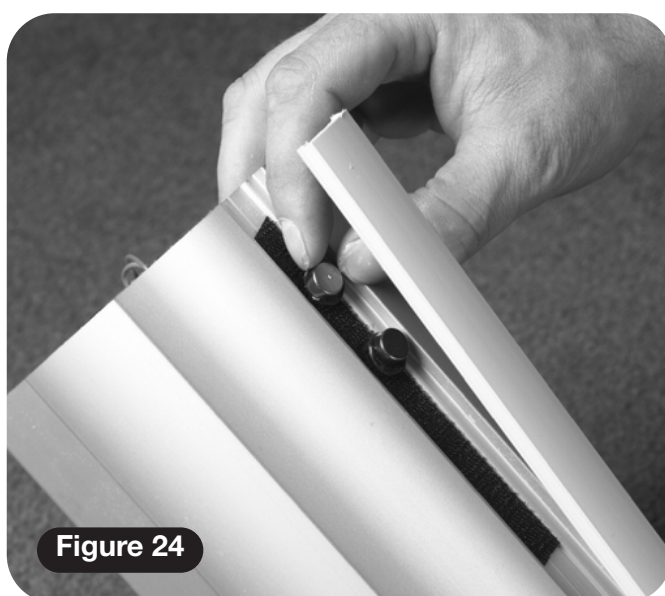


Figure 24

Loading the power pack

Items required:

- Power pack
- Fitting kit
- End caps

Tools required:

- Loading toggle
- Loading bar
- Shorting links

- 1 Fit one screw in to the first and last foot before loading the power pack **(Figure 25)**.
- 2 Take off the top cover from the power unit **(Figure 26)**.
- 3 Lay the power unit with its rear face down.
- 4 Visually inspect the charge contacts on the power pack to ensure that they are not damaged in any way.
- 5 Check all rollers are free running by hand.
- 6 Slide the loading bar into the power unit **(Figure 27)**.
- 7 Insert the plastic locking studs into the loading bar **(Figure 28)**.
- 8 Carefully locate the power unit/loading bar on to the track **(Figure 29)**.



Figure 25

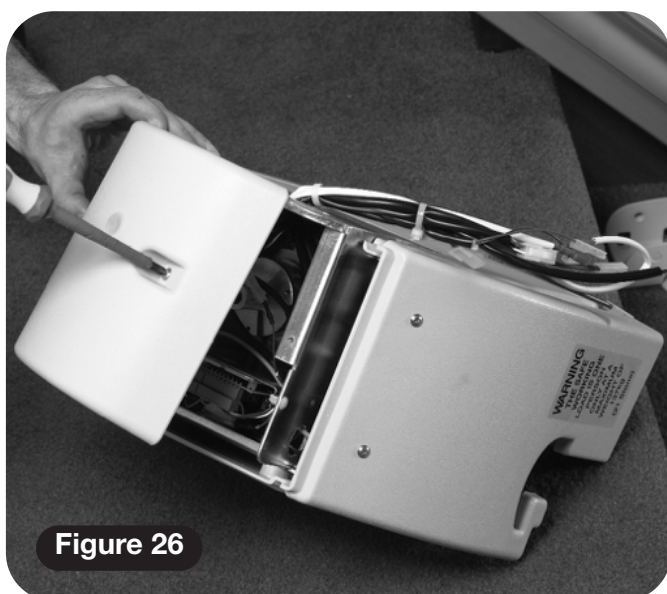


Figure 26

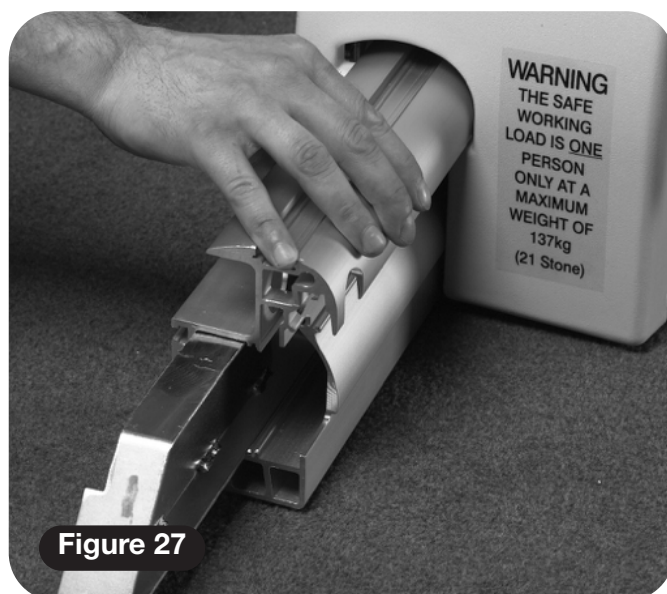


Figure 27

Power pack

Note: Ensure the charging loom is not damaged. When the loading bar is securely attached, tuck the charging loom into the cut out in the fitting rail and check that it does not protrude. This ensures the power unit override will not be activated when the unit is being driven on to the track.

- 9 Remove the power unit locking studs and carefully allow it to roll on to the track, until it starts to engage with the rack.
- 10 Connect the dummy seat toggle looms (**Figures 30, 31, 32 and 33**).

6 way footplate link connector (Part No. SIM23000) to 6 way connector – footrest (can only be fitted one way).

Driving toggle 8 way connector (Part No. 181001.50083) and conversion loom (SIM22900) – seat, direction, key switch and swivel looms.

2.5mm battery link (Part No. 181001.52036) across the flying battery leads – red link wire.

Note: Ensure that this connection is not earthed so it will blow a fuse.

Underpan link shorting loom (SIM24000).

- 11 Use the driving toggle to check the pack both ways.
- 12 When the power pack is fully and correctly engaged with the rack, remove the loading bar from the track.

If the power supply is positioned at the bottom of the stairs:

Insert the standard nut plate pressing without the negative connection at the top of the stairs (**Figure 34**).

If the power supply will be positioned at the top of the stairs:

- a Insert the nut plate pressing with the negative connection (**Figure 35**). Connect the negative flying lead (black) to the spare section of the two way connecting block (**Figure 36**).

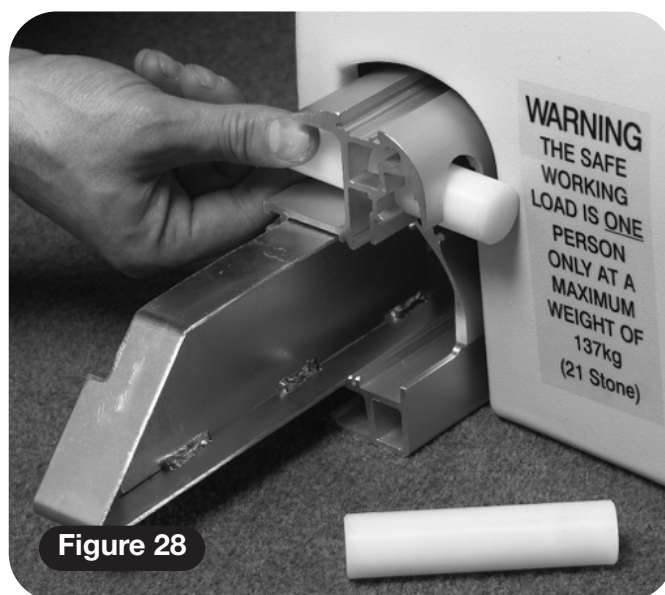


Figure 28

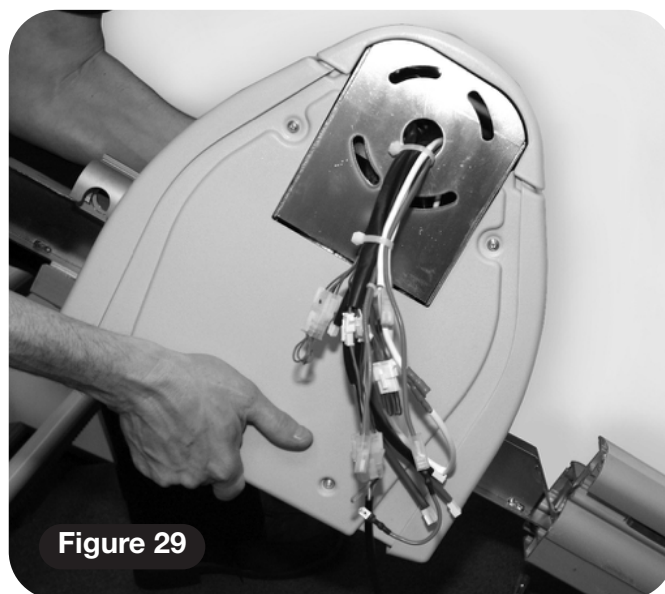


Figure 29

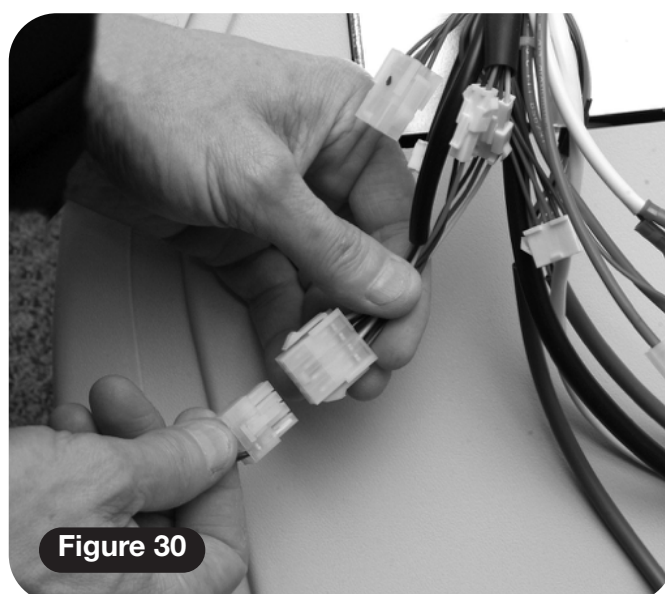


Figure 30

Power pack

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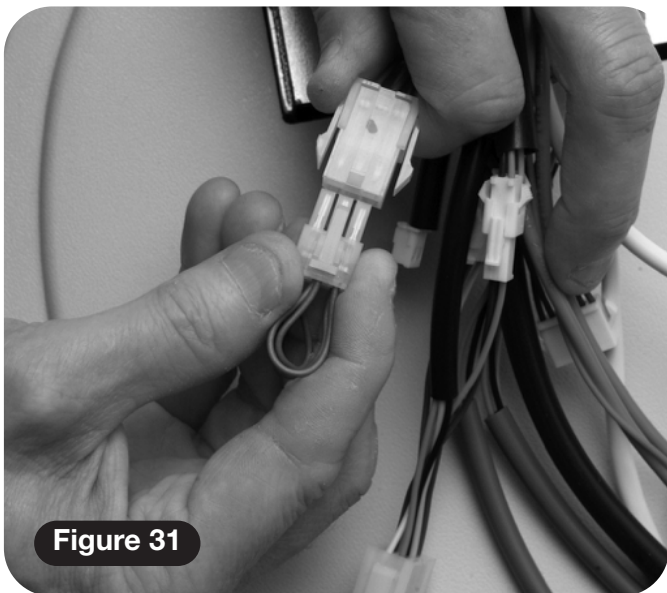


