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ROTAI S80 Massage Chair Maintenance Manual

Shanghai Rongtai Health Technology Co., Ltd.

S80 Parameters

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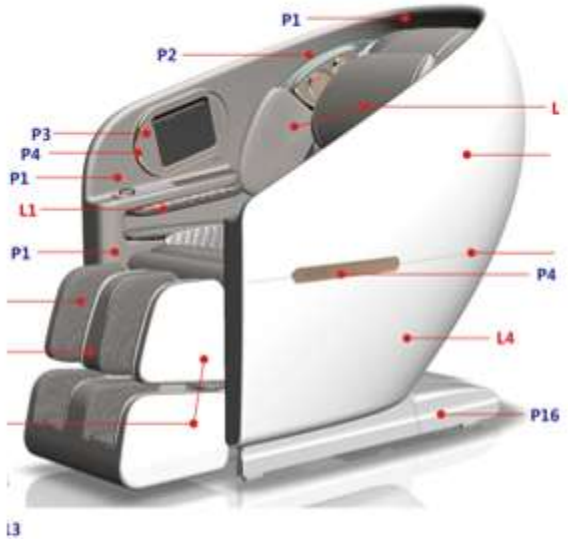
Product Parameters

Picture	Specifications	
	**Model**	S80
	Rated Voltage	220V~
	Power Consumption	160W
	Upright Size	(1680*775*1190mm)
	Reclined Size	(1865*775*1050mm)
	Package Dimension	Chair body: 1370*860*1290mm
		Footrest: 515*545*620mm
	Loading Qty	42PCS/40HC
	N.W.	120KG
	G.W.	143KG

Neck Mechanism	No	**Music**	■Yes □No	
Back Mechanism	58C# Pressure sensitive mechanism	**Bluetooth**	■Yes □No	
Shoulder Scan	■Yes Hall sensing □No	**Heating**	■Back cushion (Carbon fiber)	□leg ■foot
Mechanism Width Coverage	Kneading width ranges 4~15.5cm, Mechanism travel length reaches 820mm (to thigh)	**Ambient Light**	■Yes □No	
Track	L-style track/travel length reaches 820mm	**Sync music**	■Yes □No	

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Forward Sliding	Recline while sliding	**Controller memory function**	■Yes □No
Shoulder Width	580mm		■Yes □No
Seat Width	510mm	**Voice Control**	Offline voice control
Backrest Recline	Reclining by 130-155°	**Charging for Mobiles**	■Yes/power 5 V 2 A
Product Reclined Size	1865mm	**Program Version**	
Controller	Tablet controller	**Auto massage**	28 Auto Massage Programs: Chair Yoga,Slim Massage,High Heels,Womb Care,Sports Refresh,CEO Comfort,Tummy Care,Deep Release,Refreshing Nap,Extension,Energy Restore,Immune Boost,Growth Promotion,Intelligence Growth,Sports Refresh,Exams Relaxation, Brainwave Massage,Mindfulness Meditation,Breathing Improvement,Soul Trip,Binge Watching,Sweet Dreams,Long Sitting,Fatigue Recovery,Sore Relief,Neck & Shoulder,Back & Spine,Waist & Hip
Controller Organizer	□ Pouch ■ Slot organizer		
Phone Stand	□Yes ■No		
Foot Extension	■Electric □Spring		
	Legrest auto extension by 70mm Footrest auto extension by180mm		
Foot Roller	□one row ■ 2 rows □ 3 rows		
Airbags	Shoulder: 4PCS, 1PCS at each side (2 layer)	**Manual massage**	15 Massage Techniques: Kneading (Clockwise Kneading, lightly Kneading, Interval Kneading) , Sync (Clockwise, Circular, Interval) , Tapping (Continuous, Rhythmic, Variable-frequency) , Shiatsu (Regular,Tui Na,bone cracking) Knocking (Short, Medium, Long)
	Arm: 24PCS, 12PCS at each side (2 layer)		
	Hips: 4PCS, 1PCS at each side (2 layer)		
	Legs: 20PCS (2 layer)		Part: Whole,partial,point
	Feet: 12PCS, 4PCS at foot side (2 layer) , 4PCS at heel (single layer)		Width: wide,medium,narrow
Solenoid Valves	1 for seat,1 for shoulder,2 for armrest(a 3-way air valve at each side), Legrest: 2-way air valves, footrest: 2-way air valves, total 13 air valves	**Configure List**	Airbag QTY: 40PCS
			Air Valve QTY: 13PCS
Air compressor	Power box:2PCS YX250A/24V		Motor QTY: 7PCS
Leather	CXP series PU leather		Air compressor: 2PCS
APP Control	■Yes □No		Actuator: 2PCS

S80 How to Enter Engineering Mode

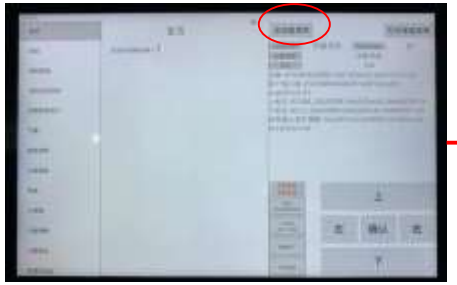
Click into Settings

Click on About

Select MAC address and click 5 times to enter Engineering Mode

Engineering Mode Homepage

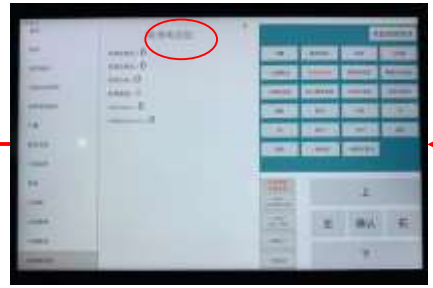
Troubleshooting Example



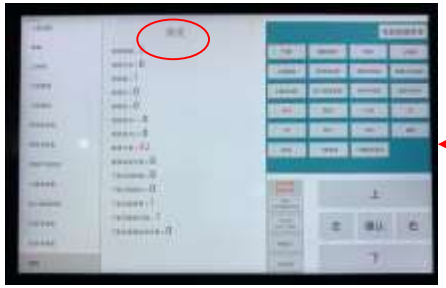
Click on Read Device Properties to obtain device information

Click on Current Errors; machine faults will display, 0 indicates normal function, 1 indicates a fault

Click on Open Keypad Menu to individually troubleshoot and repair faults



For example, with forward sliding actuator: changes in forward sliding speed indicate functionality; no changes indicate malfunction



For example, with kneading motor: manually activate the kneading motor, count the rotations to confirm functionality; if there are changes in the width values, it indicates they are functioning well.

Legrest Disassembly

Fig. 1

Pull open the marked red zipper as in Fig. 1

Fig. 2

Remove the marked blue buckle as in Fig. 2

Fig. 3

Unplug the marked purple component and air hose as in Fig. 3

Armrest Outer Cover Disassembly

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Fig. 1

Remove the rear cover's marked red 4 screws, and take off the rear cover as in Fig. 1

Fig. 2

Pry open the upper cover from under the red marked buckle as in Fig. 2

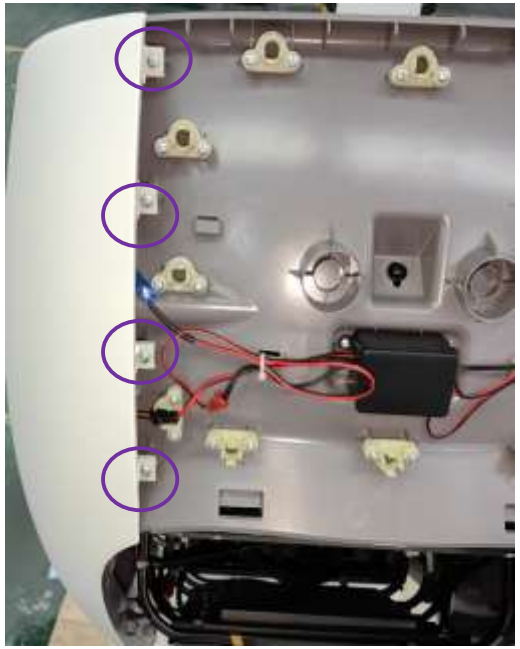

Fig. 3

Remove the upper inner cover's marked purple 4 screws as in Fig. 3

Fig. 4

Remove the 7 screws of the inner cover of the armrest marked with blue as in Fig. 4

Fig. 5

Remove the 2 screws at the front end of the armrest marked green as in Fig. 5 to remove the outer cover

Armrest Upper Inner Cover Disassembly

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Fig. 1

Remove 14 screws each marked red on the left and right sides, and one in the middle; cut the blue tie, unplug the connector, remove the purple marked screw to remove the upper inner cover

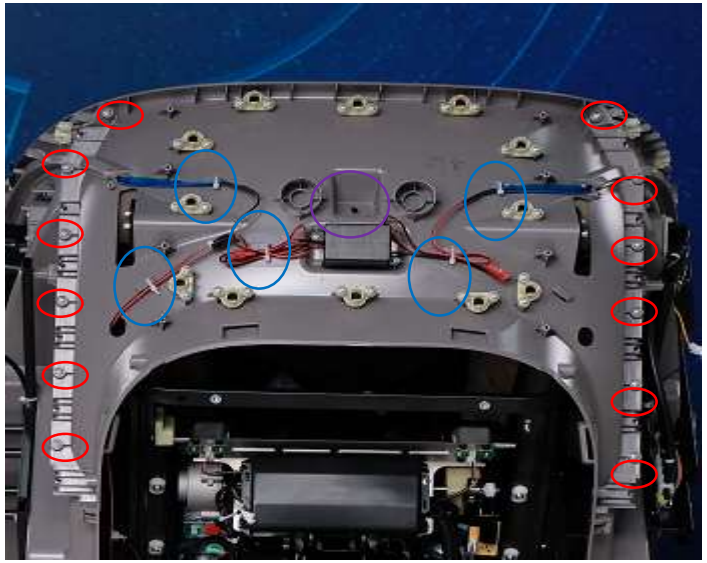


Fig. 3

Fig. 2

Power Box Disassembly

Fig. 1

Remove the red marked three screws on top of the rear footrest cover as in Fig. 1

