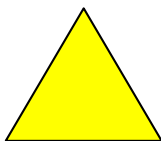


Keeler

Wireless 2

Headband & Charger

Service Manual



ALWAYS READ THE INSTRUCTIONS

A
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COMPANY

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CONTENTS

Introduction	1
Service Principles	1
Precautions	3
Headband	4
Disassembly	4
Remove Control Unit	5
Open Control Unit	6
Control PCB	7
Cable Assy	8
Headband	9
Reassembly	10
Rebuild Control Unit	10
Replace Control Unit	11
Final Reassembly	12
Spares	13
Spare Parts List – Headband – Main Unit	14
Spare Parts List – Control Box	15
Charger	16
Disassembly	16
Replacements	17
Replace PCB Assy	17
Replace Battery Contact PCB Assy	17
Replace LED PCB Assy	18
Reassembly	18
Spares	19
Spare Parts List	20

Introduction

This manual covers servicing of both the Wireless 2 Headband and Wireless 2 Charger unit..

Service Principles

Where a sub-assembly is specified the individual parts are not available as the assembly of the sub-assembly involves the use of specific tooling, jigs and adhesives

Tools Required

The tools required will be in a standard electro-mechanical toolkit.

Precautions

Care should be taken to carry out any repair work on a clean soft surface to minimise damage to the outside of the unit.

Solvents should **not** be used for cleaning.

Anti-static precautions must be used when servicing the electronic components in this product.

Headband

Disassembly

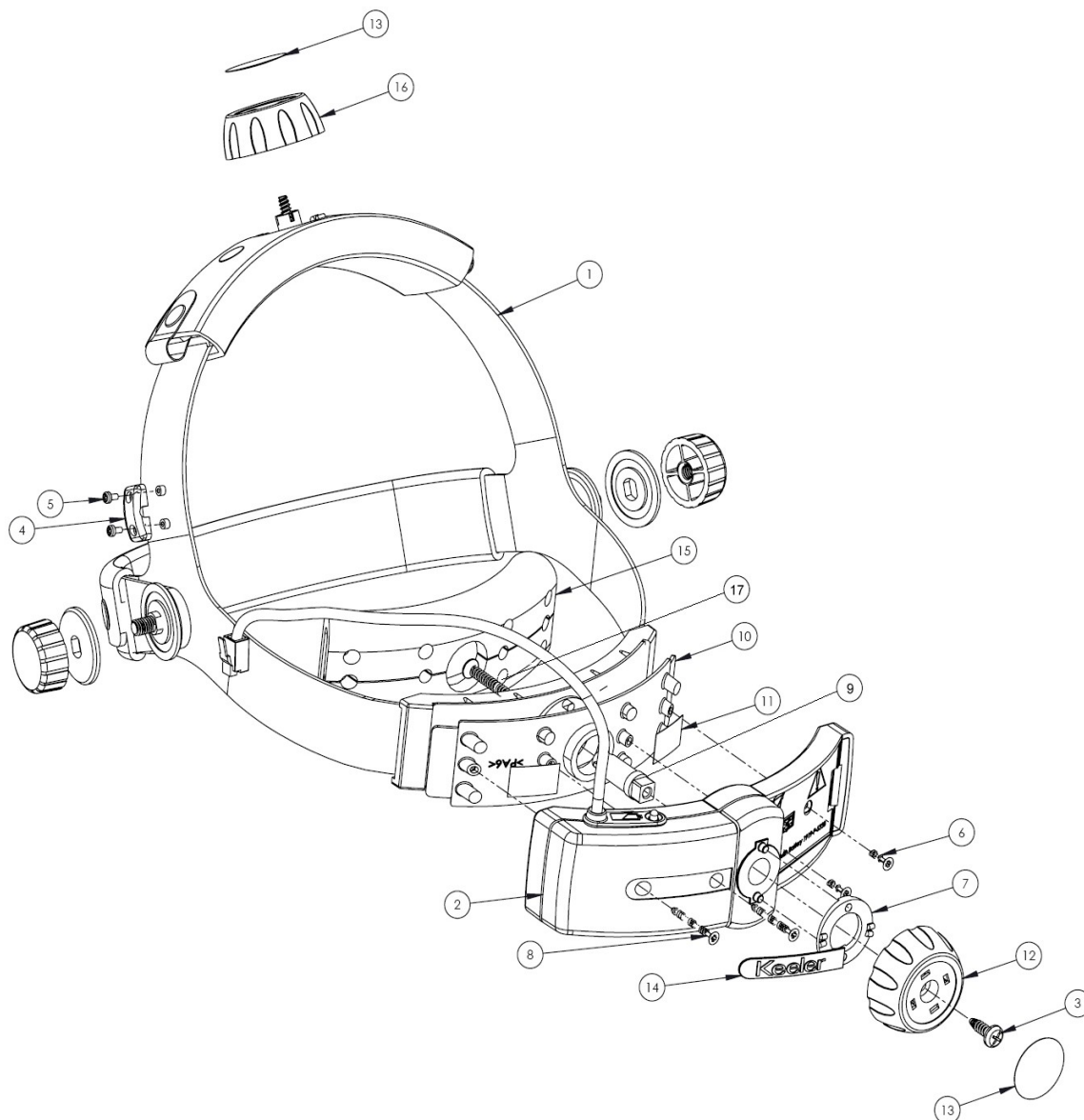
It is easier to work if the Optics Assembly and Browbar are removed by unscrewing the 2 knobs attaching the Browbar to the Headband and unplugging the cable from the Dimmer Block.