Figure 31

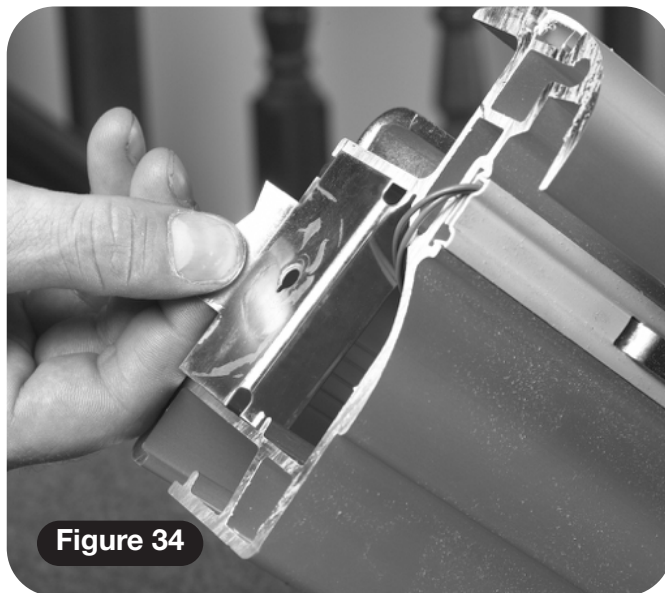


Figure 34

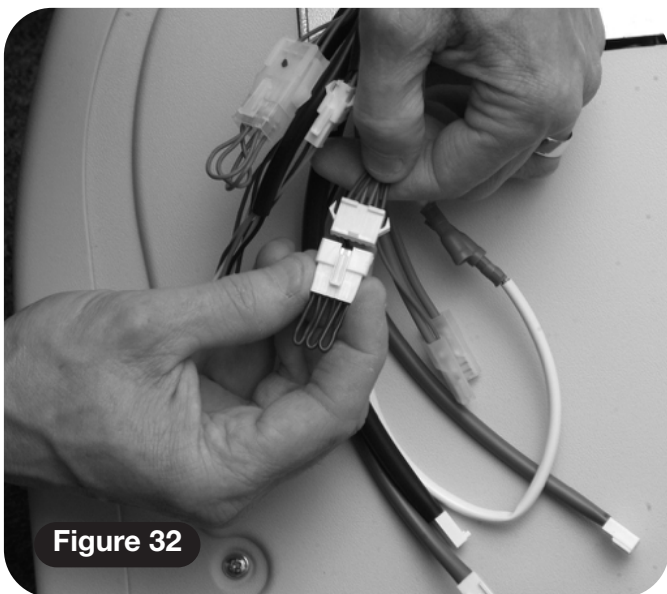


Figure 32

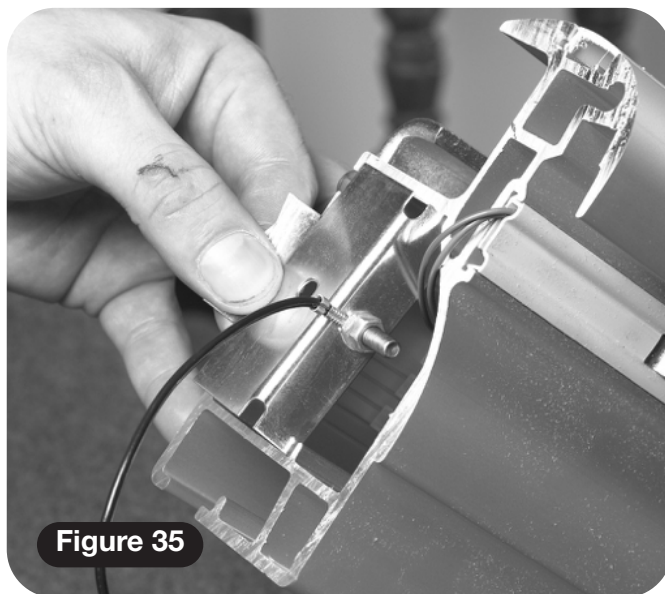


Figure 35

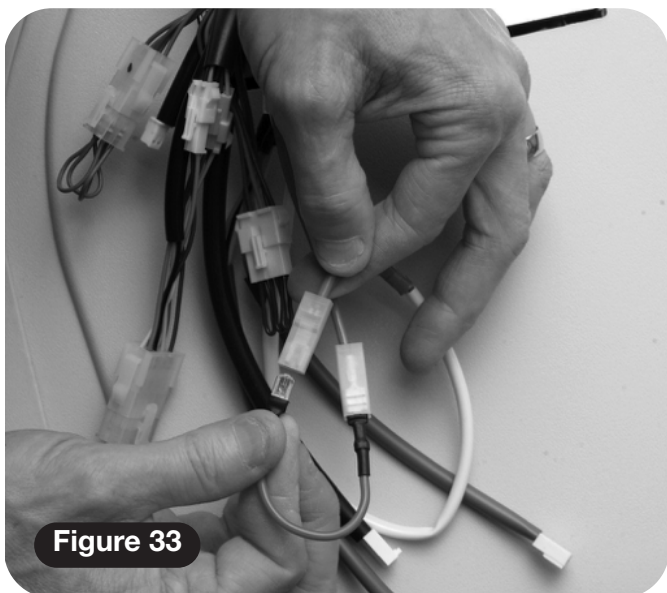


Figure 33

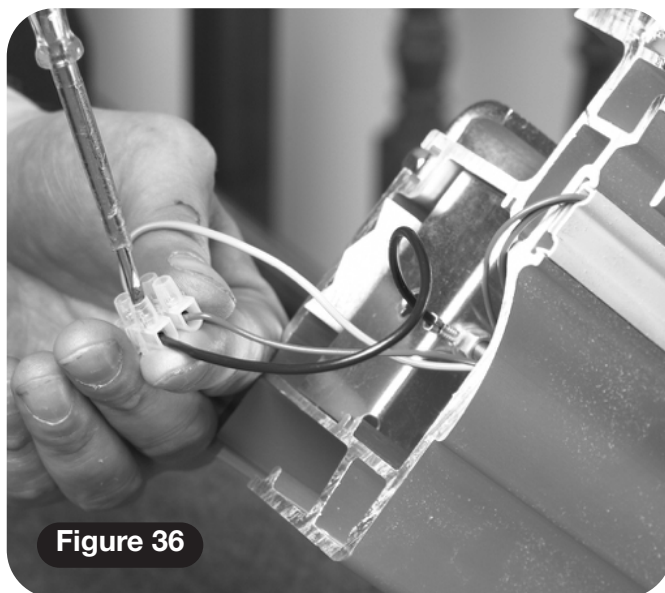


Figure 36

Power pack

- b** Connect the power supply to the top two way connecting block (**Figure 37**). Red to white and black to black.

POWER HINGE TRACK ONLY

- a** Insert the nut plate pressing with the negative connection (**Figure 35**). Connect the negative flying lead (black) to the spare section of the three way connecting block (**Figure 38**).
- b** Connect the power supply to the three way connecting block (**Figure 39**). Red to white and black to black.

- 13** Fit the final limit stop back in the same position that you marked earlier (**Figures 22, 23 and 24**).

- 14** Fit the top end stop that you removed earlier.

- 15** Replace the magnets that you removed earlier.

- 16** Insulate the two way connecting block with electrical installation tape and carefully insert the block into the track (**Figure 40**).

- 17** Fit the end cap, taking care that the end cap moulding retaining screw is not over tightened and that it avoids the wiring (**Figure 41**).



Figure 37

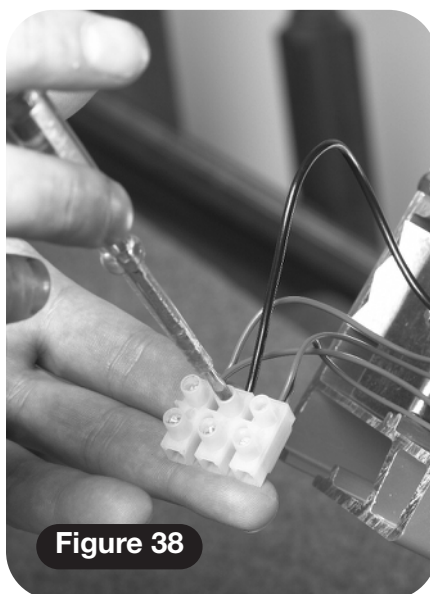


Figure 38

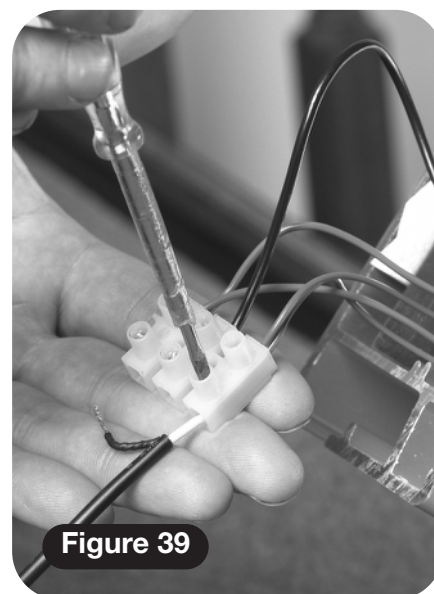


Figure 39

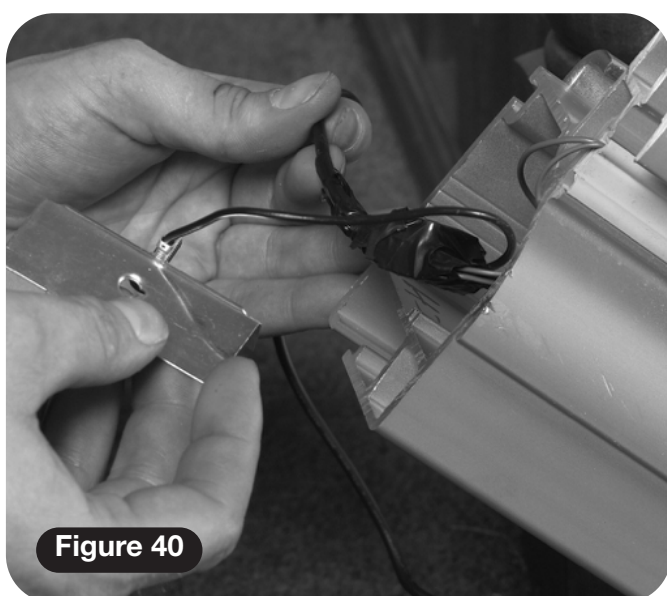


Figure 40



Figure 41

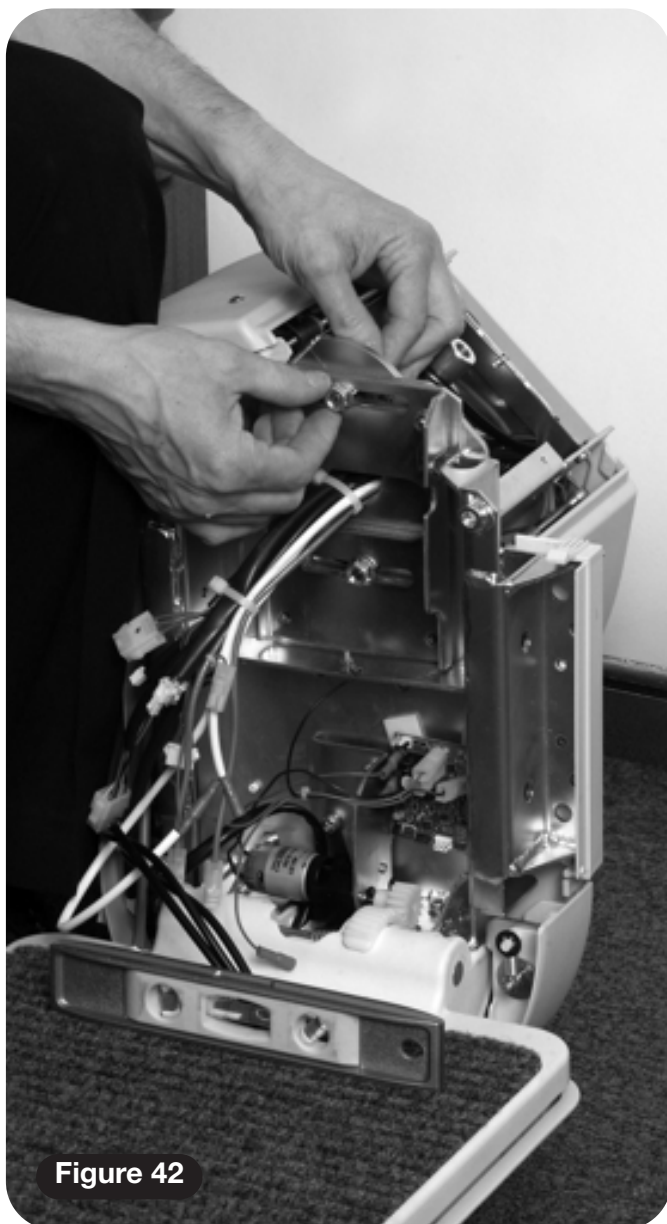


Figure 42

Fitting the front chassis to the power pack

Items required:

- Front chassis

Tools required:

- 6mm Allen key
- 8mm Allen key
- Spirit level

- 1 Gently pull down the footplate to get access to the panel.
- 2 Offer the seat chassis to the power unit and feed through the looms from the pack.
- 3 Using the nuts, bolts and washers supplied secure the seat chassis to the power unit, ensuring that the chassis is in the correct vertical alignment (**Figure 42**).

Note: Use a spirit level positioned on the top of the front chassis, or on the footplate, to ensure that correct alignment is achieved.

Note: Do not pinch any harnesses whilst assembling the chassis. Tighten the retaining bolts to torque setting 33Nm (**Figure 43**).

- 4 Fit the safety bolt and washer (**Figure 44**).

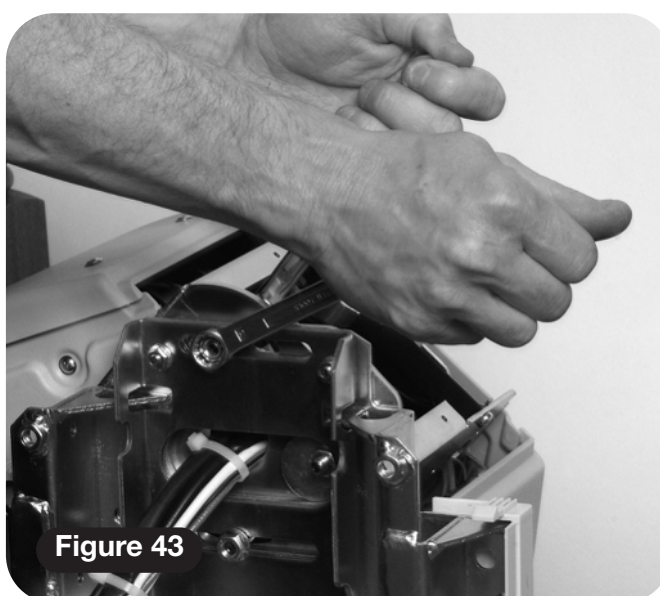


Figure 43

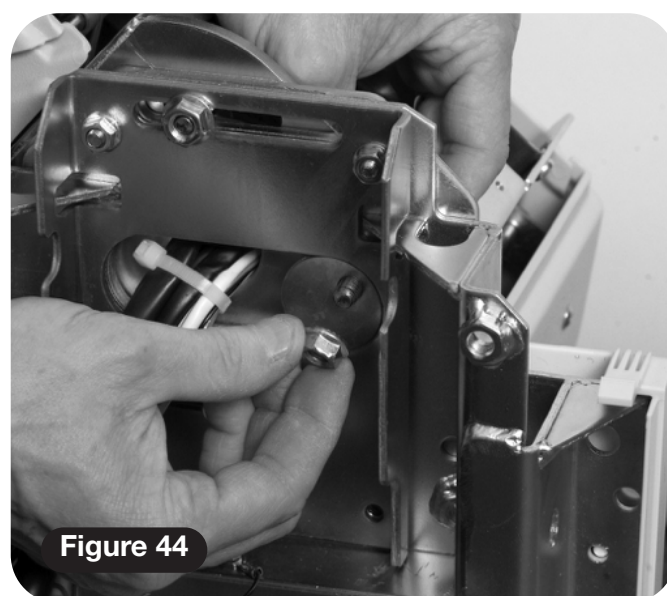


Figure 44

Seat base

Fitting the seat base

Items required:

- Seat base

Tools required:

- 10mm socket
- 10mm spanner
- Narrow nosed pliers
- 6mm Allen key

- 1 Remove the appropriate knock-outs from the chassis top rear cover (**Figure 45**). Refer to the table below for the number of knock-out to be removed for the client height.

Required seat to footplate height (mm)	Knock-outs to be removed
540	0
515	1
490	2
465	3

- 2 Load the seat base and feed the two seat post retaining bolts through the washers and the seat stems into the bottom front chassis; selecting the appropriate seat height for the client by using the holes corresponding to the height that is required (**Figure 46**).

- 3 Tighten the seat post stabilising bolts (**Figure 47**).

