Service
Service
Service

HB935/A
/B
/C
/D

Philips Domestic Appliances and Personal Care

Service Manual

PRODUCT INFORMATION

Versions:

/A : Sensitive for error problems.
/B : With solution for ERROR in the display.
/C : With solution for ERROR in the display and/or hum or bleep in the headphone.
/D: With electronic solution for ERROR and/or hum or bleep in the headphone implemented.

- This full-body tanning appliance is equipped with an electronic power supply. This means that when the appliance is connected to the mains, the tanning or relaxing functions are made visible by means of symbols on the display. The set time is also shown on the display. During the last minute of the set time, an accoustic signal sounds.
- The UV lamps only burn in combination with the IR (relax) lamps. When the UV lamps are on the IR lamps burn at reduced intensity.
- The IR lamps can also be used separately at full intensity for a relax session.
- This appliance is equipped with a sound module, offering a selection of four nature sounds. The user can also connect an external music appliance to play his/her own music, either via the loudspeakers or the earphones.
- This tanning appliance has also been fitted with a scent unit. The scent granules required for this unit can be ordered as service part (see parts list).

IMPORTANT

- Because of the brief high starting voltage, the appliance should be connected to a circuit protected with a 16A fuse.
- HPA lamps only go on at a restart if they have cooled down sufficiently.
- Never touch the HPA lamps with your fingers. If necessary, clean the lamps with a cloth moistened with some alcohol.
- When a new HPA lamp is installed, this lamp may have a different colour compared to the other lamp. This is normal and will disappear after a short period of use.
- After repair, the glass filters should be free from fingerprints. If necessary clean the filters with some alcohol.
- Never look directly into the light of an HPA lamp when it is on without protective goggles.
- Insufficient cooling – for instance when the vents are blocked or when the fan has broken down – will cause the thermal safety cut-out to switch the appliance off. Once the cause of overheating has been removed and the appliance has cooled down sufficiently, it will switch automatically on again.
- Let the appliance cool down for 15 minutes before folding it back into transport position and storing it.
- Only move the appliance when it is in transport position, i.e. when it is folded.
- If there are complaints about inadequate tanning, the output of the lamps can be measured with a UV-X 36 meter. For the minimum values, see table under ‘Technical information’.

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PHILIPS

TECHNICAL INFORMATION

HB935/A /B /C /D

- Input voltage : 230 V – 50 Hz.
- Input consumption : Approx. 2200 W
- Fuse : 16 A
- UVA source : 2 x Philips Cleo HPA SYNERGIE
- IR source : 2 x Philips type 15040R
- Starter : KAIDA KCCD-G400
- Timer : 45 min. (Digital)
- Radiation area : 190 x 70 cm
- Output (min) UVX-36 meter : 0.2 W/cm² at 65 cm. straight below the distance indicator
- Protecting goggles : 2 x HB072
- Safety : Class II Cenelec UV type 3
- Weight : Approx. 19 kg.

DISASSEMBLY & REPAIR INSTRUCTION

Always unplug the appliance before disassembly or repair!

1. Replacing lamps, fans and starters.

- Fold the appliance out into operating position.
- Remove 12 screws on the bottom of the lamp housing.
- Remove the upper part of the lamp housing (the fans, starters and internal wiring are now accessible)
- Remove the screws of the mounting bridge.
- Remove the reflector clamps.
- Remove the reflector. You have to lift the mounting bridge to do so.

2. Replacing lock grips, soundboard, relay board and power SMPS (PCB)

- Remove the back of the timer housing.
- Now the lock grips, sound board, relay board and the power SMPS are accessible

3. Replacing timer front with speakers and display

- Remove the grip main assy and slide the lamp housing together with the slider off the column and place it on a table or bed with the front pointing downwards.
- Remove the back of the timer housing.
- Remove the sound board, the relay board and the power SMPS and undo the plug-in connections.
- Undo the 4 screws attaching the front to the black sleeve.
- Now the front can be removed.

4. Replacing seesaws (always replace both)

- Start disassembling the appliance as described under 3.
- Remove the back of the timer housing.
- Remove the 4 screws attaching the front to the black sleeve.
- Remove the black sleeve.
- Remove 2 shafts.
- Remove the spring. Be careful, for the spring is tensioned.
- Remove the seesaws.

5. Stand

- The column of the stand has been mounted by means of a hydraulic press and cannot be removed without causing serious damage.
- As a result, the hinge housing cannot be disassembled either.
- The legs have been mounted on the paw by means of a hydraulic press and cannot be removed without causing serious damage.

To replace the hinge housing assy:

- Undo the screws of the main grip.
- Take the main grip off stand.
- Remove the black plastic tube from the column.
- Slide the lamp housing together with the slider off the column.

To replace the paw and the paw cap (L&R) and the wheels:

- Undo the screw on the inside of the paw.
- Unsnap the paw caps.
- The wheels are now accessible.
- Undo 4 screws in the point of rotation of the paw to detach the paw.