If the Control Unit is permanently wired to the Dimmer Block it is not recommended to disconnect the cable but to carefully protect the Optics Assembly whilst carrying out servicing.

The first level of disassembly is required for most repairs

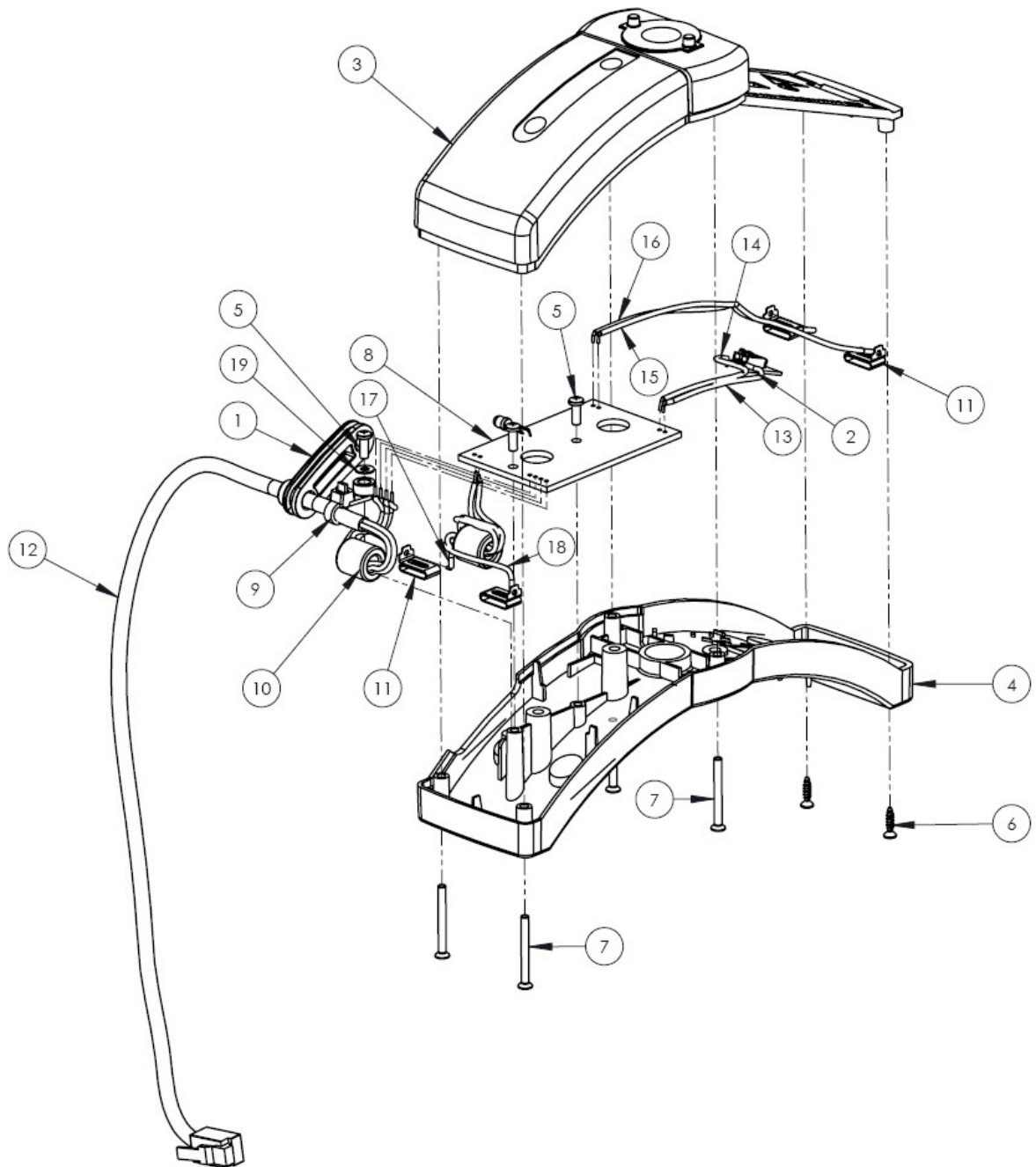
Remove Control Unit

1. Remove 2 off M5 x 4 Pozi Pan head Screws (5) from the Clamp (4) on the Headband
2. Using a pointed blade under the edge of the Adhesive Bezel (13) carefully lift the Bezel off.
3. Remove 1 off No 8 x 12.7 Pan Head Screw (3) from the centre of the Knob (12)
4. Remove the Knob (12) and Detent Plate (7)
5. Using a pointed blade under the edge of the Keeler Label (14) carefully lift the Label off exposing the Screws holding the Control Unit to the Rear Cover Plate (10)
6. Remove 2 off M2.5 x 25 Pozi Csk PT Screws (8) and 2 off M2.5 x 10 Pozi Csk PT Screws (6) holding the Control Unit Assembly (2) to the Rear Cover Plate (10).



Open Control Unit

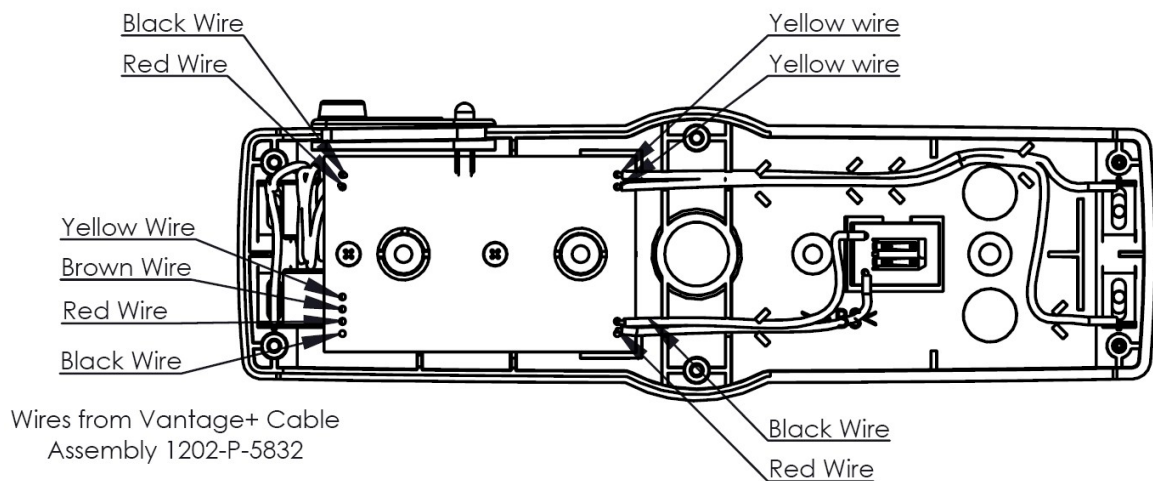
1. Remove 4 off M2 x 20 Pozi Csk PT Screws (7) and 2 off 4 off M2 x 8 Pozi Csk PT Screws (6) from the rear of the Control Unit.
2. Lift off the Front Cover Moulding (3)



