ATLAS

A Mobility and Accessibility Manufacturer

ATLAS GEN+ Stairlift

Installation Guide

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About this **guide**

Description of this **guide**

This guide is intended to show you how to install an Atlas GEN+ stairlift.

This guide contains detailed instructions about:

- Intended Audience and their Required Knowledge
- Typical Kitting List of Parts in an Atlas GEN+ stairlift
- Required Installation Equipment you will need to install a stairlift
- Health and Safety Guidance
- Installing the Stairlift
- Testing the Stairlift
- Troubleshooting
- Technical Information and System Status Codes
- Instructing the User how to Use the Product
- Paperwork
- Quick Reference Guide

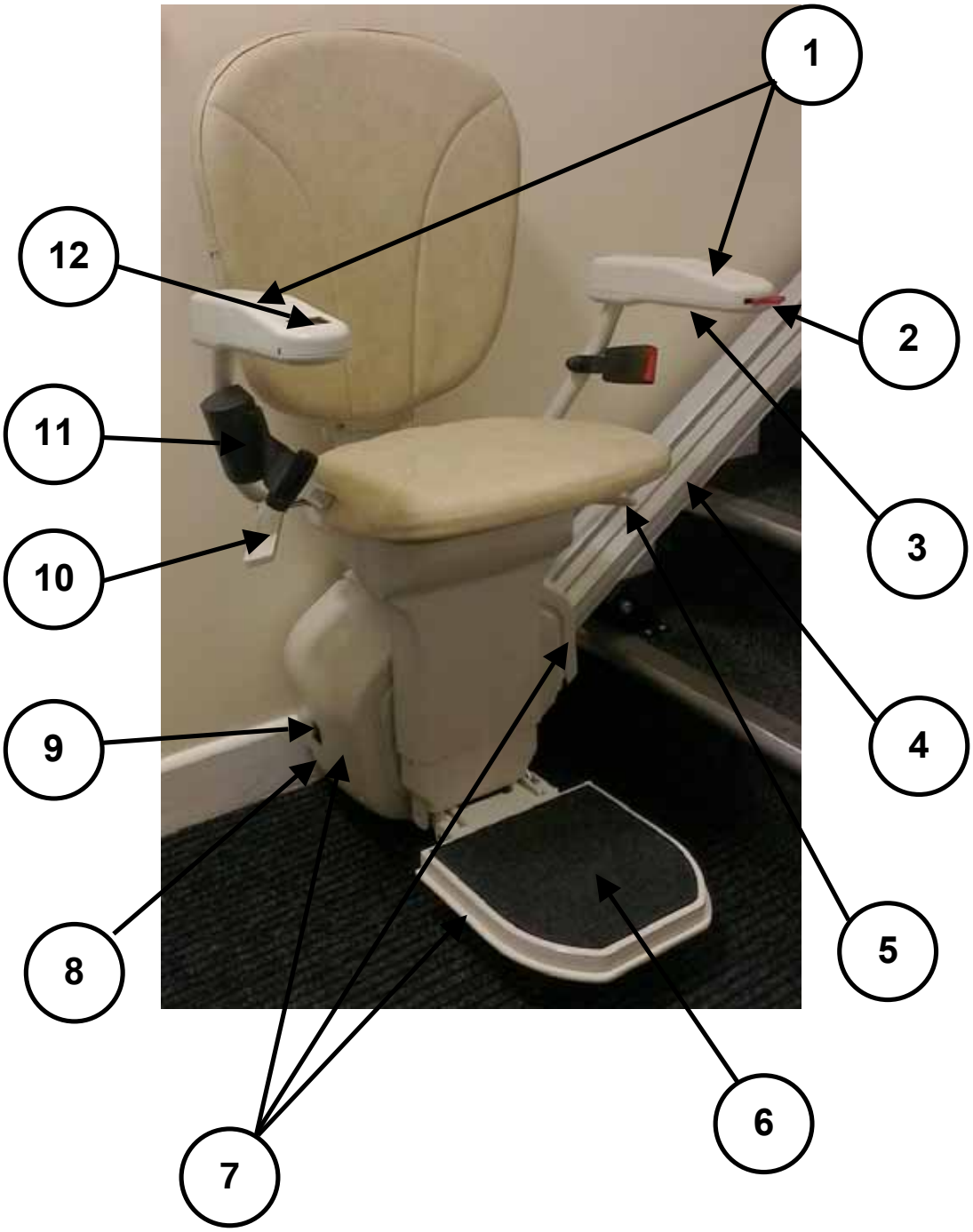
You should also have a User Guide to refer to – you must give this to the resident when the installation is completed.

Required Knowledge

This guide assumes that you have the following knowledge:

- Basic Mechanical Skills - so you understand what the components of the stairlift do and how they fit and work together
- Basic Wiring Skills - so you understand how the stairlift is connected to the mains power supply; and what the electrical components of the stairlift do and how they fit and work together
- Health and Safety Awareness - so you are fully aware of and responsible for the health and safety of yourself and the people around you

GEN+ Stairlift **Overview**



No	Meaning
1	Arm rests (fold up and down)
2	Direction Control
3	Keyswitch
4	Rail
5	Footrest Lever
6	Footrest (folds up and down)
7	Safety Edges
8	Hand Wind Point

No	Meaning
9	On / Off Switch
10	Seat Swivel Levers
11	Lap Belt
12	Status Display
13	Mains Power Connection
14	Charging Point
15	Remote Control

These numbers are used in this Installation Guide and the User Guide.

Controls

Mains Power Connection 13

The stairlift should be plugged in at the nearest mains socket. This could be at the top or bottom of the stairs.

The lift needs to be plugged in and switched on at all times. When the power is on, a green indicator light will be shown on the power supply, mounted nearby.

On / Off Switch

The On / Off Switch (9) is used to switch the stairlift on or off. If the stairlift is turned off here the batteries will not recharge.

Status Display

The Status display (12) displays current information. If any faults develop with the operation of the lift they will be displayed here. For a list of codes please see System Status Codes section in this guide.

Key Switch

The Key Switch (3) is used to lock the stairlift.

The Key Switch is located on the underside of the armrest which contains the direction control.

Direction Control

The Direction control (2) is red and located on the end of one of the armrests.

To move the chair, push and hold the joystick in the direction you want to move.

There is a short delay before the stairlift will start or change direction.

Footrest

The footrest (6) can be folded up and down using the Footrest Lever (5).

Swivel Seat

For safety, the seat is locked into one of two positions. In the normal travel position, the seat will be locked into position with your back parallel to the track. This is so you do not catch your feet on the steps during travel. The lift will not travel unless the the seat is locked into this position.