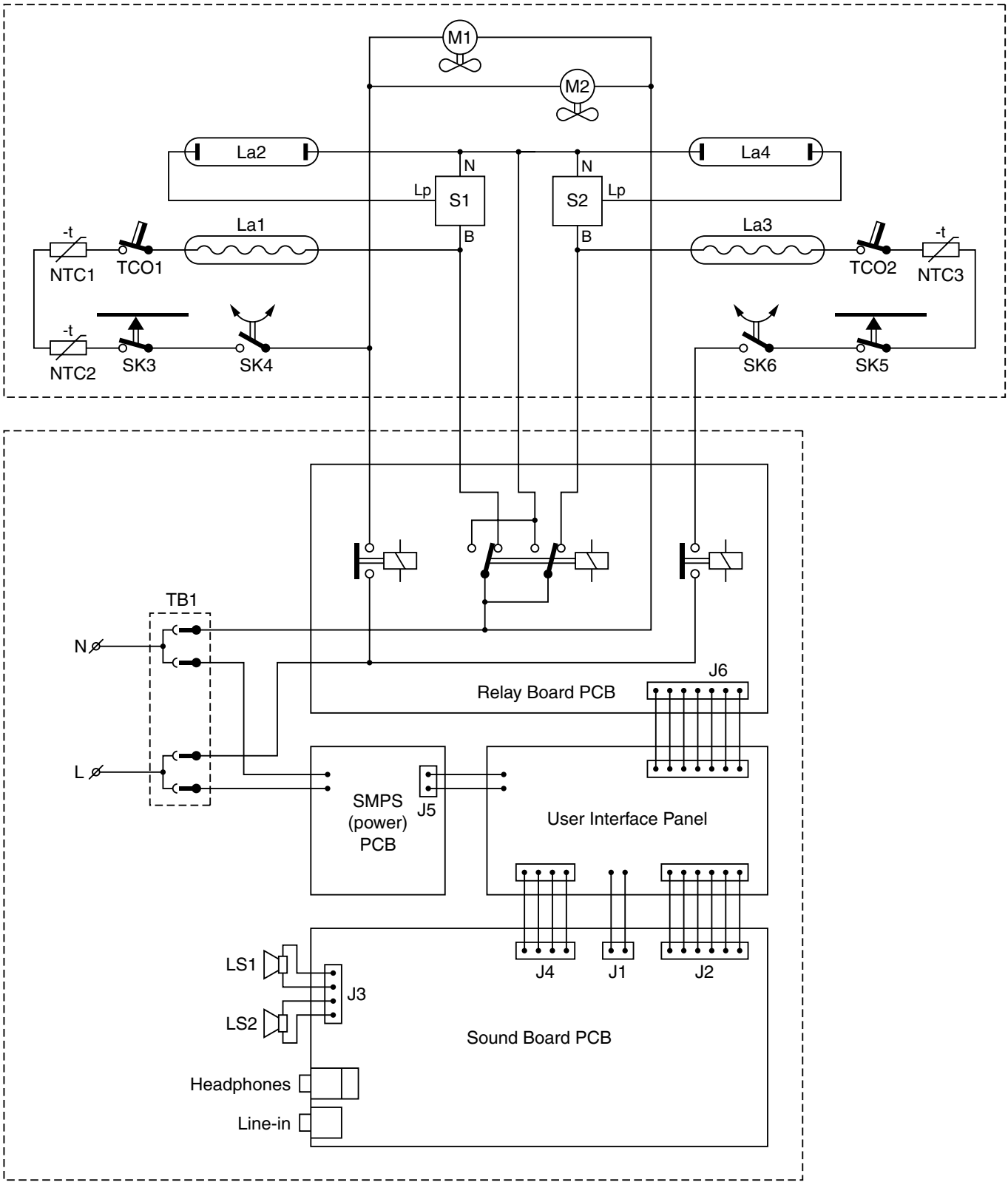
To replace the sliding plug leg:

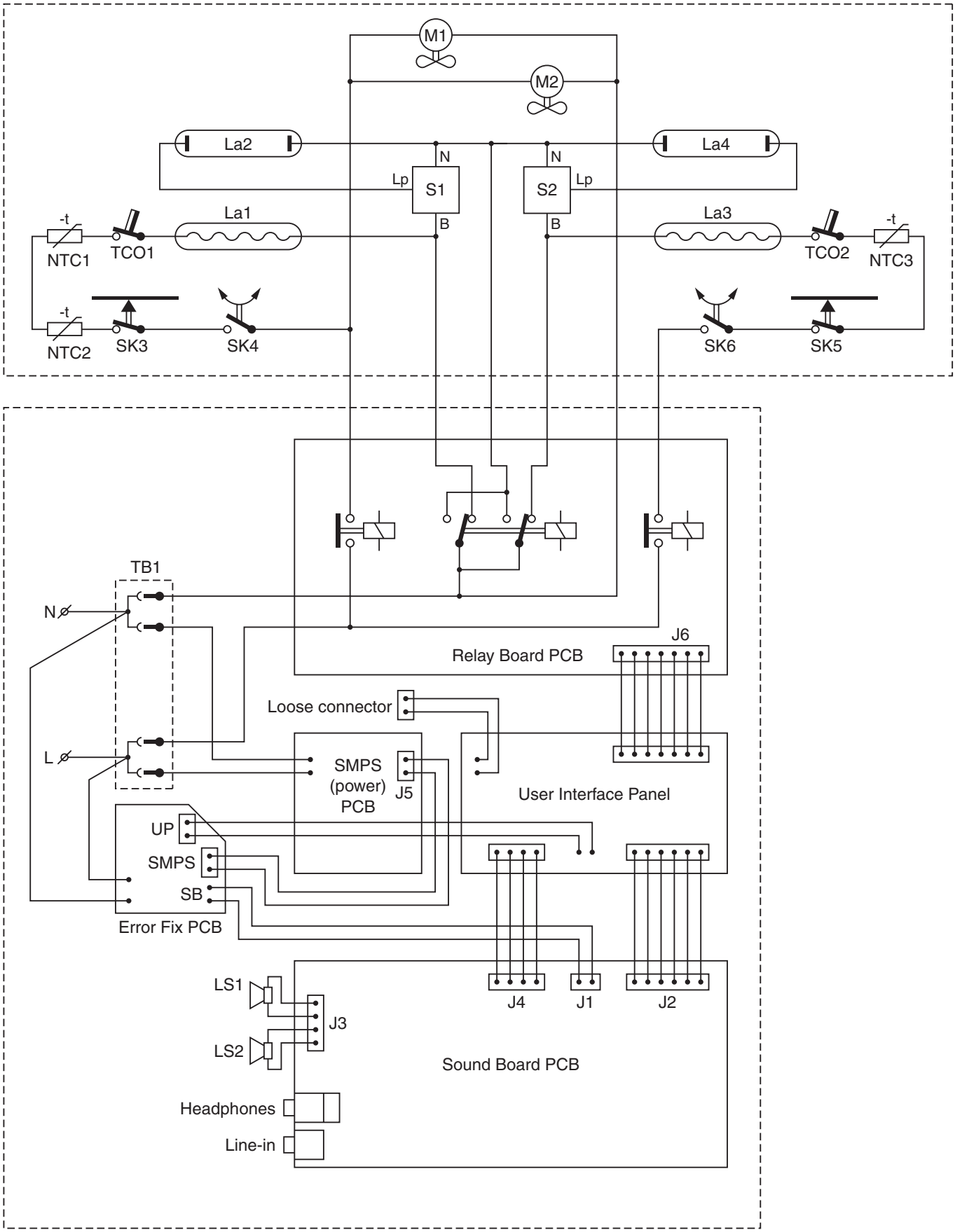
- To replace the sliding plug of the leg, the existing sliding plug has to be smashed with the pointed end of a hammer; otherwise it can't be removed without damaging the leg. A new sliding plug can simply be snapped onto the leg.