Replacements

Control PCB

1. Remove 2 off M2 x 8 Pozi Pan Head PT Screws (5) holding the PCB (8) to the Rear Moulding Assembly (4)
2. Remove 1 off M2 x 8 Pozi Pan Head PT Screw (5) and 1 off M2 Washer (19) from the Cable Retainer on the Cable (12) from the Dimmer Block.
3. Lift out the PCB (8)
4. Carefully unsolder 1 off Black and 1 off Red wire leading from the Contacts on the Rear Moulding Assembly from the PCB.
5. Carefully unsolder 10 wires from the Control PCB (8).



6. Solder the 10 wires to the replacement PCB as shown on the above diagram ensuring that the 4 wires from the Dimmer Cableform (12) pass through the Ferrite Bead (10) and still have the Strain Relief (1) and Tie Wrap (9) are still in place.
7. Solder 1 off Black and 1 off Red wire from the Contacts on the Rear Moulding Assembly to the PCB (8)
8. Fit the Tie Wrap (12) with its cable (9) to the Rear Moulding (4) using 1 off M2 x 8 Pozi Pan Head PT Screw (5) and 1 off M2 Washer (19).
9. Ensure that the Ferrite Beads (10) are positioned under where the PCB (8) will sit.
10. Fit the PCB (8) to the Rear Moulding using 2 off M2 x 8 Pozi Pan Head PT Screws (5).