The seat will swivel automatically to allow easy access when the lift reaches the top of the stairs. It will then swivel back into the correct position before you start your downwards journey.

If you need to rotate the seat manually, lift one of the Seat Swivel Levers (10), and swivel towards the landing until the seat comes to a stop then release the lever to lock the seat in place. Make sure the seat is locked before you try to sit down or get up from it.

To return the seat to the normal travel position, lift one of the seat swivel levers (10) and swivel away from the landing until the seat comes to a stop then release the lever to lock the seat in place.

The seat only swivels at the top of the stairs.

If you try to swivel the seat whilst the lift is moving, the chair will stop.

Safety Edges

The footrest and the motor unit are fitted with Safety Edges (7). These are pressure pads which will stop the lift if they come into contact with any obstructions.

If the lift stops because it has encountered an obstruction, a fault code will be displayed on the diagnostic display. Wait two or three seconds, then reverse away from the blockage.

Lap Belt

The Lap Belt (11) holds you safely on the seat as you climb or decend the stairs. Like a car seat belt, this extends from the holder to clip into a socket. The lap belt must be used every time the stairlift is used.
Do not undo the lap belt until the chair reaches the end of the track.

Charging Points

These are located at the top and bottom of the track. The lift MUST be parked on a charging point when not in use. The stairlift will sound an audible beep if it is not parked on a charging point.

Remote Controls

The Remote Controls (15) work in the same way as the arm controls. The standard lift is supplied with 2 remote controls. These remote controls have 2 buttons. Up and Down

Typical Kit List

A typical installation will use the following supplied parts:

- 5 x Rail Clamps
- 5 x Legs
- 5 x Leg Mount
- 10 x M10 x 16 hex bolt
- 10 x M10 washers
- 10 x M8 x 20 Hex Bolt
- 10 x M8 Plain Nuts
- 20 x M8 Washers
- 20 x 6.3 x 38 Wood Screws
- 1 x Extrusion Clamp
- 1 x Extrusion Clamp Lower a
- 1 x Extrusion Clamp Lower b
- 4 x M6 x 10 Countersunk Hex Screw
- 8 x M8 x 16 Button Head Hex Screw
- 2 x Extrusion End Plate
- 10 x M6 x 20
- 2 x Charge Ramps & Insulators
- 4 x M4 x 10 Countersunk hex Screw
- 4 x Charge Ramp Captive Nuts
- 2 x Remote Controls, Holsters & Batterys
- 1 x Mains – 27v Transformer & Bracket
- 8 x Pozi Wood Screw
- 8 x Red Wall Plug
- 2 x 12v 8.5aH Batteries
- 5m x White 2 Core Cable
- 2 x M5 x 12 Hex Button Head Rack mounting Bolts
- 2 x 2.25m Rail Extrusions with Rack
- 1 x Atlas GEN+ carriage
- 1 x GEN+ Ergo Seat and Chassis Leg.
- Silicone or synthetic PTFE Lubricant for the racking
- 1 x Manual Winding Handle (to be left with the user)
- 1 x User Guide (to be left with the user)

Required Installation Equipment

To perform a typical installation you will need to use the following types of equipment:

- Safety Goggles and Rigger Gloves
- Spirit level, tape measure
- Drillbits:
  - 6mm, 5mm & 4.2mm HSS Drill Bits. M5 & M6 Tap
  - 8mm masonary drill bits (for drilling into brick, stone, concrete, etc)
  - No 3 Screwdriver bit and extension bar for drill to use on footplate screws
- Combination Spanners / Sockets
  - 13mm & 17mm Combination Spanners
  - 13mm Socket with Ratchet
  - Torque Wrench, 17mm socket & 4mm allen key bit
- One set of metric Allen Keys
- Hammer
- Screwdrivers:
  - Phillips #1
  - Phillips #2
  - Terminal screwdriver
- Anti-static wrist strap
- Wire strippers
- Crimping Tool
- Electrical or Combination pliers and Electrical side cutters
- Digital multi-meter/clamp meter (must be capable of measuring DC currents of up to 30A for at least 5 seconds)
- Electric drill (varispeed with hammer/non-hammer action) (either mains-powered or 24V cordless)

Health & Safety

Guidance Electrical Safety

Installation of the stairlift is mainly a manual process. Although you do need to plug the stairlift into a mains power supply socket, this socket MUST already have been installed by a qualified electrician.

All work on the 220Volt system must be done by a qualified electrician.

Safe Working Practices

When installing the stairlift, follow safe working practices in these areas:

- Working at heights or on the stairs
- Working with power tools or equipment which generate noise
- All loading, transport, unloading, unpacking, lifting and carrying of the equipment should be done in line with current HSE guidelines.

Be aware of the risks of equipment falling from a height. For example, tools falling through open-treaded staircases or through banister rails, or equipment falling or sliding down stairs.

Always use lifting points supplied in equipment packaging.

Please observe warnings and guidlines printed on equipment packaging.

Giving Guidance to the Site Owner

Important – Intruder Alarms

Intruder alarms often have sensor pads at the top or bottom of staircases or on one or more steps. There may also be alarm wires hidden under a carpet or tucked under a skirting board.Check whether any such sensors or cables need to be moved before drilling into a staircase or floor.

Provide guidance to the home owner about what safety risks they and any other people might be exposed to during the installation. For example

- Movement of equipment and tools posing a risk to the buildings or things in it (such as pictures, paintings or ornaments)
- Cables and other equipment posing a trip hazard - especially on or near stairs
- Live electrical equipment (such as electric drills) posing a hazard (for example, if used inappropriately by children)
- Potentially sharp equipment (such as saws, drills bits, knives or chisels)
- Potential noise due to the use of power tools
- Potential creation of airborne dust
- Remember to let the resident know you will take them through how to use the stairlift, so they can let some-one else know what time a demonstration might take place.
- Resident must keep boarding/exit areas of the stairlift clear and well lit to a level of 50 lux.

Preparing the Workplace

Before you start the installation, make sure of a ***Safe Working Environment***, with enough space to assemble the stairlift assembly and for you to work around it.

Make sure any loose or fragile property (such as pictures or ornaments) is located in a safe place away from the working area.

Insect the area for potentioal obstructions such as central heating pipes, hidden cables, underfloor heating,etc.

The work area should be well lit. If sufficient lighting is not available, temporary lighting should be used.

The stair treads should be inspected for their suitability of supporting the installed machinery. If in doubt, a qualified person should be engaged to check suitability.

Installing the **GEN+** Stairlift

The stairlift must be fitted so that it does not prevent doors to and in the building from opening and closing.