6. Resetting the timer and hour counter

- When the timer has detected a "temporary" fault, it shows an error code on the display.
- If the error code does not disappear, there is probably a defect in the relay board or the checking device in the software.
- Reset the hour counter (e.g. after replacing the UV lamps).

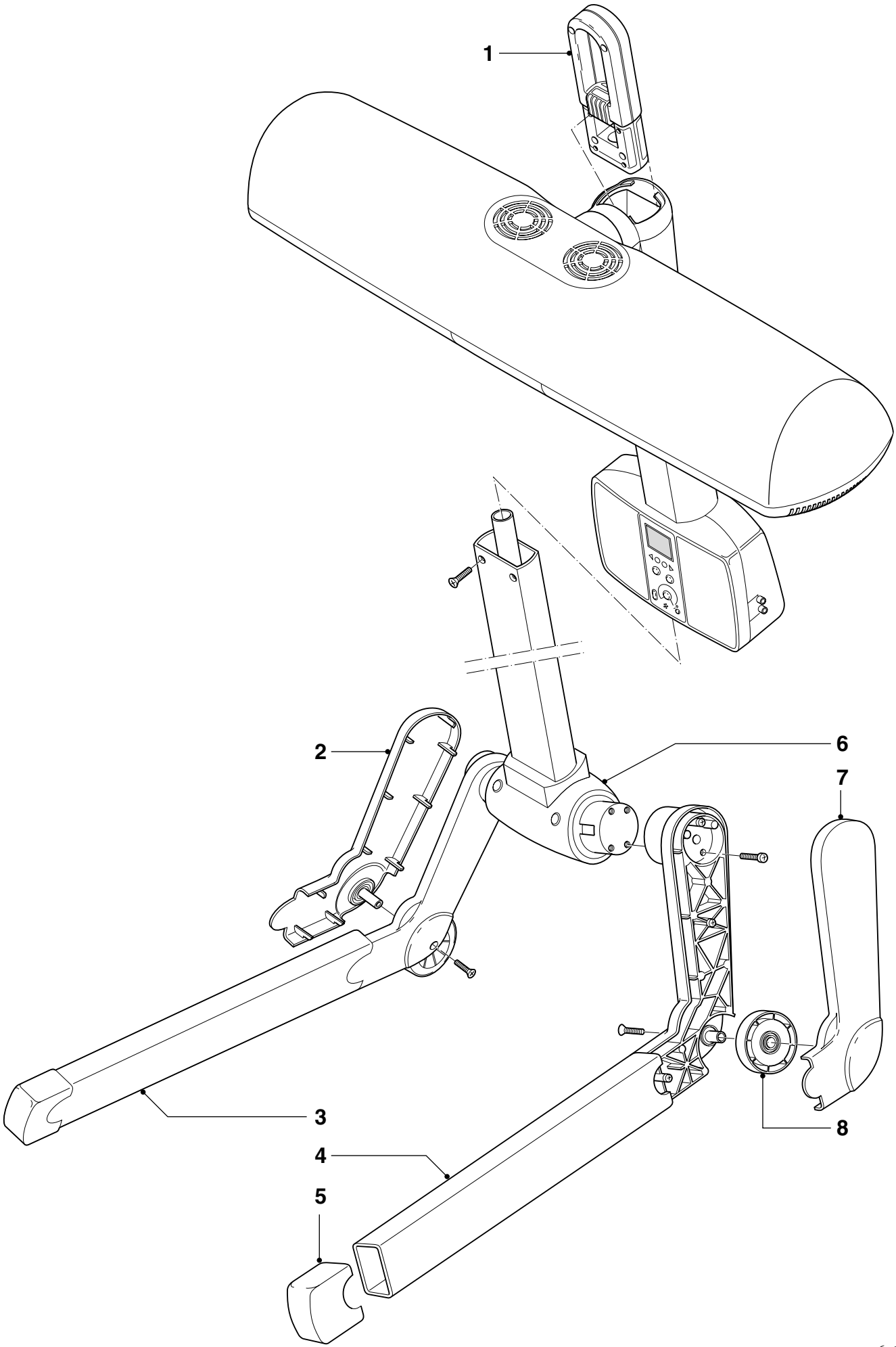
0	1	2	3	4	5	6	7
1	Resetting the timer	00 ☼ ≋	Press	+ 1x	+ 1x	+ 2x	00 ☼ ≋
1	Resetting the hour counter	00 ☼ ≋	Press	+ 2x	+ 1x	+ 1x	00 ☼ ≋


M1
M2
La2
La4
N
Lp
S1
S2
B
La1
La3
-t
NTC1
TCO1
TCO2
NTC3
NTC2
SK3
SK4
SK6
SK5
TB1
N
L
J6
Relay Board PCB
SMPS
(power)
PCB
J5
User Interface Panel
J4
J1
J2
LS1
LS2
J3
Sound Board PCB
Headphones
Line-in