Cable Assy

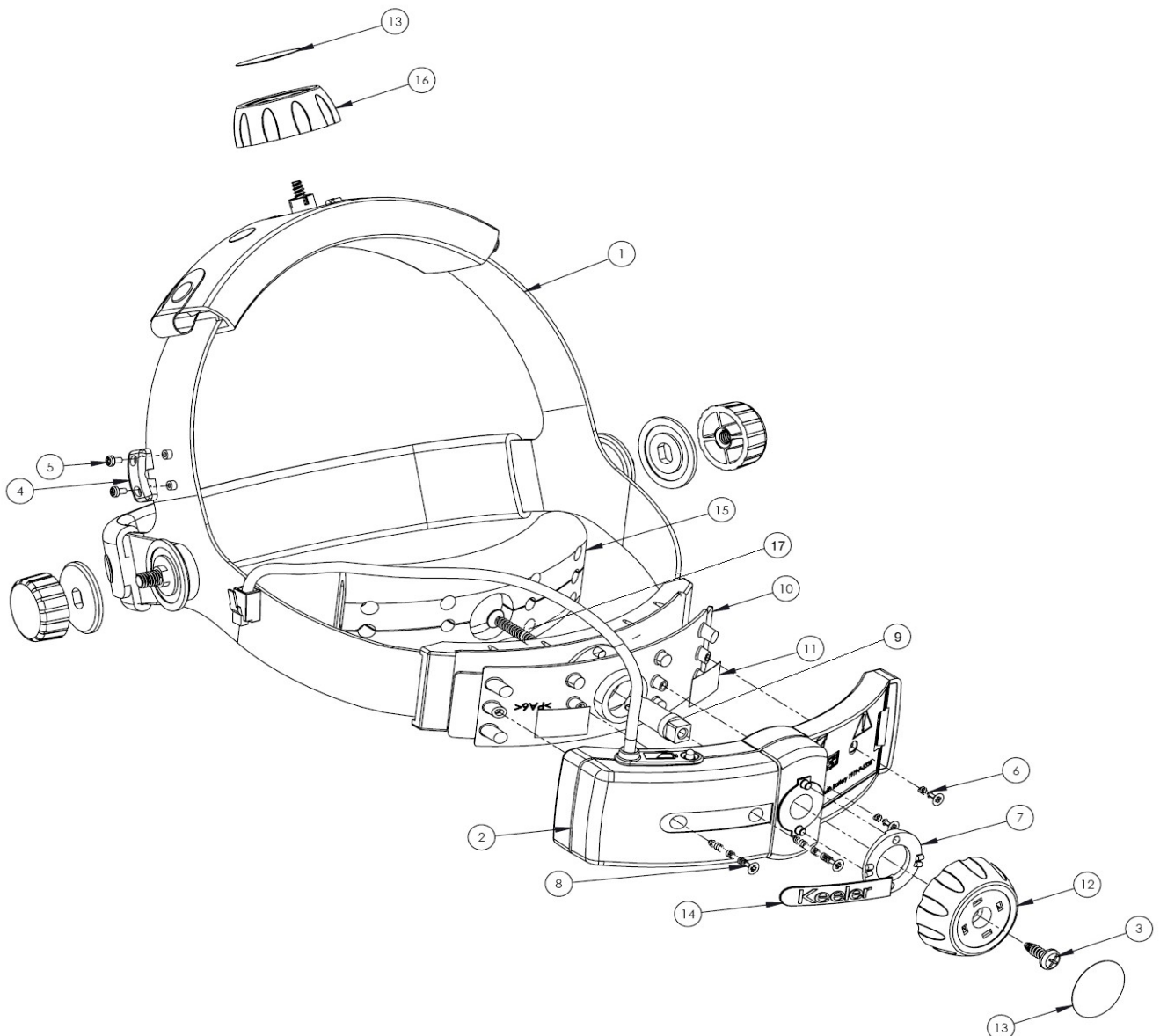
1. Remove 2 off M2 x 8 Pozi Pan Head PT Screws (5) holding the PCB (8) to the Rear Moulding Assembly (4)
2. Remove 1 off M2 x 8 Pozi Pan Head PT Screw (5) and 1 off M2 Washer (19) from the Cable Retainer on the Cable (12) from the Dimmer Block.
3. Carefully unsolder 1 off Black and 1 off Red wire from the Contacts on the Rear Moulding Assembly.
4. Carefully unsolder 4 wires from the Control PCB (8).
5. Fit the replacement cable assembly ensuring that
 - 5.1. The Cable Strain Relief (1) is fitted with the battery logo facing the plug on the Dimmer block end of the cable
 - 5.2. Cable Retainer (12) is fitted 5 mm from the end of the cable sheath as shown below



- 5.3. The Ferrite bead (10) is threaded over the 4 wires.
6. Solder the wires to the PCB as shown on the diagram above.
7. Solder 1 off Black and 1 off Red wire to the Contacts on the Rear Moulding Assembly.
8. Fit the Cable Retainer (12) with its cable to the Rear Moulding (4) using 1 off M2 x 8 Pozi Pan Head PT Screw (5) and 1 off M2 Washer (19).
9. Fit the PCB to then Rear Moulding using 2 off M2 x 8 Pozi Pan Head PT Screws (5).