Laying out the Components

Each complete stairlift consists of 3 boxes, the Drive Unit box, The Chair box the Chassis Leg box, and chair box. The Chassis leg box also contains the fitting kit.

Install the charger

Mount the DC charger using the bracket supplied near a convenient mains outlet socket. All cables must be securely clipped or trunked to the vicinity of either the top or bottom of the stairlift rail, in accordance with current regulations.

The DC output from the charger consists of 2 cores, plain black indicates 0v, black with a white dash indicates +v.

Assembling the rail

When preparing to place the rail on the stair way the teeth of the gear rack will always be facing the wall.

Note: This step will be completed prior to your lift being shipped.

Measure staircase as shown below

Add 11” to this measurement for overall rail length to cut.

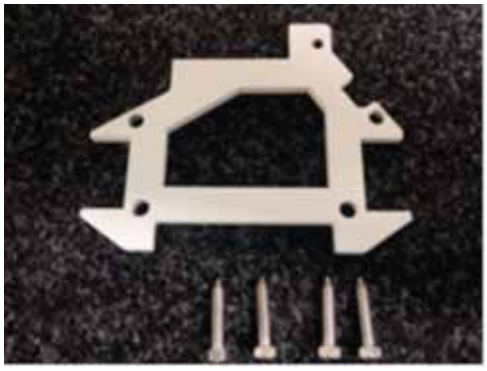
Ensure that cut is square and deburred.

Assemble and fit bottom charge / end stop



The charge/end stop assembly determines the height of the stairlift finishing postion at the bottom of the stairs. The assembly must be at least 2 ¼” from the end of the rail. **Note: Be careful not to allow the charging wire to be trapped under the screw when tightening the charging point in place**

Fit rail end cap.



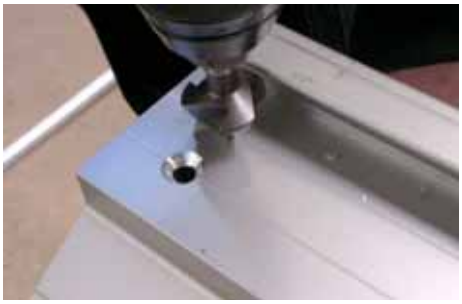

Jointing Rail

Assemble rail jointing kit.

Note: All necessary holes will be pre-drilled when you receive your lift

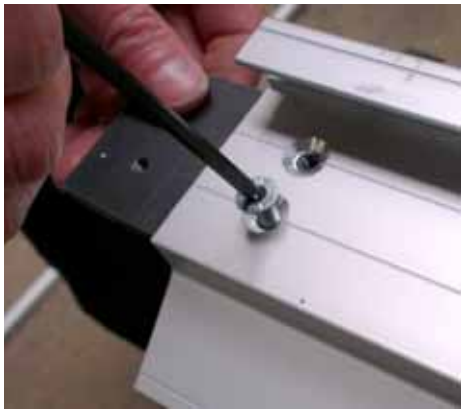
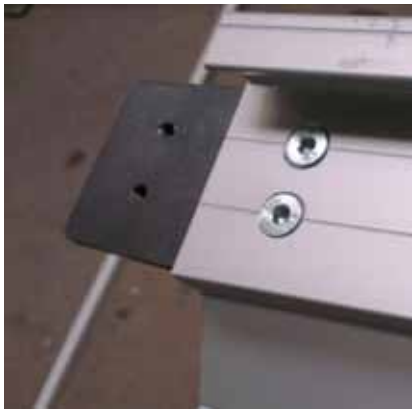
Line up top jointing plate and mark holes using lines in extrusion as a guide.

Drill holes using 6.2mm drill bit and countersink using a bit suitable for M6 Screws.



Insert Top Jointing Plate and fix with supplied M6 countersunk hex screws ensuring they do not stand proud of rail.

Note: There only 2 holes required for installation of this plate and will be predrilled when you receive your lift

Slide Bottom Jointing Plate into lower section of track and tighten on bolt to hold in position. Place lower section of rail onto the staircase and slide top section into postion until the gap closes completely.

Loosen bolt on Bottom Jointing plate and slide back up until it straddles track joint. Tighten all 8 bolts.


Run supplied 2 core cable down the inside of the rail and connect +ve core to grey charge strip cable using connector block.


If charger is to be located at bottom of the stairs drill 12.5mm hole in underside of rail, fit cable gland and pass charge wire through. Connect Black core with white trace to connector block. Crimp ring connector on to Black charger core and 0v core through rail. Loosen end cap and clamp Crimp ring connector between end cap and rail. Tighten cable gland. This procedure can also apply to the top if the charger is to be located there.

The hole for the charger cable access should be drilled before the rail is fixed to the stairs.

Note: The + charger wire will have the broken white line on the wire



Fit plastic rail end cover.

Fit Legs

Assemble Legs


Turn over rail and fit legs. On a standard length installation all 5 legs must be fitted. There must be a leg on 1st step, legs no further than 1 step above and below the rail joint and a leg on the step below landing.

Turn rail back over and ensure that each leg sits level on the correct step. Adjust until the rail is a minimum of 3 3/8”, measured diagonally from the nose of the step. This measurement is assuming that the footrest is in the central position as supplied and can be reduced to approx. 50mm by ofsetting the footrest.

Set rail 2 ¼” from wall, or with foot hard up against the stinger, whichever is the greater. Ensure that the wall is vertical. If not, base the distance from the innermost point.

This will ensure that the armrest of the carriage is the correct minimum distance from the wall to remove trapping hazards.

Screw down rail and tighten all leg bolts allowing for thickness of step covering to maintain the minimum step clearance distance. Ensure that each foot in attached using 4 screws supplied.

Insert 1st section of rack from the top and slide all the way down rail. To insert, line up “V” cut in rack to notch in rail extrusion.

Note: Insert only the full length sections of gear rack. The cut section will be installed last.

Load Drive Unit.

Upack Drive Unit. Load at top of track carefully. Ensure that lower carriage rollers are located into rail extrusion channels correctly and that drive and OSG pinions do not catch. Lower Drive Unit, slowly down the Rail Extrusion until drive pinion rests against lower rack section.

Remove Drive Unit Left and Right side covers.

Insert Drive Unit batteries. Connect as shown in picture, Orange fuse link between black and red battery terminals, Red to +24v on PCB, Black to On/Off switch in left side cover. Seat correctly into battery tray. Replace Right side cover only.

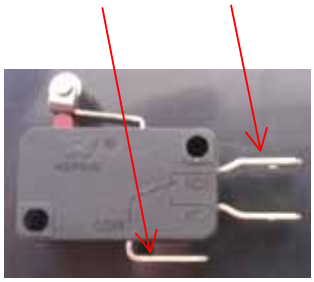
Fit Chassis Leg.