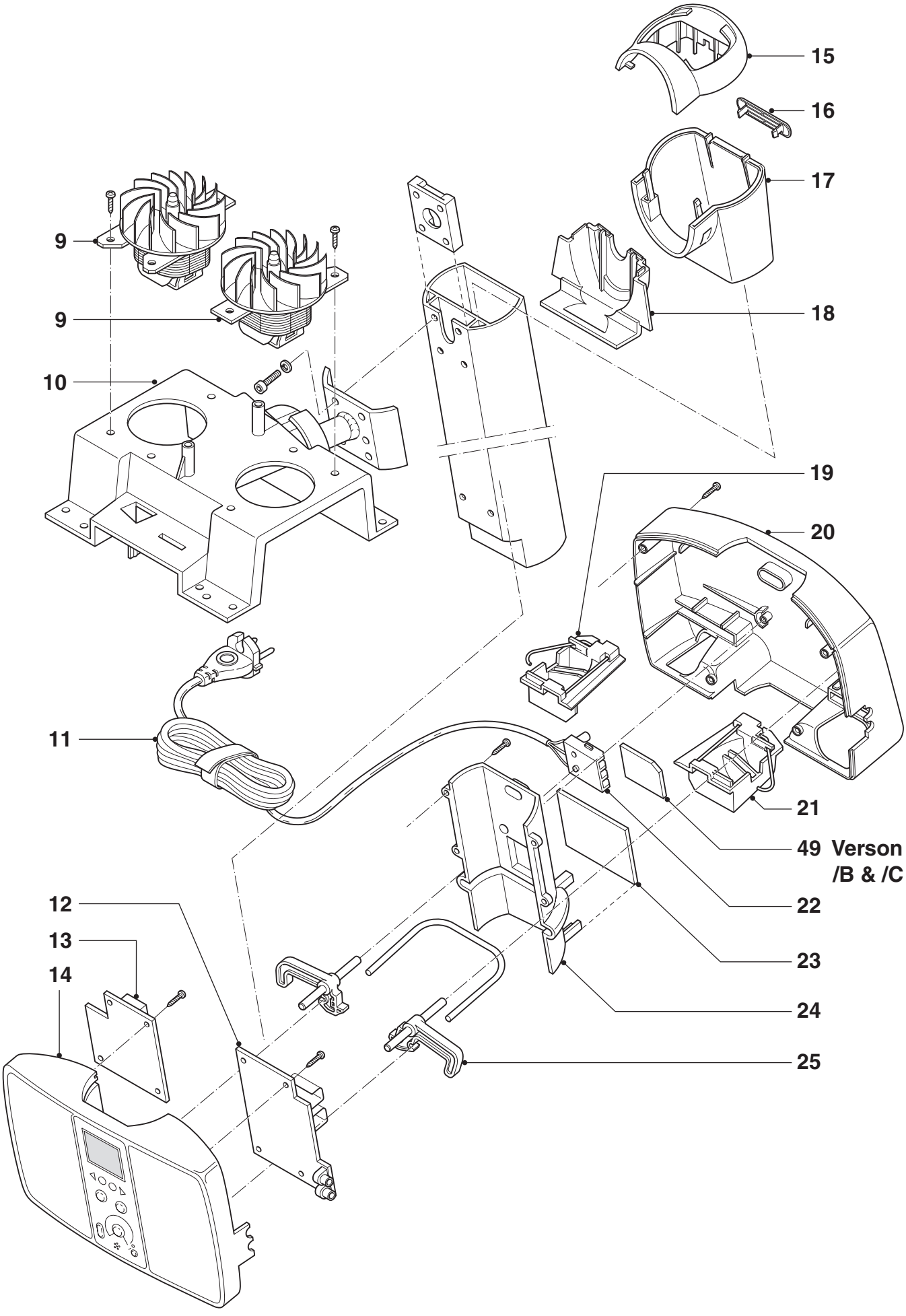

M1
M2
La2
La4
N
N
Lp
S1
S2
Lp
B
B
La1
La3
-t
NTC1
TCO1
TCO2
-t
NTC3
-t
NTC2
SK3
SK4
SK6
SK5
TB1
N
L
Relay Board PCB
J6
Loose connector
SMPS
(power)
PCB
J5
User Interface Panel
UP
SMPS
SB
Error Fix PCB
LS1
LS2
J3
J4
J1
J2
Sound Board PCB
Headphones
Line-in