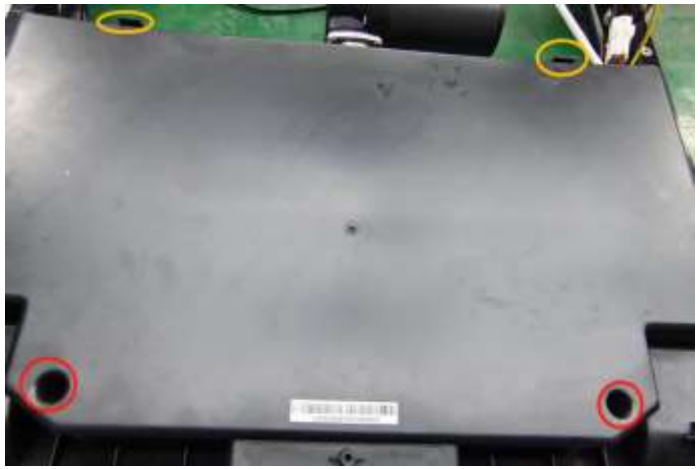


Fig. 2

Remove the red marked two screws on top of the power box; slightly push forward the red marked buckle on the power box cover, then remove the cover as in Fig. 2

Fig. 3

Inside the power box are switch components, power board, filter board as in Fig. 3

Footrest Cover Disassembly

Fig. 1

Remove the two screws outside of the footrest cover as in Fig. 1

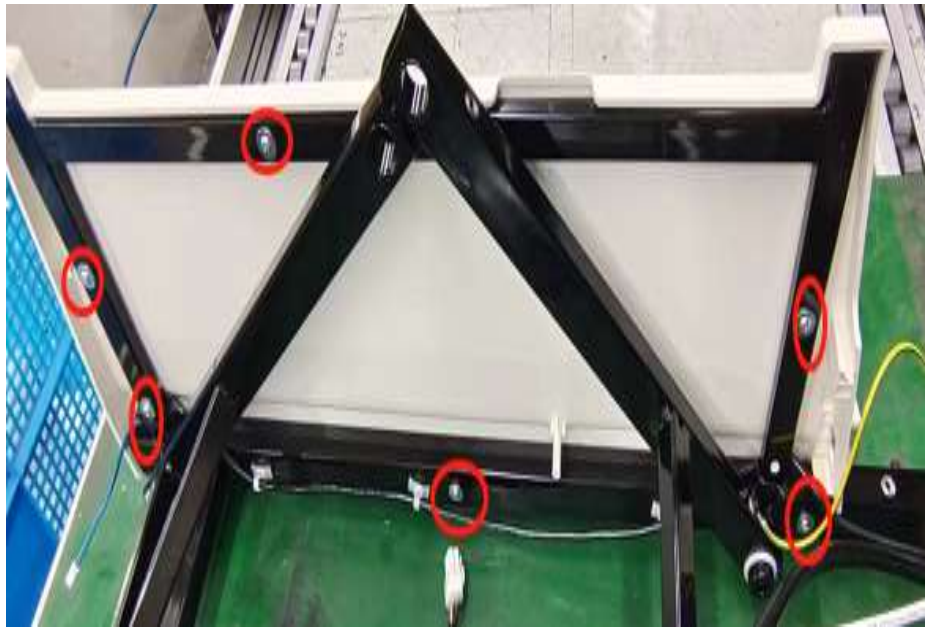


Fig. 2

Remove the six inner screws of the footrest cover; then, remove the footrest cover as in Fig. 2

Legrest Extension Unit Disassembly

Fig. 1

First, remove the upper cover's marked red 4 fixed screws as in Fig. 1

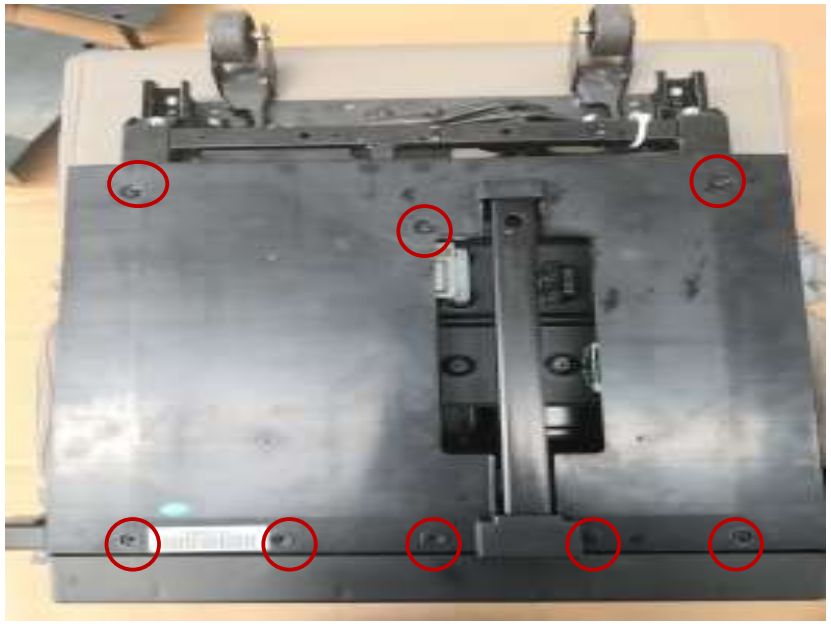


Fig. 2

Remove the lower cover's marked red 8 fixed screws as in Fig. 2

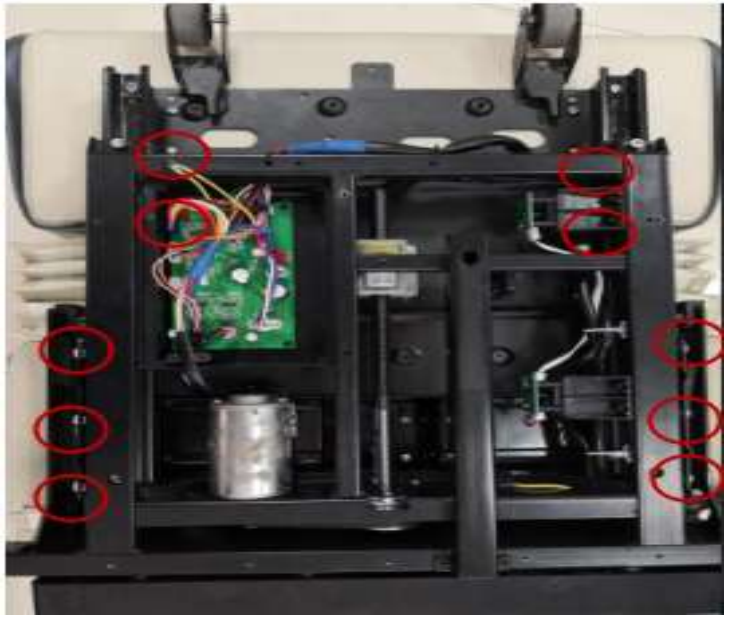


Fig. 3

First, remove 6 screws fixing the legrest extension unit, turn the extension belt, and remove the 4 fixed screws of the lower legrest as in Fig. 3

Backrest Frame Disassembly

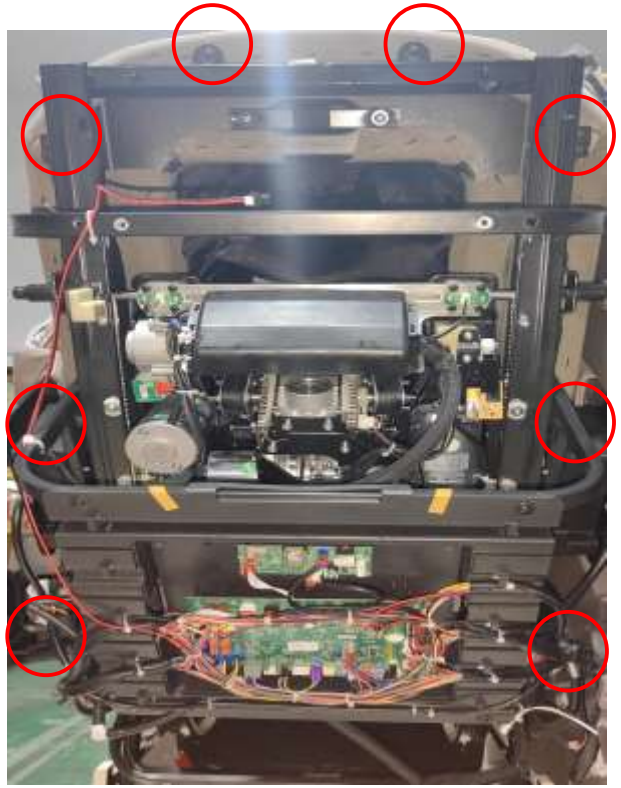


Fig. 1

Remove the 8 red-marked screws at the back of the backrest as shown in Fig. 1.

Fig. 2

Remove the 2 blue-marked screws at the front end of the backrest as shown in Fig. 2.

Mechanism Assembly Disassembly

Fig. 1

Remove the 4 red-marked screws on both sides of the backrest crossbar clamp as shown in Fig. 1.

Fig. 2

Remove the magnet on top of the backrest frame as shown in Fig. 2.

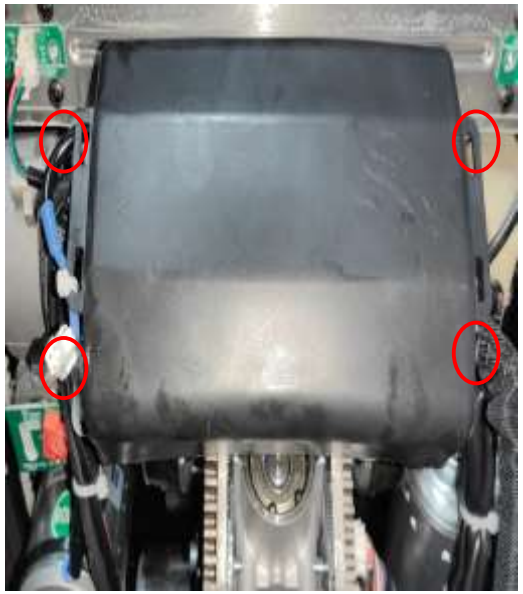


Fig. 3

Remove the 4 red-marked screws on the mechanism cover as shown in Fig. 3.