Headband

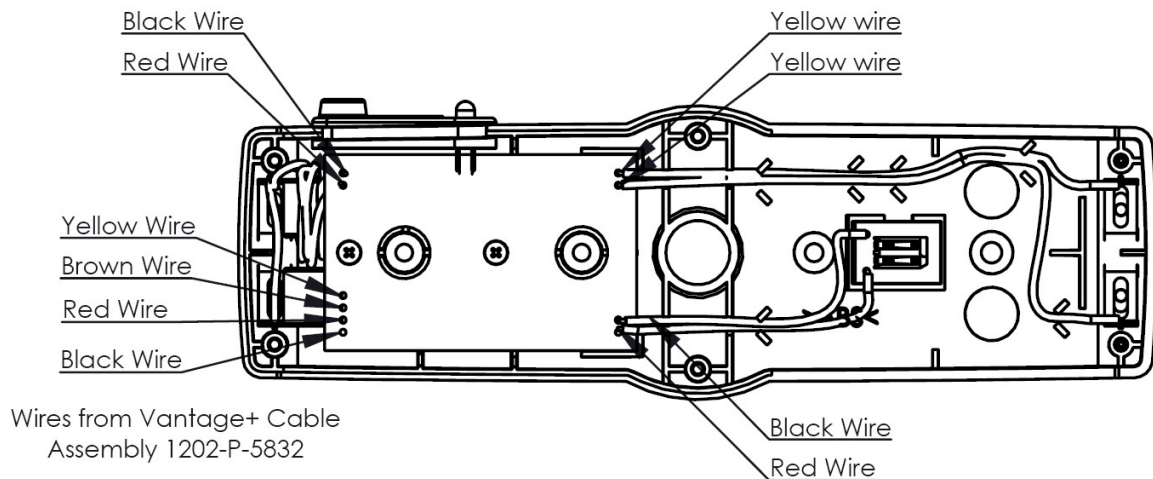
1. Carefully remove the Comfort Pad (15). Double sided adhesive tape is applied during assembly to retain the pad in place until the Control Box is fitted.
2. Remove 1 off M4 x 25 Pozi Screw (17) from the Headband Adjuster joining it to the Extension Bar (9)
3. It will now be possible to remove both sides of the Headband from the Mounting Plate (10)
4. Feed both sides of the replacement Headband into the Mounting Plate.
5. Fit the Adjuster through the back of the Mounting Plate (10) and fit it to the Extension Bar (9) with 1 off M4 x 25 Pozi Screw (17) Ensure that the Extension Bar is fully engaged with the Adjuster.
6. Meshing of the Adjuster with the Headband will be adjusted after the Control Box has been fitted.



Reassembly

Rebuild Control Unit

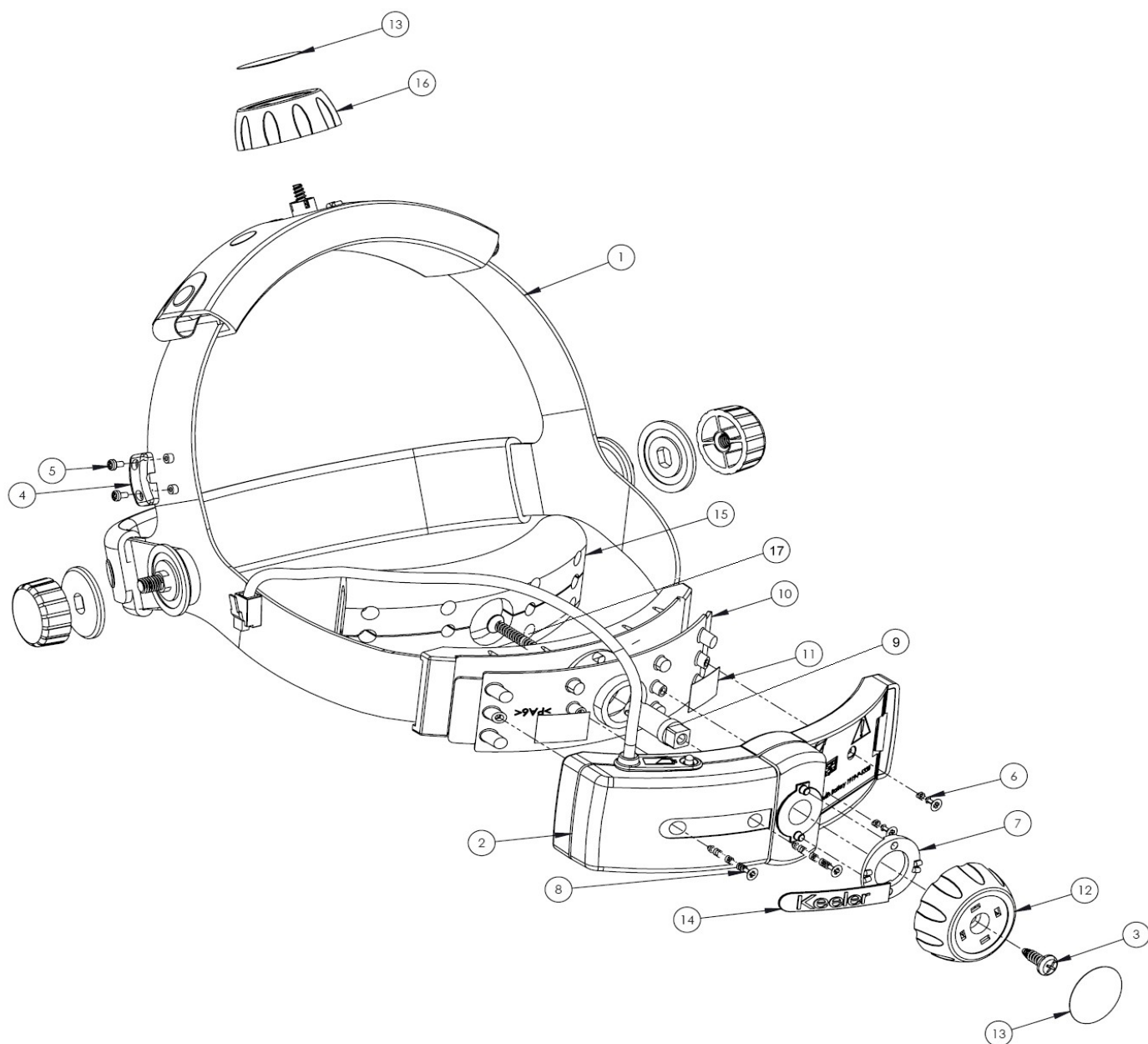
1. Check that the Control Unit PCB (8) is fitted and screwed down.
2. Check that the wiring in the Control Unit is correct according to the diagram below and that all soldered joints are sound.