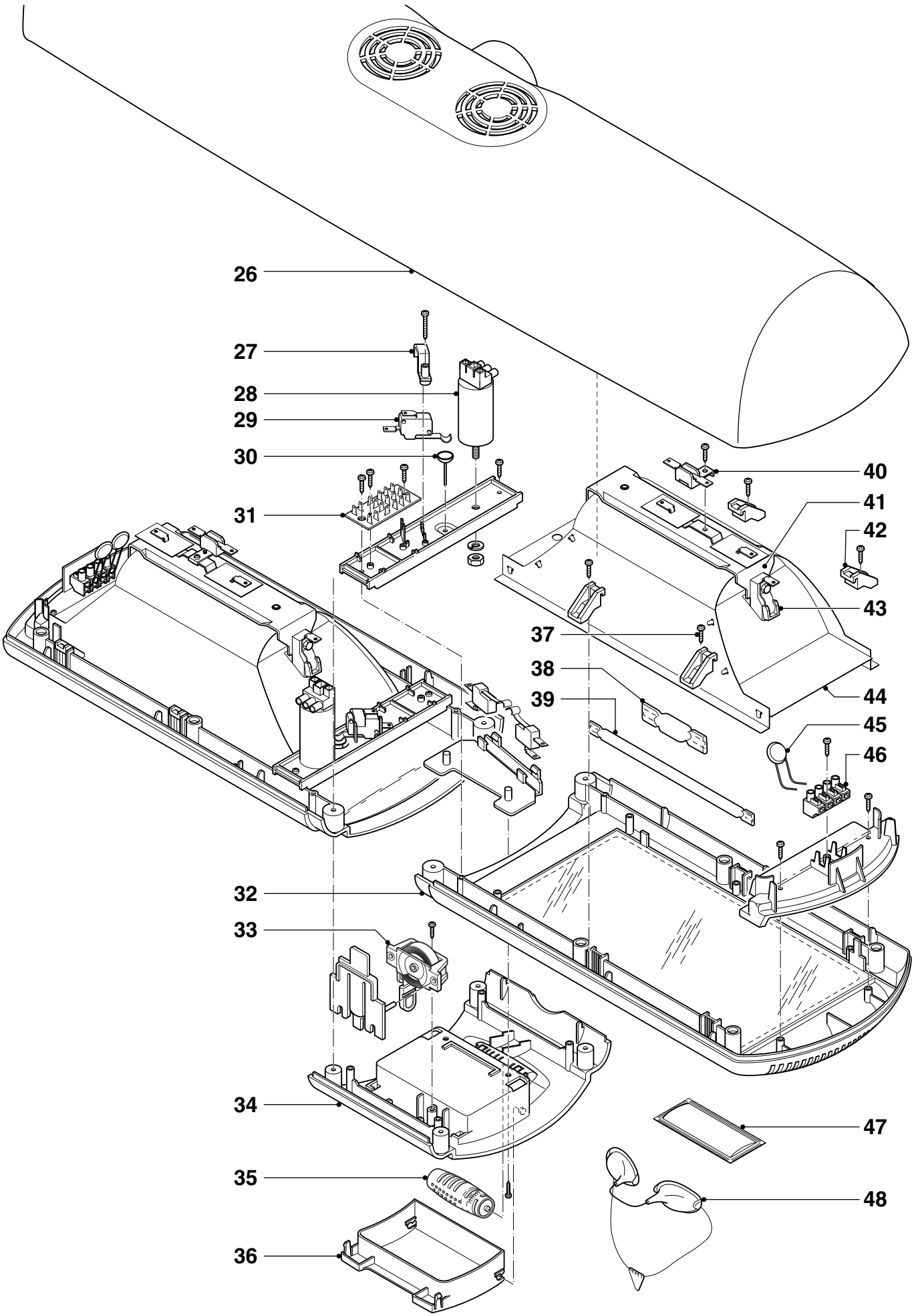
Item	Service code	Description
1	4222 062 95930	Grip main assy
2	4222 062 95940	Paw cap R
3	4222 062 95950	Leg assy R
4	4222 062 95960	Leg assy L
5	4222 062 95970	Leg sliding plug (set)
6	4222 062 96400	Hinge assy
7	4222 062 95990	Paw cap L
8	4222 062 96000	Wheel
9	4222 062 96010	Fan assy
10	4222 062 96410	Slider assy
11	4222 062 96030	Main flex EU
	4222 062 96040	Main flex UK
	4222 062 96050	Main flex CH
12	4222 062 96340	Sound Board PCB
13	4222 062 96350	Relay Board PCB
14	4222 062 96360	Timer housing front
15	4222 062 96420	Slider head top
16	4222 062 96430	Slider head cap
17	4222 062 96440	Slider head bottom
18	4222 062 96450	Hinge cap
19	4222 062 96060	Lock grip assy R
20	4222 062 96370	Timer housing back
21	4222 062 96200	Lock grip assy L
22	4822 265 30284	Connecting block 3S
23	4222 062 96380	SMPS (power) PCB

Item	Service code	Description
24	4222 062 96390	Sleeve
25	4222 062 96190	Sea saw (set)
26	4222 062 96460	Lamp housing US
27	4822 404 40639	Switch bracket
28	4822 214 12272	Starter HPA
29	4822 271 30619	Micro switch
30	4822 410 40417	Switch pin
31	4222 062 96230	17 tabs PCB
32	4222 062 96240	Lamp housing LS
33	4222 062 95020	Distance indicator
34	4222 062 96250	Mid compartment
35	4222 062 96260	Scent cartridge
36	4222 062 96270	Compartment lid
37	4222 062 96280	Screw (set 3.5x20 and 3.5x12)
38	4222 062 96290	Lamp HPA
39	4222 062 96300	Lamp IR
40	4222 062 95920	Thermal cut off 90 °C
41	4222 062 96310	Lamp holder assy IR
42	4222 062 95250	Reflector clamp
43	4822 325 20102	Lamp holder HPA
44	4222 062 96320	Reflector assy
45	4222 062 94580	NTC resistor 22W
46	4222 062 94570	NTC connector
47	4222 062 96330	Scent refill packages HB080
	4222 062 96481	Scent refill packages “**Only for EE**”
48	4822 690 80147	Protecting Goggles HB072
49	4222 062 96490	Error Fix PCB