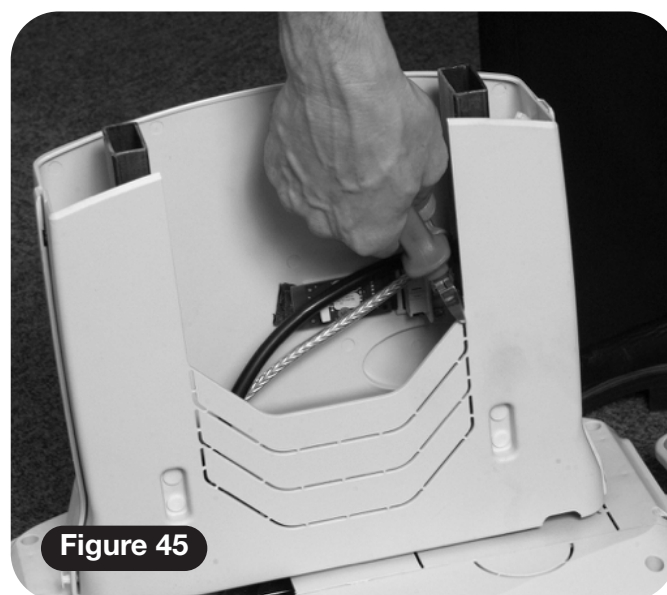


Figure 45



Figure 46

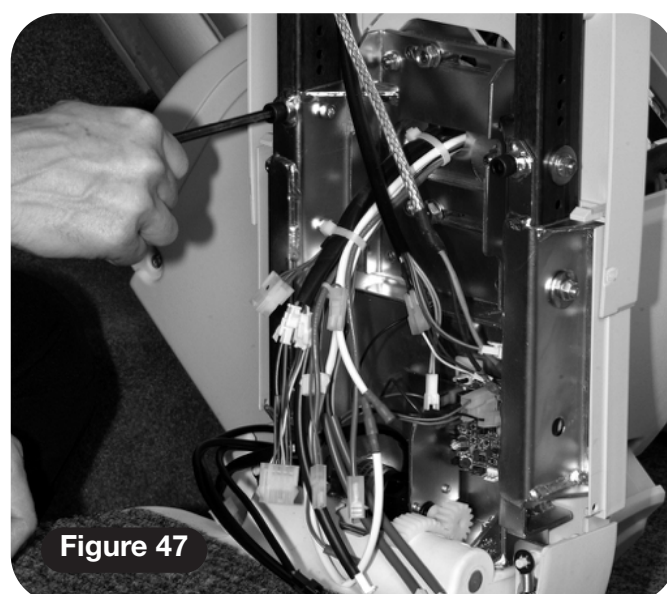


Figure 47

Fitting the seat back

Items required:

- Seat back

Tools required:

- 6mm ball ended Allen key

- 1 Place the seat back onto the seat base and using a ball ended 6mm Allen key secure it with the four bolts and washers provided **(Figure 48)**.
- 2 Make the upper seat wiring connections as follows **(Figure 49)**;
 - a Key switch connection: green and orange to green and orange.
 - b Toggle switch: blue, white and brown to blue, white and brown.

ARM SWITCHED POWERED FOOTPLATE ONLY

- c Powered footplate: twin yellow to twin yellow.

Note: The toggle switch connection must be made through the interlock loom to enable the arm interlock functionality **(Figure 50)**.

Note: Redundant connections are present to allow easy re-handing of seats. Connections must be made according to the handing of the stairlift; i.e. for a stairlift with left-hand toggle switch and key switch (always together on one side), those connections must be made to left hand arm. The right arm will then house a powered footplate switch (if fitted).

- 3 Tidy the cables to the back of the seat **(Figure 51)**.

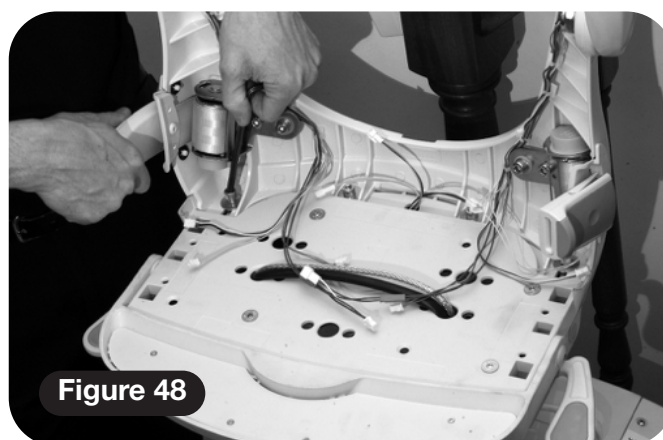


Figure 48

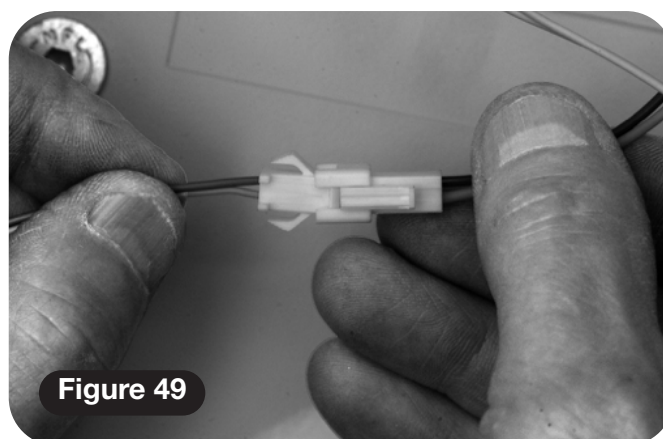


Figure 49

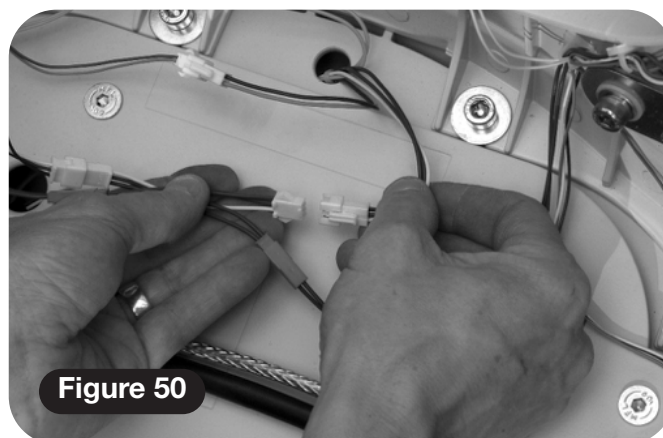


Figure 50

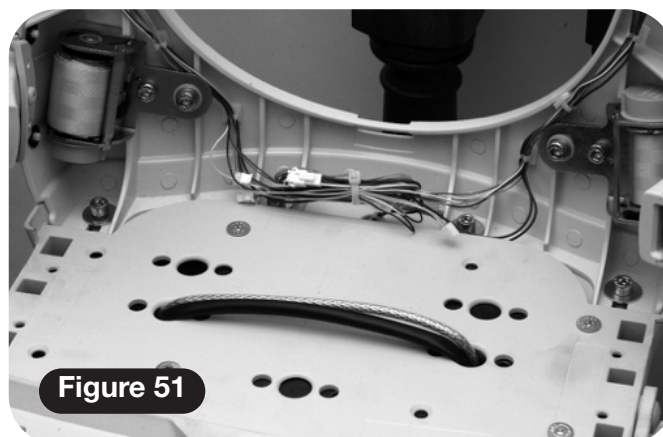


Figure 51

Electrical connections

Electrical connections

Items required:

- None

Tools required:

- None

1 Make seat and footplate electrical connections (Figure 52).

- Connect the key switch loom (orange and green).
- Connect the toggle loom (white, blue and brown).
- Connect the safety edge loom (flat six way connection: 2 x brown, 2 x red and 2 x violet).
- Connect the six way footplate loom.

POWERED FOOTPLATE ONLY

- Connect the powered footplate looms (twin yellow and grey comms).

POWER SWIVEL ONLY

- Connect the grey powered swivel loom.
- Connect the shielded swivel loom earth ring terminal.

2 Test the function of the powered features, including the toggle (see pages 26/27).

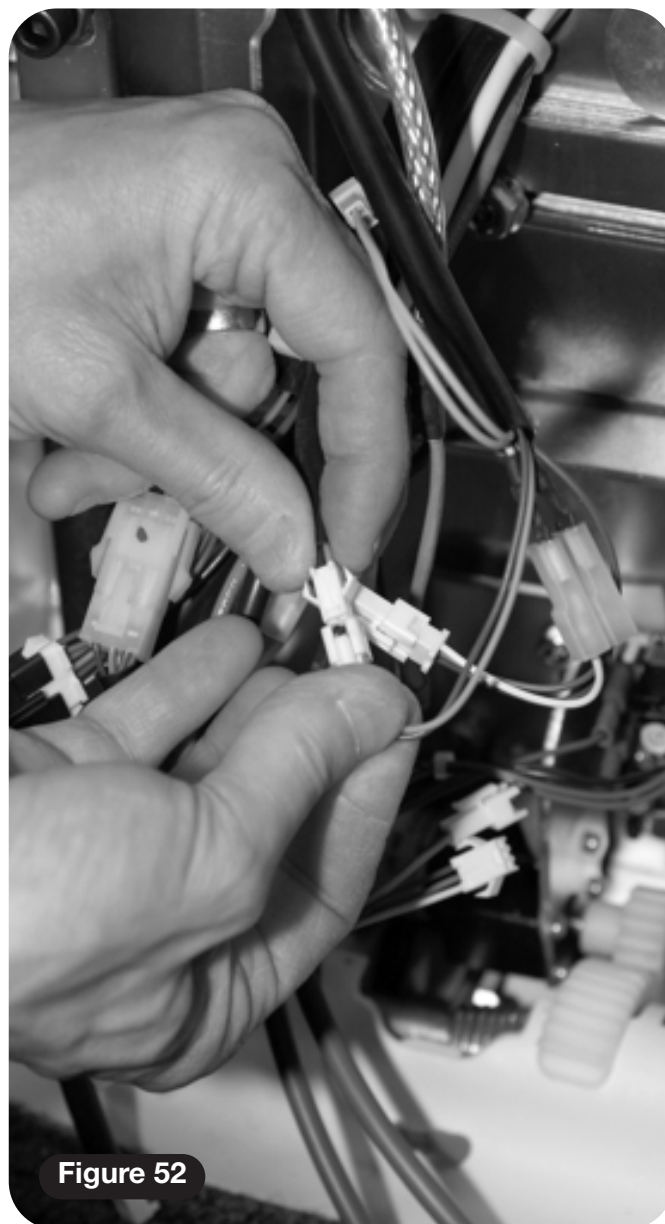


Figure 52

Fitting the seat upholstery

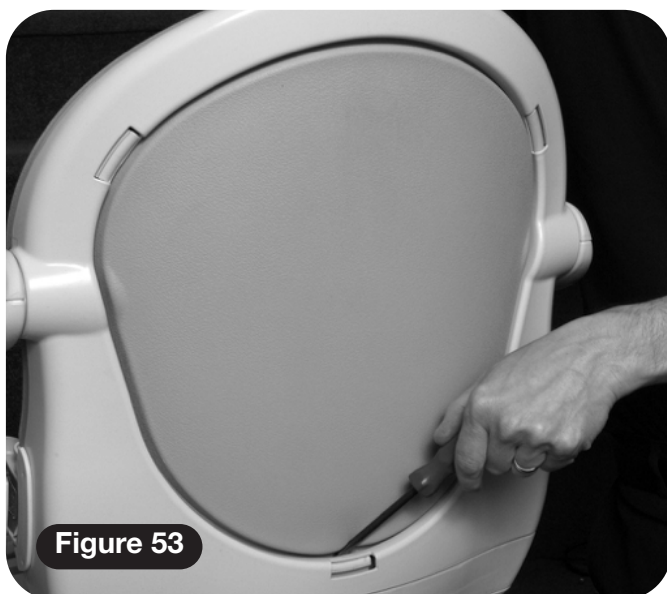
Items required:

- Seat upholstery

Tools required:

- Screw driver

- 1 Clip in the seat back, starting with the top two clips (**Figure 53**) and then screw in the seat belt cover mouldings (**Figure 54**).
- 2 Fit the main seat cushion.
- 3 Fit the seat flap cushion.
- 4 Fit the arm upholstery. Starting at the front, press the upholstery into the arm recess. (**Figure 55**).



Chassis covers

Fit the front chassis covers

Items required:

- Top front chassis cover
- Bottom front chassis cover

Tools required:

- Side cutters

- 1 Clip in the bottom front cover and fit the panel fixing push studs.
- 2 Make top front cover electrical connections;
 - a Connect the display board (black sleeved) (**Figure 56**).
 - b Connect the power switch (2 x red) (**Figure 57**).
 - c Connect the left and right infrared sensors (blue sleeved) (**Figure 58**). Test the function of the lift and any powered options including the toggle (**see pages 26/27**).
- 3 Fit the top front cover and secure with the supplied panel fixing push studs (**Figure 59**).

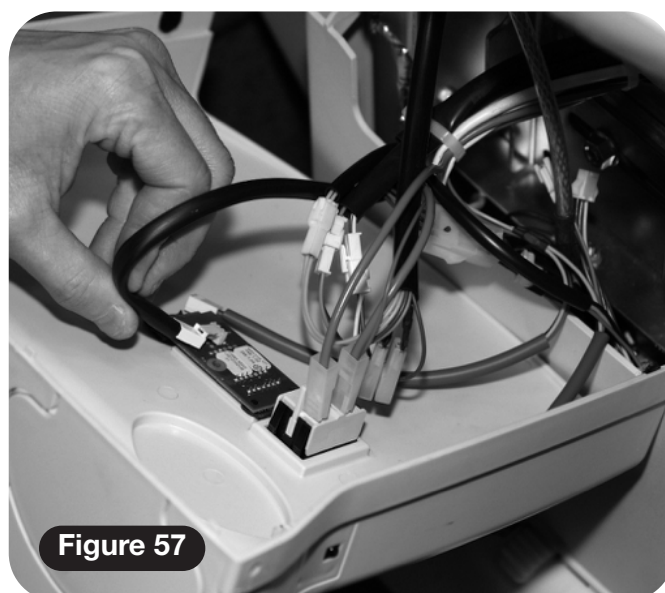


Figure 57

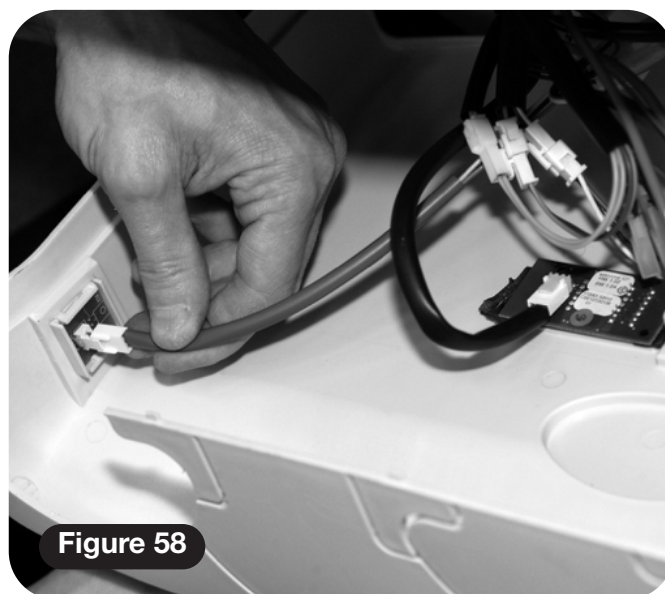


Figure 58



Figure 56



Figure 59

Program the stairlift and handset

Items required:

- Handsets

Tools required:

- No. 2 Pozi-drive
- 5mm Allen key

The infrared remote control handsets supplied with the lift should work out of the box. If the lift does not travel up and down the stairs when the corresponding handset buttons are pressed, or if there are multiple lifts in one area, follow the procedure set out below.