Remove Chassis leg from packaging and remove plastic covers


Attach Chassis Leg to Drive Unit ensuring all cables pass through central hole correctly. Fit washers and nuts, tightening one to temparily hold Chassis Leg in position.


Connect Powered Swivel Motor loom (Red & Black), connect Footrest loom (Yellow & Brown).

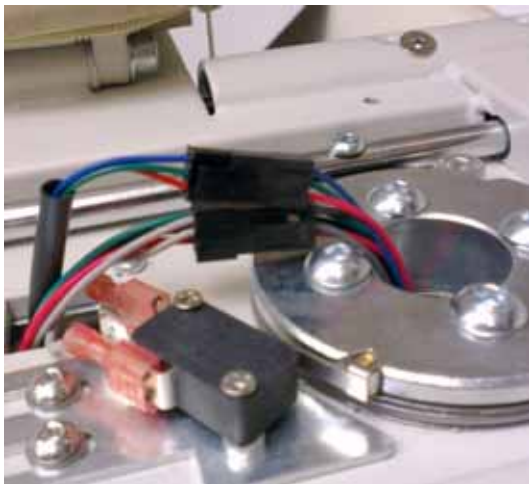

Connect Swivel Limit loom (Purple & White) to swivel limit switches as shown in the picture below, White pair always connected to the right hand switch, COM and N.O, purple pair to left hand switch, COM and N.O.Finally pass chair and display loom through centre of swivel boss.

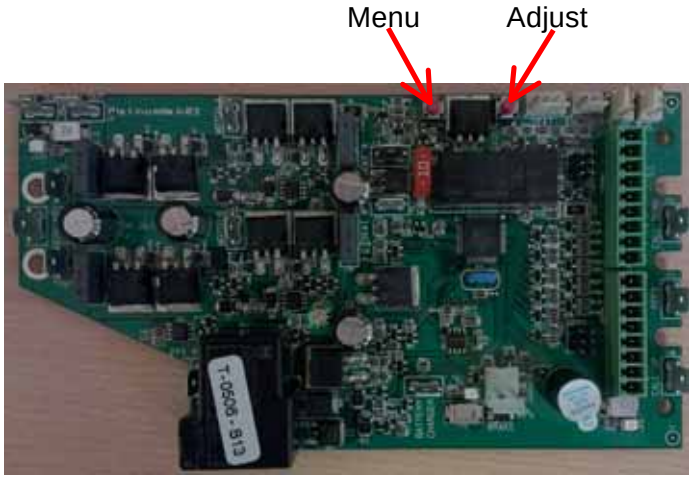
The seat height can be adjusted if necessary. Unhook lever linked footrest spring, remove 2 bolts joining footrest link, remove 4 large bolts holding top chassis leg section and move up or down to suit. Replace 4 large chassis leg bolts, 2 lever link bolts and spring.



Fit Seat using 4 x 5mm Allen bolts. Using a torque wrench,Tighten to 20 Nm. Connect Chair and Display Looms. Lift manual swivel levers and turn chair, make sure it locks securly at either end if travel and thet the swivel interlock switch operates correctly.



Turn lift on using On/Off switch located on left hand side cover. Set stairlift hand, swivel method, lift mode and display language using red buttons on main PCB. Menu button steps through options, Adjust button changes settings. This must be done prior to completing the installation just as pictured below



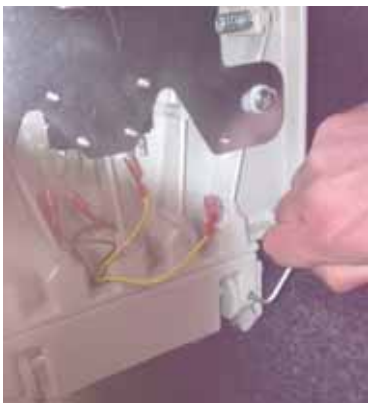
Run Lift down rail at least 6 ½” Refit Drive Unit Left side cover (you may have to change the angle of the Chassis Leg to locate cover correctly). Fit Underseat cover

Level Seat and Footrest Assembly. Tighten 4 nuts using 13mm socket and torque wrench. Tighten to 25Nm.

The footrest can be offset if necessary. Unhook lever linked footrest spring, remove screws holding rootrest lever link bracket,disconnect footrest loom.

Remove plastic footrest cover, remove footrest limit loom, slacken off grub screw.





Tap mounting bar through bracket and remove footrest assembly, pull loom out of footrest 1 connector at a time, remove 3 bolts and repostion bracket. Replace bolts and feed loom back through hole 1 connector at a time. Reattach to chassis leg by knocking mounting bar back through bracket – **be careful not to damage footrest limit loom.** Tighten grub screw and reattach lever link bracket with 2 screws. Rehook leverlink footrest spring.



Fitting top section(s) of racking.

Slide remaining section(s) of racking into the rail extrusion until it's touching the top of the 1st section.

Note: This gear section will cut and tapped with the screw in place.

The screw will aline with the hole drilled in the top of the rail


Mark racking flush with rail extrusion, remove and cut ensuring cut is level. Slide racking back into position. **Ensure that cut section of rack is at the top of the rail.** Fit top end stop/charge assembly. Again, the position of this sets the stairlift height but must be at least 55mm from end of rail.

Fit Rail end plate as described on page 13 and connect end stop/ charge assembly as described on page 15.

Fix Racking.

Fit rack tension bolt through end stop plate and tighten until a gap starts to appear between plate and rail extrusion. Drill a 4.2mm hole through top of extrusion and racking using the guide line in the rail at least 15mm from end of rail extrusion at both the top and bottom. Tap the hole using a 5mm tap and insert a 5mm buttonhead the cap screw supplied. **Note: This hole will be drilled and tapped when your rail is prepped for shipment.**

Slacken off rack tension bolt but leave in place. Fit plastic end cap.

Check that the upper surface of the footrest is no further than 6 ½” above bottom and top boarding points. Adjust end stop / charge points to suit.

GEN+ Chair Ergonomic Alteration.

The chair can be individually tailored to better fit the customer or installation area. The arm rests can be widened or made shorter, and the seat pad can be moved forward.

The arm rests can be made shorter and/or further apart by removing the 4 x allen bolts, repositioning the arms and replacing the bolts.

Position 1. Fully extended, fully forward. This will give maximum seat width with maximum length of useable armrest.

Postion 2. Fully extended, fully back. This will give maximum width of seat with minimum useable armrest. (*For use when swivel radius width at top of stairs is reduced.)*

Position 3.Mid extended, fully forward.

