Infinity Curved Stair Lift

Installation Guide

Please read this installation guide carefully to ensure correct installation of your rail, carriage and seat of the Infinity curved stair lift.

AmeriGlide
ACCESSIBILITY SOLUTIONS

The information contained within this manual has been designed for use by AmeriGlide approved engineers who have received the appropriate product training in the following categories:
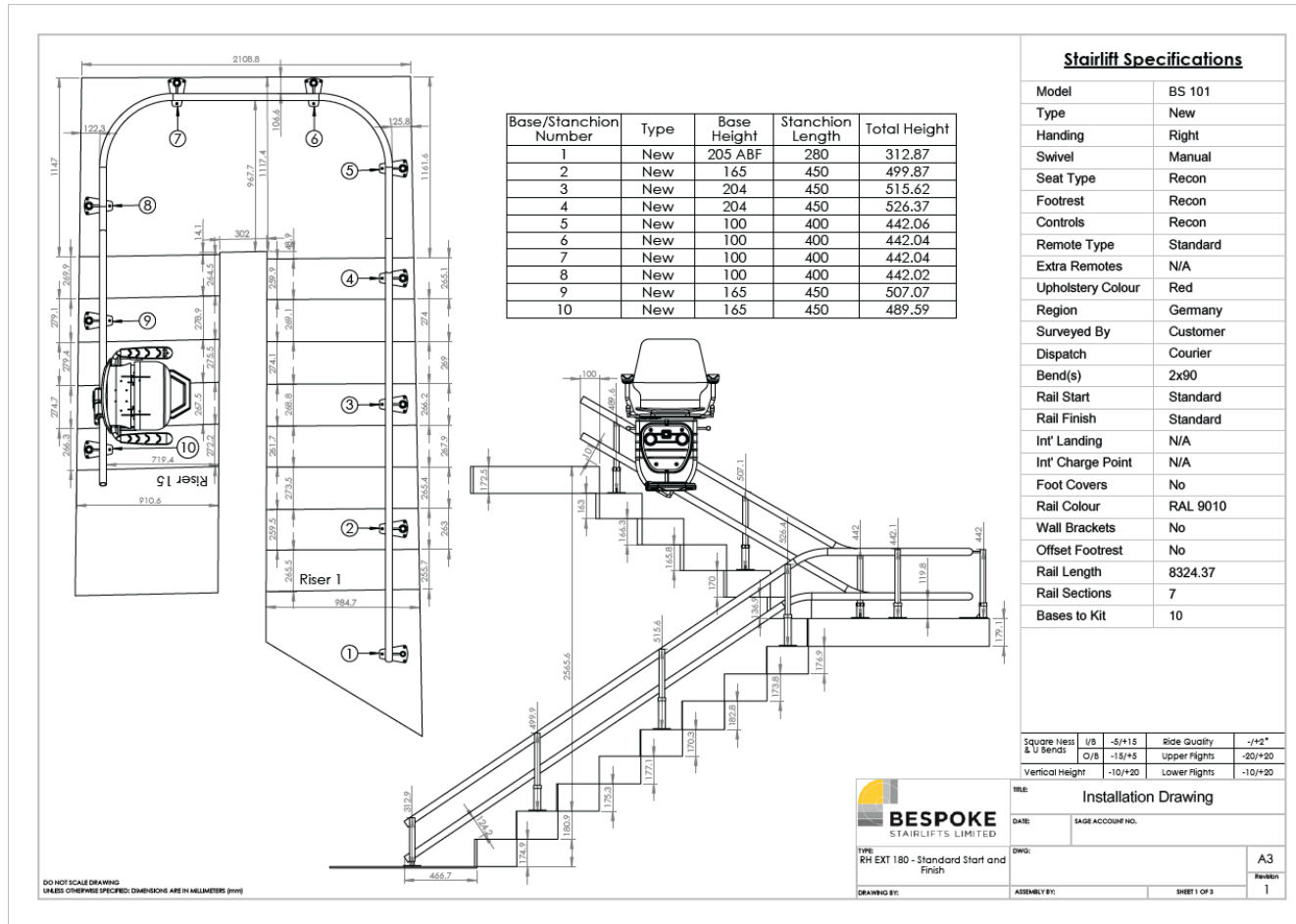1. Product Installation
2. Testing and Commissioning.

It is also assumed that the person using this manual will have the basic knowledge and skills required in both the mechanical and electrical aspects to apply consideration and awareness for the safety of themselves and others involving their work.

The contents of this manual are in the recommended order of placement, which forms the full installation, and commissioning of this standard model.

Table of Contents

Rail Preperation and Fixing

Stairlift Specifications

Model	BS 101
Type	New
Handing	Right
Swivel	Manual
Seat Type	Recon
Footrest	Recon
Controls	Recon
Remote Type	Standard
Extra Remotes	N/A
Upholstery Colour	Red
Region	Germany
Surveyed By	Customer
Dispatch	Courier
Bend(s)	2x90
Rail Start	Standard
Rail Finish	Standard
Int' Landing	N/A
Int' Charge Point	N/A
Foot Covers	No
Rail Colour	RAL 9010
Wall Brackets	No
Offset Footrest	No
Rail Length	8324.37
Rail Sections	7
Bases to Kit	10

Base/Stanchion Number	Type	Base Height	Stanchion Length	Total Height
1	New	205 ABF	280	312.87
2	New	165	450	499.87
3	New	204	450	515.62
4	New	204	450	526.37
5	New	100	400	442.06
6	New	100	400	442.04
7	New	100	400	442.04
8	New	100	400	442.02
9	New	165	450	507.07
10	New	165	450	489.59

Square Ness & U Bends	I/B	-5/+15	Ride Quality	-/+2°
	O/B	-15/+5	Upper Flights	-20/+20
Vertical Height		-10/+20	Lower Flights	-10/+20

BESPOKE STAIRLIFTS LIMITED

TITLE: Installation Drawing

DATE: SAGE ACCOUNT NO.

TYPE: RH EXT 180 – Standard Start and Finish

DWG: A3

Revision 1

DRAWING BY: ASSEMBLY BY: SHEET 1 OF 3

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS (mm)

- Remove packaging and protective wrapping from rail sections.

- Position rail sections on staircase as per Installation Drawing.

- Insert the leg stanchions into the relevant bases and approximately set the height by tightening the 3 x grub screws on each base. (Do not tighten too much as these will need to be adjusted later)
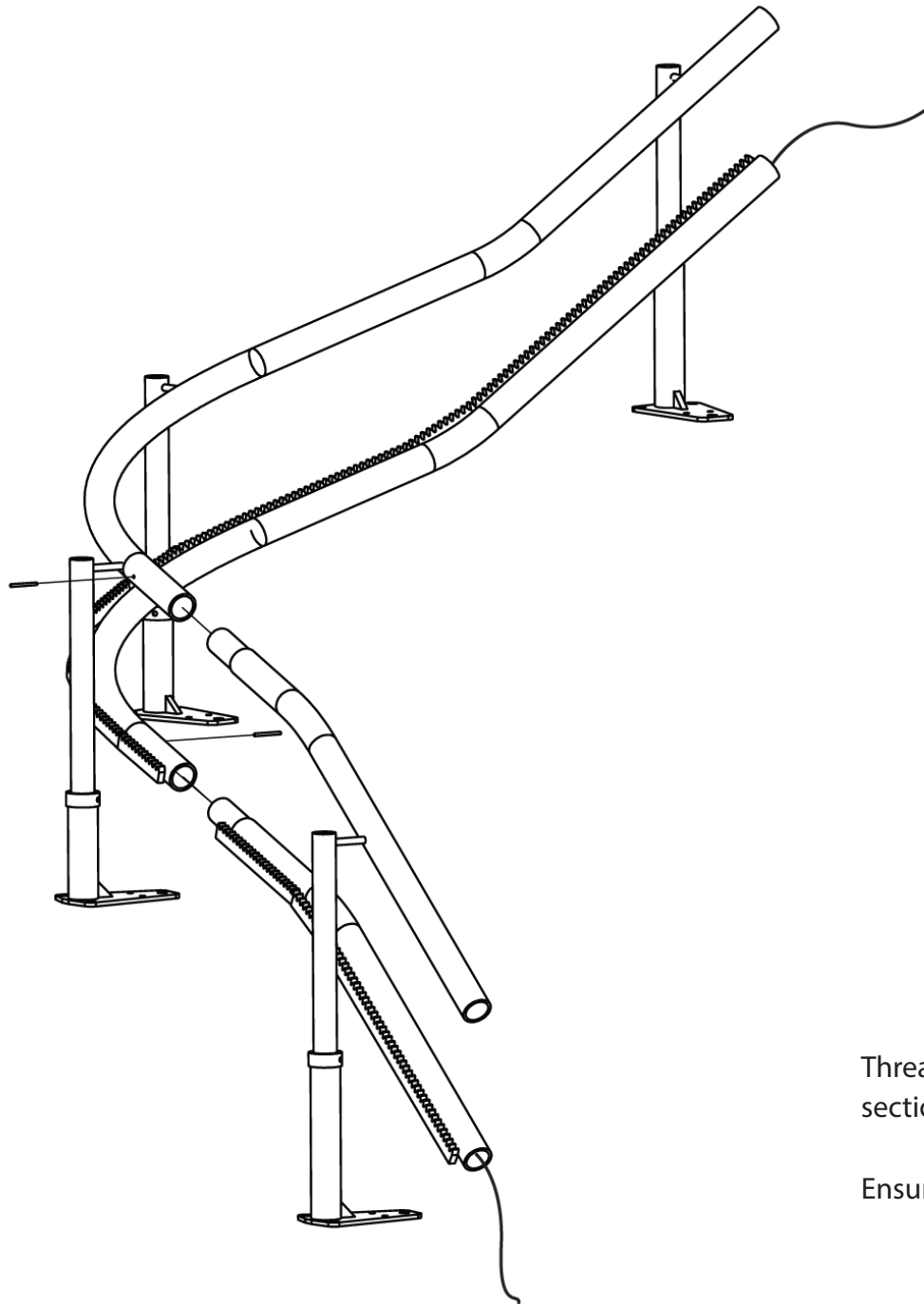
Thread 2-core cable through lower tube of each section of rail, working from top to bottom.
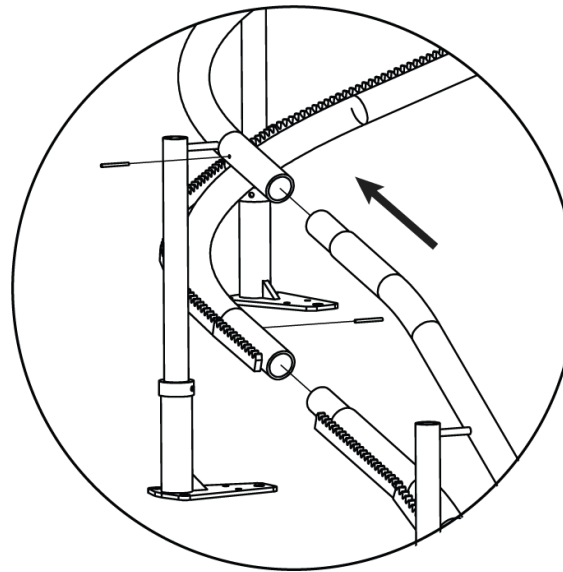
Ensure a minimum of 150mm of cable at each end.