If the lift operates when the handsets are used please go to step 4 in the procedure below.

- 1 Rotate the seat through 90° to gain access to the main control board (**Figure 60**).
- 2 Bring both handsets to the lift and then programme the handset to the board in the following way.
 - a For single lift applications:
 - i Press and hold the red button on the PCB (**Figure 61**) – a yellow LED will illuminate on the PCB.
 - ii Press any button on the handset and the yellow light will go out.
 - iii Programming is complete.

Note: Low energy light bulbs can interfere with the infrared signal causing the lift to stop and start. Reprogramming the handsets with the lights on can resolve this problem.

- b For multiple lift applications:
 - i Remove the red dipswitch protection cap with a small screwdriver (**Figure 62**).
 - ii Set the dipswitches on the PCB on both handsets to the same settings – note that the next pair of handsets will require the dipswitches to be set to a different combination (**Figure 63**).

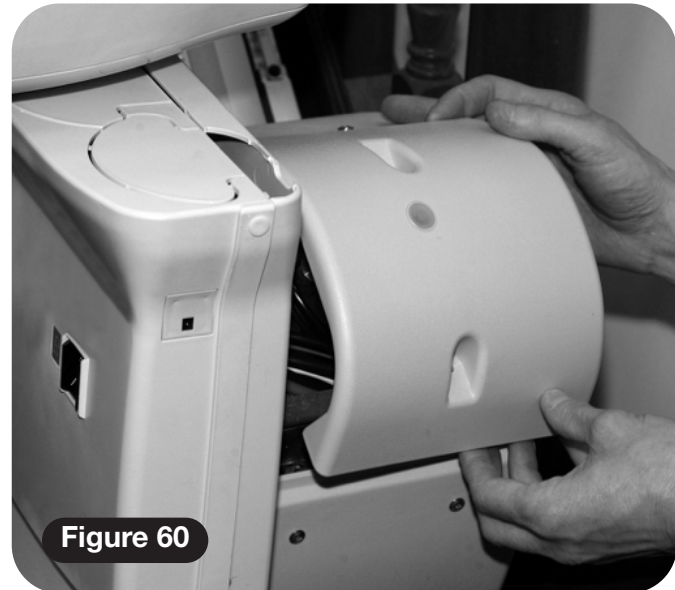


Figure 60

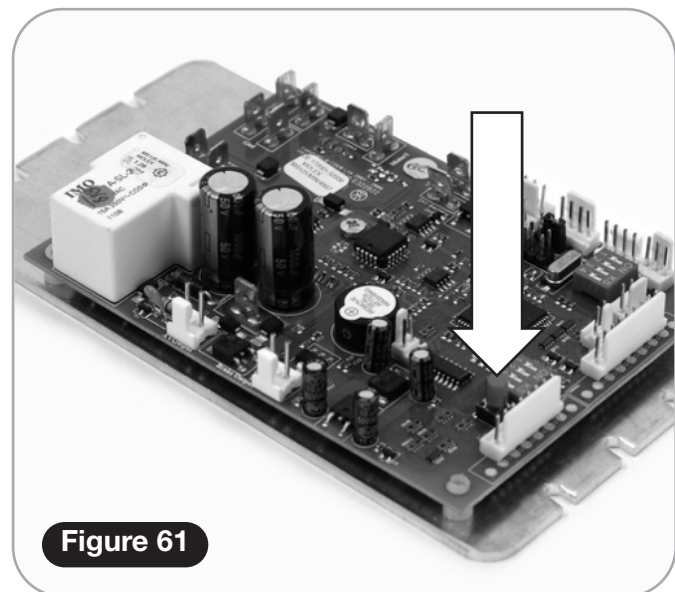


Figure 61

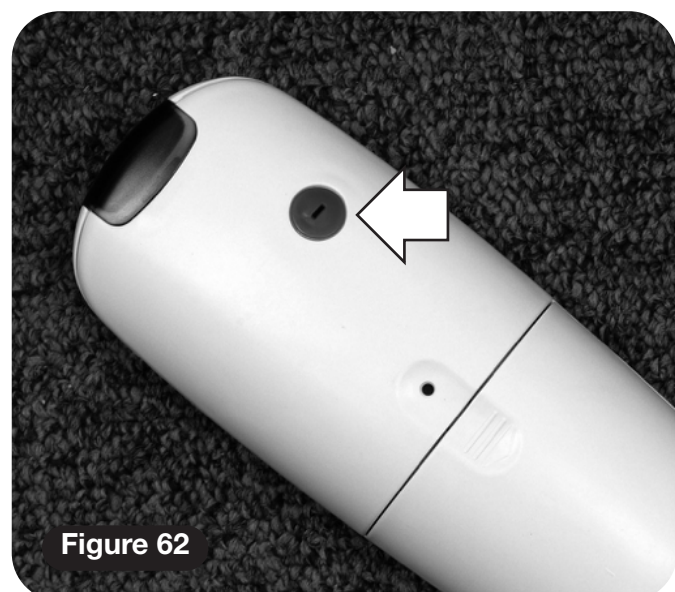


Figure 62

Programming

- iii Press and hold the red button on the PCB **(Figure 61)** – a yellow LED will illuminate on the PCB.
 - iv Press any button on one handset and the yellow light will go out.
 - v Programming is complete.
- 3 Test that the handsets have programmed correctly by pressing the up and down button on each and check that the lift moves in the corresponding direction.
 - 4 Finally fit the power unit top cover.

Fitting the handset holder

Note: The handset MUST be fixed into the holder by screwing through the holder into the handset **(Figure 64)**.

- 1 Fit the hand control holder to the wall in the required position using the fixings supplied **(Figures 65 and 66)**.

HINGE TRACK INSTALLATIONS ONLY

Program the main PCB board as **Appendix 3, page 41**.

Note: Always remember after any changes to main PCB to switch off for 15 seconds and switch back on again.



Figure 63



Figure 64

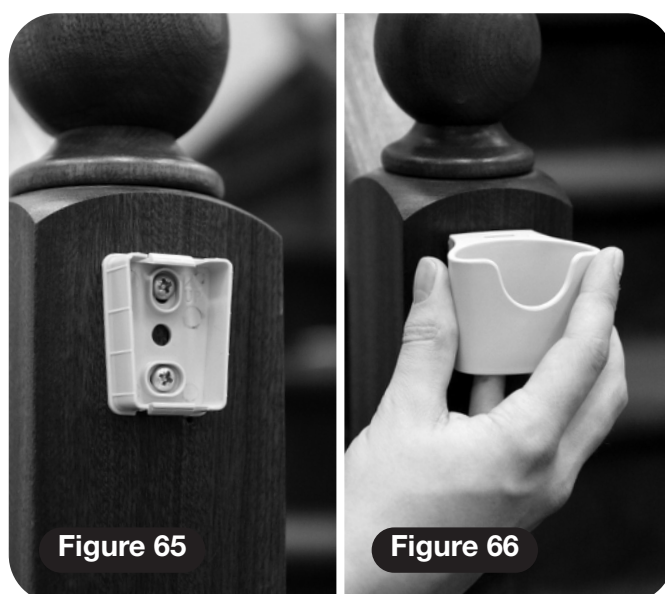


Figure 65

Figure 66

Fix the track to the stairs

Items required:

- Track fixing screws

Tools required:

- 300mm extension appropriate for screw heads

- 1 Drive the power pack to the top and bottom of the stairs to ensure that it will not encounter any unforeseen obstacles (**Figures 67 and 68**).

Note: Look for any other potential obstacles such as window ledges or exposed pipework that could obstruct the movement of the lift at this stage. If there are any other obstacles remove the two screws that you have already fitted and then move the track away from the wall until the rear edge of the power pack can travel freely past them. Refit a screw into the top and bottom foot before continuing.

- 2 Using the screws supplied locate the feet using three screws per foot but do not fully tighten the screws until the track angle has been checked for vertical alignment (**Figure 68a**).
- 3 Tighten the feet pivot bolts (**Figure 69**).



Figure 68a

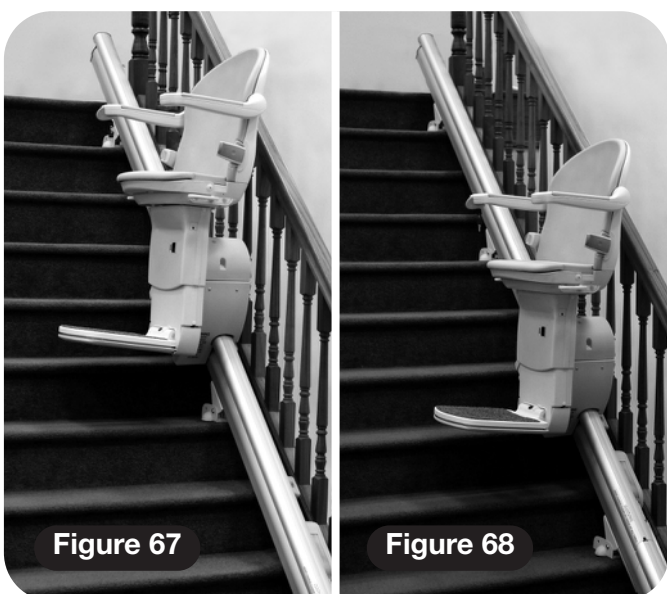


Figure 67

Figure 68

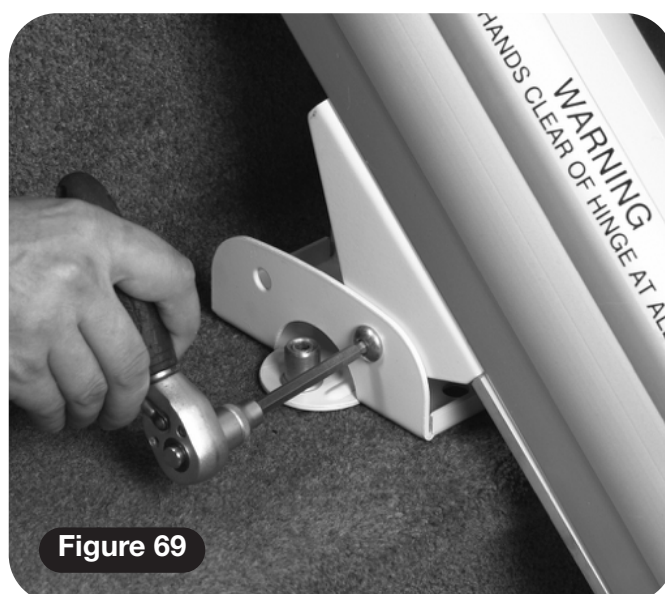


Figure 69

Track

- 4 Vertically align the track by screwing the front foot adjuster up or down as required using a 6mm Allen key on each foot (**Figure 70**). Adjust the vertical alignment of the track such that it is slightly angled towards the wall. The top of the seat should clear the wall by approximately 20mm when the alignment is correct.

Note: You must ensure that the alignment of the track is consistent along the complete length.

- 5 Fully tighten the three screws at the rear of each foot.
- 6 Recheck the vertical alignment of the track and if necessary correct using the front foot adjuster (**Figure 70**).
- 7 Fit the screw supplied into the front foot adjuster on each foot (**Figure 71**).
- 8 Drive the stairlift to the top of the track. If the footplate does NOT finish level with the landing (**Figure 72**) then:
 - a Mark the position of the top safety edge from the end of the track (**Figure 73**).



Figure 70



Figure 71

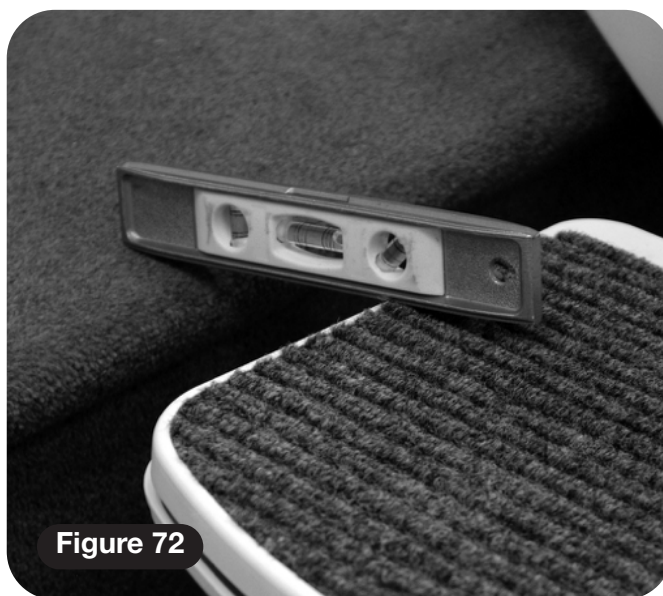


Figure 72



Figure 73



Figure 74

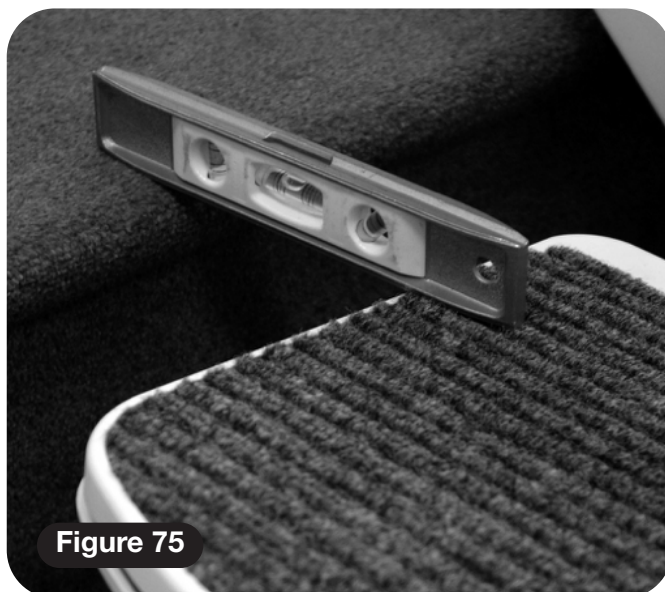


Figure 75

- b** Mark the current position of the magnets and then remove them.
- c** Measure the distance from the top safety edge to the position that you marked on the track.
- d** Drive the stairlift halfway down the stairs.
- e** Move the pair of magnets the same distance up the track from their original position **(Figure 74)**. Take care to maintain the same distance between the magnets.
- f** Drive the stairlift back to the top of the stairs and check that the footplate now finishes level with the landing **(Figure 75)**.
- g** Make minor adjustments as necessary and repeat process until the footplate finishes level with the landing.