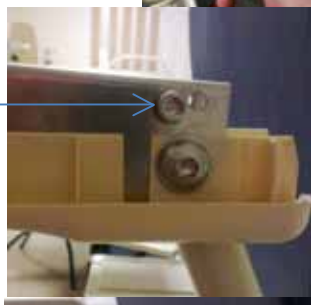
Position 4. Mid extended, fully back.

Postion 5. Minimum extended, fully forward. This is how the chairs are supplied as standard/

Position 6. Minimum Extended, fully back. (*For use when swivel radius width at top of stairs is reduced.)*

When using positions 2, 4 & 6, the arm rest angle will need altering. Remove 4 x pozi screws in bottom of armrest cover. Remove armrest top.

Remove Bolt.



And Replace here.

The Seat pad can be moved forwards. Undo the zips on the seat pad. Remove the 4 allen bolts shown on the right, reposition seat pad. Replace bolts.

Test Running the **GEN+** Stairlift, Unladen and Unprogrammed.

Important:
If there any issues with the stairlift, the system may display System Status Codes. Refer to the System Status Codes section for more details of what these codes mean.

To test run the stairlift (unladen):

Make sure the area covered by the movement of the stairlift is free of obstructions.

Fold down the footrest and swivel the seat into correct travel position. Leave the armrests in the upright position. Do not allow any weight to rest on the carriage as yet.

Run the unladen stairlift to the very bottom of the track. While the stairlift is travelling check:

1. Footrest to riser.

2. Armrest and seat back, especially on staircases with low bulkheads.

3. Seat back to wall/newel

4. Arm rest to wall when swivelled.

At the bottom check that the stairlift is charging correctly and the footrest is at the correct height to allow the user to easily access the stairlift.

Run the stairlift to the top of the track while checking all above points.

At the top check that the stairlift is charging correctly and the footrest is at the correct height to allow the user to easily access the stairlift. Also check the swivel radius to ensure that the downside armrest does not come into contact with the opposite side of the staircase.

Installing the Remote Controls

There are 2 types of remote control:

1. Infra-Red. These controls have 2 buttons and Up, Down *This is the Standard control supplied with most stairlifts.*

2. Radio. These controls have 2 buttons, Up and down only. *This is the control supplied if the radio option is ordered.*

To install the remote controls: Infra-Red

The infra-red receivers are mounted in the arm of the chair.

Fit the batteries into the remote controls, then use each of them to call and send the stairlift to and from the other end of the track and then back again.

Locate suitable locations for the control holsters to be mounted, confirm these postions are suitable for the customer, and screw into position.

The controls are sent pre-programmed to the PCB. However, if there are several stairlifts installed in close proximity or there are other infra-red/radio sources in the area creating interference, the Infra-Red signals for each of the stairlifts can be changed so that they do not interfere with each other.

To change the signal.

Remove battery cover and batteries from the control. Remove the four screws holding the back cover of the control and carefully remove the PCB from the plastic housing.

Change jumper settings on **all** controls for this lift to either 1,2 3 or 4.

Carefully, put the PCB back into the plastic housing, replace back cover, batteries & battery cover.

To program the remote controls to the carriage, cycle throught the menu and adjust "**Remote 1**" to the corresponding jumper number.

To install the remote controls: Radio Option

The system consists of 1 receiver and 2 transmitters. More transmitters can be added as needed. These controls have 2 buttons, Up and down only. If park function is required with RF controls, Landing Stop must be selected in the menu system of the main PCB. The system is compatible with all previous Carriages. Can be retrofitted to CSE control system with on-site modification.

To install with Benchmark Control System

1. Turn off main battery isolator switch
2. Remove side cover over main PCB
3. Connect RF receiver as follows:-
Red +24v Out
Black 0v/Ground
Brown Call Down
White Common
Blue Call Up

The radio option requires a small PCB, set in a black plastic housing, to be mounted to the stairlift, on the inside of the large plastic side cover over the main PCB. This should then be connected to the main PCB, black to 0v, red to +24v and the three direction control wires, Blue to Call up, Brown to Call down and White to Feed should be connected to the corresponding spade connectors on the main PCB below the large green limit connectors, as detailed in the picture above and the connection diagram later in this guide.

Fit the batteries into the remote controls, then use each of them to call and send the stairlift to and from the other end of the track and then back again.

Locate suitable locations for the control holsters to be mounted, confirm these positions are suitable for the customer, and screw into position.

The controls are sent pre-programmed to the PCB. However, if there are several stairlifts installed in close proximity or there are radio sources in the area creating interference, the Infra-Red signals for each of the stairlifts can be changed so that they do not interfere with each other.

To change the signal.

Remove battery cover and batteries from the control. Remove the four screws holding the back cover of the control.

Remove the four small screws holding the cover for the receiver (black plastic enclosure) Carefully remove the cover feeding the wires through the holes as you go.

Change dip switch settings on receiver and **all** controls for this lift.

Carefully, replace all covers and batteries.

Test Running the **GEN+** Stairlift, fully laden.

☝ **Important:**

The lift must be tested up to it's full laden capacity before handover to the customer.

Test running the stairlift fully laden ensures the lift is working correctly, and that it clears any obstacles.

It also begins the bedding in process. Please ensure that the rack is lubricated with a suitable silicone or synthetic PTFE based grease at this point. We recommend that you lubricate three teeth every 300mm on the rack.

To test run the stairlift (fully laden):

Move the stairlift to the bottom of the track, fold down the armrests and footrest, Load the chair to capacity. Using one of the remote controls, send the stairlift to the top of the rail. Keep direction control activated to ensure chair automatically swivels to safe entry/exit position. Press remote control in opposite direction to ensure chair swivels back to correct travel position.

To test manual swivel, depress swivel levers, and ensure chair will swivel into correct entry/exit position. Press direction control in downwards direction to ensure swivel interlock switch is working, and stairlift will not decend in this position. Depress swivel levers and ensure chair swivels back to correct travel position.

Use remote control to send stairlift down the stairs, stop part way along the rail and then reverse direction to bring stairlift back to the top, ensuring the stairlift slows and stops correctly.

Use the remote control to travel down the stairs. Ensure the stairlift slows and stops correctly.

Make sure the stairlift comes to a stop quickly, if you do any of the following actions:

- Let go of the direction control
- Encounter an obstruction with the footrest.
- Encounter an obstruction with the safety pads on the carriage.
- Swivel the seat.

Run the stairlift from one end of the track to the other; then return it to its original position. For both trips make sure it runs freely and smoothly, and proceeds clear of stair treads and any other fixed obstructions.