Rail Fixing

- Assemble rail joints together working from bottom to top of stairs.

> **NOTE:** Offer top tubes first.

- Apply grease to male part of joint. Pins should be flush with stair side of rail.

- Fit and tighten joint clamps.

Using the installation drawing details:

- Check top and bottom rail heights over the corresponding steps.

- Check rail angles

- Check lower and upper rails are vertically in line.

- Adjust leg heights as required.

- Ensure rail to wall measurements match the Installation drawing.
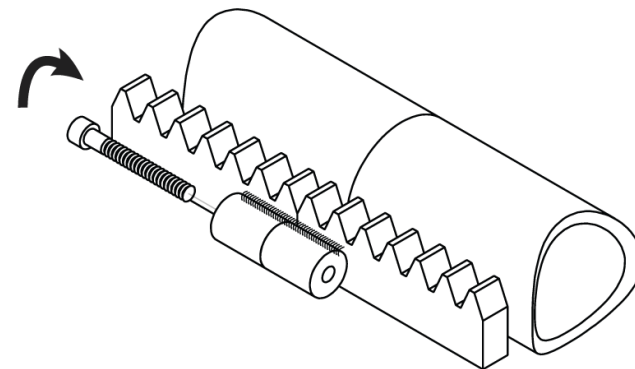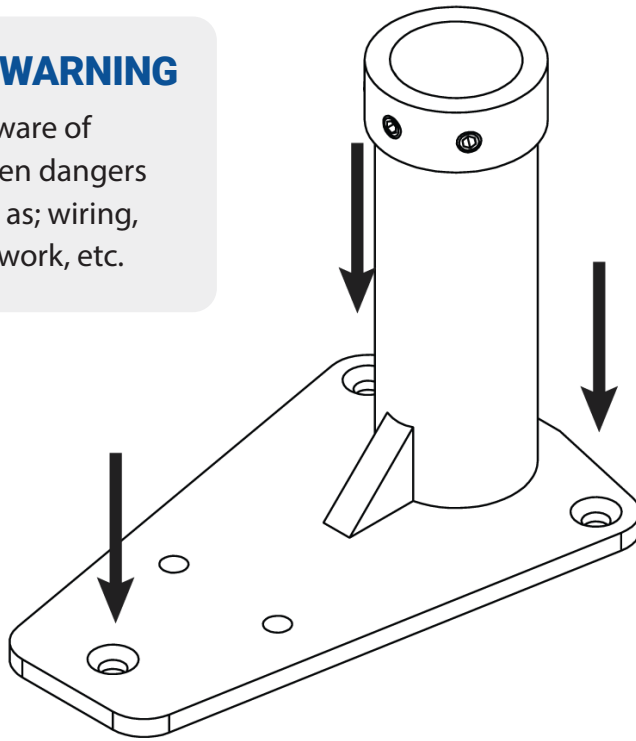
Secure plates to the staircase by the following method:

- Loosen grub screws on leg collar
- Fix foot-plate with 3 screws (Figure 4)
- Tighten screw to leg.
- Repeat for each leg.

The following fixings are recommended:

Timber Staircase: 3 x 50mm screws.

Concrete Staircase: 3 x 50mm screws & 3 xrawlplugs.

Other Staircases: Installation requirements must be assessed during Survey.

- Finally ensure all rail dimensions are in accordance with the rail installation drawing.

- Carry out any final adjustment to the bases as required using the 3 x Grub Screws then tighten once the rail position is correct.

Mounting the Charger

Power Supply
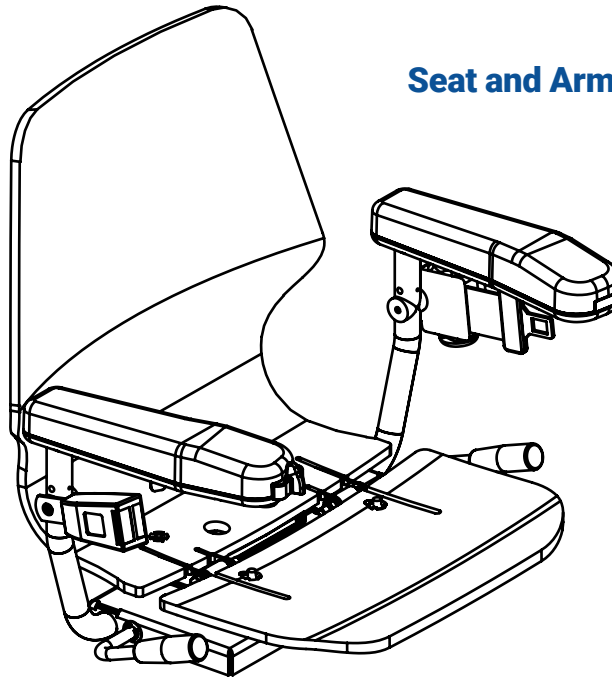
Charging Unit

Power Output Cable
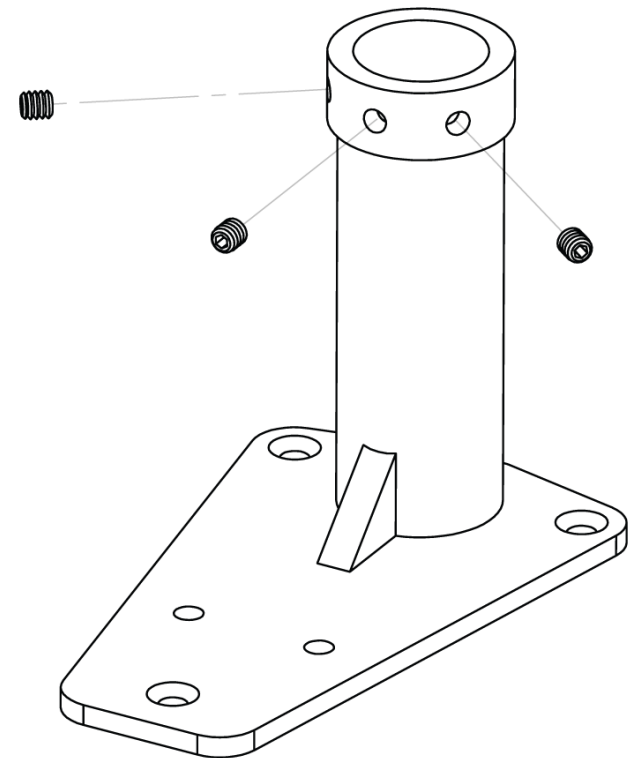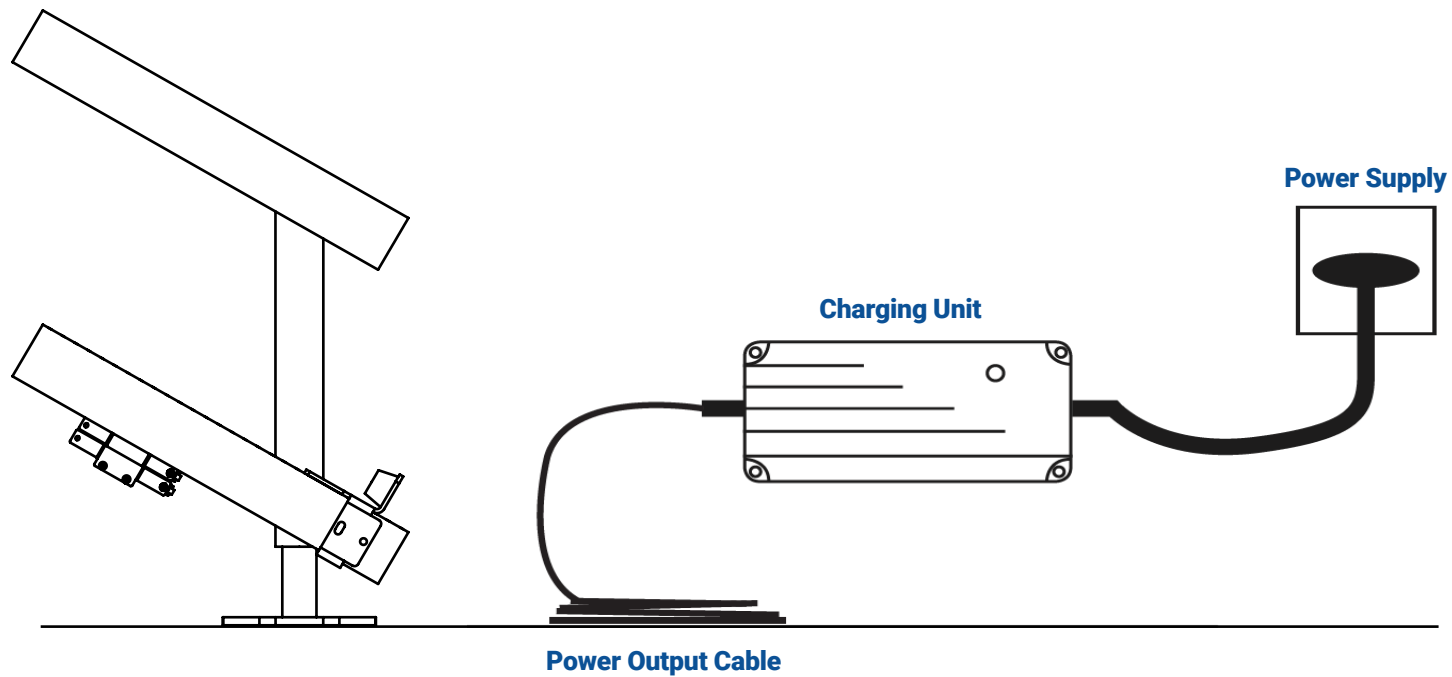
- Find a suitable power supply as close as possible to either the top or bottom of the stairs.