Note: If the stairlift does not travel to the end of the track at the bottom of the stairs move the bottom set of magnets further down the track. When happy with the finishing position superglue the magnets in place.

HINGE TRACK ONLY

- a** Fit the floor plate underneath the hinge on the ground floor.
- b** Lower the hinge manually and position the plate **(Figure 75a)**.



Figure 75a

- c** Lift the hinge and screw the floor plate down using the fixing provided.
- d** Adjust the feet on the hinge so that when the hinge is fully closed the feet locate into the floor plate and support the end of the hinge section.

Testing

ALL VARIANTS

- 1** Sit on the lift and drive up and down the track to ensure that the footplate clears the nose of the risers along the complete length of the track.
- 2** Check that the lift charges correctly:
 - a** Drive the lift to the top charge contacts and ensure that '-' shows in the diagnostic display.
 - b** Drive the lift to the bottom charge contacts and ensure that '-' shows in the diagnostic display.
- 3** Check the key switch operation
 - a** Turn the key to the off position and ensure that the lift will not drive – '0' should show in the diagnostic display when you try and drive the lift with the key switch in the off position.
 - b** Turn the key switch back on.
- 4** Ensure that all of the safety edges on the power pack are functioning (**Figure 76**).
 - a** Drive the lift in the up direction.
 - b** Press the top safety edge – the lift should stop.
 - c** Drive the lift in the down direction.
 - d** Press the bottom safety edge – the lift should stop.
- 5** Check the safety edges on the footplate and front chassis (**Figure 77**).
 - a** Drive the lift in the up direction.
 - b** Press the upstairs edge of the footplate – the lift should stop.
 - c** Drive the lift in the down direction.
 - d** Press the downstairs edge of the footplate – the lift should stop.
 - e** Drive the unit in the down direction.
 - f** Press the underside of the footplate – the lift should stop.
 - g** Drive the lift in the down direction.
 - h** Press the underside of the front chassis – the lift should stop.

POWER FOOTPLATE ONLY

- 1** For arm operated versions:
 - a** Operate the switch under the arm.
 - b** The footplate should lift.
 - c** Operate the switch in the opposite direction.
 - d** The footplate should lower.
- 2** For seat operated versions:
 - a** Lift the front seat squab.
 - b** The footplate should lift.
 - c** Lower the front seat squab.
 - d** The footplate should lower.

POWER HINGE TRACK ONLY

- 1** Using the handset:
 - a** Drive the lift to the top of the stairs.
 - b** Depress the down button and keep it depressed.
 - c** Observe the function of the lift. The lift should:
 - i** Drive down the stairs.
 - ii** Stop at the park position.
 - iii** Beep whilst lowering the hinge.
 - iv** After a short pause continue to the bottom of the track.
 - d** Depress the up button and keep it depressed.
 - e** Observe the function of the lift. The lift should:
 - i** Drive up the stairs.
 - ii** Stop at the park position.
 - iii** Beep whilst raising the hinge.
 - iv** After a short pause continue to the top of the track.
- 2** Sit on the stairlift:
 - a** Drive the lift to the top of the stairs.
 - b** Push the toggle switch in the down direction and hold it in that position.

- c** Observe the function of the lift. The lift should:
 - i** Drive down the stairs.
 - ii** Stop at the park position.
 - iii** Beep whilst lowering the hinge.
 - iv** After a short pause continue to the bottom of the track.
- d** Push the toggle switch in the up direction and hold it in that position.
- e** Observe the function of the lift. The lift should:
 - i** Drive up the stairs.
 - ii** Stop at the park position.
 - iii** Beep whilst raising the hinge.
 - iv** After a short pause continue to the top of the track.
- 3** Turn off the power supply to the charge contacts.
- 4** Repeat steps 1 and 2 above.
- 5** Turn the power supply back on.

MANUAL SWIVEL ONLY

- 1** Check the swivel interlock:
 - a** Drive the lift in the up direction.
 - b** Swivel the seat – the lift should stop.
 - c** Drive the lift in the down direction.
 - d** Swivel the seat – the lift should stop.

POWER SWIVEL ONLY

- 1** Using the handset:
 - a** Drive the lift down to the bottom of the stairs.
 - b** Depress the up button and keep it depressed.
 - c** Observe the function of the lift. The lift should:
 - i** Drive up the stairs.
 - ii** Stop at the top of the track.
 - iii** Beep whilst swivelling the seat to the exit position.
 - d** Depress the down button and keep it depressed.

- e** Observe the function of the lift. The lift should:
 - i** Beep whilst swivelling the seat to the drive position.
 - ii** Drive down the stairs.
- 2** Sit on the stairlift:
 - a** Drive the lift down from the top of the stairs.
 - b** Push the toggle switch in the up direction and hold it in that position.
 - c** Observe the function of the lift. The lift should:
 - i** Drive up the stairs.
 - ii** Stop at the top of the track.
 - iii** Beep whilst swivelling the seat to the exit position.
 - d** Use the manual over-ride lever to swivel back to the drive position.
 - e** Use the manual over-ride lever to swivel back to the exit position.
 - f** Push the toggle switch in the down direction and hold it in that position.
 - g** Observe the function of the lift. The lift should:
 - i** Beep whilst swivelling the seat to the drive position.
 - ii** Drive down the stairs.



Handover

Handover

Items required:

- None

Tools required:

- None

Note: Ensure that the site is cleaned and tidied before demonstrating the lift to the customer.

Demonstrate the stairlift to the customer, carer and any users or potential users before leaving the installation site.

Please use the following checklist to ensure that all of the items that should be demonstrated are covered:



Feature	Explanation	Done?
Key switch	Used to disable the stairlift against unauthorised use – especially useful to prevent children from playing with the stairlift.	
	The stairlift will still charge with the key switch disabled.	
On/Off switch	DO NOT turn the stairlift off using this switch unless you will not be using the stairlift for a prolonged period such as a holiday.	
Power supply	NEVER turn the power supply off.	
Seat belt	The seat belt should be used every time the stairlift is used.	
Operating toggle	Which way is up /and which way is down.	
	How the toggle can be used, e.g. with the fingers, palm of the hand, etc. Explain need for constant pressure on the control.	
	The delay from pressing the lever before the stairlift will move.	
Operating the stairlift	Always keep your FEET ON THE FOOTPLATE whilst the stairlift is in motion, and try to avoid your feet hanging over the edges of the footplate.	
	Always sit fully back in the chair when the stairlift is in motion.	
	Demonstrate the 'normal' noise that a stairlift will make in operation.	
Remote control	How to call and send the stairlift.	
Folding the stairlift	How to fold and unfold the stairlift.	
	The stairlift should be folded when not in use.	

Feature	Explanation	Done?
Operating the swivel	How to operate the swivel.	
	Never swivel the seat whilst the stairlift is in motion.	
	Never remove the seat belt until the chair is swivelled.	
	Never dismount the chair unless the seat is in a locked position.	
	Never dismount the chair whilst the stairlift is in motion.	
Power swivel	The lift beeps before and whilst it rotates to warn the client that it is moving.	
	The lift beeps before the stairlift moves to warn the client.	
Power swivel override	Demonstrate the operation of the override.	
	Explain that the override is for emergency use only and should not be used instead of the power swivel mechanism.	
Manual Footplate link (if fitted)	How to operate the manual footplate link.	
Power Footplate (if fitted)	How to operate the power footplate.	
Manual Hinge (if fitted)	How to send the lift to the park position.	
	The importance of parking the lift and lifting the track when not in use.	
Power Hinge (if fitted)	How to operate the hinge section using the lift toggle control.	
	How to operate the hinge section using the handsets.	
	The lift beeps before and whilst the hinge operates to warn the client that it is moving.	
	How to use the park function on the handset to park the lift and automatically raise the hinge section.	
	The importance of parking the lift and lifting the track when not in use.	
Diagnostic codes	Show the section in the user manual about self help, using the fault codes and the location of the display on the lift.	
Reporting a fault	What number should the customer call and what information do they need to have available when they call.	
Emergency hand winding	When should this be done (overrun, with key switch off and power on).	
	How to report a stairlift that has overrun repeatedly.	

Testing

Feature	Explanation	Done?
Trapped articles	Reverse the stairlift away from the trapped article and remove the item before use.	
Other warnings	Never allow more than one person to use the stairlift at any one time. The maximum carrying capacity is dependant on the variant – explain the particular maximum weight capacity of the lift installed.	
	NEVER allow children to play on or with the stairlift.	
	NEVER allow water to come into contact with the components in the stairlift. If you have to transport liquids DO SO WITH CARE.	
	NEVER place objects in or on the track, or leave objects on the stairs, where they could come into contact with the stairlift in operation. Your stairlift is fitted with sensitive side edges and undertray on the footplate, which will automatically stop the stairlift if it detects any obstructions.	
	NEVER use the stairlift in a standing position.	
	Maintenance and repairs should only be undertaken by a qualified engineer to maintain the validity of the warranty.	
	Under no circumstances attempt to repair or resite the stairlift yourself.	
Servicing	Recommend that the stairlift is serviced by a qualified engineer after 12 months and every 12 months after that.	
Cleaning	Turn the lift off using the key switch and clean with a damp, not wet, lint free cloth and a small quantity of washing up liquid.	
	Do not use abrasive cleaners, bleach or solvent based cleaners as they can damage the stairlift.	

Maintenance

Items required:

- Lubricant
 - petroleum jelly
- Cleaning materials

Tools required:

- None

- 1** Lubricate the rack with a small quantity of petroleum jelly:
 - a** Apply a small amount of petroleum jelly at 4 equally spaced points along the track in the rack recess (**Figures 78 and 79**).
 - b** Run the lift up and down the track several times to distribute the lubricant.

Note: Do not use an oil based lubricant such as WD40. It will damage the lift.

- 2** Lubricate the swivel mechanism with a small quantity of petroleum jelly:
 - a** Remove the seat by unscrewing the retaining bolt.
 - b** Apply the lubricant to the nylon washer.
 - c** Refit the seat and refit the retaining bolt.
- 3** Check all of the safety features on the lift as described in the Testing section of the installation manual.
- 4** Check that the lift still stops flush with the top step and adjust as necessary – **see page 25**.
- 5** Sit on the lift and ride it up and down the stairs several times:
 - a** Listen for any unusual noises.
 - b** Check for poor ride quality, especially across the spliced joint.
- 6** Clean the track.
- 7** Clean the seat.
- 8** Clean the power pack.

If anything does not function correctly further investigation and corrective action should be undertaken.

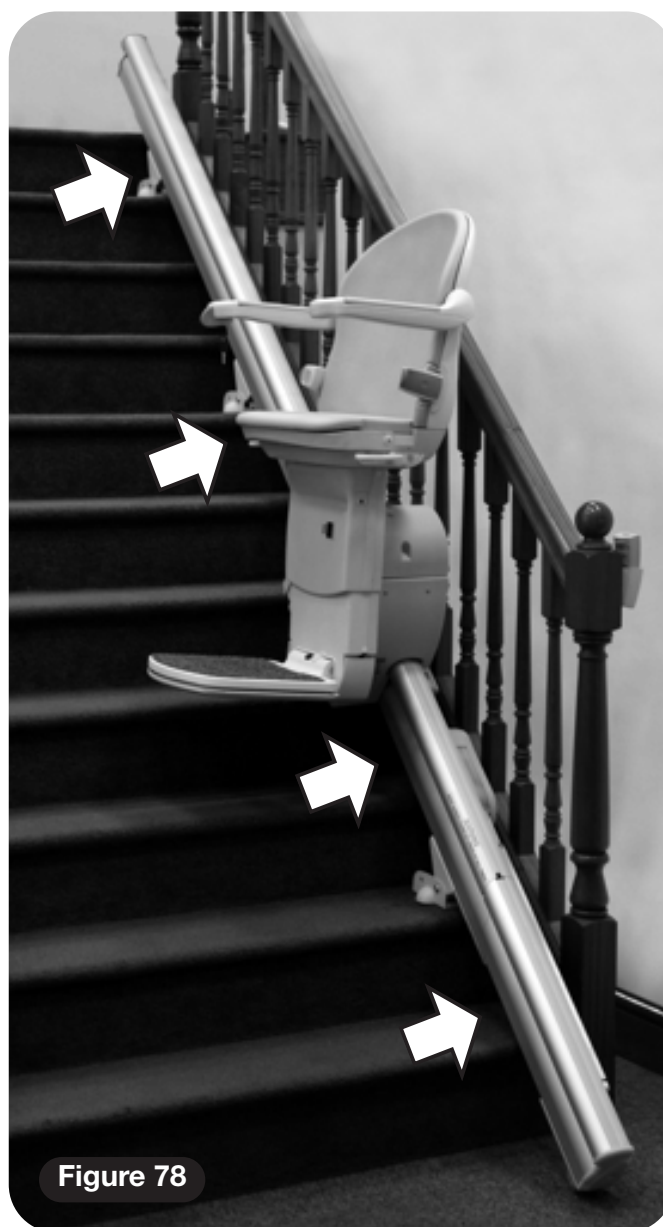


Figure 78

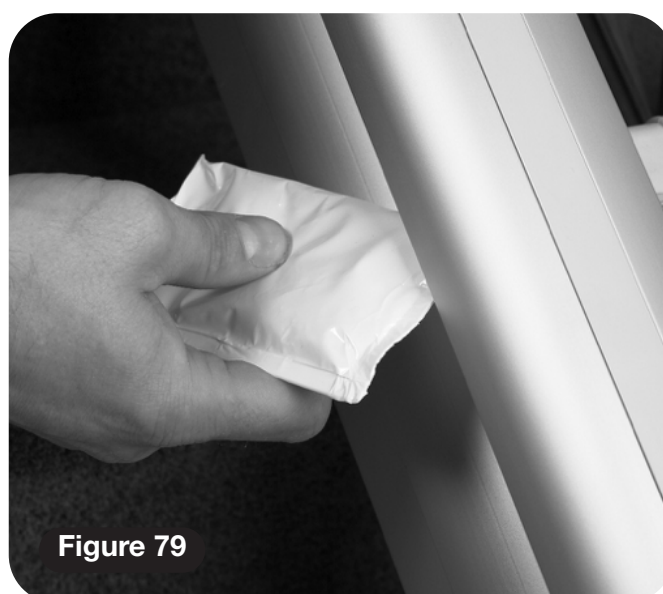


Figure 79

Appendix 2

Diagnostic codes

 **Code:**
Okay

Meaning:
Charging.

Description:

Telephone fault finding action:

If no other code is displayed and lift does not drive – are the arms fully down? Ask client if 8 or 9 show in the display when the toggle switch is activated – if no send an engineer.

On site fault finding action:

Send engineer to check toggle and arm circuit.

 **Code:**
None

Meaning:
No display.

Description:

Telephone fault finding action:

Ask client to press toggle and see if display comes on.
Ask if main power switch on the lift is turned on.
If does not correct fault – send engineer.