At one end of the track, stop the chairlift at one end of the track, undo the seatbelt and make sure the plug part of the lock retracts into its housing.

Lift up the seat, footrest and arm rests and make sure they all stay upright.

Run the stairlift to the middle of the track, then stop it.
Use the hand-winding procedure to make sure the chair can be hand-wound both up and down the track.

Final Checks

Once the lift has been installed, a series of tests must be performed ensure that the installation has been completed correctly and that the system works correctly and safely. A copy of these tests should be left with the customer. The tests are documented on The Example of the Certificate For Test & Examination After Installation Checklist detailed on the next page.

Electrical, Battery and Operational Tests

Detailed measurements and tests must be carried out before handover to the customer.

that all electrical and safety systems are working correctly and that the stairlift operates in a safe manner.

It is recommended that your company use a certificate such as this when installing our prouct.

Clean Work Area

Before demonstrating to the user, please ensure that work area is left clean and tidy. As drilling has taken place in this area it is recommended that the area is checked for swarf and thoroughly vacuumed.

Please remove any packaging not required by the user from site and, if possible, recycle.

Example of a Certificate for Test & Examination After Installation

Certificate For Test & Examination After Installation

ATLAS
A Mobility and Accessibility Manufacturer

Location of Installation	Make		Model
	Serial No.		
	Rated Load		Rated Speed

Electrical Tests		**Battery Tests**	
1. Electrical Supply Voltage	..... V AC	1. Battery Voltage	..... V DC
2. AC Supply Frequency	..... Hz	2. Check Battery Polarity Correct	Yes / No
3. Phase	Single	3. Confirm Battery Enclosure Ventilated	Yes / No
4. Stall Current	..... Amps	4. Confirm Batteries Securely Fitted	Yes / No
5. Tripping Time	..... Seconds	5. Confirm batteries Fully Charged	Yes / No
6. Mains Fuse Rating	..... Amps	6. Confirm No Leak When Batteries Fitted	Yes / No
7. Check Mains Polarity Correct	Yes / No	7. Confirm Chassis Is Effectively Grounded	Yes / No
8. Motor Reversal Delay	..... Seconds		

Installation/Operational Tests				
1. Feet Are Correctly Screwed to Risers				Yes / No
2. Rail Joints Are Correctly Made				Yes / No
3. End Stops Are Correctly Attached To Rail				Yes / No
4. End Plates Are Correctly Attached To rail				Yes / No
5. Ensure Seat Mounting Bolts are Tightened to Torque 20 Nm				Yes / No
6. Confirm All On/Off switches Operate Correctly				Yes / No
7. Confirm All Safety Limits Operate Correctly	Upper	Yes / No	Lower	Yes / No
8. Confirm Final Limits Operate Correctly	Upper	Yes / No	Lower	Yes / No
9. Confirm safety Gear Operates Correctly				Yes / No
10. Confirm Swivel Interlock Switch Operates Correctly	Manual	Yes / No	Powered	Yes / No / NA
11. Confirm Hinge Interlock Operates correctly (If Fitted)				Yes / No / NA
12. Confirm Off Charge Indicator Operates Correctly				Yes / No
13. State Stopping Distance Of Carriage After Application Of The Brake				..... mm
14. Confirm Handwinding Operates Correctly				Yes / No
15. State Distance Of Footrest Above Floor Level				..... mm
16. State Running Current				..... Amps

Handover			
1. Confirm User Manual Handed To Customer			Yes / No
2. Confirm Stairlift Demonstrated To Customer			Yes / No
3. Confirm Premises Left Clean & Tidy			Yes / No
4. Balance Collected	Yes / No	$.....	Cash/Check/ Credit Card

Comments/Observations

I / We certify that on .... / .... / .... This stairlifts was thoughly examined and found to be free from obvious defects.

Name (Engineer) ..... Signed..... Company .....

Instructing the User

Before using the stairlift for the first time the customer must be instructed in the safe use of all aspects of the stairlift. The User guide is a good starting point for this instruction.

Once the training is complete, the User Guide must be retained by the user of the stairlift.

You now need to instruct the user (and any carers, helpers or other family members), how to use the lift. The demonstration should include:

- Keeping the boarding / exit area of the stairlift clear.
- It is important that the boarding / exit area of the stairlift is well lit.
- Introduction to the Stairlift.
- Installer Demonstration of the Stairlift.
- Resident Use of the Stairlift.

Introduction to the **GEN+** Stairlift

Show the user the installed stairlift and point out all of the key features, including:

- Footrest, arm rests and fold-down seat.
- Seat Belt (lap belt) and locking mechanism.
- Safety Pads and need to keep free from obstructions.
- Direction Controls – armrest and remote control.
- Power-on switch and key-switches.
- Emergency hand-wind mechanism.

Installer Demonstration of the **GEN+** Stairlift

The installer should then use the stairlift themselves to demonstrate the following:

- How to fasten and unfasten the lap-belt, and stress how important it is to use this at ALL times.
- How to use the Remote Control to move the stairlift up and down the stairs.
- How to fold up and fold down the footrest, seat and arm rests, and why you need to do this.
- How to use the swivel seat, how to sit on the seat safely at the top and the bottom of the stairs.
- How to get up from the seat safely.
- How to use the direction controls to go up and down; how to stop, start and change direction.
- How to lock the stairlift so it can not be used as a plaything – for example if children are visiting.
- How to Open the Remote Control to replace the batteries.

Resident use of the **GEN+ S**tairlift

The installer should then guide the resident to use the stairlift so they are completely familiar with the stairlift and its safe operation, including:

- Using the remote control to send or bring the stairlift.
- Safely using the swivel seat to get on the stairlift at the bottom of the stairs, fastening the seat belt, going to the top, unfastening the seat belt, and safely using the swivel seat to get off the stairlift at the top of the stairs. And this equivalent procedure for going to the bottom of the stairs.
- How to start, stop, reverse and chairlift using the direction controls.
- How to lock the stairlift.
- Make sure the resident and any-one else asks any questions they want to.
- Ensure the customer understands what the Status display codes mean.
- Ensure the customer understands what to do in the event of a breakdown.
- Ensure the customer is aware of your companys service procedure.
- Ensure the customer has the correct contact telephone numbers in the event of a breakdown or to request Service calls.

Paperwork

Signing the Test Certificate

If a test certificate has been used to provide a checklist of important tests and checks that need to be made by you, it should now be shown to the customer. This will demonstrate that all the tests have been done correctly, and that the installer has completed the installation to a satisfactory standard.

It also provides a proof that the customer is happy with the installation and the instruction given, and they have formally accepted it as an installed and working system in their premises.