- Mount the charger in a suitable position near the power supply using the screws supplied. Please ensure the charger is mounted level and secure.

- Leave sufficient length on the power output to enable easy connection to the rail charge points.

Do not connect or switch on the power supply until the rail charge points have been connected. (See Page 31)

Carriage Preperation and Assembly
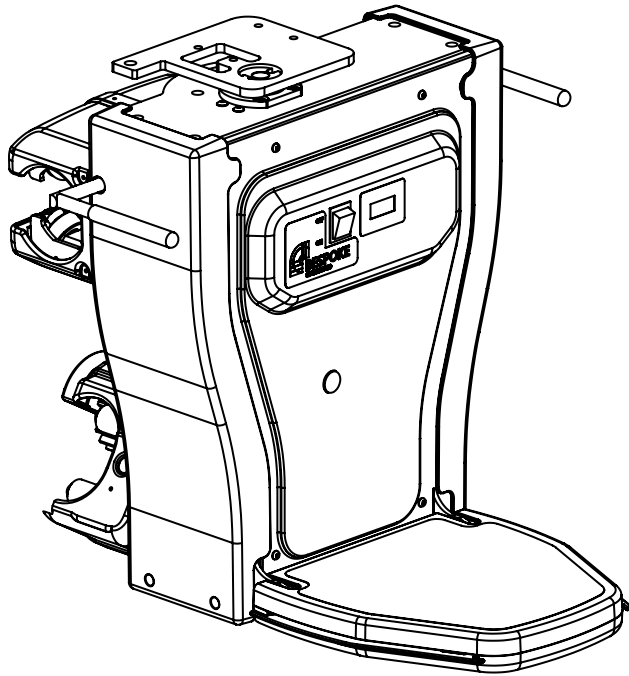
Seat and Armrest

Carriage and Footrest

Unpack all the pre-assembled units from their packaging, taking care not to place the carriage on the floor, avoiding damage.

Your carriage will arrive already pre-assembled as either a manual swivel option or powered swivel option as per your order.

Installing the Batteries

- Remove the front panel by unscrewing the 4 main screws.

- Once you're have inserted the batteries consult fig. 2, making sure the battery circuit is correct.

Fig. 1

Fig. 2

FUSE
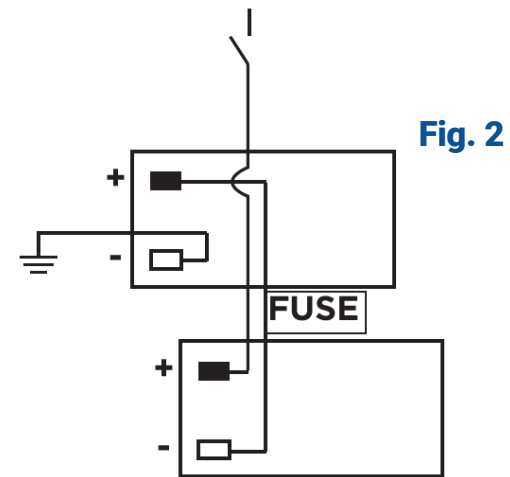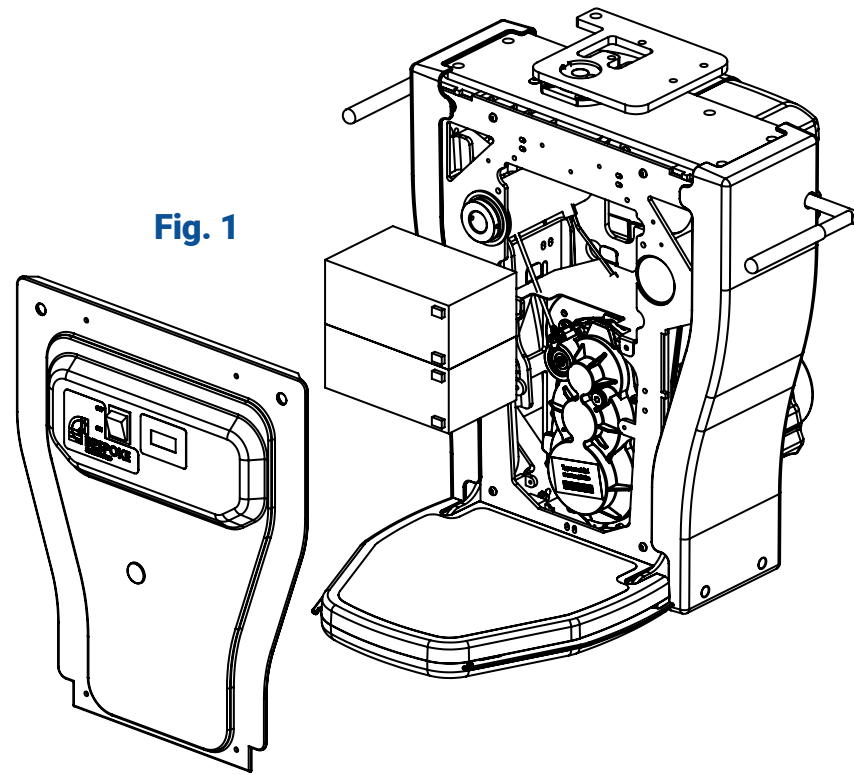
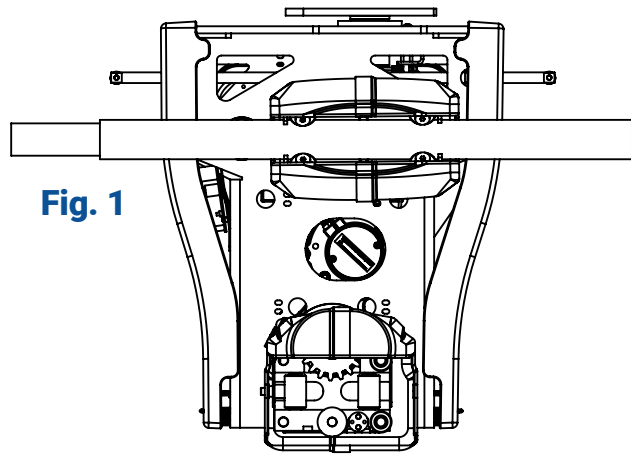# Loading onto the Rails

Fig. 1

Fig. 2

Loading Bar

Small Cone
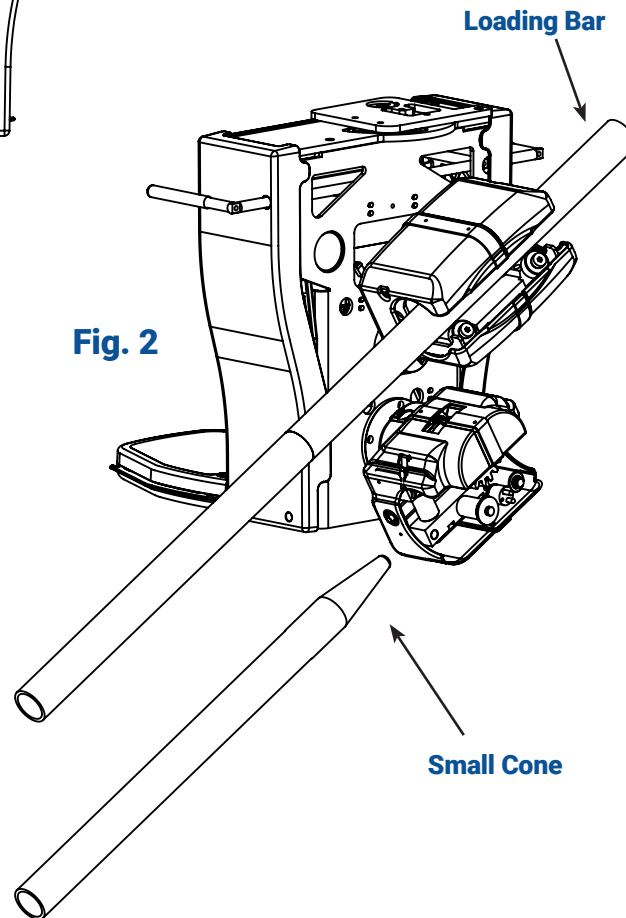
- Insert the long loading bar into the top skate of the carriage and insert the small cone stopper in the bottom rail tube.

- At the top of the stairs lift the carriage with the loading strap and insert the loading bar into the top rail tube, slowly run the carriage along until the small cone is through the bottom skate. Once the carriage is securely located on rail it is safe to let go of the loading strap.

(Loading bar and cone are part of the separate installation kit.)

Connect Seat Base with Arms to Carriage

You can now begin to install the seat to the carriage.