On site fault finding action:

Check batteries. Check display board is working correctly.
Check comms circuit for short circuits.

 **Code:**
0

Meaning:
Final limit activated.

Description:

Key switch, seat swivel, OSG,
overrun activated, short circuit.

Telephone fault finding action:

Ask client to ensure key switch is on and seat is fully swivelled to drive position. If this does not correct the fault – send engineer.

On site fault finding action:

Test each item in turn to determine fault.

 **Code:**
1

Meaning:
Requires charge.

Description:

Telephone fault finding action:

Ask client to drive lift to charge contacts – if 'Okay' code does not show send engineer.

On site fault finding action:

Drive lift to charge contacts. Check charging circuit if 'Okay' code not displayed.

 **Code:**
2

Meaning:
Off charge.

Description:

Telephone fault finding action:

Ask client to drive lift to charge contacts – if 'Okay' code does not show send engineer.

On site fault finding action:

Drive lift to charge contacts. Check charging circuit if 'Okay' code not displayed.

 **Code:**
3

Meaning:
Top stop – Right hand.
Bottom stop – Left hand.

Description:
End limits activated.

Telephone fault finding action:

Ask client to tap trunnion guards in case they are stuck.
If this does not correct the fault – send engineer.

On site fault finding action:

Check end limit circuit and trunnion guards.

 **Code:**
4

Meaning:
Top pressure – Right hand.
Bottom pressure – Left hand.

Description:

Safety edge (up/down direction)
activated – footplate.

Telephone fault finding action:

Ask client to tap footplate edges. If this does not correct the fault – send engineer.

On site fault finding action:

Check footplate leading edge.

5 Code:
5**Meaning:**Bot stop – Right hand.
Top stop – Left hand.**Description:**

End limits activated.

Telephone fault finding action:Ask client to tap trunnion guards in case they are stuck.
If this does not correct the fault – send engineer.**On site fault finding action:**

Check end limit circuit and trunnion guards.

6 Code:
6**Meaning:**Bot pressure – Right hand.
Top pressure – Left hand.**Description:**Safety edge (down/up direction)
activated – footplate, underpan.**Telephone fault finding action:**Ask client to tap footplate edges. If this does not correct the fault
– send engineer.**On site fault finding action:**

Check footplate bottom and downside and chassis underpan.

7 Code:
7**Meaning:**

Low voltage.

Description:

Batteries approaching critical level.

Telephone fault finding action:Ask client to drive lift to charge contacts – if 'Okay' code does
not show send engineer. If the lift will not drive – send engineer.**On site fault finding action:**Drive lift to charge contacts. Check charging circuit if 'Okay' code not
displayed. If lift will not drive replace batteries and check charging circuit.**8** Code:
8**Meaning:**Up direction – Right hand.
Down direction – Left hand.**Description:**Shows when toggle switch
is activated in up/down direction.**Telephone fault finding action:**

None.

On site fault finding action:

None.

9 Code:
9**Meaning:**Up direction – Left hand.
Down direction – Right hand.**Description:**Shows when toggle switch
is activated in down/up direction.**Telephone fault finding action:**

None.

On site fault finding action:

None.

A Code:
A**Meaning:**

Hinge is open.

Description:**Telephone fault finding action:**

None.

On site fault finding action:

None.

b Code:
b**Meaning:**

Switch active.

Description:A switch is active at power on
i.e. Toggle Up, Toggle down,
IR up IR down or learn.**Telephone fault finding action:**

Send engineer.

On site fault finding action:

A short circuit has occurred on toggle circuit – check circuit.

C Code:
C**Meaning:**

IR address fail.

Description:The IR address (dip switch)
does not match.**Telephone fault finding action:**

Send engineer.

On site fault finding action:

Reprogram handsets.

Appendix 2

d Code:
d

Meaning:

Relay not open
(stopped).

Description:

The main power relay
is welded closed.

Telephone fault finding action:

Send engineer.

On site fault finding action:

Replace main board.

E Code:
E

Meaning:

Relay not closed.

Description:

The main power relay
did not close.

Telephone fault finding action:

Send engineer.

On site fault finding action:

Check battery voltage and replace if necessary, otherwise replace
main board.

F Code:
F

Meaning:

Brake semi-conductor failed.

Description:

Telephone fault finding action:

Send engineer.

On site fault finding action:

Replace main board.

g Code:
g

Meaning:

Brake not connected.

Description:

Telephone fault finding action:

Send engineer.

On site fault finding action:

Check brake.

H Code:
H

Meaning:

Relay not open
(pre delay).

Description:

The main power relay
is closed early.

Telephone fault finding action:

Send engineer.

On site fault finding action:

Replace main board.

J Code:
J

Meaning:

Hinge interlock switch error.

Description:

Telephone fault finding action:

Send engineer.

On site fault finding action:

Replace hinge interlock roller switch.

L Code:
L

Meaning:

Current limit exceeded.

Description:

Telephone fault finding action:

Check client understands loading limits.
Send engineer if persistent fault.

On site fault finding action:

Check motor and track for obstructions.

n Code:
n

Meaning:

Half speed.

Description:

Telephone fault finding action:

Send engineer if permanently showing.

On site fault finding action:

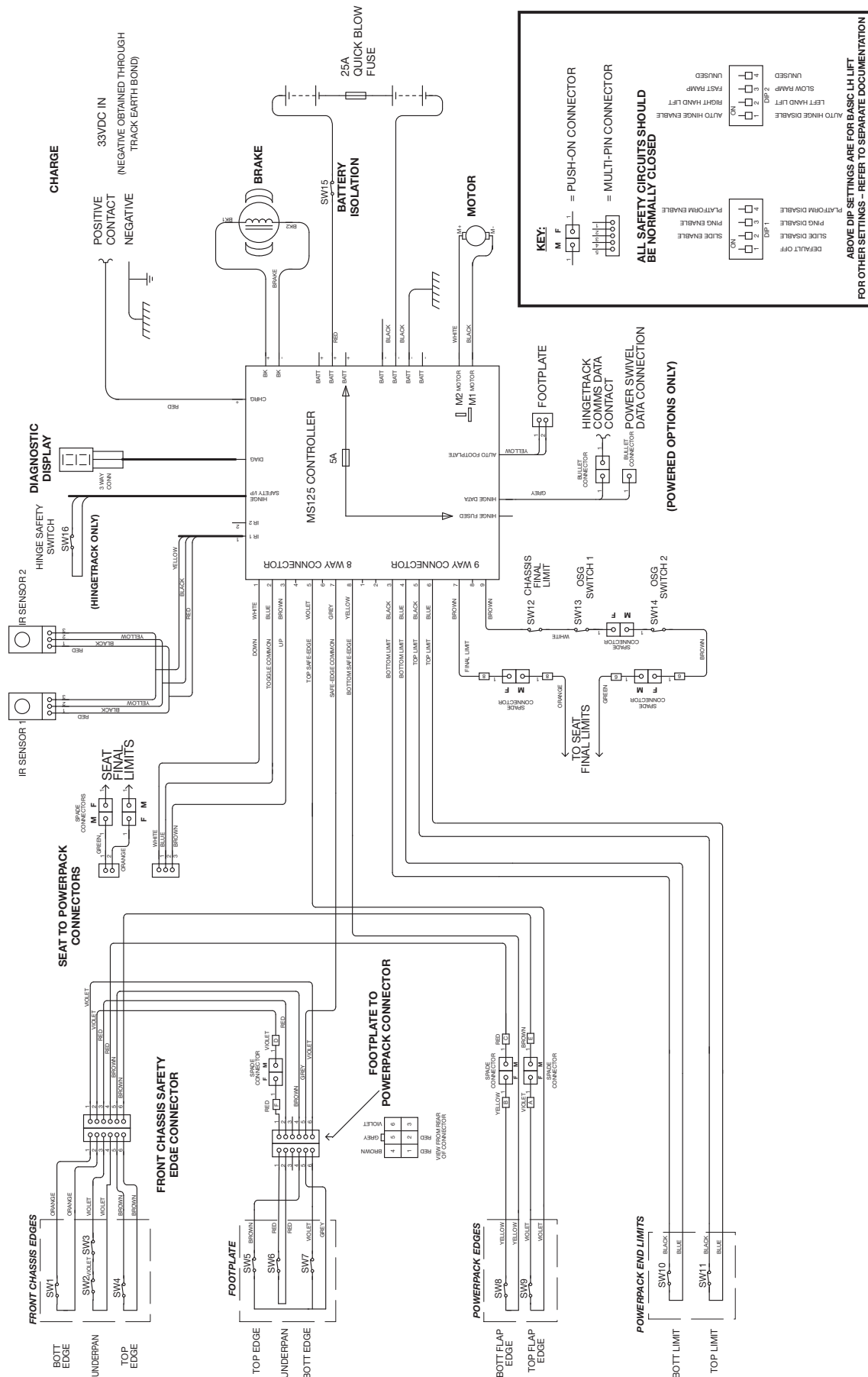
Check reed switches and dip switch settings.
Check battery voltage.

Code:
0**Meaning:**
Default Eeprom.**Description:**
The Eeprom has been reset to its default value (Flash Failure).**Telephone fault finding action:**
Send engineer.**On site fault finding action:**
Replace main board.**Code:**
P**Meaning:**
PS no reply.**Description:**
Powered swivel did not respond.**Telephone fault finding action:**
NOT YET ACTIVE.**On site fault finding action:**
NOT YET ACTIVE.**Code:**
r**Meaning:**
No charge current.**Description:**
Activated.**Telephone fault finding action:**
Check that power supply is switched on from mains supply. If yes send engineer.**On site fault finding action:**
Check power supply.**Code:**
U**Meaning:**
No float indication V1.19 software and later only.**Description:**
Faulty power supply.**Telephone fault finding action:**
Send engineer.**On site fault finding action:**
Check power supply.**Code:**
Y**Meaning:**
Main board error.**Description:**
The main control board has a fault.**Telephone fault finding action:**
Send engineer.**On site fault finding action:**
Replace main board.**Code:**
N/A**Meaning:**
Over current.**Description:****Telephone fault finding action:**
Send engineer with a service exchange power pack.**On site fault finding action:**
Replace power pack.**Code:**
N/A**Meaning:**
Lift is in "sleep mode" to conserve battery power.**Description:****Telephone fault finding action:**
None.**On site fault finding action:**
Press toggle or handset button to wake lift.**NOTE: If the display is showing anything but the diagnostic codes listed it requires resetting.**

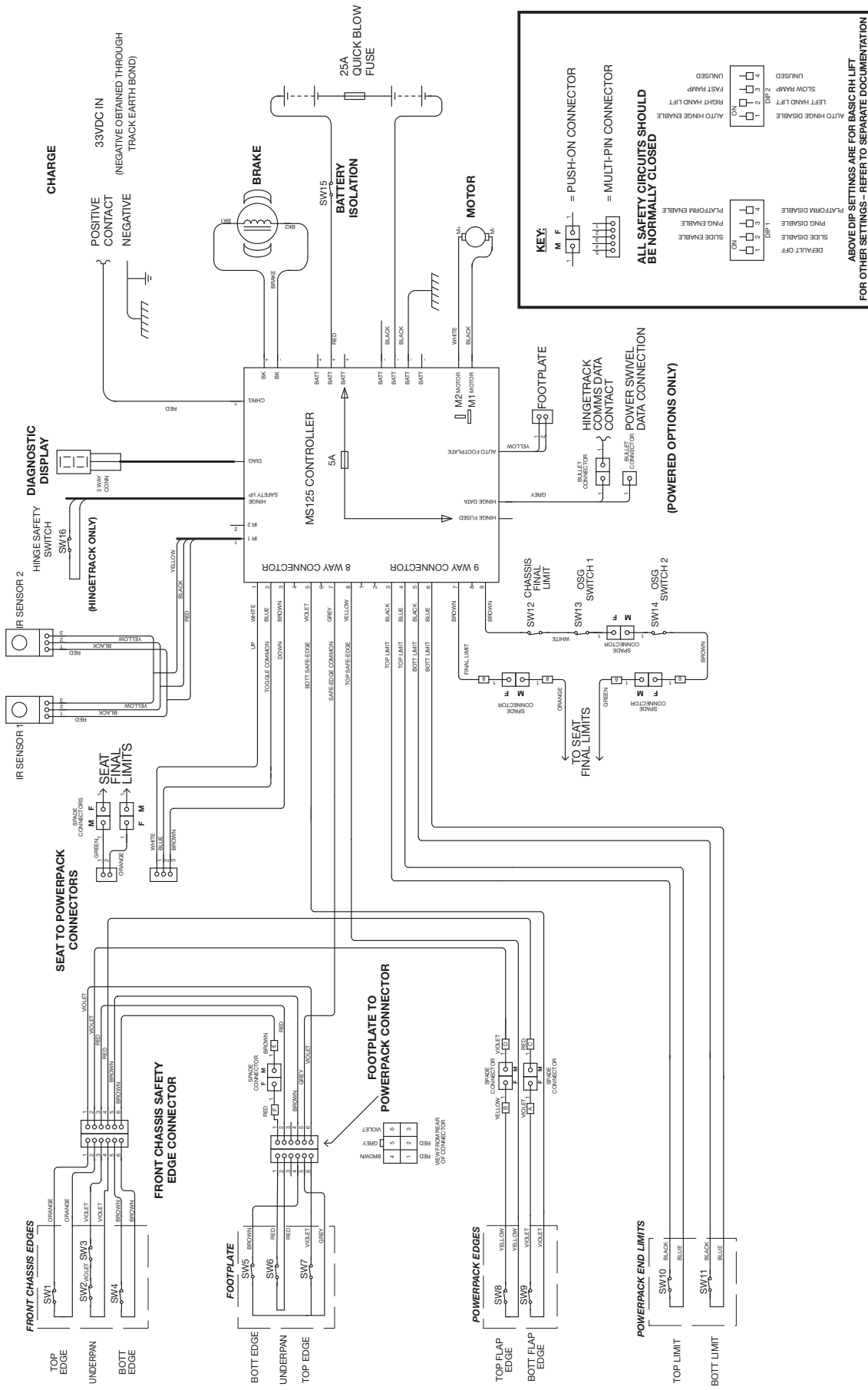
Drive the lift off the charge contacts. Turn the main switch on the unit off for 10 seconds and then back on.