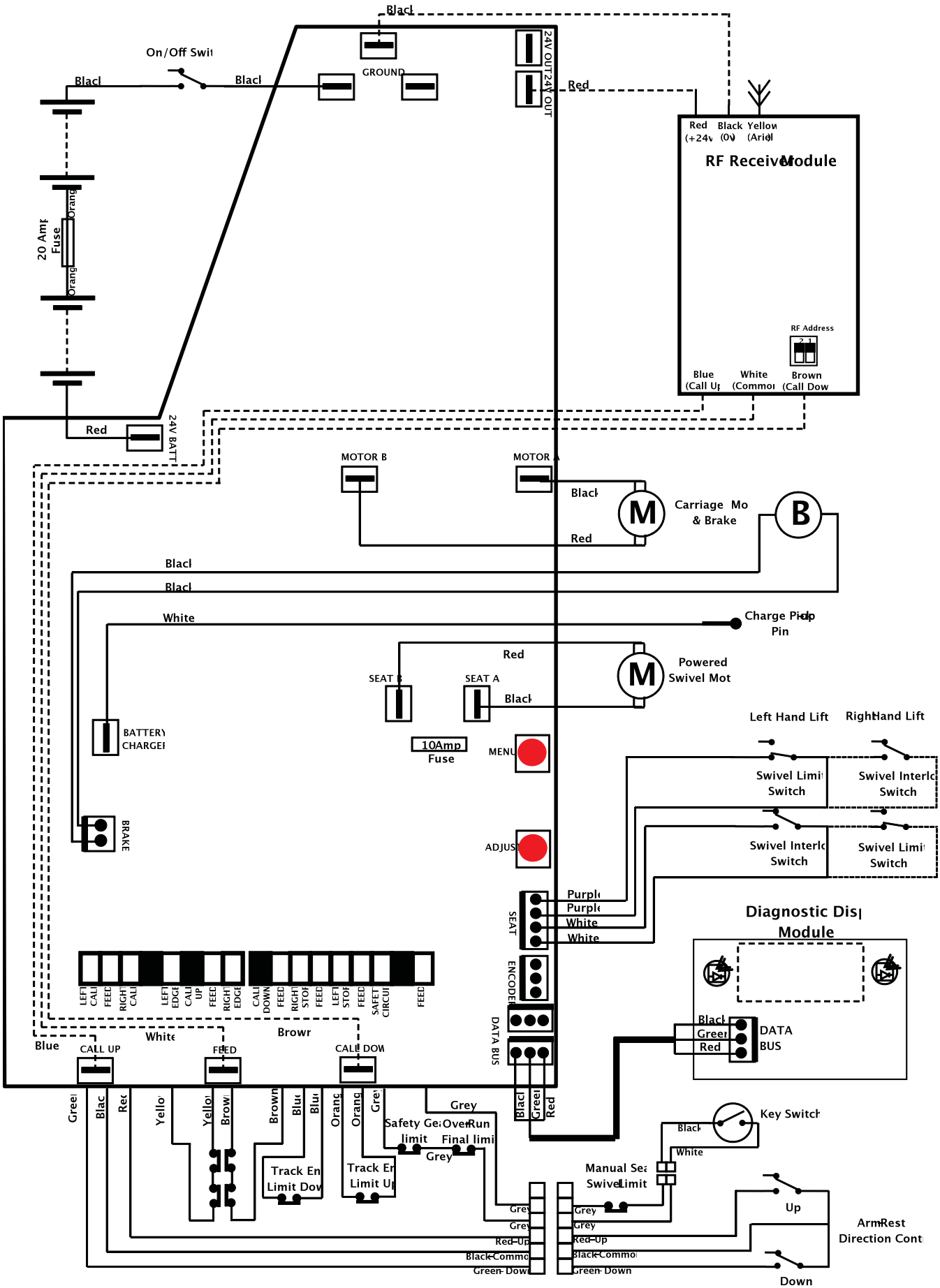
When the installation and instruction is complete, both parties should sign and date the Certified section of the test certificate.

User Guide

Hand a copy of the User Guide to the customer, requesting that they keep it to hand for easy reference by themselves, any family members, carers or other helpers.

An Installation & Service Record sheet is contained in the User Guide and should be signed and dated upon completion of installation.

Connection Diagram



Technical Information

Weight Limits

The stairlift has been designed to carry one person only, in a seated position. The standard stairlift has a maximum weight limit of 140kg (22 stone).

Operating Periods/Excessive Use

The stairlift has been designed to run for four minutes with a break of at least six minutes afterwards. If you use the stairlift too often without taking a break, the motor will not cool down between journeys and may become damaged.

Replacement Batteries

We recommend that the batteries in each remote control are renewed at least every six months. This is the responsibilty of the user,

Maintenance

To maintain safe and reliable operation, the standard stairlift needs a annual safety inspection and service.

CAUTION:
Modifications which have not been expressly approved by the manufacturer may void the warranty and may cause damage. Your stairlift should be inspected and maintained by an approved service engineer.

Upholstery

Carelessness with matches, cigarettes and so on can cause a fire. The upholstery material used on your stairlift has been tested for compliance with BS5852.

Hand Winding the Stairlift

If necessary, for example to release the safety gear after the OSG has activated or to return the carriage from an over-run position, the stairlift can be manually hand-wound using the supplied winding handle.

If the OSG has been activated, the carriage should only be hand-wound in the upwards direction.

Hand winding should only be attempted by, or under the supervision of a competent stairlift engineer.

To hand-wind the stairlift:

- Fully insert the winding handle into the Emergency Hand Wind Mechanism Socket (8)
- Keeping the handle fully inserted, carefully rotate it as needed.
  If you rotate the handle clockwise, this will move the chair to the right.
  If you rotate the handle anti-clockwise, this will move the chair to the left.
- Never use the stairlift when the winding handle is in the socket.

Releasing a Trapped User

If a user becomes trapped on the stairlift due to a fault, they should be assisted from the chair in the following way:

- Lift one of the manual swivel levers and rotate the carriage towards the staircase until seat locks into swivelled position.
- Release users seatbelt
- The user can then be helped from the chair, up the stairs.
- Lift manual swivel levers and return seat to original position.

Never exit seat without first turning towards staircase and ensuring that it lock into position. Always exit upwards.