2x Long Screws

2x Short Screws

Fig. 1
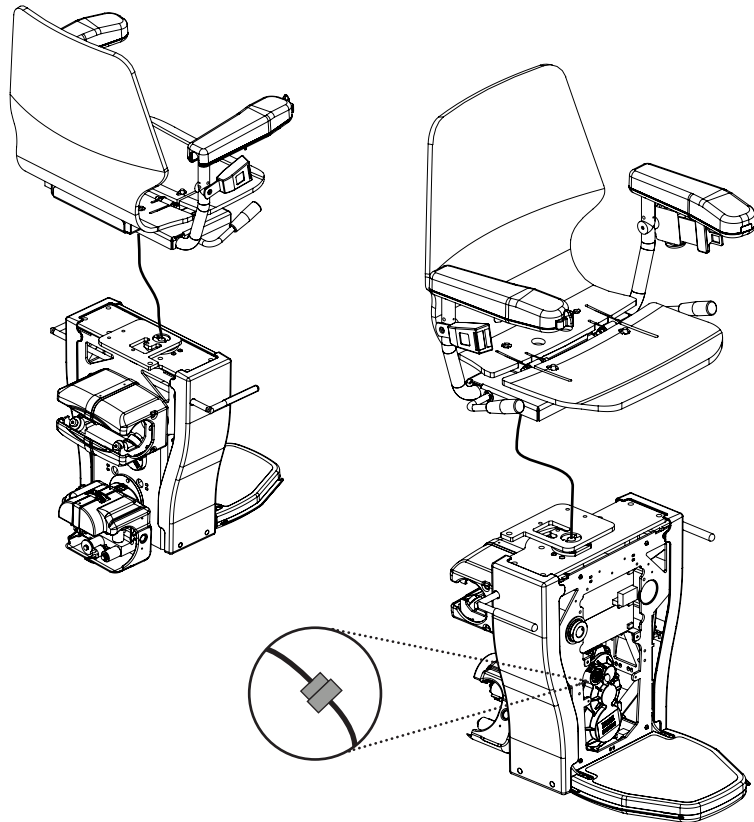
- Lift the seat above the carriage and feed the joystick cable down through the hole located in the seat boss plate, before lowering the seat down onto the plate ensure to feed all the cable through when through when doing so, to prevent the cable getting trapped under the seat frame.
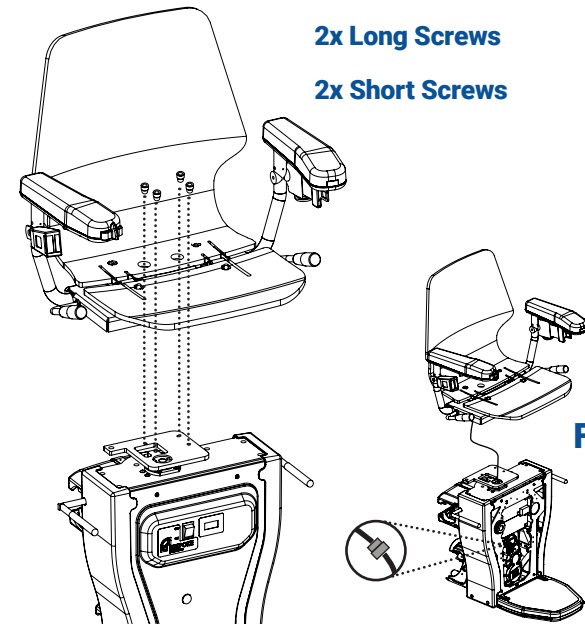
- Line the holes up on the seat frame down to the boss plate below. Fix with the 2 shorter bolts towards the front of the seat, the 2 longer ones to the back.

  Please ensure the correct screws are positioned in the correct holes as incorrect installation will result in damage.

- Then connect the joystick cable to the PCB cable which is located inside the chassis above the upper battery (Fig 1), making sure the 2 cables are free to move as the chair rotates, then the front battery can now be fixed back on.

- Insert the key into the arm and turn to the in position, the carriage is now ready to run down the rail.

Running the Chair On

MANUAL
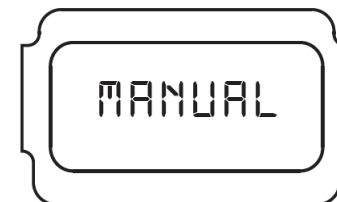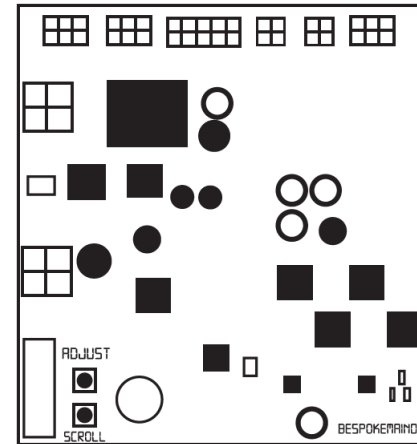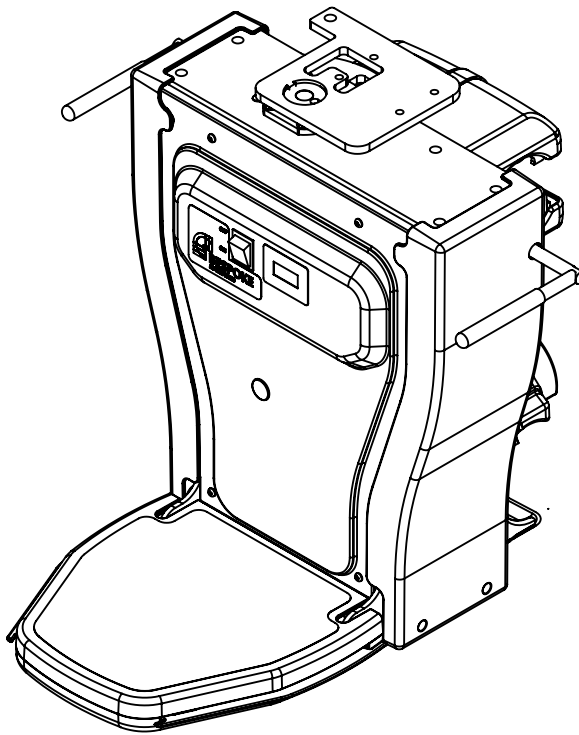
- Switch on the lift by pressing the orange switch ON the front of the carriage to the ON position.

- Remove the PCB cover for access to the programming buttons and to have a clearer view of the LCD screen. The lift should already come set up correctly ready for programming, but this can be checked by going through the menu function on the screen.

The lower 'SCROLL' button is used to cycle through the menu options and the top 'ADJUST' button to charge an option For example, scroll to the Swivel option and press the adjust button to choose Manual or Powered. It is best to check through all these beforehand to make sure everything is set up correctly.

HOLD

POSITION
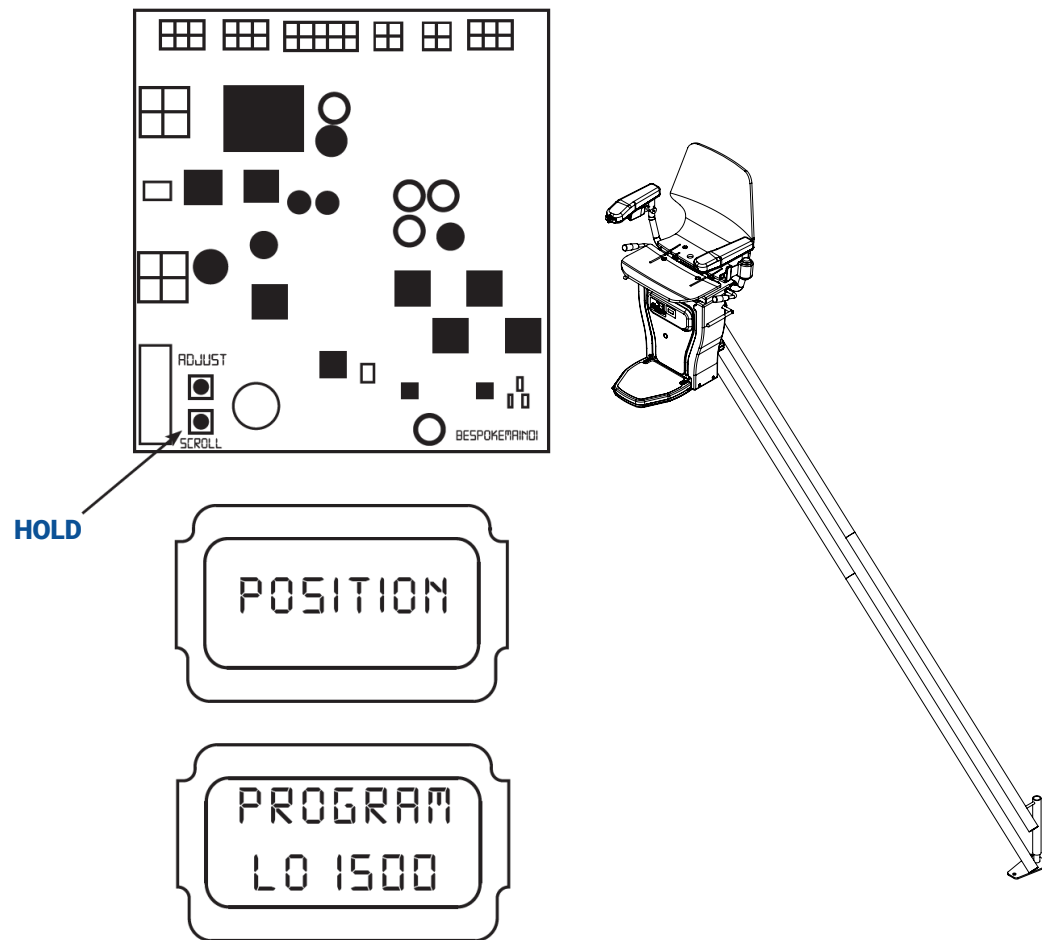
PROGRAM
LO 1500

The lift will not run unless in program mode or already programmed to the rail. This is how you put the lift into PROGRAM mode:

Press the scroll button until you see 'POSITION' (this is the first option you come to if scrolling from the home screen), then press and HOLD the scroll button and this will change to 'Program LO 1500' – you are now in program mode and able to drive the lift onto the rail.

Run the chair to a desired position on the rail so you are now able to start mounting the charging points.

Install Rail Charge Points

Return to the rail and fit the charge points to both the top and bottom connecting the core cable at both ends, use the diagram in the installation guide to ensure correct polarity (+ to the lower charging strip and - to the top) once you are happy with the positions fasten the final end stop brackets at the top and bottom of the rail.

When placing the final end stops and charging points please ensure;

- The lower skate of the carriage does not touch the floor before engaging with the final end stop. This could result in damage to the skate mechanism. If the distance is incorrect you may need to adjust the charging terminal.