Appendix 3

MS125 1000 series block schematic – left hand stairlift



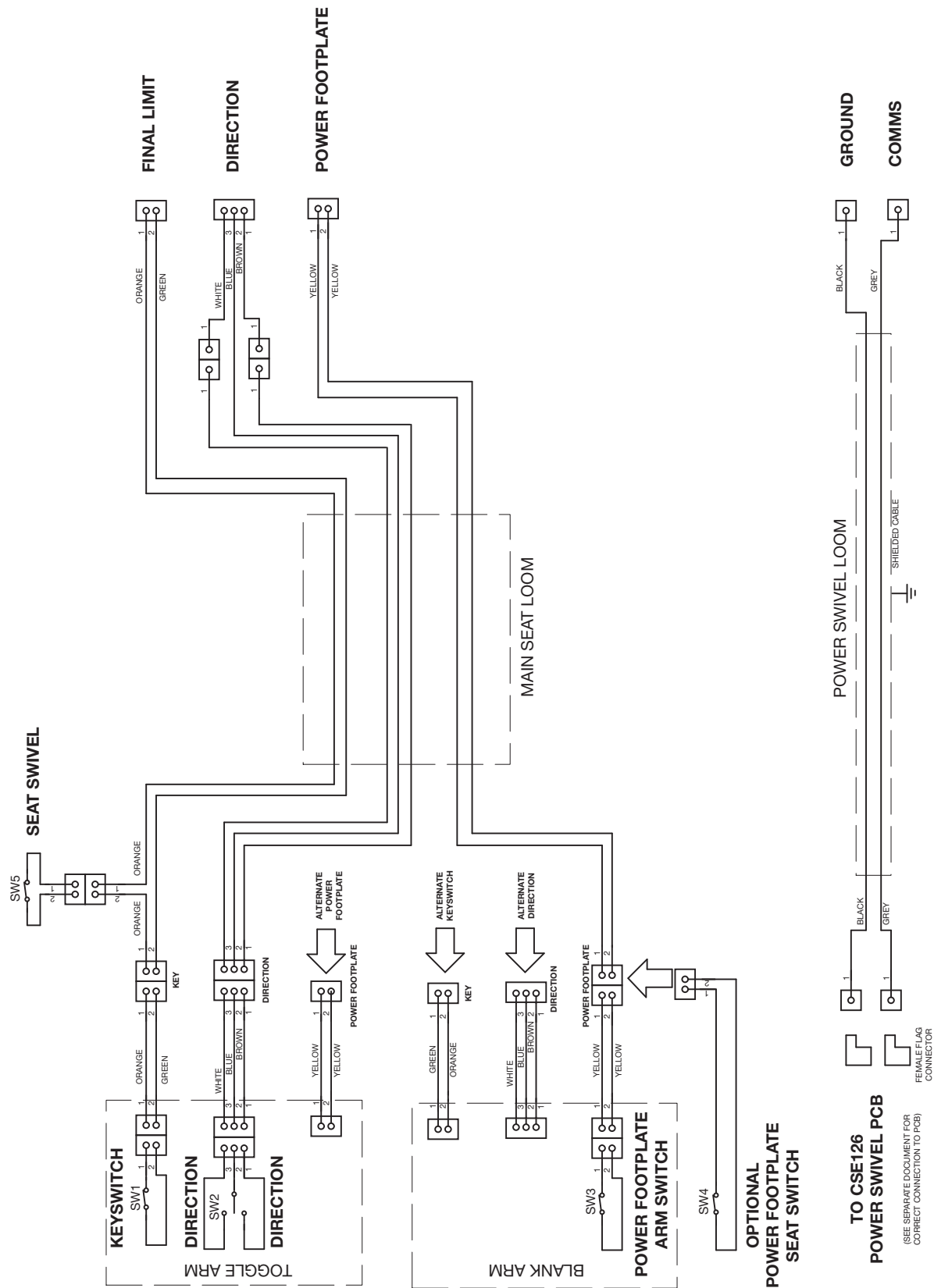
MS125 1000 series block schematic – right hand stairlift



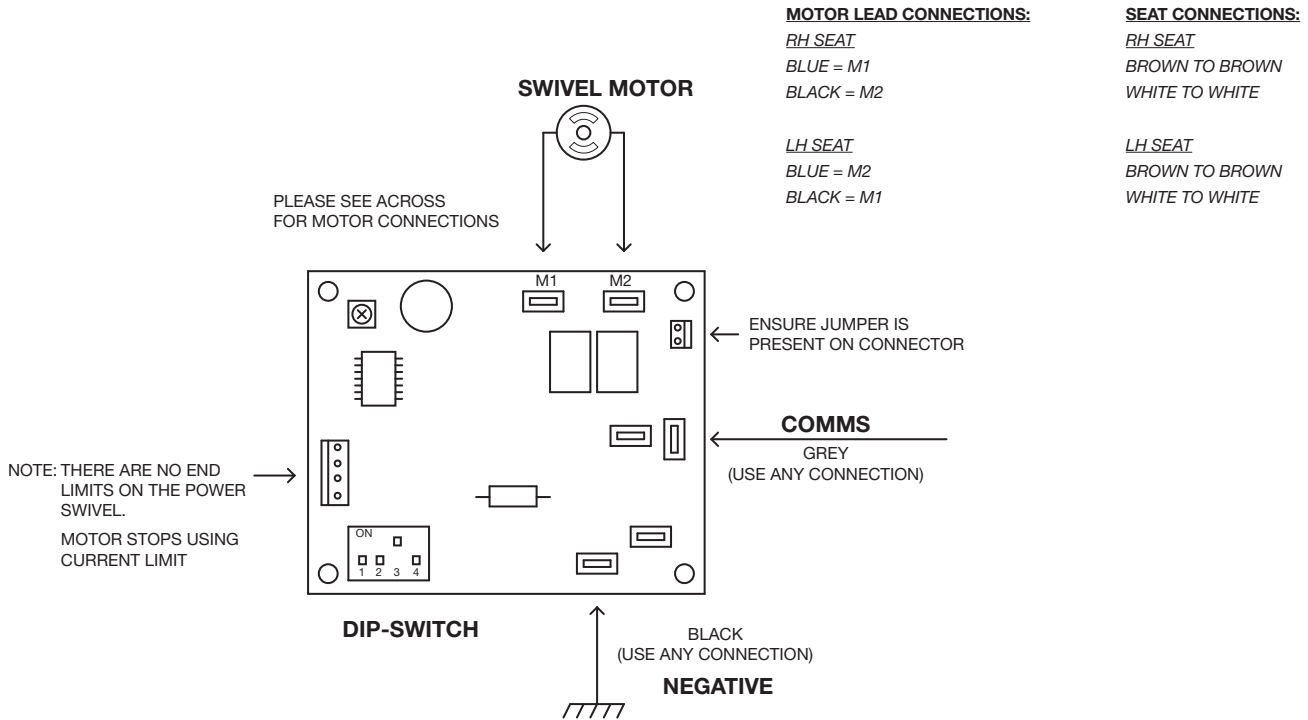
ENGLISH

Appendix 3

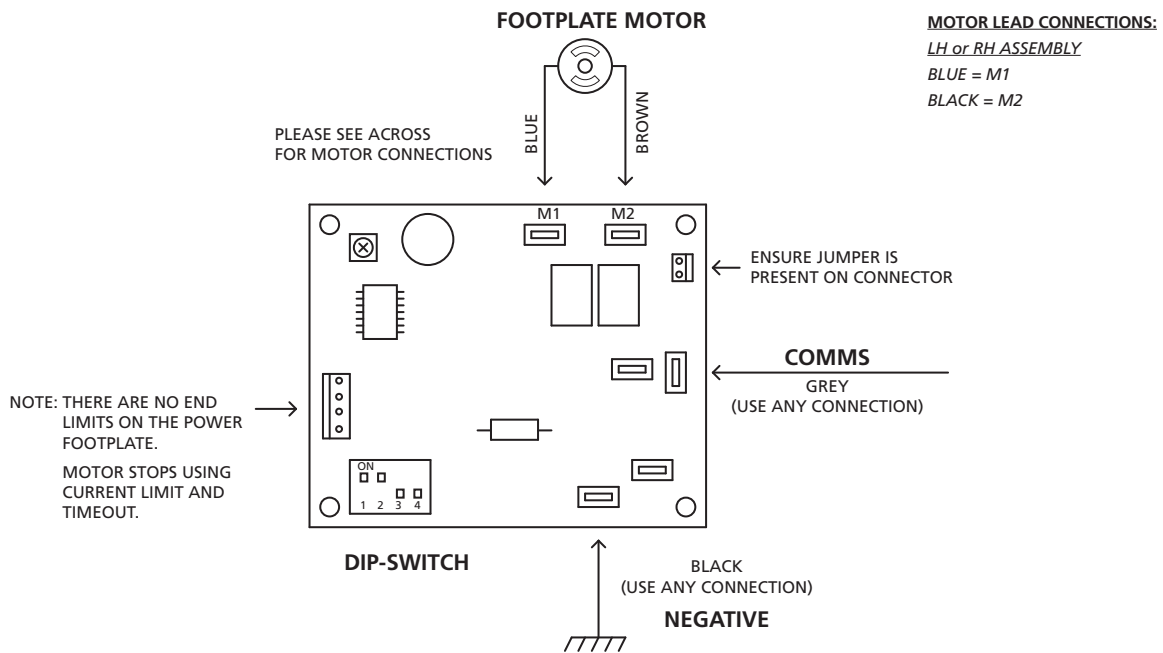
Handicare smart seat schematic



Smart seat power swivel PCB connections

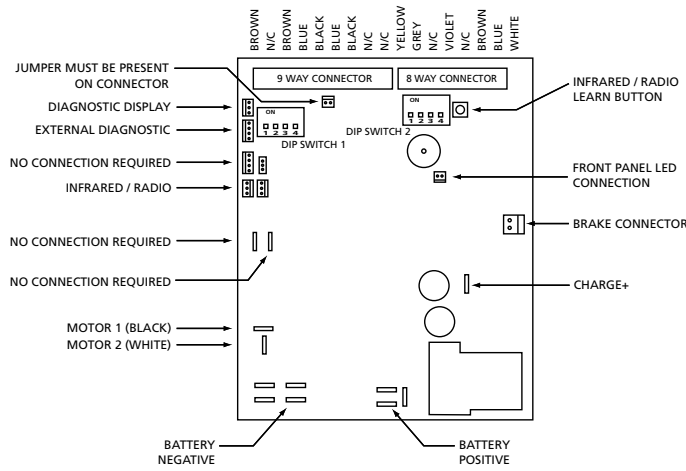


Smart seat power footplate PCB connections



Appendix 3

MS125 1000 standard DIP settings **LH**

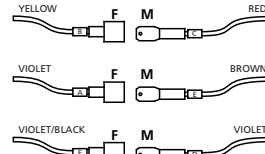


PLEASE NOTE: ONLY DIFFERENCE BETWEEN A LH AND RH LIFT IS DIP SWITCH SETTINGS + SPADE CONNECTOR CHANGES.

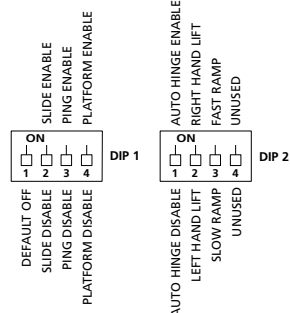
SEE ACROSS FOR SPADE CONNECTIONS.

IF ANY DIP SWITCHES ARE CHANGED, PLEASE TURN OFF LIFT, WAIT 10 SECONDS, THEN POWER THE LIFT BACK ON.

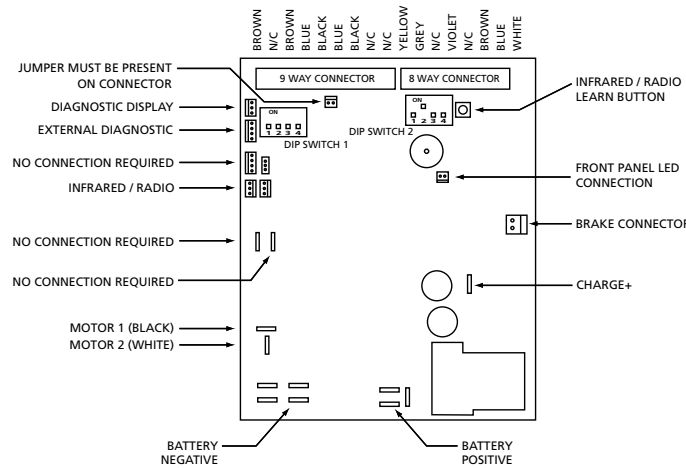
LEFT HAND CONNECTIONS



FUNCTION OF SWITCHES



MS125 1000 standard DIP settings **RH**

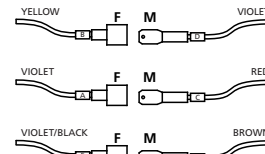


PLEASE NOTE: ONLY DIFFERENCE BETWEEN A LH AND RH LIFT IS DIP SWITCH SETTINGS + SPADE CONNECTOR CHANGES.

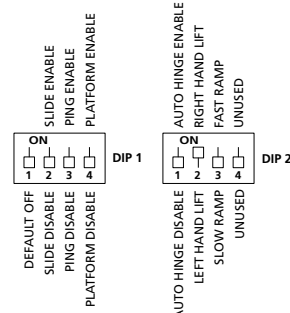
SEE ACROSS FOR SPADE CONNECTIONS.

IF ANY DIP SWITCHES ARE CHANGED, PLEASE TURN OFF LIFT, WAIT 10 SECONDS, THEN POWER THE LIFT BACK ON.

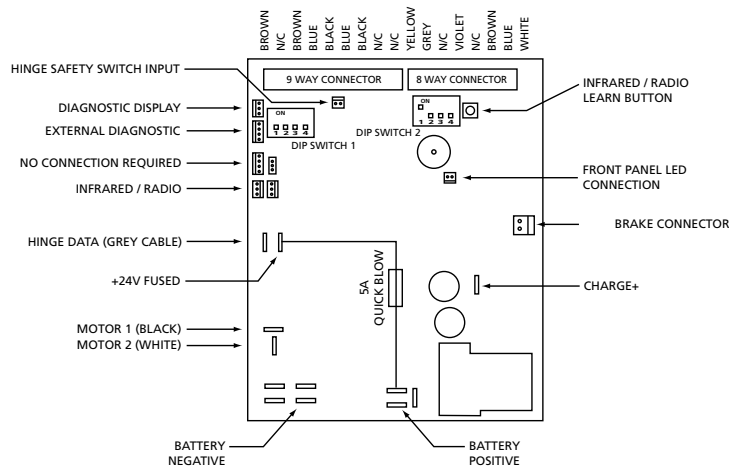
RIGHT HAND CONNECTIONS



FUNCTION OF SWITCHES



MS125 1000 DIP settings **LH** auto hinge CSE126

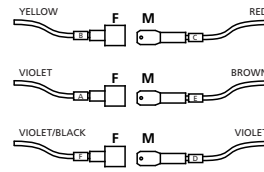


PLEASE NOTE: ONLY DIFFERENCE BETWEEN A LH AND RH LIFT IS DIP SWITCH SETTINGS + SPADE CONNECTOR CHANGES.