3. Offer the Front Moulding (3) to the Rear Moulding (4) ensuring that the Cable Strain Relief (1) is correctly positioned in the cut-out.
4. Refit the Front Moulding (3) using 4 off M2 x 20 Csk PT screws through the PCB end (2 at the end and 2 in the middle) and 2 off M2 x 8 Csk PT Screws at the other end.

Replace Control Unit

1. Check that the Comfort Pad (15) is fitted over the Headband Rear Cover Plate (10). If not apply 2 pieces of double sided adhesive tape (11) as shown and fit the Comfort Pad (15) using the adhesive tape to temporarily hold the Pad in place.
2. Offer the Control Box Assembly (2) onto the Headband Rear Cover Plate (10) ensuring that the cable is pointing upwards.
3. Fit 2 off M2.5 x 25 Csk Pozi PT Screws (8) through the PCB side of the Control Unit and 2 off M2.5 x 10 Csk Pozi PT Screws (6) through the Battery side to fix the Control Unit (2) to the Headband Rear Cover Plate (10)
4. Refit the Keeler Label (14) to the face of the Control Unit (2)



Final Reassembly

1. Fit the Detent Plate (7) to the front of the Control Unit ensuring that it fits over the 2 pegs on the front of the Control Unit (2)
2. Ensure that 2 sides of the Headband are equally fitted inside the Headband Rear Cover Plate (10) by gently pushing the Extension Bar (9) back into the Comfort Pad (15) to disengage the Adjuster with the teeth on the sides of the Headband.
3. Pull the sides of the Headband out as far as possible and move them about gently until they re-engage with the Adjuster at the end of their travel.
4. Refit the Headband Knob (12) using 1 off No 8 x 12.7 Pan Head Screw (3).
5. Carefully refit the Knob Bezel (13).
6. Refit the Strain Relief Clamp (4) over the Cable with Approx 90mm of cable between the Clamp (4) and the plug to the Dimmer Block.

Spares

Spare parts can be supplied in accordance with the following list.

The parts indicated with * are only available as part of the Fixings kit.