- When the charging terminals are engaged make sure there is ONLY 5mm-10mm gap between the end stop and the skate cover, if for any reason the lift overruns the charge points it will ensure the lift is still on charge.
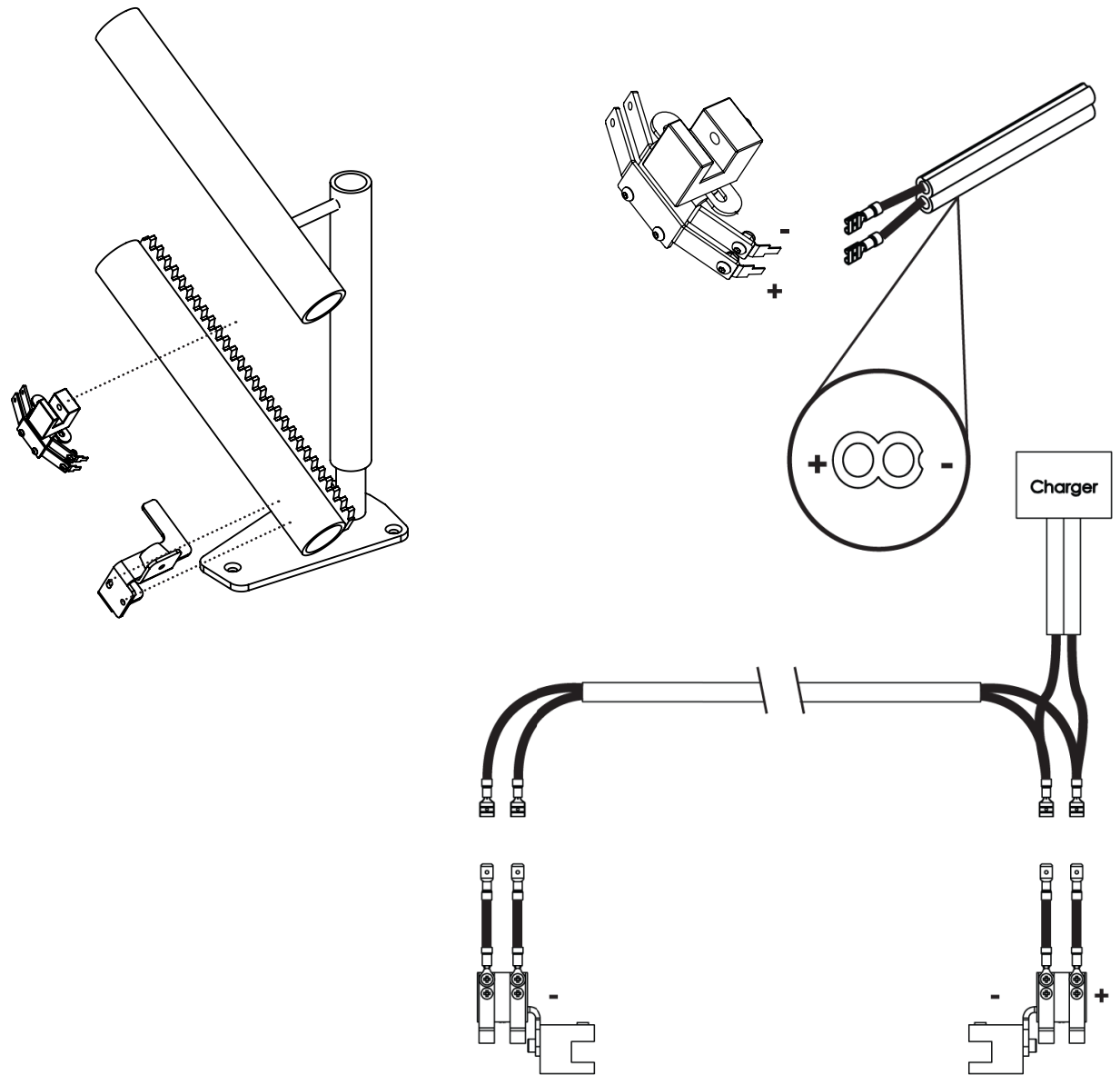
Calibrate and Programming

Below is breakdown and explanation of each of the menu options shown on the display when using the scroll / adjust button. The home screen will show lift status, for example, 'LIFT READY' or 'OFF CHARGE' before you scroll through the menu, the display will automatically go back to the lift status after 5 seconds of neither button being pressed.

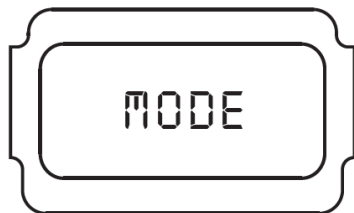|		
POSITION	ADJUST ● **NO FUNCTION**	Used for programming the lift to the rail (press and hold scroll button to get in/out of Program mode), also shows the encoder count once programmed.
HAND	ADJUST ● **LEFT / RIGHT**	This is to determine the hand of the lift
MODE	ADJUST ● **CURVED / STRAIGHT**	Used for different lift types as will both Curved and Straight lifts will use the same PCB & software.\n\n*Straight lift not yet available*

SWIVEL

ADJUST
●
MANUAL / POWERED

This option is to set up whether the lift has a manual or powered swivel.

INT.CP

ADJUST
●
PASS / STOP

When the lift has an Intermediate Charging Point (INT. CP) the lift will always park here from the remote controls, but you have the option for the joystick, PASS – to always pass the charge point when using the joystick (when the lift only requires the charge point STOP – To stop on the charge point when using the joystick (usually required where the customer has an intermediate landing they need to be able dismount the lift).

TRAVEL

ADJUST
●
QUIET / ALARM

Option for the lift to BEEP when travelling up or down the rail.

LANGUAGE

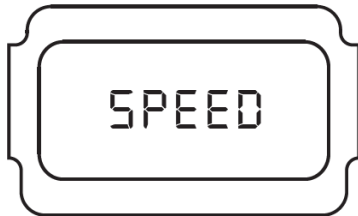ADJUST
●
SELECT LANGUAGE

Choose 1 of 7 language options: English, Spanish, French, German, Italian, Portuguese and Dutch.

TRIPS

ADJUST

NO FUNCTION

This logs how many the trips the lift has made.
This cannot be reset.

SPEED

ADJUST

NO FUNCTION

This is used for factory assembly ONLY.

FAULT LOGS

ADJUST

RESET FAULT COUNT
PRESS ON EACH FAULT

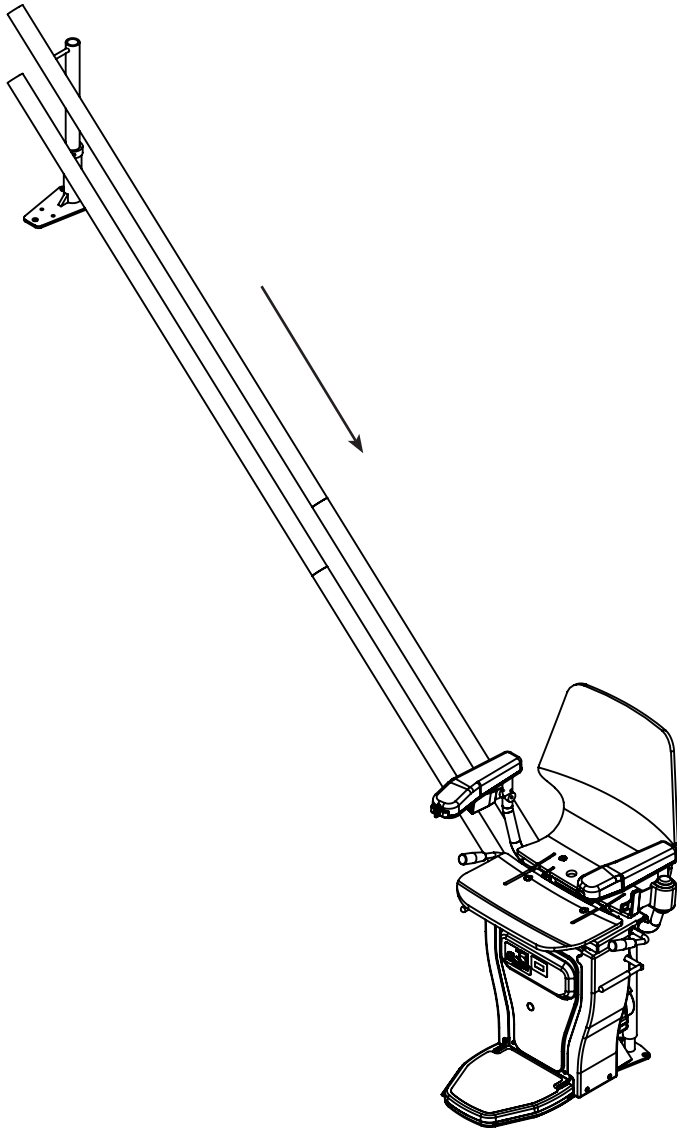The PCB will record each fault / safety switch ever activated on the unit. These can be reset once repaired or serviced.

SOFTWARE VERSION

ADJUST

NO FUNCTION

Used to determine the current software version of the PCB.

Once you have scrolled through all the menu options, you will be taken back to option 1

Program the Stair Lift

1 ADJUST
⚫
⚫
SCROLL

2 POSITION

3 1000
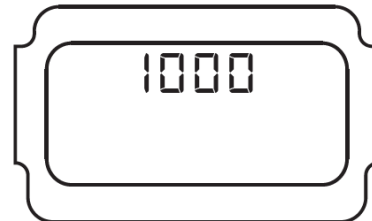
- Put the lift into Program mode and begin to run it down the bottom charge point, making sure the charger is turned on before making contact.

  If you have an intermediate charge point, turn the charger on when you are below this so that the bottom charge point is the first inwhich the lift detects.