Fig. 4

Enter the engineering mode, navigate to the walking section, and move the mechanism upwards as shown in Fig. 4.

Fig. 5

Cut the zip ties, unplug the blue-marked connector, and remove the mechanism as shown in Fig. 5.

Armrest Button Pad Disassembly

Fig. 1

Peel off the two red-marked stickers as shown in Fig. 1.

Fig. 2

Remove the 4 red-marked screws as shown in Fig. 2.

Fig. 3

Remove the 12 red-marked screws, unplug the purple-marked connector as shown in Fig. 3.

ECG Detection Sensor Board Disassembly

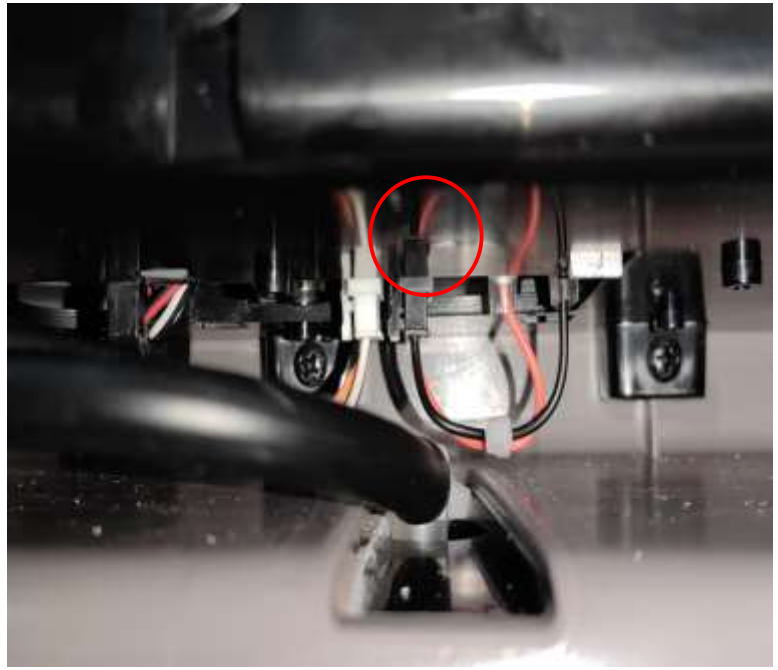


Fig. 1

In the state of the armrest outer cover removed, use a tool to push up the red-marked buckle as shown in Fig. 1.

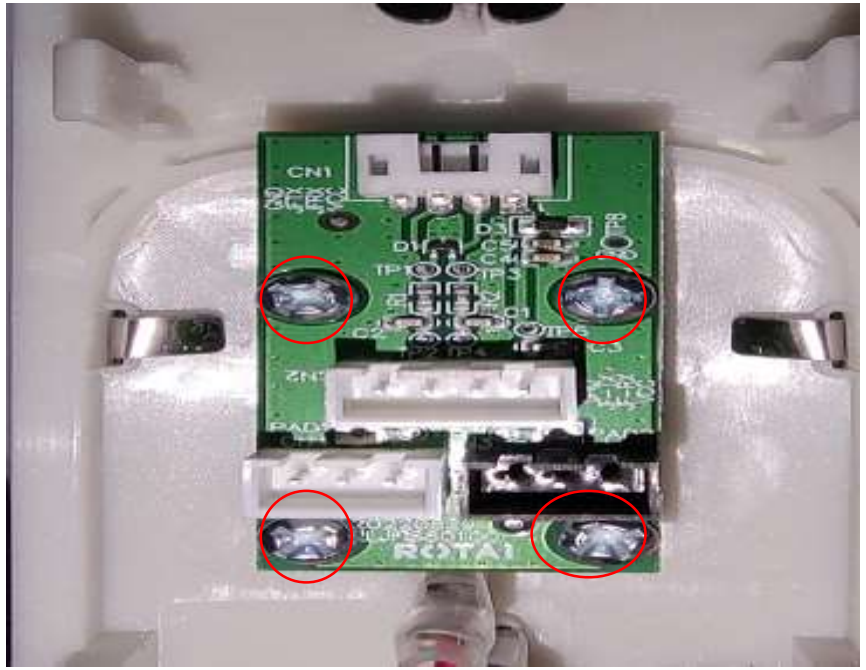


Fig. 2

Remove the 4 red-marked screws and unplug the connector as shown in Fig. 2.

Aroma Placement

Fig. 1

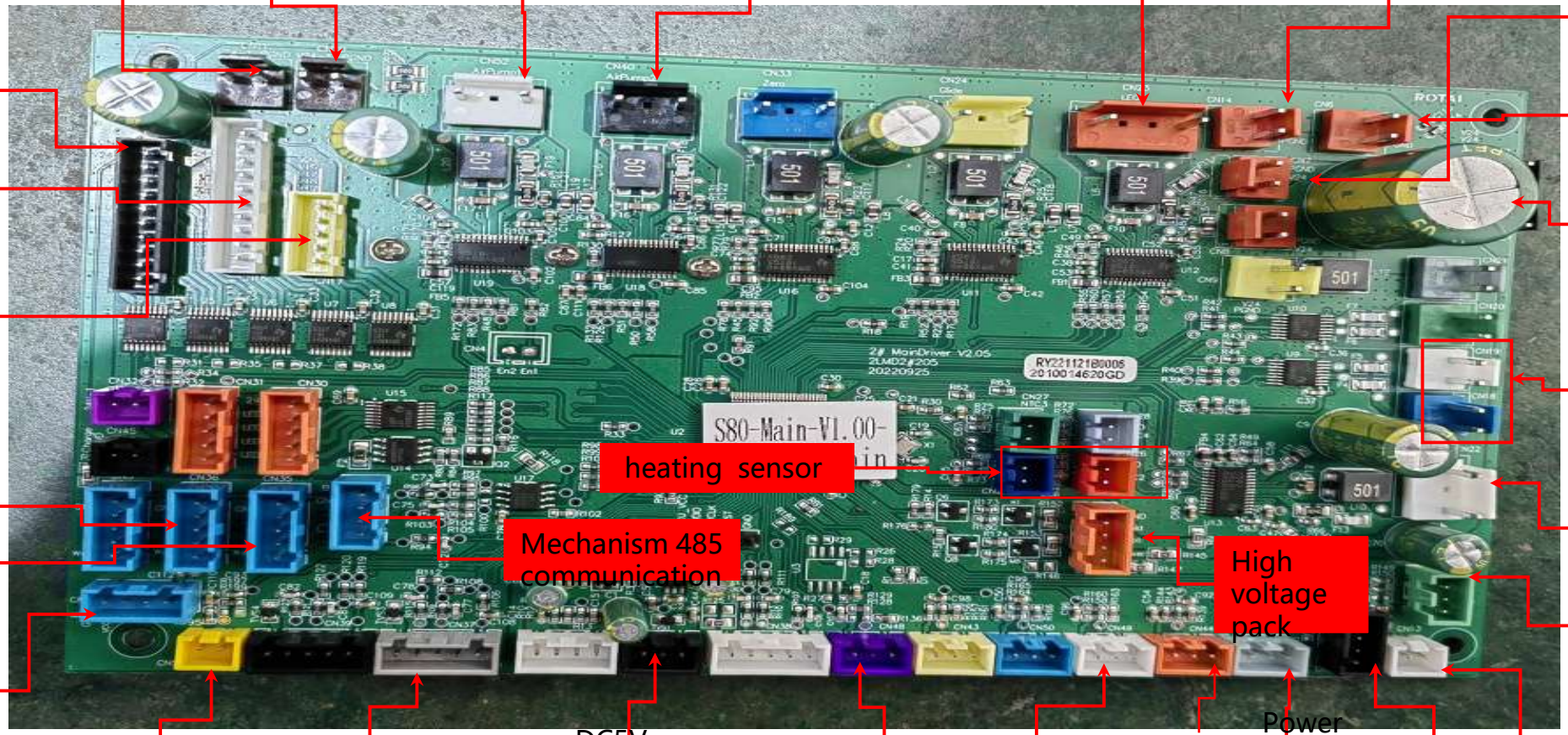
Remove the aroma container from the red-marked right speaker position as shown in Fig. 1.

Fig. 2

Fig. 3

Take out the aroma, find the corresponding number, and open the rubber pad to place it inside as shown in Fig. 2 and Fig. 3.