Spare Parts List – Headband – Main Unit

Item	Part No	Description	
1	2099-P-5010	Mk 2 Headband Assembly	
3	SP70-80024	No8 x 12.7 Pan Head Screw	*
4	EP39-70232	Strain Relief Clamp	
5	SP72-00003	M2 x 4 Pozi Pan Head Screw	*
6	SP72-50002	M2.5 x 10 Csk Pozi PT Screw	*
7	EP39-70324	Detent Plate	*
8	SP72-50003	M2.5 x 25 Csk Pozi PT Screw	*
9	EP39-70328	Extension Bar	
10	EP29-59902	Headband Rear Cover Plate	
12	EP39-70327	Headband Knob	*
13	EP39-70325	Knob Bezel	*
14	EP39-70317	Keeler Nameplate	
15	EP39-70331	Comfort Pad	
16	EP39-70344	Headband Top Knob	*
	1299-P-7198	Fixings (Marked * above and below)	

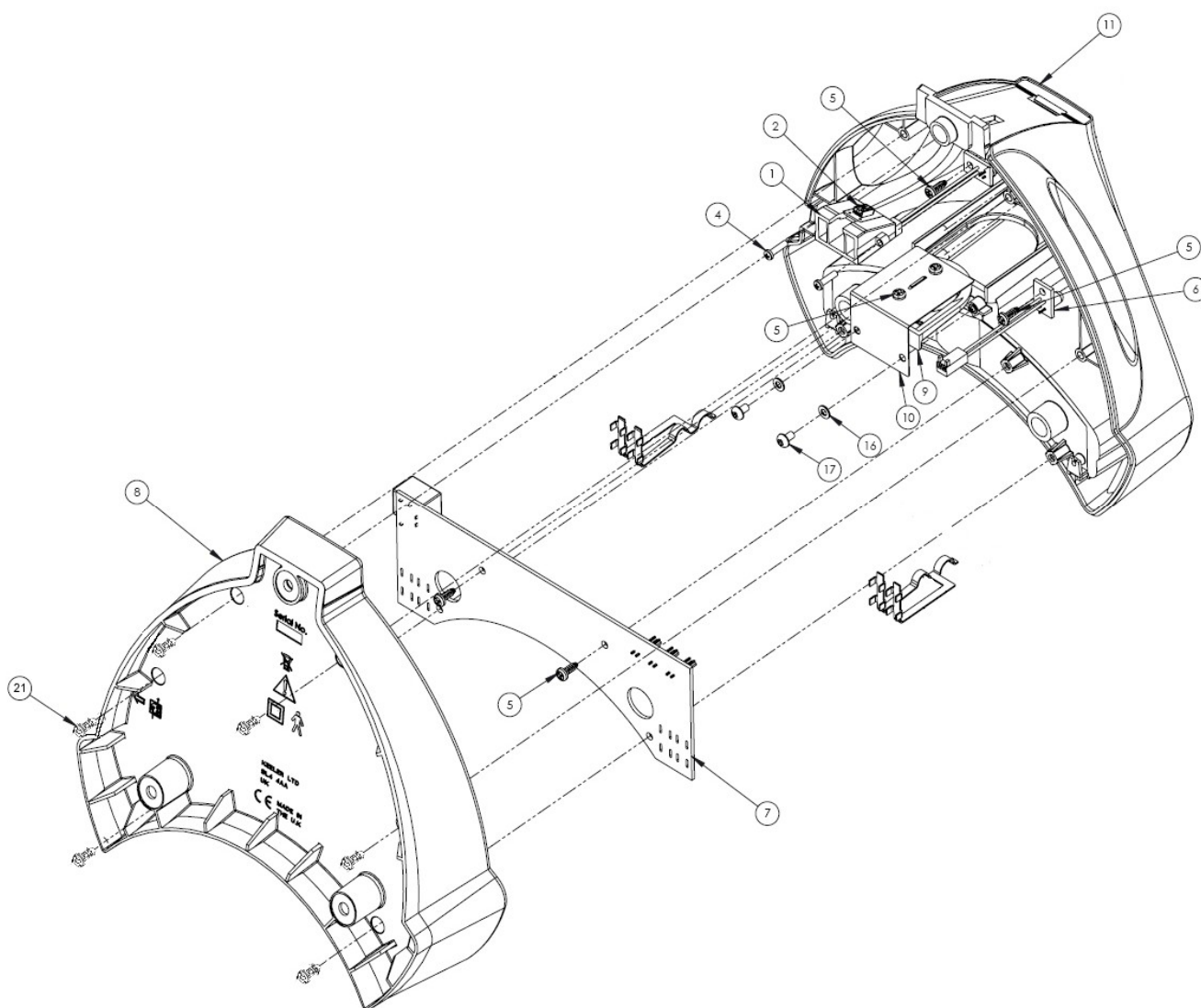
Spare Parts List – Control Box

1	EP39-70316	Cable Strain Relief	*
3	EP29-59929	Main Housing Front Moulding	
4	1299-P-7171	Main Housing Rear Moulding Assy	
5	SP72-00004	M2 x 8 Pan Head Screw	*
6	SP72-00001	M2 x 8 CSK PT Screw	*
7	SP72-00006	M2 x 20 Csk PT Screw	*
8	EP39-70321	Head Unit PCB	
9	EP79-11115	Tie Wrap	*
10	EP79-10374	Ferrite Bead	*
12	1202-P-5832	Vantage + Cable Assy	
19	WP12-01007	M2 Washer	*