- Once the lift reaches the charge point it will stop automatically and the counter will reset to a number around 1000, this is the datum point in which the lift will count from.
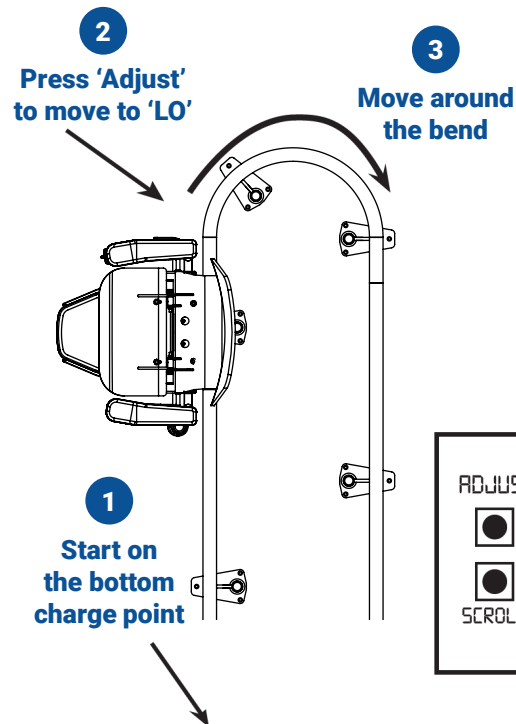
1 ADJUST
● ←
●
SCROLL

2 LO

3 HI
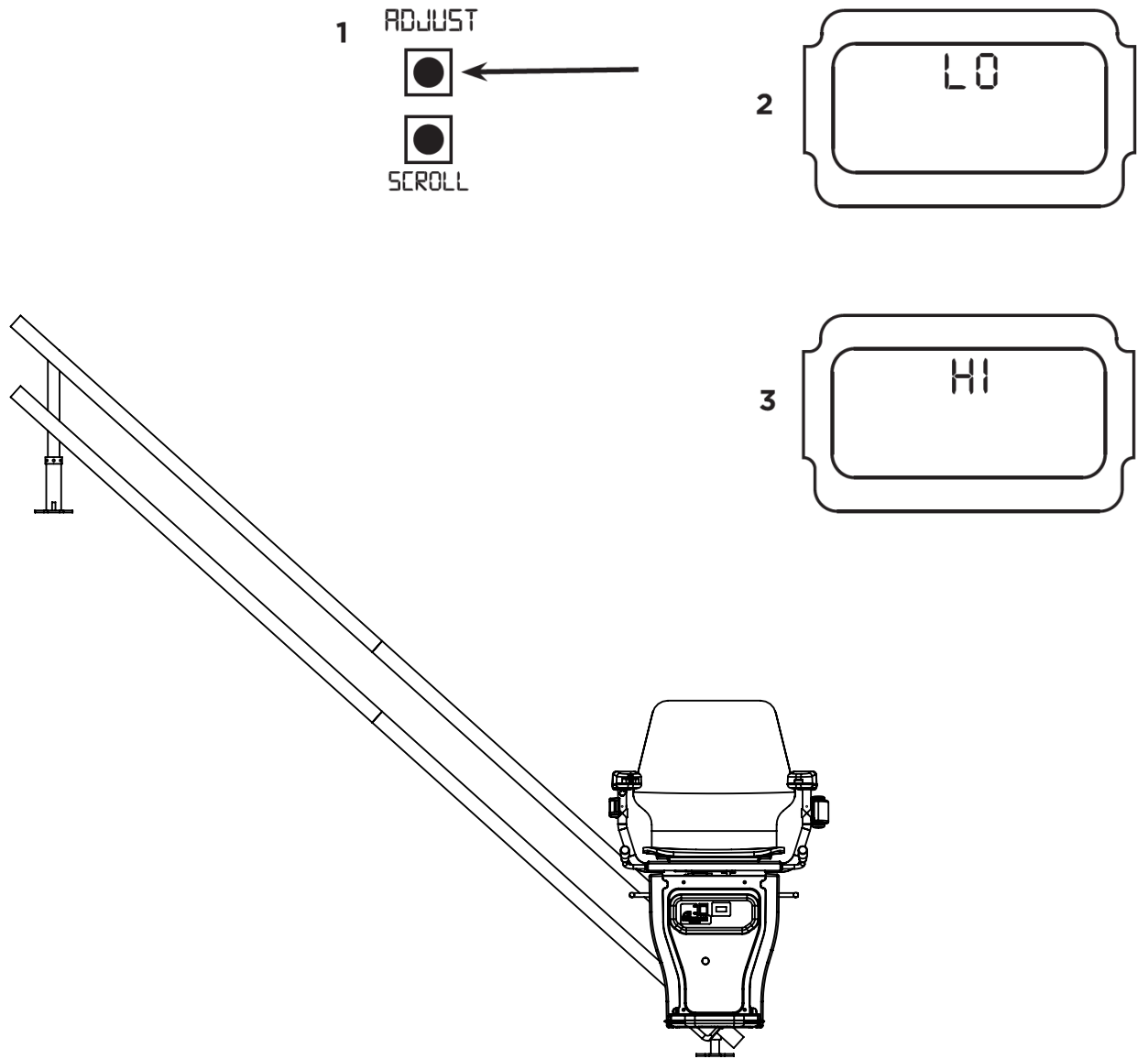
The 'LO' shown on the screen is the speed the lift will travel after programming. Press the adjust button to change to 'HI' to program the lift to full speed.

The speed can be changed at any point on the lift as you travel up to the top charge point by pressing the adjust button again to select between 'HI' and 'LO', this will only need to be adjusted on internal curves.

Programming the Bend Slowing Function *(optional)*

Note: To program using the slowing function The Infinity Stair Lift must be programmed using following the steps:

1. Once Programmed as described on pages 19-21

2. Move off the first charge point

3. Follow the steps below.

4. Move to final terminal.

4

Press 'Adjust' to move to 'HI'

Move the Infinity around the bend to the position where you would like the slowing function to stop.

Push 'Adjust' until the display reads 'HI'.

2

Press 'Adjust' to move to 'LO'

3

Move around the bend

1

Start on the bottom charge point

To slow The Infinity when travelling around the bends the unit must be programmed the following way; Position the stair lift where you would like to start the slowing function Push 'Adjust' until the display reads 'LO'.

5

Move to final Terminal

Remote Control

**Remote**

Insert Batteries

Wall Mount
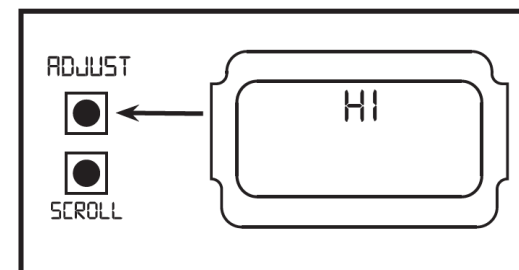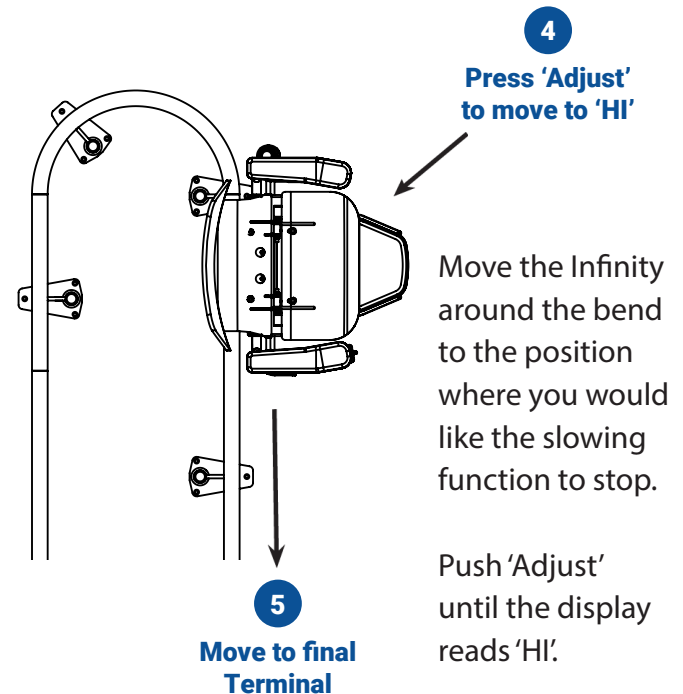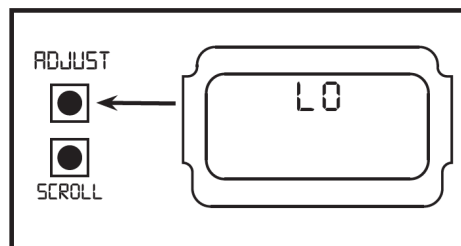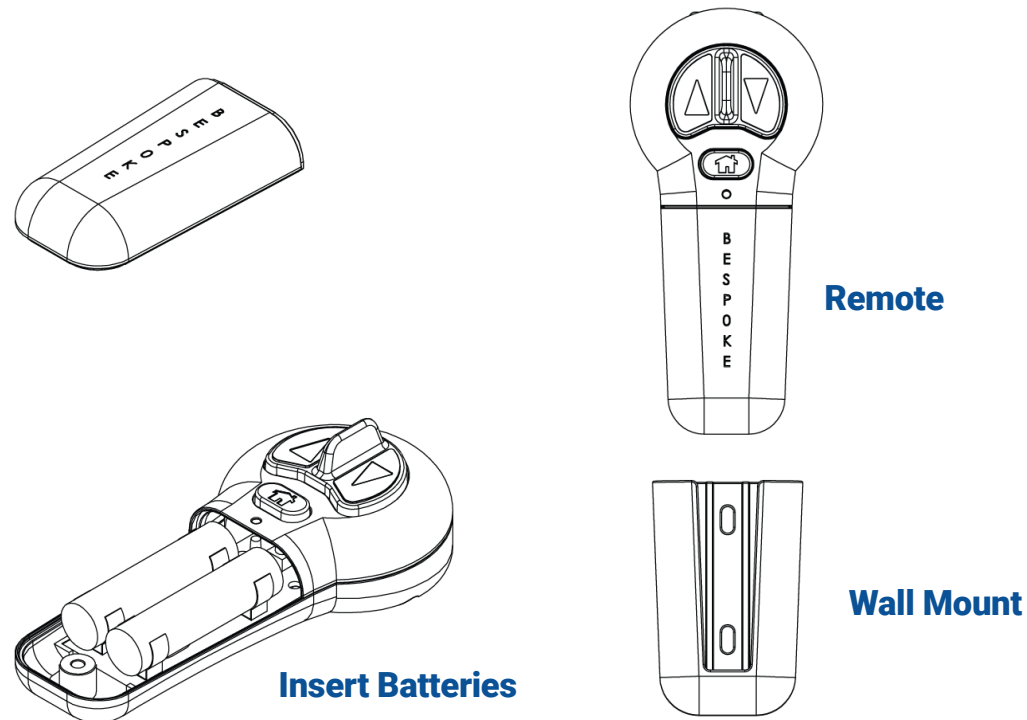
The remotes will need to be programmed to the lift. The process is as follows;

- Turn the lift off/on again.

- Within the first 5 minutes of the lift being switched back on, press and hold the reset button (using a small blunt item such as a paper clip) on the remote control for 3 seconds then press any directional button and the remote will be paired.