S80 mainboard



Wireless charging 24V output

Negative Ion DC24V output

Main chair air pump

Legrest air pump

legrest actuator

legrest DC24V output

USBDC24V output

机芯DC24V output

DC24V input

left armrest air valve connector

right armrest and aroma air valve connector

Leather cover and shoulder air valve connector

backrest heating

heating sensor

backrest actuator

left armrest communication

Mechanism 485 communication

High voltage pack

left footrest cover infrared receiver

right armrest communication

legrest communic ation

right foot cover infrared emitter

bluetooth

Huawei WIFI

DC5V power countro l

Negative Ion fan

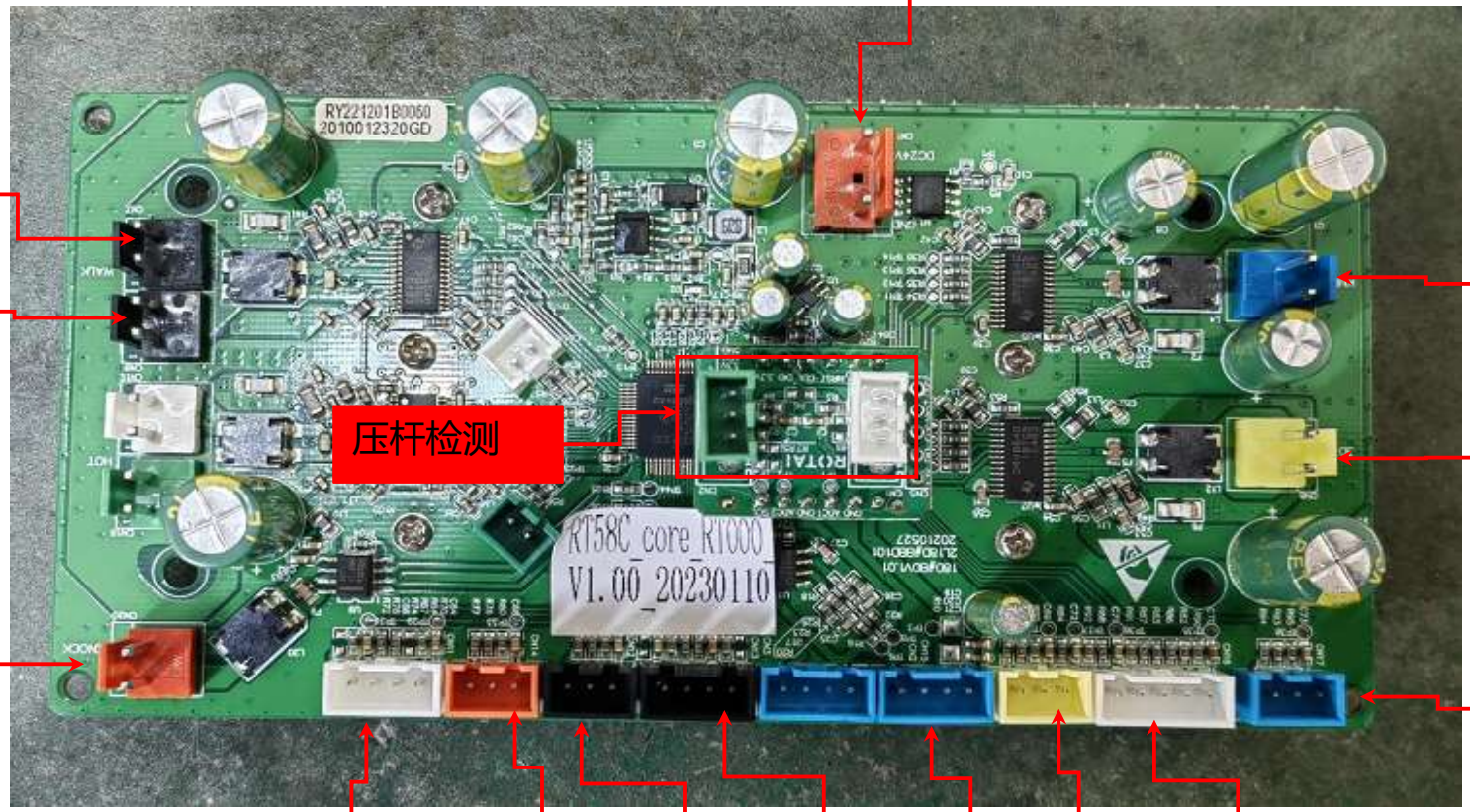
backrest actuator counter

legrest actuator counter

Power box upper anti-pinch

left and right armrest anti-pinch

S80 mechanism boar connectors



DC24 input

Walking motor testing connector

Walking motor connector

压杆检测

Kneading motor connector

3D motor connector

Tapping motor connector

kneading counter signal

Mechanism limit signal

Tapping counter signal

3D coun ter

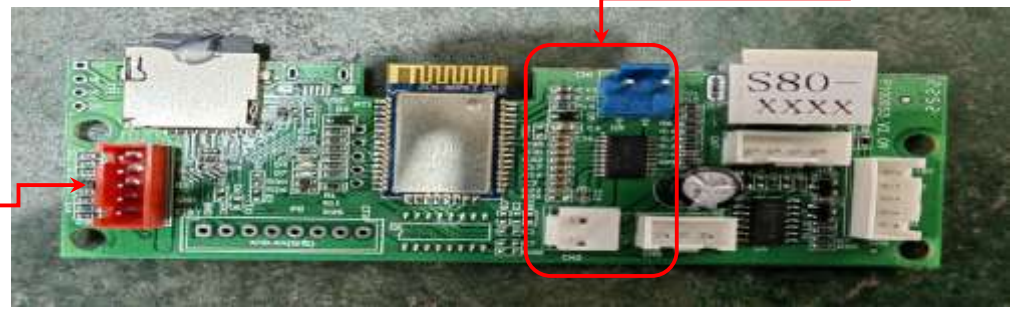
3D limit

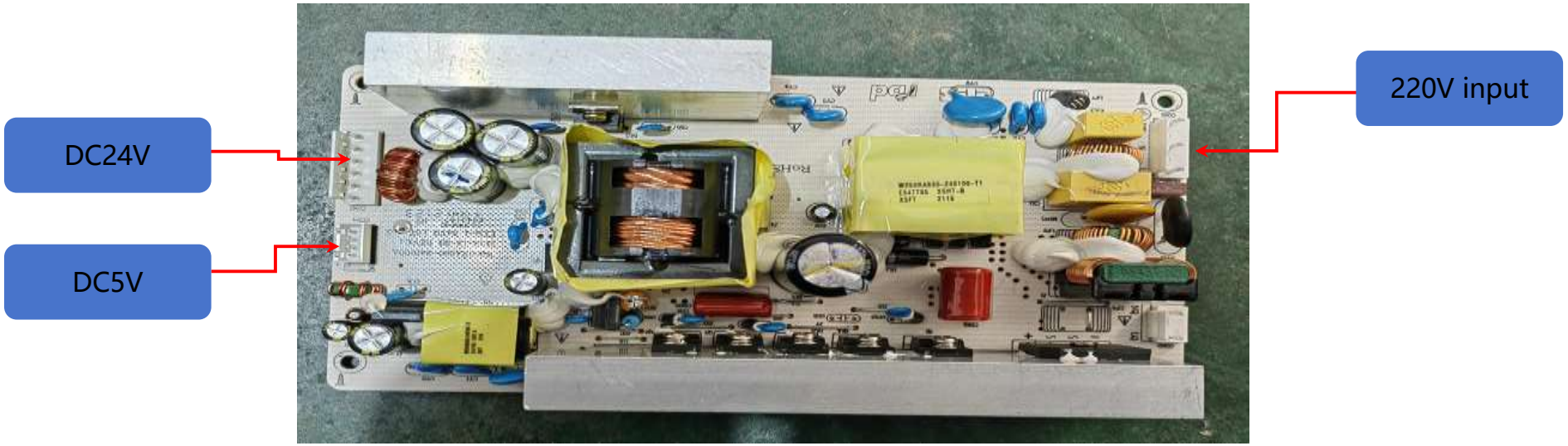
485 com muni catio n

3D motor counter

Width signal

Bluetooth board, power board



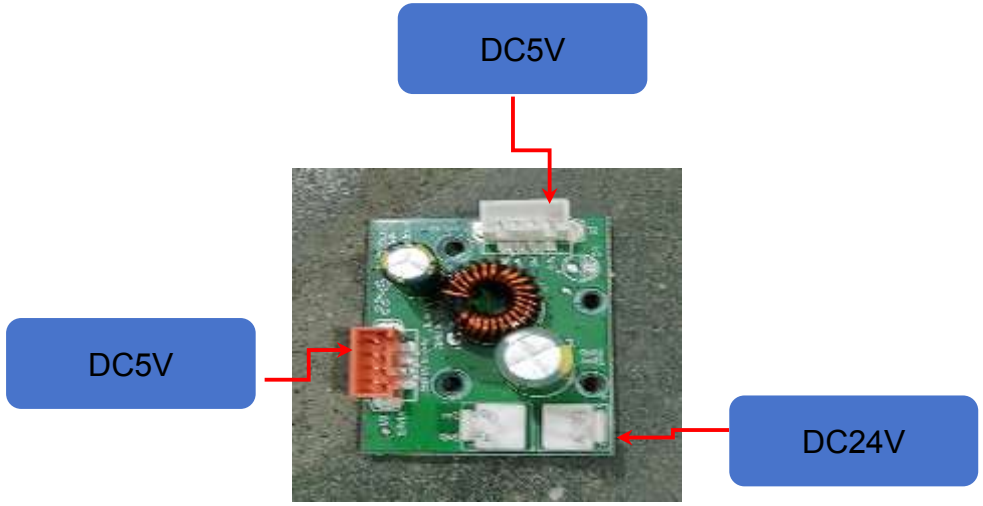


Width sensor board

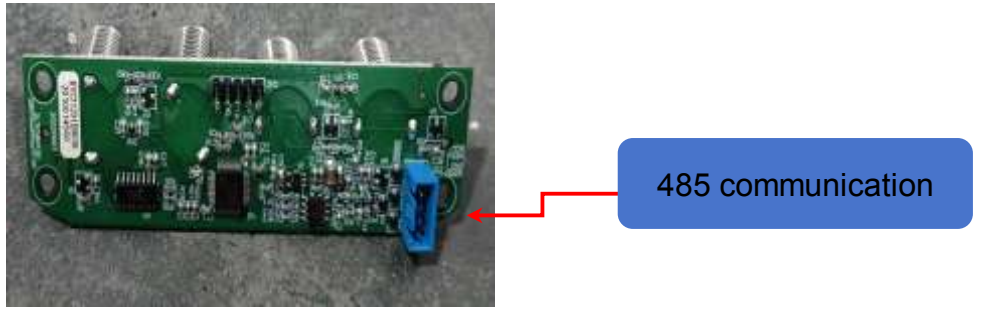
walking motor counter signal connector

mechanism width sensor board

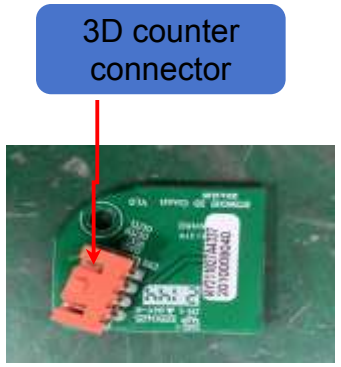
S80 3D counter board, push rod sensor board, button pad, charging board