1
2
3
4
5
6
7
8

HB935/A /B /C /D




26
27
28
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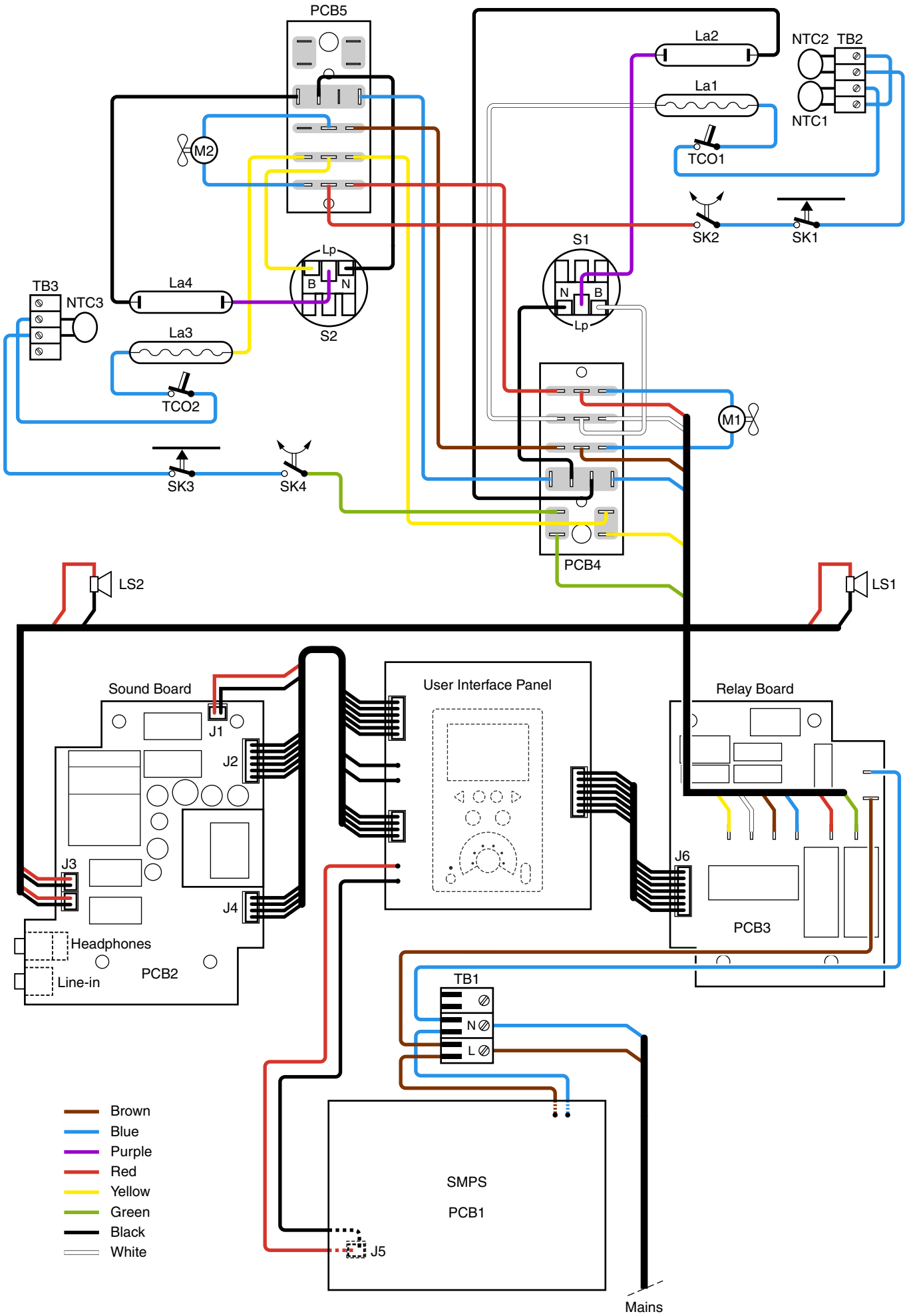
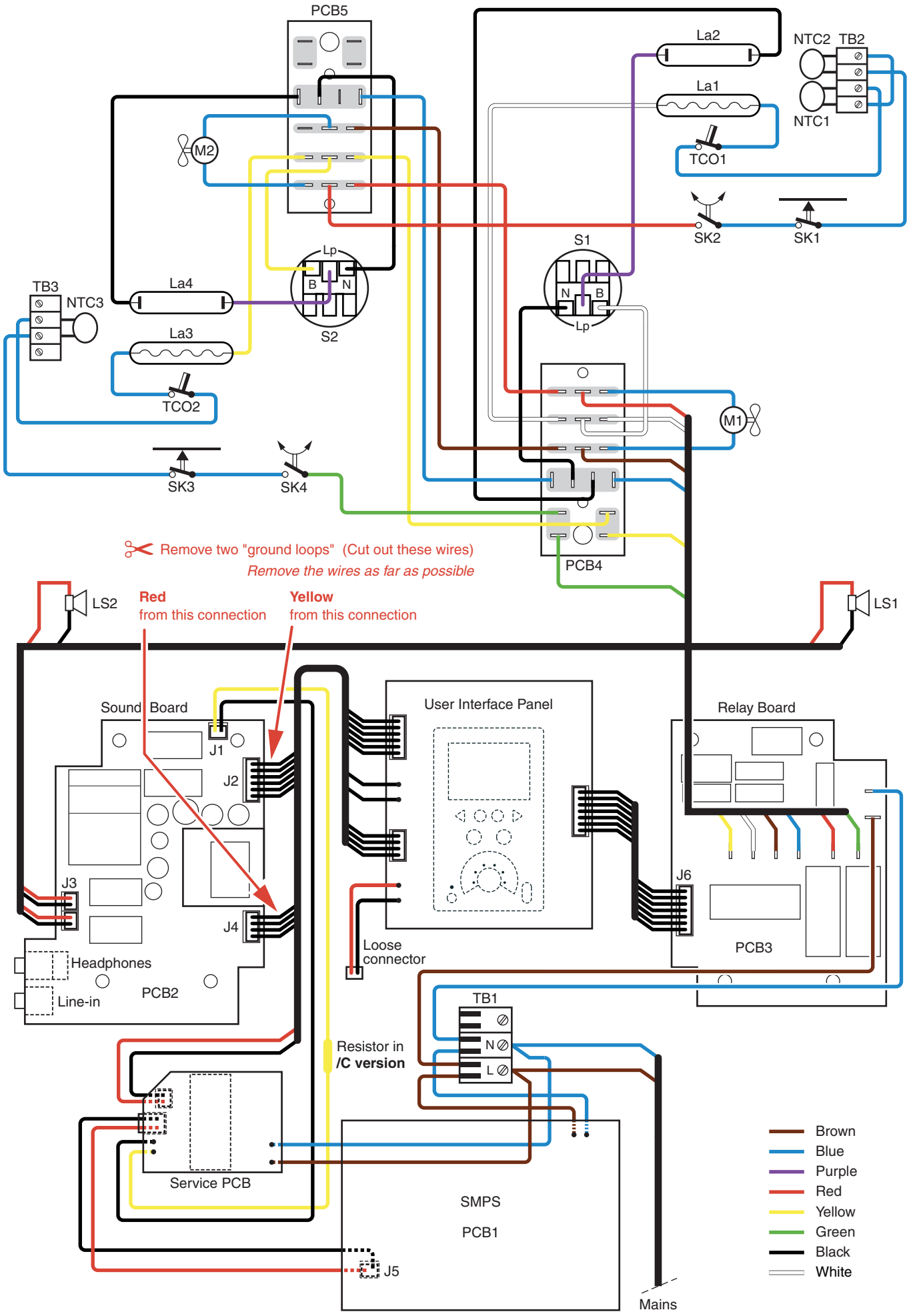
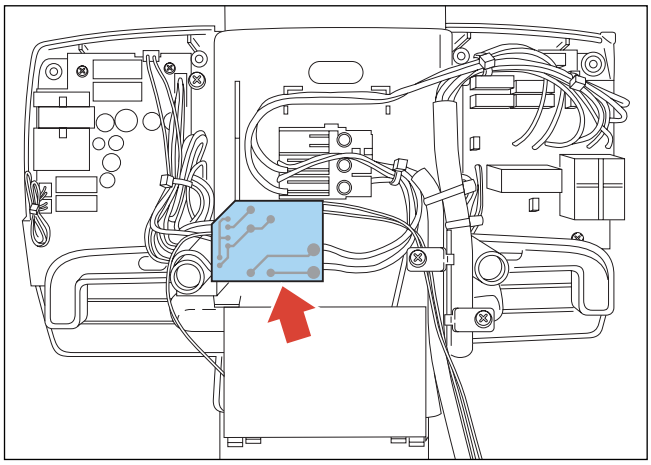
35
48
36