Charger

Disassembly

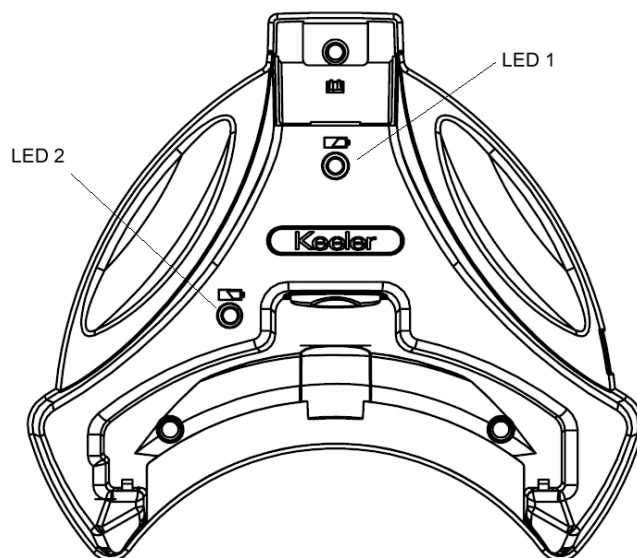
1. Remove 6 M3 x 10 Pozi Pan head Screws (21) fixing the Charger Base Moulding (8) to the main unit.
2. Remove 2 off M3 x 8 Pozi Pan head Screws (5) holding the PCB (7) to the main unit.
3. Lift off the PCB (7) taking care not to damage the Contact Springs mounted on the PCB and noting the wires connected to the PCB.



Replacements

Replace PCB Assy

1. Carefully unplug the 3 connectors from the 2 LEDs (6) and the Battery Contact PCB (2)
2. Take the replacement PCB Assy (7) and reconnect to the PCB
 - 2.1. LED 2 to J1
 - 2.2. LED 1 to J2
 - 2.3. Battery Contact PCB to J3



3. Offer the PCB Assy (7) to the main unit taking care not to damage the Contact Springs attached to the PCB.

Replace Battery Contact PCB Assy

1. Unplug the connector from J3 on the main PCB (7)
2. Remove 2 off M2.5 x 10 Pozi Pan Head Screws holding the Charger PCB Mounting block (1) to the main unit.
3. Locate the replacement Battery Contact PCB Assy (2) into the recess on the Charger PCB Mounting Block (1)
4. Holding the 2 parts together offer them to the main unit and retain with 2 off M2.5 x 10 Pozi Pan Head Screws
5. Plug the connector onto J3 on the main PCB
6. Tidy the wires using 1 off Tie Wrap (22)

Replace LED PCB Assy

1. Unplug the appropriate connector from the main PCB
2. Remove 1 off M3 x 8 Pozi Pan Head Screw (5)
3. Remove the old LED PCB Assy (6)
4. Place the replacement LED PCB Assy (6) into position and fix with 1 off M3 x 8 Pozi Pan Head Screw (5)
5. Tidy the wires using 1 off Tie Wrap (22)

Reassembly

1. Check that the 3 connectors J1, J2, J3 are correctly connected
2. Place the Main PCB Assy (7) onto the main unit taking care to ensure that the Contact Springs are not damaged and move freely in their cut-outs
3. Fix the Main PCB (7) using 2 off M3 x 8 Pozi Pan Head Screw (5)
4. Fit the Base Moulding (8) using 6 off M3 x 10 Pozi Pan Head Screw (21)

Spares

Spare parts can be supplied in accordance with the following list.
The parts indicated with * are only available as part of the Fixings kit.

Current prices for spare parts are available from Technical Service.

Technical Service
Keeler Ltd
Clewer Hill Road
Windsor
Berks
SL4 4AA

Phone +44 (0)1753 827110

Fax +44 (0)1753 827114

Spare Parts List

Item	Part No	Description	
1	EP39-70337	Charger PCB Mounting block	
2	1945-P-7023	Battery Contact PCB Assy	
3	EP39-70334	Keeler Nameplate	
4	SP72-55086	M2.5 x 10 Pozi Pan Hd Screw	*
5	Sp73-00002	M3 x 8 Pozi Pan Hd PT Screw	*
6	1945-P-5014	Charger LED PCB Assy	
7	1945-P-7021	Charger Main PCB Assy	
8	EP19-70011	Charger Base Moulding	
9	EP39-70335	Retaining Moulding	*
10	EP39-70336	Retaining Spring	*
11	1945-P-5015	Charger Top Assy	
16	WP13-01008	M3 Plain Washer	*
17	SP13-05089	M3 x 5 Pozi Pan Hd PT Screw	*
21	SP73-00003	M3 x 10 Pozi Pan Hd PT Screw	*
22	EP79-40899	Cable Tie	*
	1945-P-7020	Fixings Kit (Marked * above)	