Diagnostic Codes

These codes are displayed on the Diagnostic display panel on the carriage:

Code	Meaning
	No Display No power 1. Check the battery isolator switch is in the “I” position 2. Check batterys are correctly connected and in good order
Platinum	**OK** The stairlift is on charge and everything is OK, lift should operate normally.
Safety Circuit	**Final Limit Fault/Safety Circuit short to 0v** 1. Check keyswitch is on connected and working 2. Check seat swivel switch is connected and working 3. Check if the stairlift has over-run and switch is connected and working 4. Check if OSG and Safety gear has actioned and switch is connected and working
Low Battery	**Batteries Need Charging** Stairlift batteries are down to 21V. 1. Check transformer is plugged in to mains socket and turned on. 2. Check charging point voltage is present unloaded and loaded. 3. Check charge voltage is present on white charge connector on main PCB.
Off Charge	**Lift is off Charge** Stairlift batteries are not charging (the stairlift may still work). To charge them: 1. Move the stairlift to a charging point 2. Check transformer is plugged in to mains socket and turned on. 3. Check charging point voltage is present unloaded and loaded. 4. Check charge voltage is present on white charge connector on main PCB.
End Stop	**End Stop Activated (bottom skate metal cover left and right)** Ensure that both track and staircase are clear of obstructions.
Safety Edge	**Lift stopped by safety edge in direction of travel (footplate, top skate, side cover)** Ensure that both track and staircase are clear of obstructions.
Move Right	**Lift travel direction** Right.
Move Left	**Lift travel direction** Left.

Code	Meaning
Seat Swivel	**Seat in Swivelled position** Lift cannot move until powered swivel seat is returned to travel position. 1. Check Powered swivel option is selected in menu. 2. Check lift is set as correct hand in menu. 3. Check lift is at top of track and bottom skate end stop is activated. 4. Check transformer is plugged in to mains socket and turned on. 5. Check charging point voltage is present unloaded and loaded. 6. Check charge voltage is present on white charge connector on main PCB.
Thermal Cut Out	**Motor and motor drive are running too hot, overloaded lift or excessive use.** Switch lift off and allow motor to cool.
Call Conflict	**More than one conflicting call received.** Direction toggle or wall control direction button stuck on.
Release Joystick	**Conflicting call received.** User needs to release joystick and re-input call.
Brake Fault	**Motor brake inoperable.** Reset lift. Check brake connection on main PCB and reset lift.
Relay Fault	**Power relay did not close** Check battery charge level. Reset lift.Tap Relay. If problem persists, renew PCB.

There are also 3 thermal fuses on the the PCB. If any of these fuses are activated, a red LED located nearby will light.This generally indicates a wiring fault on one of the circuits connected to the PCB in the surrouding area to that LED.

Engineers Menu

Further diagnostics and settings are available by cycling through the menu system.

Code	Meaning
Position 12345	**Lifts current position on rail. Bottom end stop is 00000. Press and hold menu button to reprogram.**
Remote 1/2/3/4	**Shows current Remote channel selection. Press adjust button to change.**
Right/Left Hand	**Shows current installation hand selected. Press adjust button to change.**
Quiet Travel / Travel Alarm	**Shows current travel alarm selection. Press adjust button to change.**
Landing Stop / Pass	**Shows current landing selection. Press adjust button to change.**
Powered / Manual Swivel	**Shows current swivel selection. Press adjust button to change.**
Edge 123	**Number of sensitive edge trips since last engineer reset. Press adjust button to reset to 0.**
Low Batt 123	**Number of low battery events since last engineer reset. Press adjust button to reset to 0.**
Trips 12345	**Number of trips (up or down) done by control system. Not resettable.**
Safety 123	**Number of safety circuit trips since last engineer reset. Press adjust button to reset to 0.**
Brake 123	**Number of brake faults since last engineer reset. Press adjust button to reset to 0.**
Relay 123	**Number of relay faults since last engineer reset. Press adjust button to reset to 0.**
LostP	**Number of times position has been lost since last engineer reset. Press adjust button to reset to 0.**
Battery Bar (bar display 1-8)	**A bar display of battery voltage. Approx. 21V (all off) to 27V (all on).**
Low Battery	**Battery below 21V**

Mains Power, Battery Power and Power Cuts

The DC charger supplies power to a set of large internal batteries. These batteries then power the motor which lifts the chair up and down the stairs.

If the mains power fails, you can continue to use the stairlift for a short while as the batteries store enough power to allow you up and down the stairs a few times.

Servicing

The Standard 140 Kg (22 stone) stairlift requires a service every **12 months.**

Services should only be carried out by a competent stairlift engineer, Trained and certified on this product.

If working on the drive unit while still mounted on the rail extrusion, it is advisable to move it as close to the floor downstairs as possible.

All lifting and carrying should be in line with current HSE manual handling guidelines.

Service Carriage

Remove carriage from rail. Turn off. Remove plastic side covers.

- Check rollers for wear/damage. If replacing, lubricate roller shafts *lightly.*
- Check pinion for wear/damage.
- Check all rollers rotate freely. If necessary lubricate roller shafts *lightly.*
- Check all wires and connectors for damage & and operation of all switches.
- Check operation of OSG and safety gear.
- Check operation of charge pin,left/right end stop switches and final limit switch.
- Remove any debris including excessive, built up grease and clean all surfaces.
- Check all wiring and connectors to PCB.
- Check all wiring and connectors to batterys.
- Check battery condition. Replace if necessary.
- Check battery retaining strap.
- Check hand-wind mechanism operates correctly.
- Check wiring, connectors and switches on side cover safety edges.
- Ensure footrest operates correctly.
- Ensure footplate safety edges operate correctly.
- Ensure footrest carpet is fixed correctly.
- Replace side covers ensuring they fit correctly and safety edges operate correctly.
- Ensure Diagnostic Display shows correct codes.

4. Chair. Remove cover.

- Check all wiring and connectors.
- Ensure the 4 x M8 x 10 Hex bolts are tightened to a torque of 20 Nm..
- Ensure manual swivel mechanism is free of debris and operates correctly.
- Ensure swivel interlock switch operates correctly.
- Remove plastic covers around powered swivel, check all wiring and connectors, ensure the area is free of debris. Check operation and replace plastic covers.
- Check arm rests operate correctly.
- Check seat belt operates correctly.

- Check all controls operate correctly.
- Repace seat pad.

Service Rail

- Clean excessive grease off racking and inspect for damage/wear. If necessary re-apply lubrication. We recommend that you lubricate three teeth every 300mm on the rack.
- Inspect rack jointing bolts and replace/re-fit if necessary.
- Clean rail and inspect for damage.
- Check combined end stops/charging ramps are fixed firmly and in the correct position.
- Inspect rail joints and legs and replace/re-fit if necessary.
- Inspect all leg screws and replace/re-fit if necessary.
- Check charge circuit is operating correctly.
- Check carriage stops in the correct position at the top and bottom.

Notes