PCB5
La2
NTC2
TB2
La1
NTC1
M2
TCO1
SK2
SK1
S1
Lp
B
N
TB3
NTC3
La4
S2
La3
TCO2
M1
SK3
SK4
PCB4
LS2
LS1
Sound Board
User Interface Panel
Relay Board
J1
J2
J3
J4
J6
Headphones
Line-in
PCB2
PCB3
TB1
N
L
SMPS
PCB1
J5
Mains
Brown
Blue
Purple
Red
Yellow
Green
Black
White

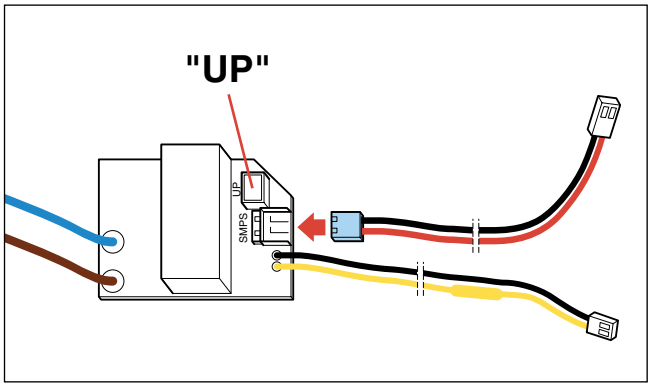

PCB5
M2
La2
La1
TCO1
NTC2
TB2
NTC1
SK2
SK1
S1
Lp
B
N
S2
TB3
NTC3
La4
La3
TCO2
SK3
SK4
M1
PCB4
Remove two "ground loops" (Cut out these wires)
Remove the wires as far as possible
LS2
Red
from this connection
Yellow
from this connection
LS1
Sound Board
J1
J2
J3
J4
Headphones
Line-in
PCB2
User Interface Panel
Loose
connector
Relay Board
J6
PCB3
TB1
N
L
Resistor in
/C version
Service PCB
SMPS
PCB1
J5
Mains
Brown
Blue
Purple
Red
Yellow
Green
Black
White

As a result of an intermitting contact, the text ERROR may appear on the display when the appliance is plugged in and switched on (only occurs in HB935/**A** up to production code 0442).
This can be solved by assembling an extra PCB (item 49) according to the diagram shown on page 4 of the service manual and by removing two “ground loops” according to de instructions on page 10.
Customers who have an HB935/**B** and complain about a hum or bleep: exchange the Error Fix PCB (item 49) fore one with a resistance in the yellow wire and cut the “ground loops” according page 10.
If this gives problems because it does not fit, you have to change item 14 complete!
After assemble the Error Fix PCB, always reset the timer.
Check if the PCB has been correctly assembled: **the display turns black immediately after the plug is pulled out of the socket**.

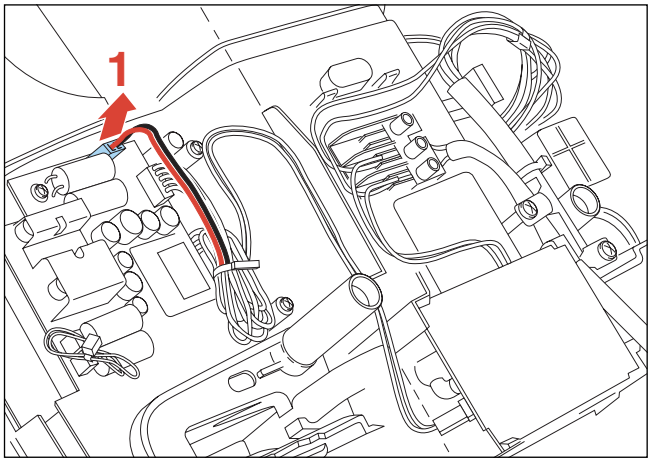


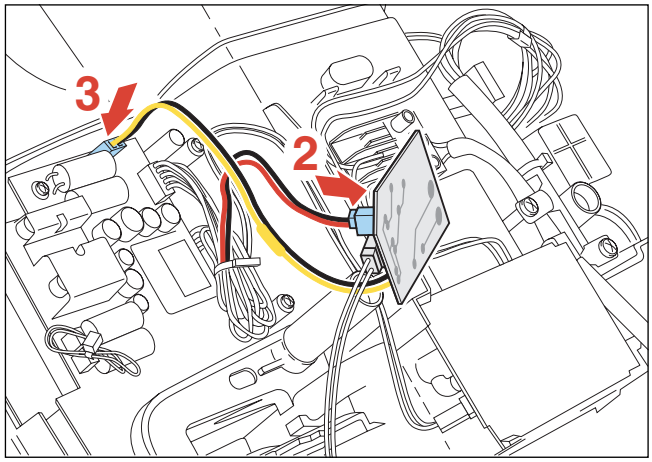
- Drawing to explain where the extra PCB should be assembled.