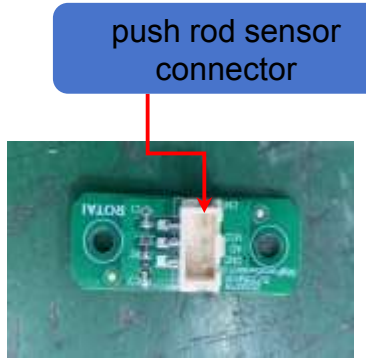
charging board



button pad

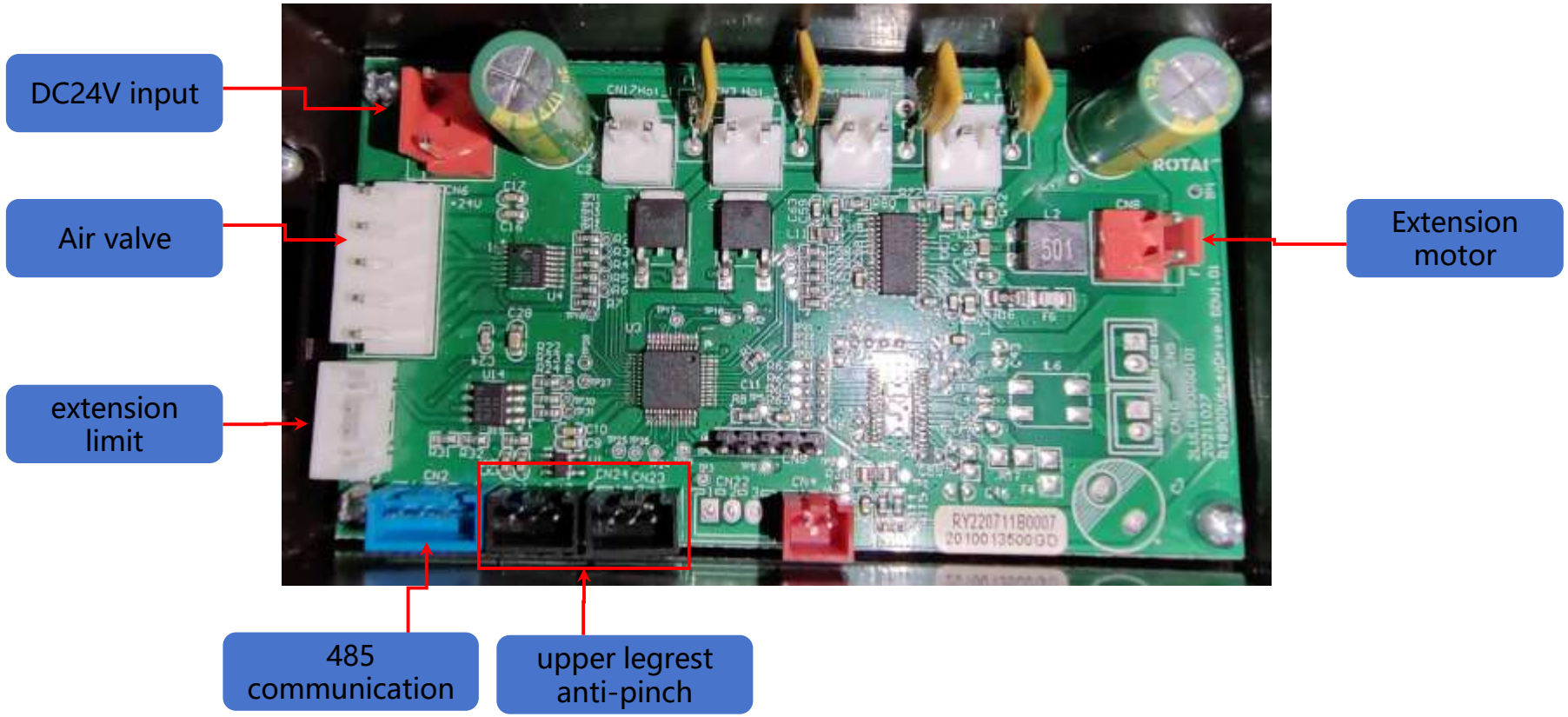


3D counter board

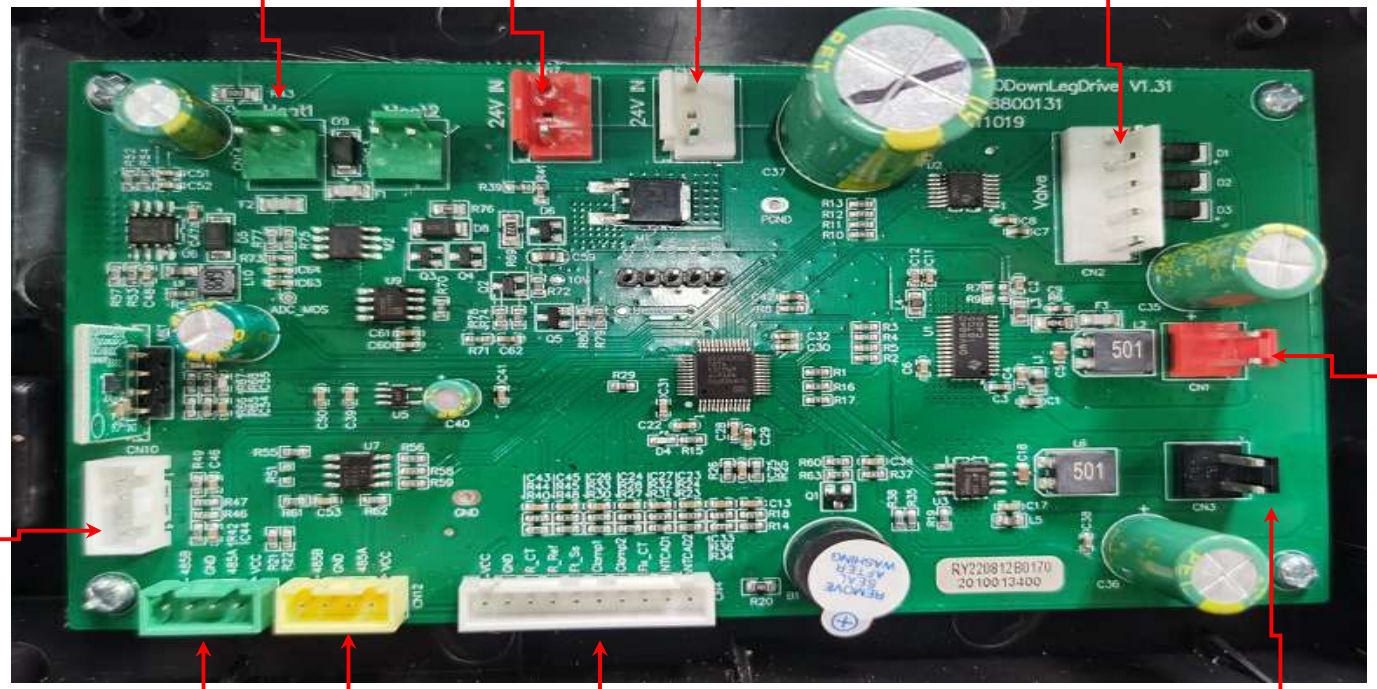


push rod sensor board

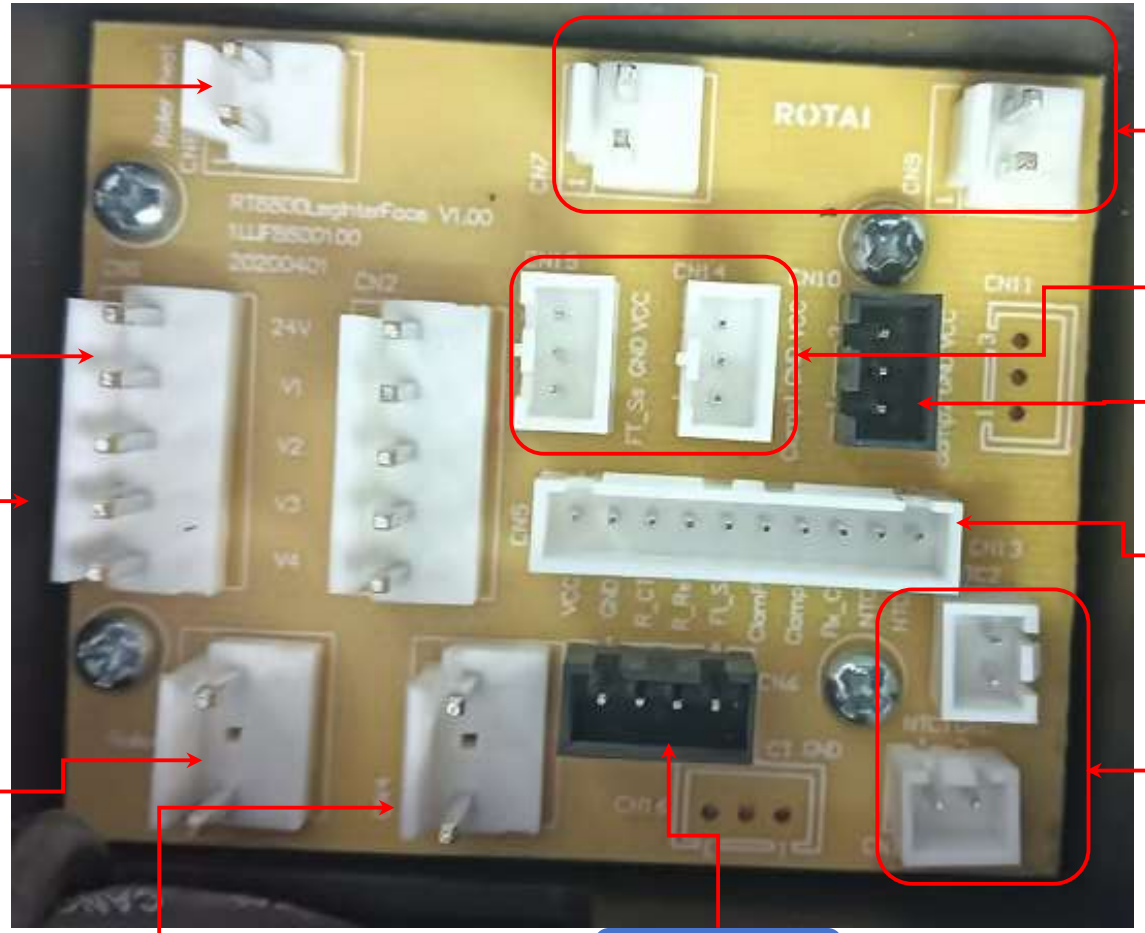
S80 upper legrest drive board



S80 lower legrest drive board



Footrest transfer board



lower legrest left and right sole heating 24V output

lower legrest air valve input

lower legrest air valve output

lower legrest sole roller 24V input

lower legrest sole roller 24V output

sole roller counter

lower legrest left and right sole heating 24V output

left and right sole sensor board signal

lower legrest anti-pinch signal

lower legrest signal

lower legrest left and right sole heating sensor

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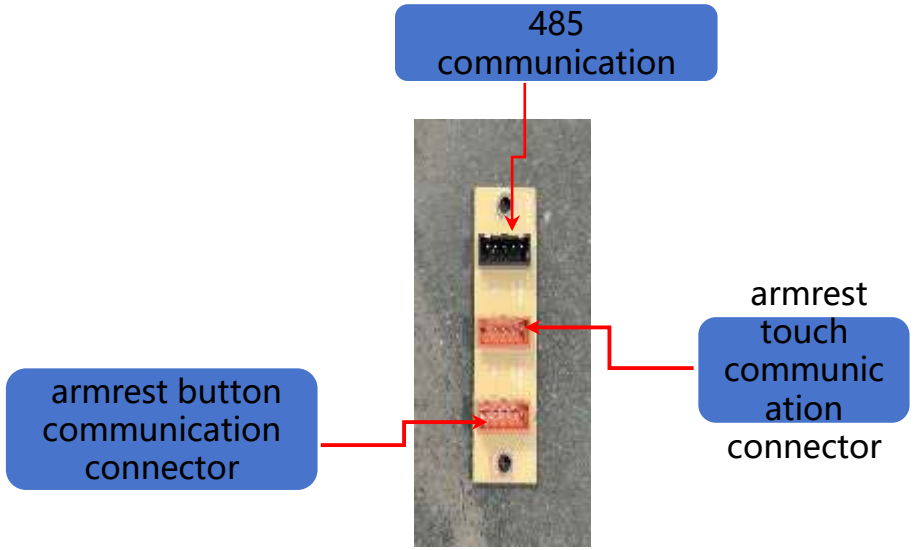
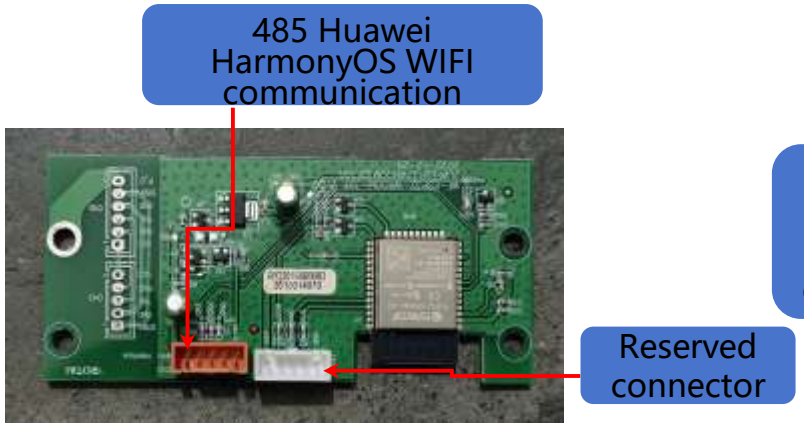
armrest button pad