- Repeat the process again for any additional remote controls. The remotes will now be paired to this lift.
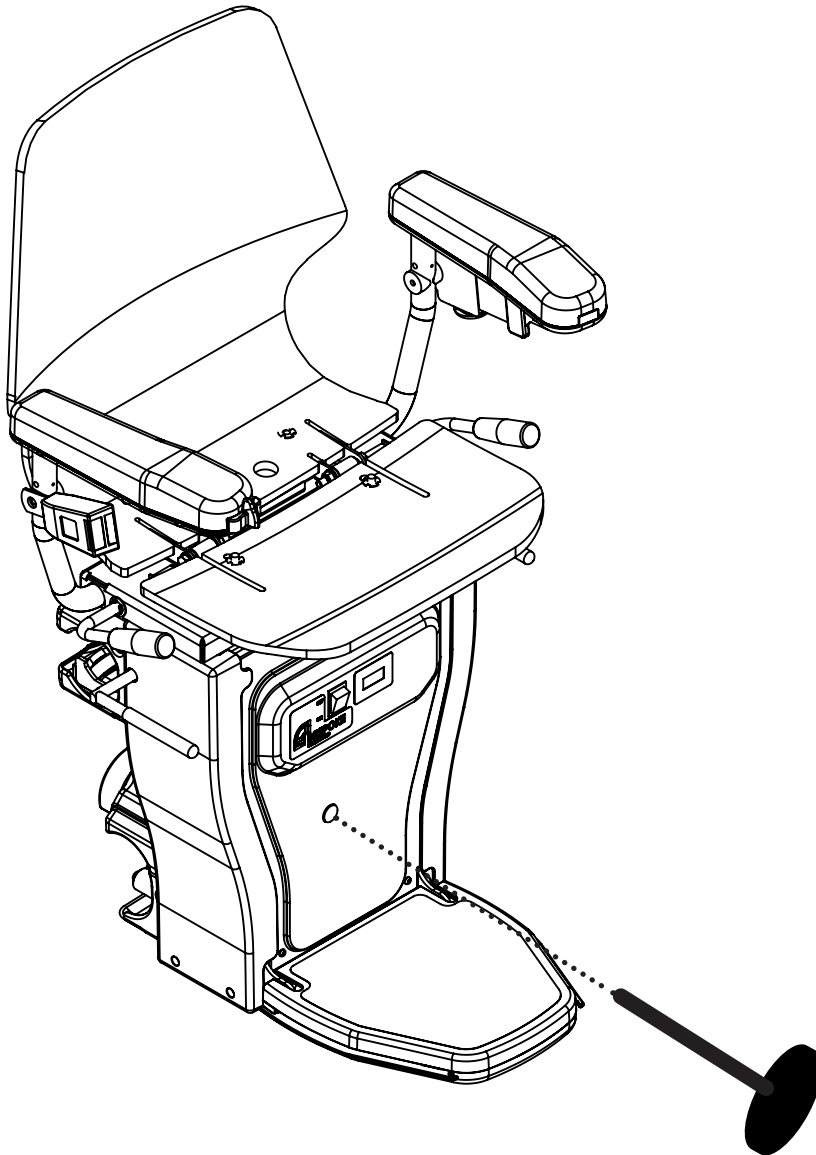
Troubleshooting and Safety

Here we are going to quickly check the stopping safety features:

- First move the stair lift to a convenient position

- Now run the stair lift placing your hand in front of each sensor individually running the lift both up and down the rails.

Front   **Back**
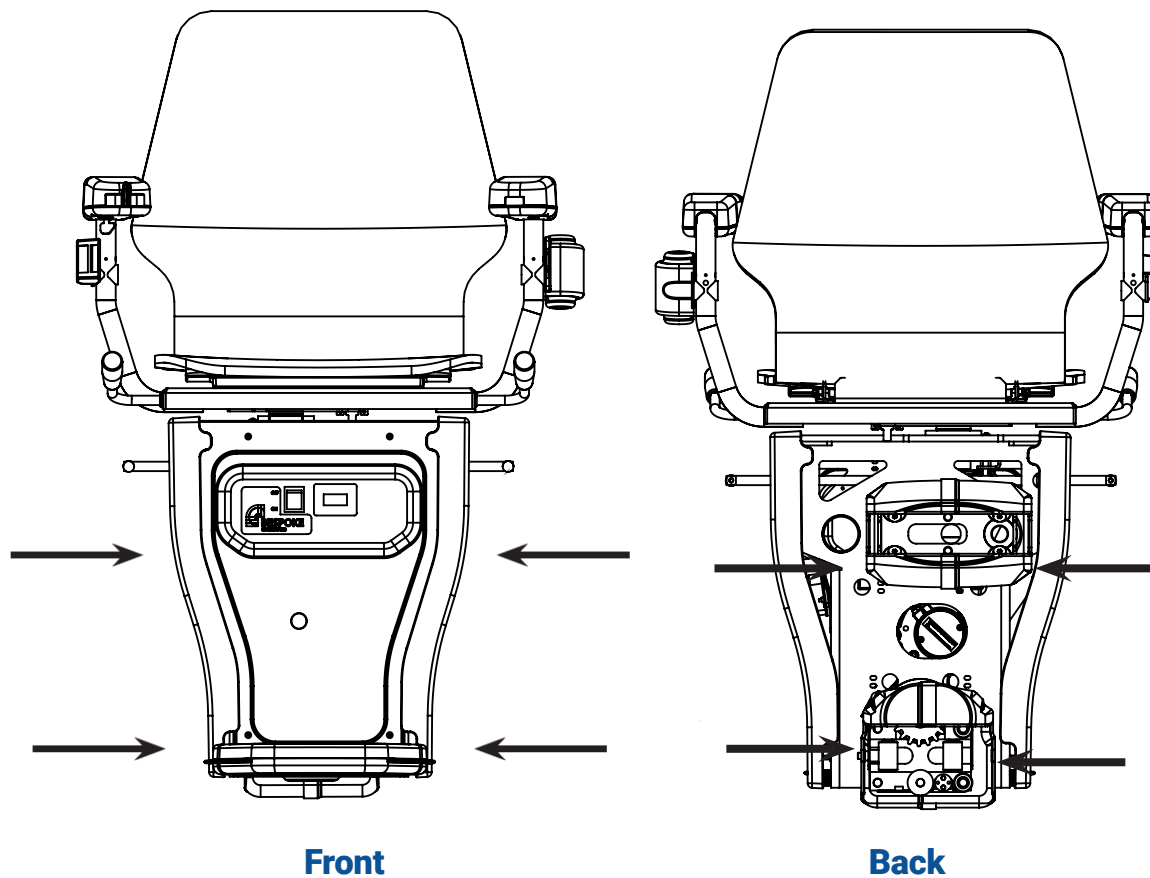
Manual Override

- Manually insert the winding handle into the hole located on the left side of the carriage and locate the winding mechanism.

- Engage the winding mechanism and manually turn the handle.

To release the over-speed governor (OSG) wind the stairlift in the upwards direction to release the OSG arm.

Reset the OSG

- Run the lift upwards with the manual override, the OSG should come loose from the tube then.

-
  Make sure that the OSG is in neutral position again.

The unit does not need re-programming.
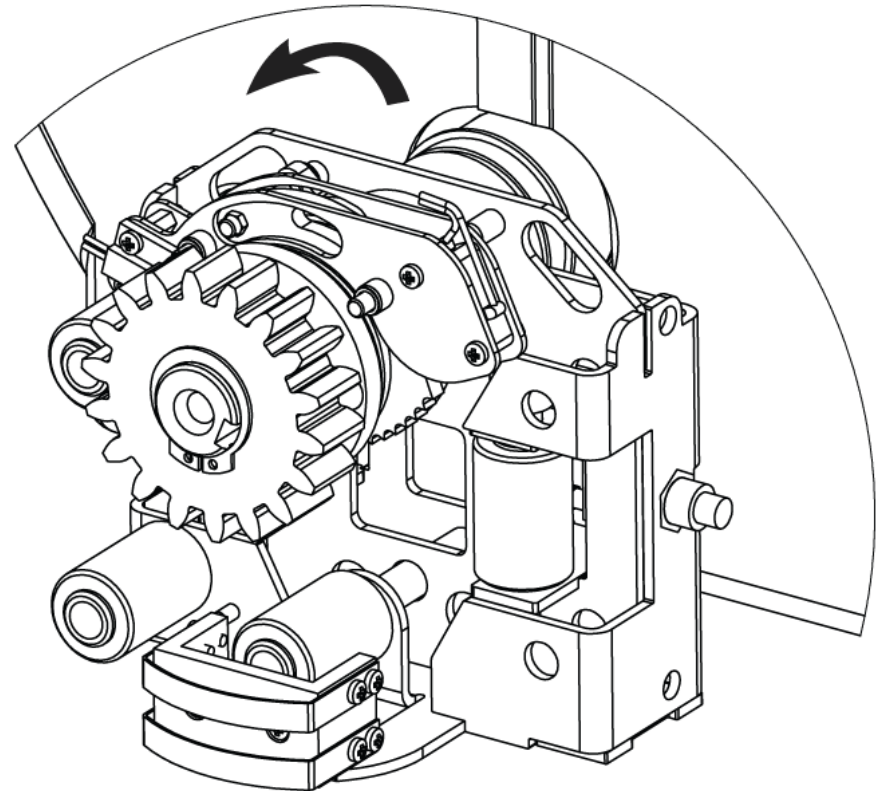
The Display Diagnostic

The Display Diagnostics feature that can inform the engineer of any problems that The Infinity stair lift has encountered during installation or in general use. Depending on the problem the Infinity diplays a selection of error messages to indicate what the problem is enabling the engineer to pinpoint the fault and resolve quickly without the need of elimination of other potential faults.

```
OFF
CHARGE
```
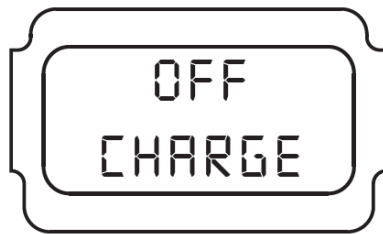
Lift Not Charging

- Check lift is parked on a charge point.

- Check the voltage at the charge point, the power is turned on and polarity is correct.
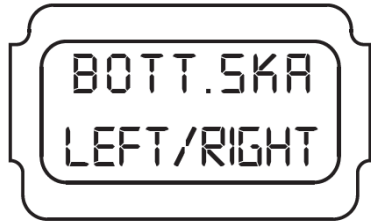
```
FOOTREST
LEFT/RIGHT
```

**Footrest Safety
Switch Activated**

- Check for obstructions and covers able to move freely.

- Check Footrest wiring loom for continuity as marked on the PCB and using the wiring diagram for correct switch cables.

```
 SEAT
LEFT/RIGHT
```

**Main Chassis Safety
Switch Activated**

- Check for obstructions and covers able to move freely.