Procedure after removal of the back of the timer housing:

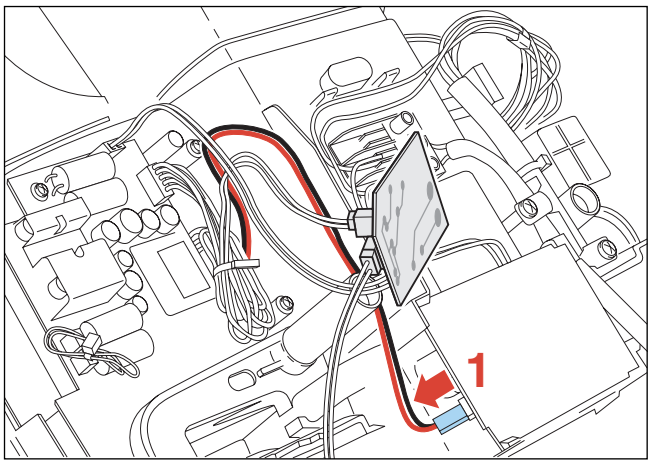


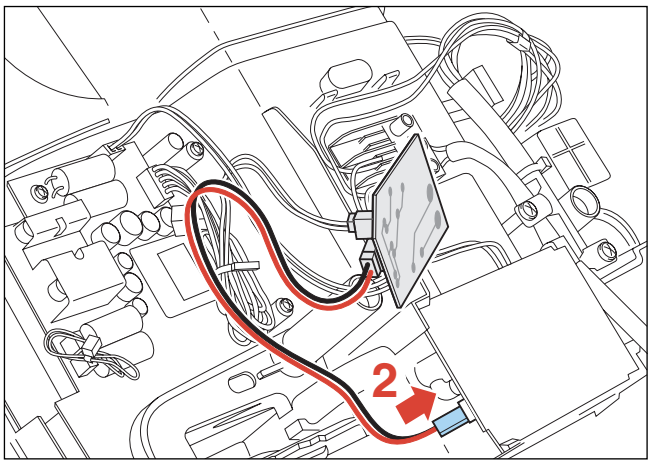
- Connect red/black wire to Error Fix PCB at “SMPS”.



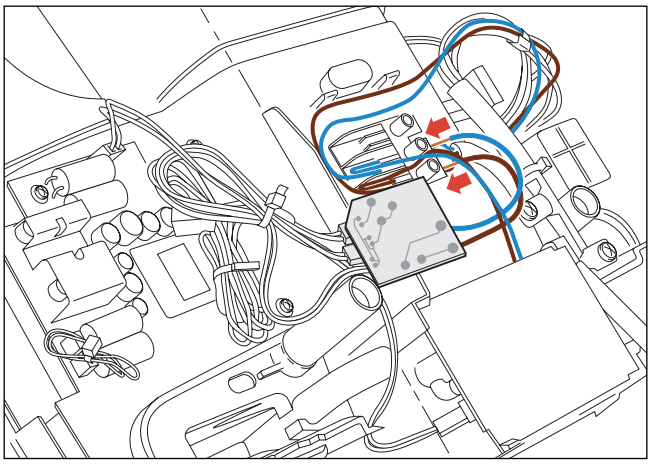


- Disconnect red/black wire from the soundboard (1) and connect it to the Error Fix PCB at “**UP**” (2).
- Connect the yellow/black wire of the Error Fix PCB to the vacant connection of the sound PCB (3).

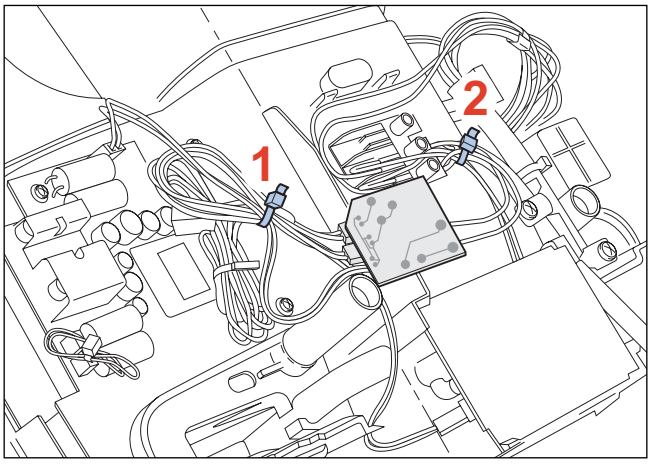




- Pull the plug with the red/black wire out of the power supply PCB (1) (this socket remains vacant and the wire should be fixed in the bunch of wires).
- Plug the red/black wire of the **Error Fix PCB** into the power supply PCB (2).



- Put the red and blue wires across the connector block of the mains cord, turn the Error Fix PCB upside down and fasten it in the vacant spot with double-sided adhesive tape (first remove the backing).
- Then connect the brown and blue wire of the Error Fix PCB in parallel to the mains cord connector.



- Loop the wires and fasten them with the tie wrap supplied (1).
- Tie the blue and brown wires to the mains cord with a tie wrap (2).