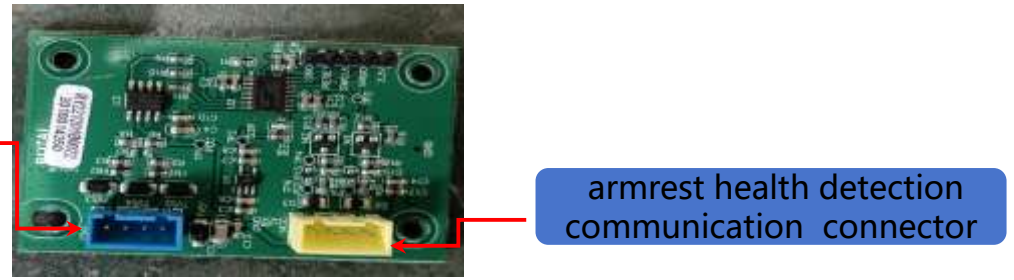
anti-pinch sensor board



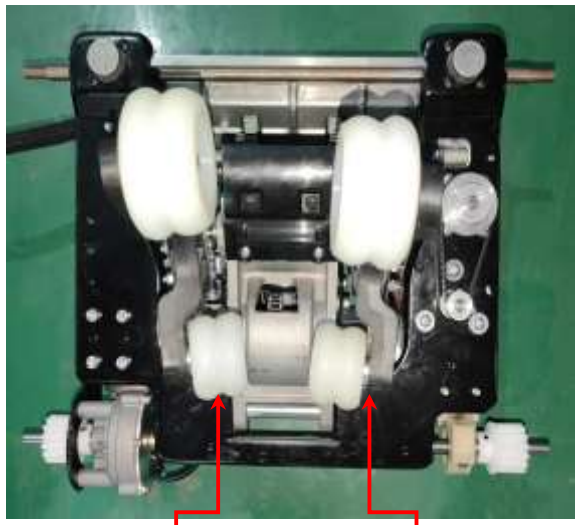
Button board and transfer board



Huawei HarmonyOS WIFI board

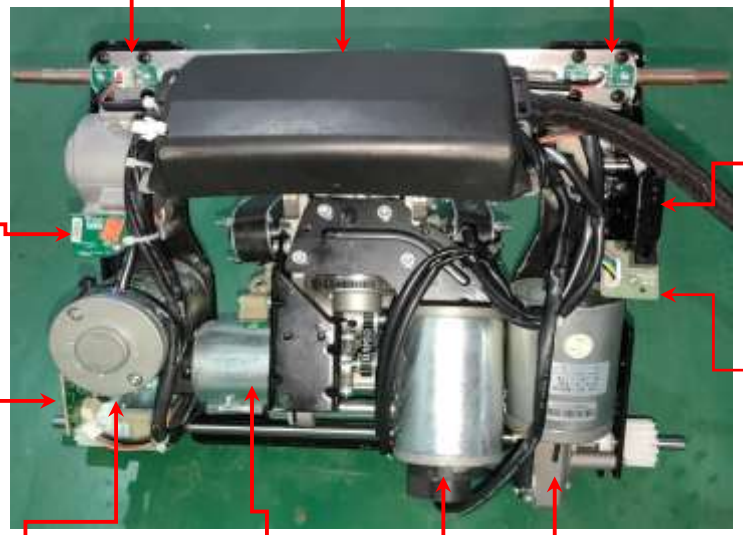


armrest health detection communication transfer board



Right arm

Left arm



Pressure sensor board

Mechanism board

Pressure sensor board

3D motor Encoder

3D counter board

3D limit sensor board

Limit sensor board

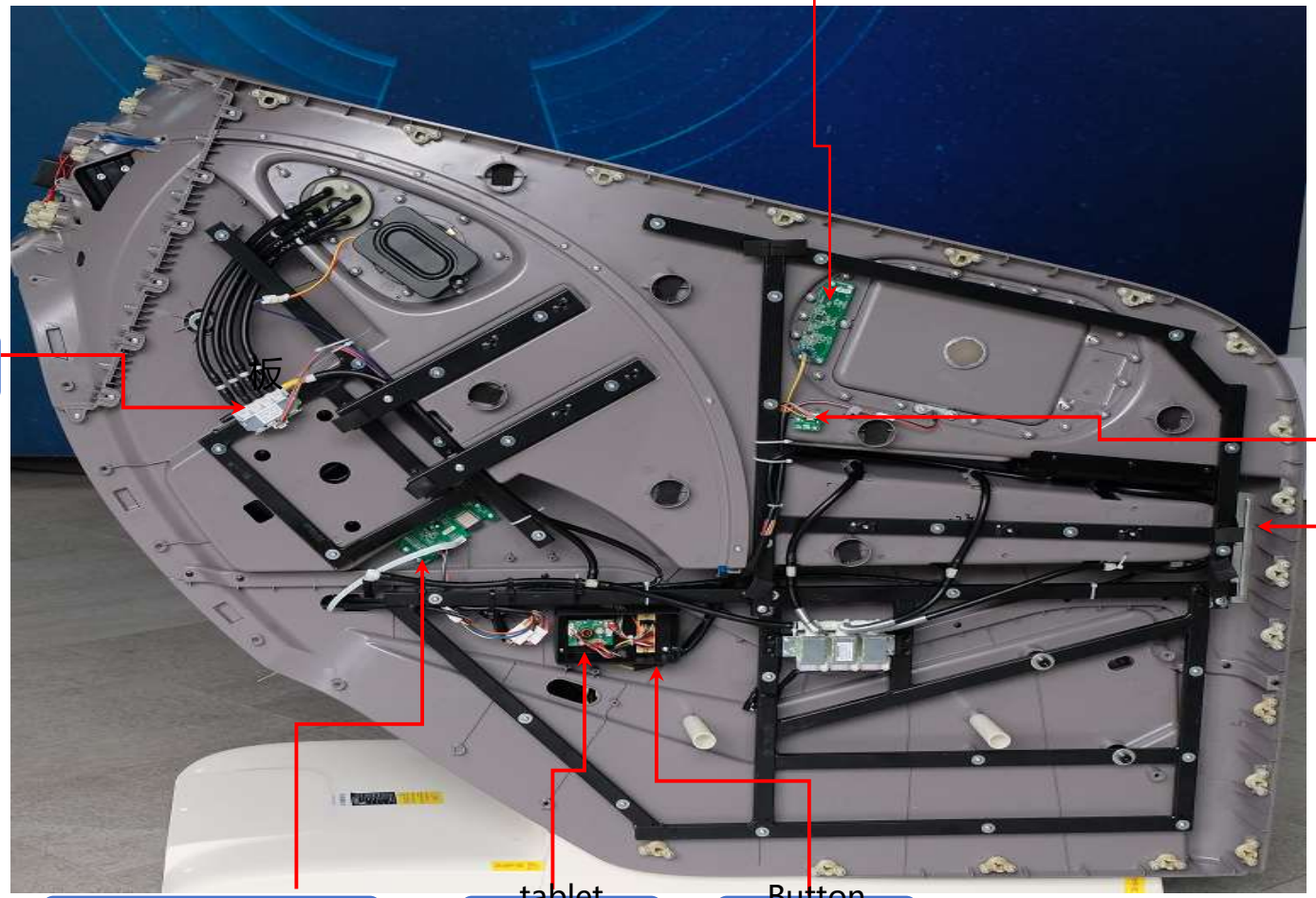
3D vertical motor

Tapping motor

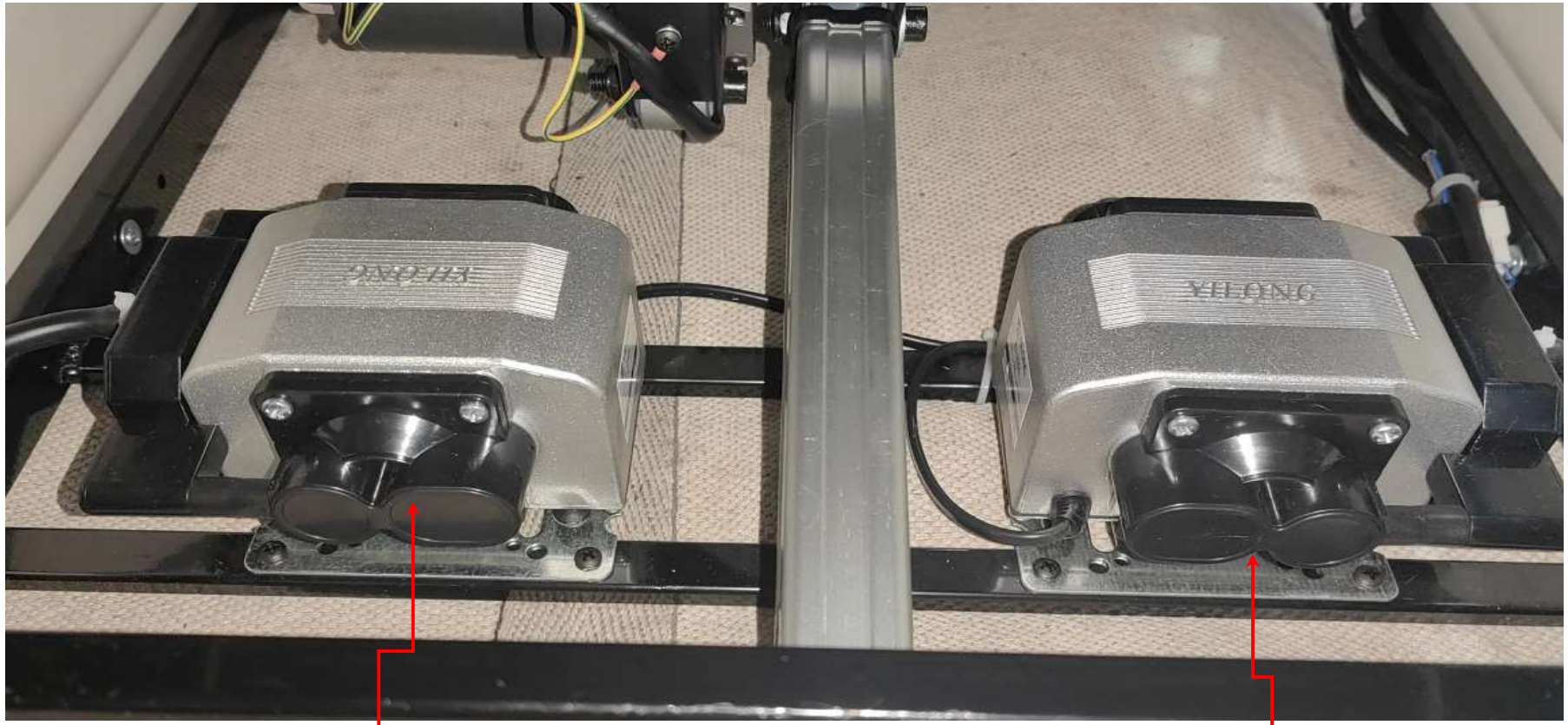
Kneading motor

Walking motor

right armrest



S80 air pump



Troubleshooting

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1. The touchscreen cannot control the massage chair
2. Burnt fuse
3. Kneading motor not working
5. Tapping motor not working
6. Walking motor not working
4. Mechanism cannot detect width
4. 3D vertical motor not working
8. Legrest actuator not working
9. Backrest actuator not working
10. Upper legrest extension not working
10. Lower legrest extension not working
11. Foot roller not working
12. Airbags not working
13. Massage chair error alert
15. Button pad not working
16. Health detection no results
17. Wireless charger not working
18. Aroma not working
19. Ambient light not working
20. Main chair heating not working
21. Leg heating not working
22. Body scan no results

1.S80 touchscreen cannot control the massage chair

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Touchscreen → Bluetooth board → Mainboard → Mainboard communication cable

- Touchscreen: Check if the touchscreen can power on, if the touchscreen can be touched, and if the touchscreen can receive Bluetooth.
- Bluetooth board: Check if the touchscreen can connect to the host's Bluetooth, if the phone can receive Bluetooth, and the Bluetooth board cannot be replaced.
- Mainboard: If the Bluetooth connection is successful but cannot operate, check if the connection communication cable is loose or if the wiring harness is broken; if so, replace the mainboard.
- Mainboard communication cable: Use a multimeter to check if the cable harness has poor contact or is broken. Replace the cable harness.

2. Burnt fuse

Burnt fuse → filter board is short circuited → Power board is short circuited → Drive board is short circuited → A certain load is short circuited

1. Replace the fuse with the same type if the voltage fluctuations cause the fuse to blow out.

2. If the fuse is blown again, unplug the red marker connector on the power supply board and power on, if fuse is blown again then replace a filter board.

If the fuse blows, power off and reset the electrical plug-in. Then, unplug the 220V primary plug from the power board, power on again, and if the fuse blows, it indicates a short circuit in the power board. Replace the power board.t

Reset the 24V input plug on the mainboard, unplug all other plugs on the mainboard, and power on again. If the fuse blows, it indicates a short circuit in the mainboard. Replace the mainboard.

If not, re-plug all connectors one by one to check which connected part short circuited. Replace with a new part upon confirmation of the short circuited parts.

3. Kneading motor not working

Kneading motor malfunctions

Mainboard malfunctions

Loose/broken connection cable