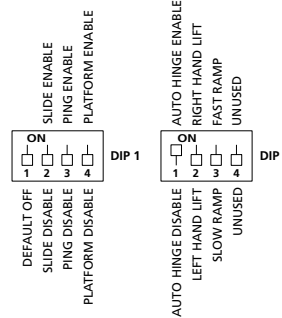
SEE ACROSS FOR SPADE CONNECTIONS.

IF ANY DIP SWITCHES ARE CHANGED, PLEASE TURN OFF LIFT, WAIT 10 SECONDS, THEN POWER THE LIFT BACK ON.

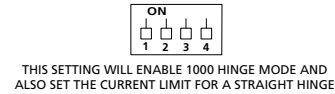
LEFT HAND CONNECTIONS



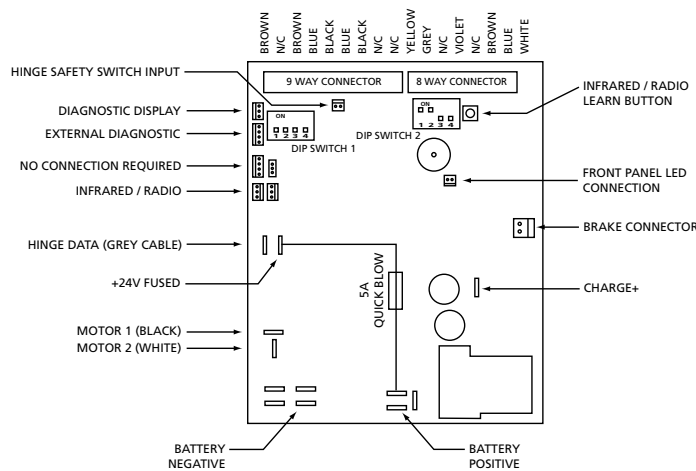
DIP SWITCH SETTING CSE125SM



DIP SWITCH SETTING CSE126



MS125 1000 DIP settings **RH** auto hinge CSE126

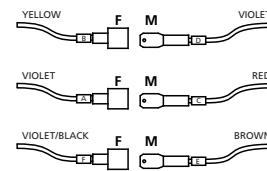


PLEASE NOTE: ONLY DIFFERENCE BETWEEN A LH AND RH LIFT IS DIP SWITCH SETTINGS + SPADE CONNECTOR CHANGES.

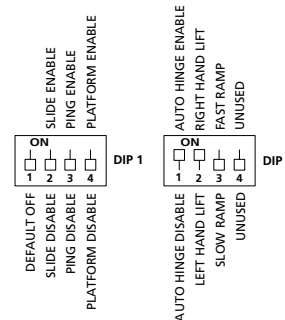
SEE ACROSS FOR SPADE CONNECTIONS.

IF ANY DIP SWITCHES ARE CHANGED, PLEASE TURN OFF LIFT, WAIT 10 SECONDS, THEN POWER THE LIFT BACK ON.

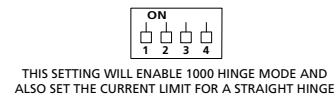
RIGHT HAND CONNECTIONS



FUNCTION OF SWITCHES

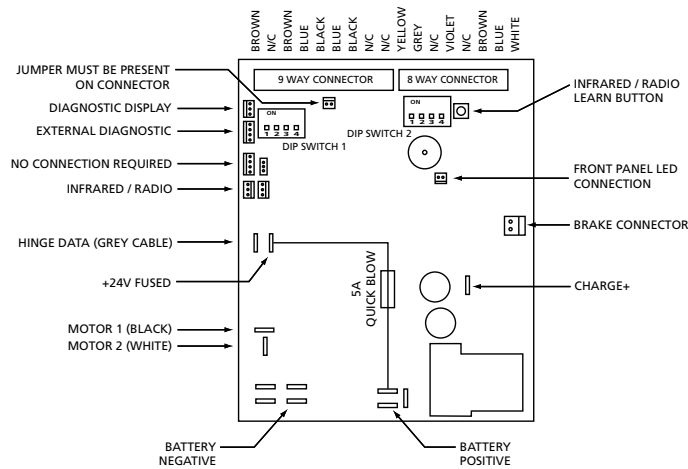


DIP SWITCH SETTING CSE126



Appendix 3

MS125 1000 DIP settings **LH** auto swivel CSE126

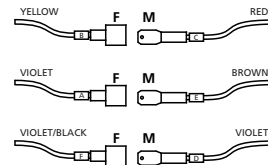


PLEASE NOTE: ONLY DIFFERENCE BETWEEN A LH AND RH LIFT IS DIP SWITCH SETTINGS + SPADE CONNECTOR CHANGES.

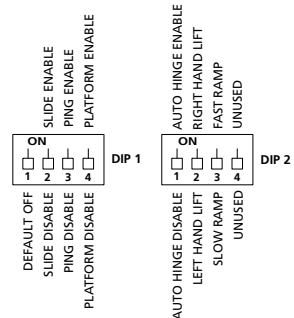
SEE ACROSS FOR SPADE CONNECTIONS.

IF ANY DIP SWITCHES ARE CHANGED, PLEASE TURN OFF LIFT, WAIT 10 SECONDS, THEN POWER THE LIFT BACK ON.

LEFT HAND CONNECTIONS



DIP SWITCH SETTING CSE125SM

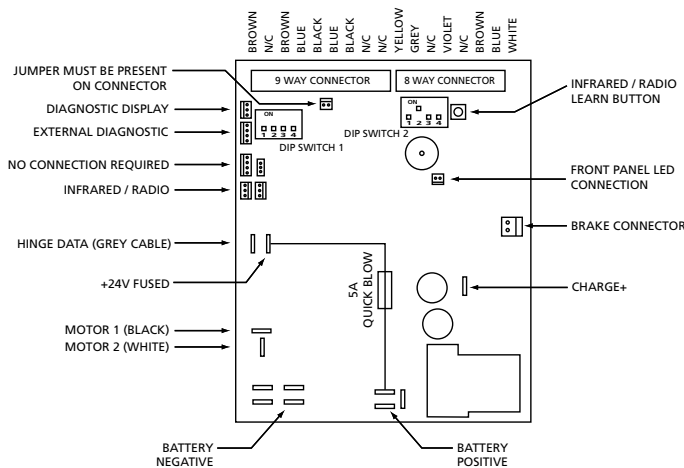


DIP SWITCH SETTING CSE126



THIS SETTING WILL ENABLE POWER SWIVEL MODE

MS125 1000 DIP settings **RH** auto swivel CSE126

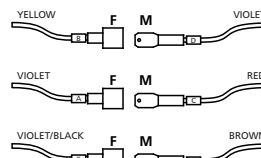


PLEASE NOTE: ONLY DIFFERENCE BETWEEN A LH AND RH LIFT IS DIP SWITCH SETTINGS + SPADE CONNECTOR CHANGES.

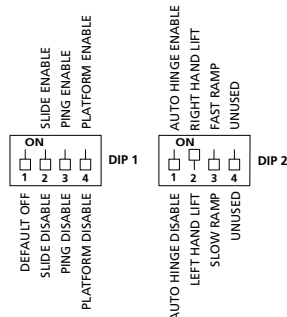
SEE ACROSS FOR SPADE CONNECTIONS.

IF ANY DIP SWITCHES ARE CHANGED, PLEASE TURN OFF LIFT, WAIT 10 SECONDS, THEN POWER THE LIFT BACK ON.

RIGHT HAND CONNECTIONS



FUNCTION OF SWITCHES



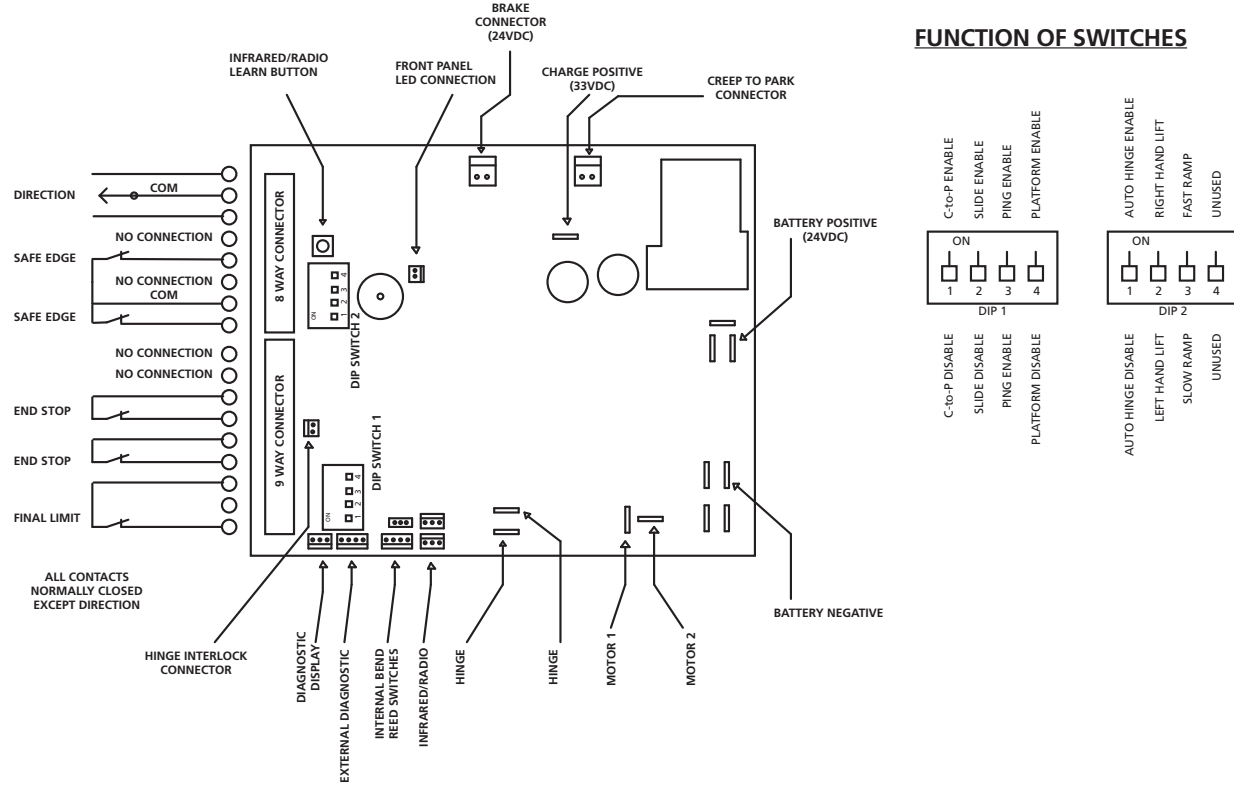
DIP SWITCH SETTING CSE126



THIS SETTING WILL ENABLE POWER SWIVEL MODE

MS125 PCB connections

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IF ANY DIP SWITCHES ARE CHANGED, PLEASE TURN OFF LIFT, WAIT 10 SECONDS, THEN POWER THE LIFT BACK ON.

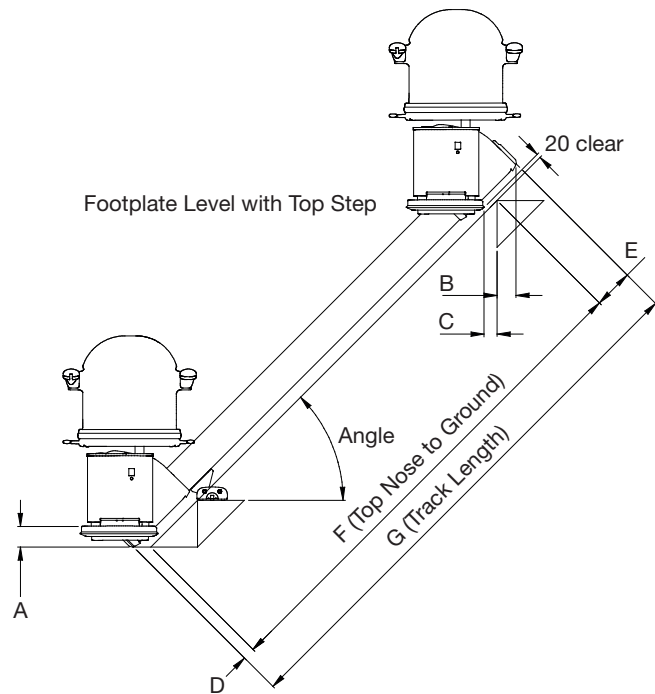
Appendix 4

1000 track overhang

The Handicare 1000 track overhang can be ordered in two basic configurations, dependant on the requirements of the application. These configurations are:

- 1 Minimum Footplate Height with Standard Top Intrusion, or
- 2 Minimum Top Intrusion

The diagram opposite should be used in conjunction with the tables below to calculate the 'Track Cut Length'.



1000 TRACK LENGTH CALCULATION – TRACK OVERHANG

Once the measurement of the stair length is taken and the angle has been ascertained it is possible to calculate accurately the total track length (An additional length of track is required to allow the footplate to finish level with the top landing).

If the track overhang at the top of the staircase is not critical a rule of thumb is to add 280 mm to the stair length to give you a total track length.

Stair length + 280 mm = Total track length

Note: 20mm minimum footplate edge to stair nose clearance.

MINIMUM TRACK INTRUSION AT THE TOP OF STAIRS (CRITICAL)

If there is a door or obstruction at the top of the stairs it may be necessary to keep the track overhang on the top landing to a minimum. For a given angle it is possible to ascertain the horizontal intrusion and the dimension required to get the total track length.

By using this method the footplate may be higher than usual when it is in the start position at the bottom of the stairs.

IF THE TRACK INTRUSION IS CRITICAL AT THE TOP OF THE STAIRCASE USE THE CHART BELOW.

	Angle	38°	39°	40°	41°	42°	43°	44°	45°	46°	47°	48°	49°	50°
Minimum Footplate Height	A	102	102	102	101	100	98	96	95	94	91	89	87	86
Horizontal Track Overhang	B	92	97	100	102	105	108	110	111	113	114	115	115	115
Nose to Footplate Gap	C	71	68	64	62	59	56	53	50	50	49	49	48	48
Ground Track Intrusion	D	57	56	55	53	51	49	47	46	44	43	41	40	38
Track Extension from Nose	E	147	154	161	168	176	183	189	195	201	209	213	218	224
Top Nose to Ground	F													
Track Cut Length (D+E+F)	G													

Example

Angle	45°
A	95
B	111
C	50
D	46
E	195
F	3250
G	3491

Example: If the Track Nose to Ground measurement, F, is 3250mm the Track Cut Length will be:
 $F (3250\text{mm}) + E (195\text{mm}) + D (46\text{mm}) = \text{Track Cut Length, G (3491mm)}$.



Notes

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