- Check Mainframe wiring loom for continuity as marked on the PCB and using the wiring diagram for correct switch cables.

```
BOTT.SKA
LEFT/RIGHT
```

**Bottom Skate Safety
Switch Activated**

- Check for obstructions and covers able to move freely.

- Check Bottom Guidance wiring loom for continuity as marked on the PCB and using the wiring diagram for correct switch cables.

```
 TOP.SKA
LEFT/RIGHT
```

**Top Skate Safety
Switch Activated**

- Check for obstructions and covers able to move freely.

- Check Top Guidance wiring loom for continuity as marked on the PCB and using the wiring diagram for correct switch cables.
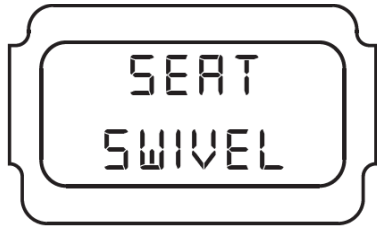
SEAT SWIVEL

**Seat Swivel Safety Switch Activated**

(will also show when powered swivel is in motion)

- Check seat is in home position.

- Check swivel switch is open, located on the swivel boss cam above the batteries.

- Check continuity on orange wire located in the mainframe loom.

R.M.U. FAULT
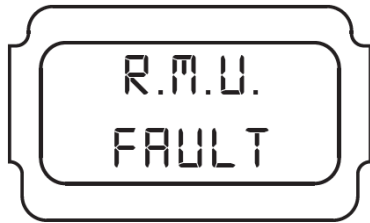
R.M.U Reed Switch is not Receiving a Signal

- Check white OSG roller is rotating when the lift is travelling. The 2 magnets must pass the sensor to give a pulse in less than 7 seconds.

- Check grey wires on bottom guidance loom for continuity.
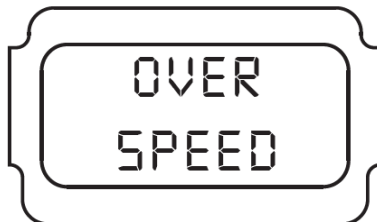
OVER SPEED

Over Speed Switch is Activated

- Check O.S.G assembly is in neutral position, if not reset and try run the lift again.

- Check Orange wires on bottom guidance loom for continuity.

```
OVER
CURRENT
```
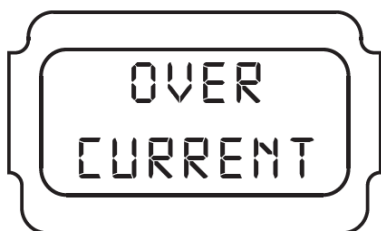
**Lift is Drawing too
Much Current**

- Check rack / pinion is clear for the lift to move.

- Check the lift has not hit the overrun plate on the
  End stops.

- Check customer weight does not exceed limit.

```
RELAY
FAULT
```
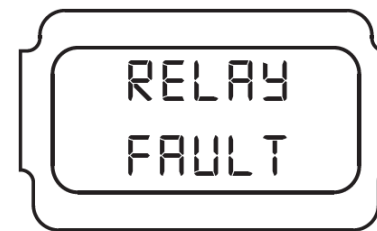
**Relay is Sticking
on Main PCB**

Gently tap the relay to free the mechanism, if
this doesn't work, a new PCB will be required.

**Faults Not Shown
on Display**

Board has no power, but LED 1 is activated.
There is a live short on a safety line, un plug each connector on the PCB until the light goes out,
this will determine which loom the short is on and you are able to test for continuity to the chassis
to find the short. The PCB is designed to handle a short instead of requiring a fuse.

Lift will only work from Remote controls.

- Check both arms are horizontal (arm interlock switch is present in downside arm)

- Check key switch is turned on / wiring (wiring for interlock is in series with the key switch)

Infinity Wiring Diagram
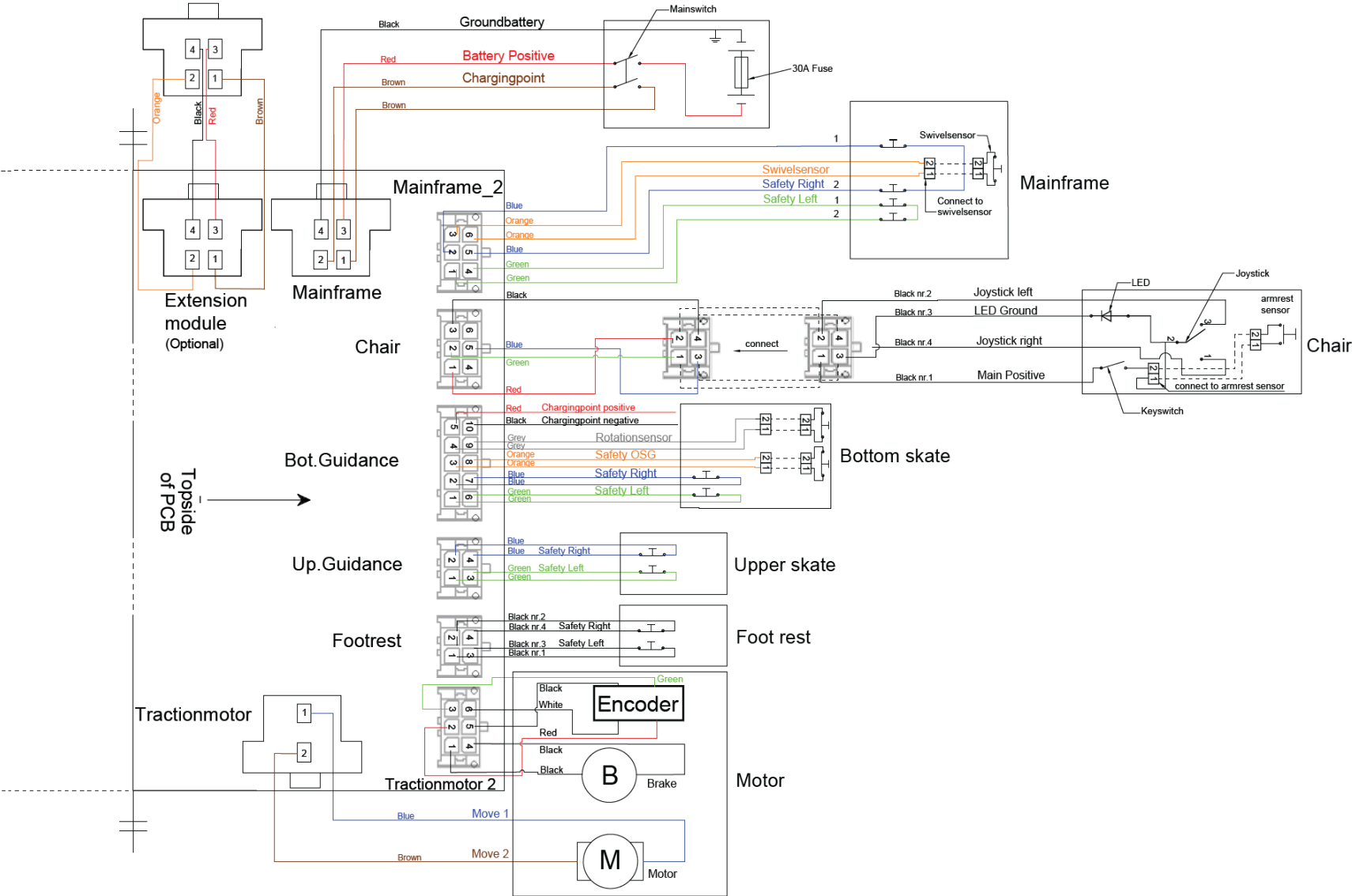
Demonstration and Handover

- **Demonstration**
- **Explanation**
- **User Safety**
- **User Booklet**
- **Paperwork Completion**

1: Ask user to stand clear of the stairlift making sure that they have a clear view of the lift.

2: Demonstrate the operation of the seat and footrest (manual or powered if fitted); advise the user to stand clear of the footrest to avoid the footrest coming into contact with the users legs.

3: Explain the L.E.D. functions on the chair arm clearly.

4: Explain the operations and positions of all the on / off switches.

 Explain that the Key switch should always be turned off before getting in / out of the chair.

5: Explain the operation and position of the directional controls on the chair.

6: Explain that if constant pressure is released from directional controls the lift will stop, and there is approximately a three second delay before the stair lift will restart.

7: Explain the swivel function (manual or powered, if fitted) and also that the lift will stop automatically at the top and bottom of the rail. Explain manual override of a powered swivel if fitted. Demonstrate and explain the manual override function should only be used if a fault develops with the power functions, and when used, should only swivel in the up direction as a safety measure.

 On NO occasion should the manual override function allow the user to swivel the chair in the down direction.

Tools and Equipment

Installation Tools

- 2ft (500mm) spirit level (approx)
- Extension Bar 3/B" or W drive
- Tape Measure ~ 5 metres
- 6mm twist drill bit (15/16")
- 8mm masonry drill bits
- Hexagon keys one set - Sizes: 2
- 10mm ('T handles or long series)
- Combination spanners, one set - Sizes: M8 to M24
- Crimping tool
- Cross-head screw / drivers, one set (variable sizes)
- Dust sheet
- Electric drill (Variable speed / Hammer action / Chuck size 13m minimum)
- Electrical or combination pliers
- Electrical side cutters
- Extension lead (heavy duty)
- External circlip pliers
- Flat blade screwdrivers, one set (variable sizes)
- Hammer 20oz (claw or ball pen)

- Long nose pliers
- Magnetic angle finder
- Digital Multi meter / Clamp meter (must be capable of measuring DC current at 30A for at least 5 seconds)
- Nut runners - sizes: 5mm, 5.5mm, 7mm, 8mm
- Stanley knife (utility knife)
- Lube grease
- Terminal screwdriver
- Torque wrench drive range 12 - 68Nm (3/8" or W drive)
- Vacuum cleaner
- Wire stripper
- Wiring mouse - approximately 6m
- Bit / socket set- 2.5 - 10mm (3/S" or W drive)
- Anti Static Wrist Strap
- 3/8" or W square drive sockets range 8 -19mm
- 24mm socket
- Ratchet 3/8" or W drive
- ®30mm Hole Saw/Cone Cutter

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ACCESSIBILITY SOLUTIONS

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