1. Use controller to power on the chair, select MANUAL mode -SYNC Massage. Connect kneading motor to tapping motor connector port on the mechanism mainboard, and check if the kneading motor works. If not, replace the kneading motor.

2. If it works, the mainboard is faulty. Replace the mechanism mainboard.

3. Use a multimeter to check if the cable harness has poor contact or is broken. Replace the cable harness.

4.S80 Tapping motor not working

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Knocking motor malfunctions → Mainboard malfunctions → Loose/broken connection cable

1. Use controller to power on the chair, select MANUAL mode -SYNC Massage. Connect tapping motor to kneading motor connector port on the mechanism mainboard, and check if the knocking motor works. If not, replace the knocking motor.

2. If it works, the mechanism mainboard is faulty. Replace the mechanism mainboard.

3. Use a multimeter to check if the cable harness has poor contact or is broken. Replace the cable harness.

5.S80 Walking motor not working

Distance limit sensor board is damaged → Walking motor malfunctions → Mainboard malfunctions → Loose/broken connection cable

1. Switch on the controller and power on the chair, select MANUAL mode-SYNC massage, then choose POINT massage, press the "UP" or "DOWN" button to check if it double beeps. If there are fast beeping sounds, distance limit detection board is damaged and replace with a new one if needed.

2. If both have slow single beeping sound, the limit sensor signal is good, then unplug mechanism walking motor connector (black color) and plug it into tapping motor connector socket (red color) to check if walking motor works. If no, the motor is damaged and needs to be replaced.

3. Plug the motor back to its original position, exchange walking motor connector and kneading motor connector to check if the walking motor functions. If motor moves then replace the mainboard, if motor fails to move, the motor cable is loose or broken, replace with a new cable.

3. Use a multimeter to check if the cable harness has poor contact or is broken. Replace the cable harness.

6.S80 Mechanism cannot detect width

Width board → Kneading motor counter board → Magnet stand → Loose/broken connection cable

1. Enter engineering mode, activate kneading, and check for changes in width values. If none, replace the width board.

2. In engineering mode, activate kneading, check if kneading counter is normal. If not, replace the kneading motor.

3. Check if the magnet stand is normal or damaged. If damaged, replace it.

4. Use a multimeter to check if the cable harness has poor contact or is broken. Replace the cable harness.

7.S80 3D vertical motor not working

3D vertical motor malfunctions → Mechanism mainboard malfunctions → 3D limit sensor board malfunctions → Loose/broken connection cable

1. Select MANUAL mode, KNEADING massage. Switch 3D motor connector with kneading motor connector on the mechanism mainboard. If motor does not work, replace with a new motor.

2. If it's good, the connection wire or connection pin is damaged (use multimeter to test); If all are good, replace the mainboard.

3. If it works, then check the 3D motor 5V voltage (red yellow wire around 5V, yellow blue wire around 4.5V, yellow green around 4.5V). If output voltage is normal, then replace limit sensor board.

4.Use a multimeter to check if the cable harness has poor contact or is broken. Replace the cable harness.

8.S80 Legrest actuator not working

Actuator malfunctions → Loose/broken connection cable → Mainboard malfunctions

Power on, press the leg rest up/down button, and use a multimeter to check if the actuator has resistance. If there is no resistance, actuator is faulty and needs to be replaced.

Use a multimeter to check if the cable harness has poor contact or is broken. Replace the cable harness.

If the cable is good, replace the mainboard

9.S80 Backrest actuator not working

Actuator malfunctions

Loose/broken connection cable

Mainboard malfunctions

Power on, press the backrest up/down button, and use a multimeter to check if the actuator has resistance. If there is no resistance, actuator is faulty and needs to be replaced.

Use a multimeter to check if the cable harness has poor contact or is broken. Replace the cable harness.

If the cable is good, replace the mainboard

10.S80 lower legrest extension motor not working

Legrest extension limit sensor board malfunctions

Lower legrest mainboard malfunctions

Extension motor malfunctions

Loose/broken connection cable

1. Adjust the lower legrest extension using the hand controller, listen to the sound. If the legrest stops in the reset position and there is a fast sound, it indicates an issue with limit sensor, and needs to replace the limit sensor board or checking if the limit detection board connection wire is open. If there is a slow sound, it suggests a motor or legrest mainboard issue with no motor working voltage output.

2.Switch on the leg extension function, use the multimeter to test legrest mainboard for DC24V voltage output, if there is no voltage output, replace the mainboard.

3. If there is, then replace the extension motor.

4. Use a multimeter to check if the cable harness has poor contact or is broken. Replace the cable harness.

11.S80 upper legrest extension motor not working

Upper legrest extension limit sensor board malfunctions

Upper legrest mainboard malfunctions

Extension motor malfunctions

Loose/broken connection cable

1. Adjust the upper legrest extension using the hand controller, listen to the sound. If the legrest stops in the reset position and there is a fast sound, it indicates an issue with limit sensor, and needs to replace the limit sensor board or checking if the limit detection board connection wire is open. If there is a slow sound, it suggests a motor or legrest mainboard issue with no motor working voltage output.

2.Switch on the leg extension function, use the multimeter to test legrest mainboard for DC24V voltage output, if there is no voltage output, replace the mainboard.

3. If there is, then replace the extension motor.

4. Use a multimeter to check if the cable harness has poor contact or is broken. Replace the cable harness.

12.S80 Foot roller motor does not work

Legrest mainboard malfunctions → Roller motor malfunctions → Loose/broken connection cable

1.Switch on the foot roller function, use the multimeter to test the connector plug of legrest mainboard for DC24V voltage output, if no, replace the legrest mainboard.

2. If yes, replace the roller motor.

3. Use a multimeter to check if the cable harness has poor contact or is broken. Replace the cable harness.

13.S80 Airbags not working

Air hose → Air valve → Mainboard → Air pump

1. If part of the airbags fail to inflate, check the air hoses in that area to see if they are folded or fell off.

2. If air hose and airbags are good, use a multimeter to test air valve connector, if the black probe and yellow probe read between 160-170, air valve is good, otherwise the air valve is damaged.

3. If the air pump vibrates, check if the mainboard air valve has AC24V output. Replace the mainboard if not.

4. If all airbags fail to work, check if the air pump is functioning. If the air pump is not working, check if the mainboard has an output of AC24V. If there is an output, replace the air pump; if not, replace the mainboard.

14.S80 Error Alert

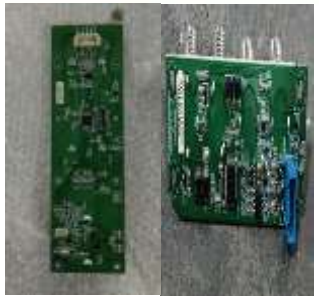
Mainboard → Sensor board → Loose/broken connection cable

1. Check if the mainboard has DC5V Voltage output. Replace the mainboard if not.

2. Check for 5V voltage input and replace the sensor board.

3. Inspect the middle connecting cable for breaks or poor contact and replace the cable.

15.S80 Button pad not working



Mainboard → 485 Communication transfer board → button pad → Loose/broken connection cable

Check if there is 5V voltage or signal output on the mainboard. If there is no voltage or signal output, replace the mainboard.

Check if the 5V power supply on the 485 communication board is normal.

If the 5V power supply is normal on the mainboard and the transfer board, replace the button pad.

Check if the button pad connector is loose, if any pins are disconnected, or if the cable is broken. If any issues are found, replace the cable.

16.S80 Health detection no results

Mainboard → transfer board → Armrest Health Detection Module → Loose/broken connection cable

1. Check if there is a DC5V voltage output on the mainboard. If there is no voltage output, replace the mainboard.

2. Check if the 5V voltage on the transfer board is normal.

3. Check if there is a DC5V voltage output on the health detection board. If there is no voltage output, replace the health detection board.

4. Inspect the middle connecting cable for breaks or poor contact and replace the cable.

17.S80 Wireless charger not working

Mainboard → charging board → Loose/broken connection cable

Check if there is a DC24V voltage output on the mainboard. If there is no voltage output, replace the mainboard.

Check if there is a DC24V input on the charging board. If there is voltage input, replace the charging board.

Inspect the middle connecting cable for breaks or poor contact and replace the cable.

18.S80 Aroma not working

Air hose → Air valve → Mainboard → Loose/broken connection cable

1. check the air hoses in the aroma area to see if they are folded or fell off.

If the air hose is normal, use the multimeter to check air valve. If the red & white probe and the green probe read is not within the range of 155-165, the air valve is faulty and should be replaced.

Check if there is a DC24V voltage output on the mainboard. If there is no voltage output, replace the mainboard.

Inspect the middle connecting cable for breaks or poor contact and replace the cable.

19.S80 Ambient light not working

Mainboard → High Voltage Package → Ambient light → Loose/broken connection cable

Check if there is a DC24V voltage output on the mainboard. If there is no voltage output, replace the mainboard.

Check if there is an AC voltage of around 160V on the high voltage package. If there is no voltage output, replace the high voltage package.

If there is a voltage output, replace the ambient light.

4. Inspect the middle connecting cable for breaks or poor contact and replace the cable.

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20.S80 Main chair heating not working

Heating pad location

Mainboard

Use a multimeter to measure if there is a DC24V output at the heating connector on the mainboard. If there is no output, replace the mainboard

Loose/broken connection cable

Measure the cable. If the cable is faulty, replace the cable.

Heating pad

If the cable is good, replace the heating pad.

21.S80 Leg heating not working

Heating pad location

Mainboard

Use a multimeter to measure if there is a DC24V output at the heating connector on the legrest board. If there is no output, replace the board

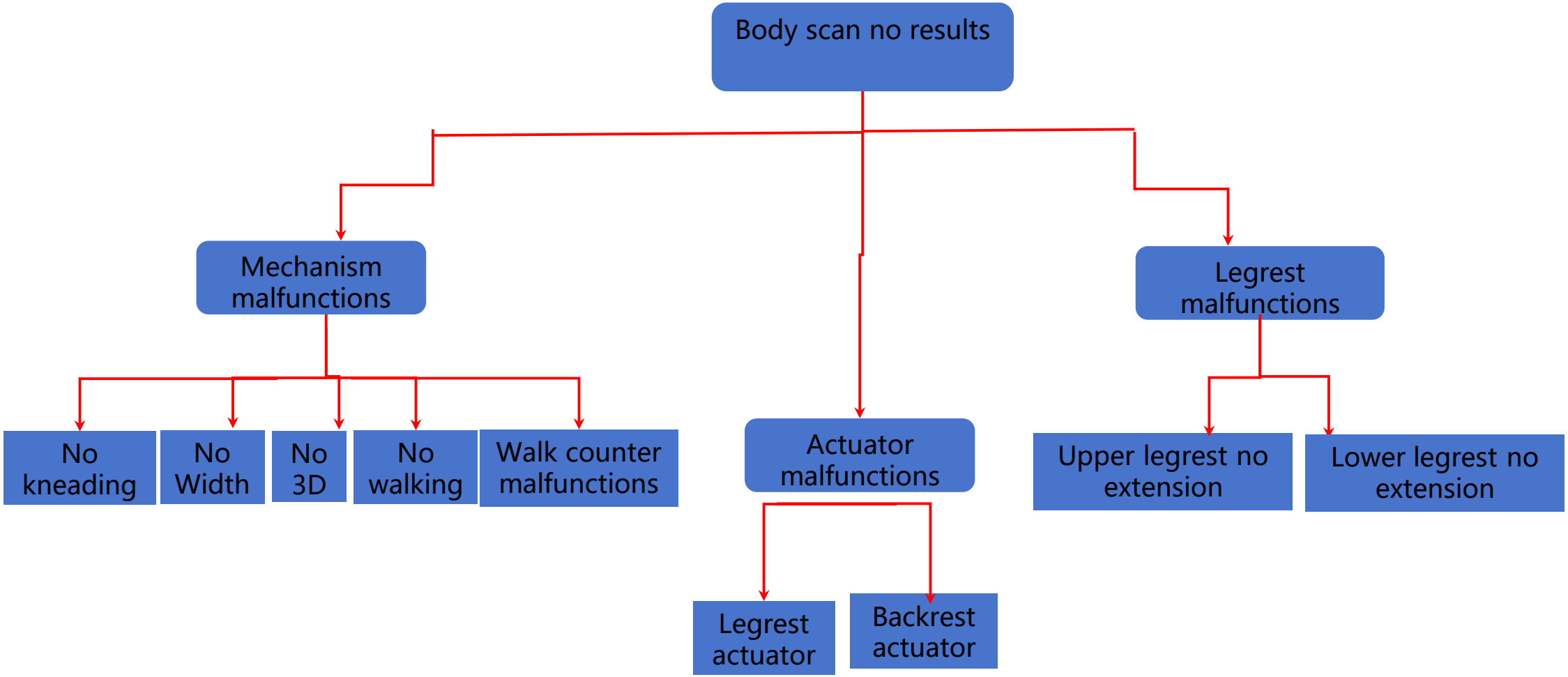
Loose/broken connection cable

Measure the cable. If the cable is faulty, replace the cable.

Heating pad

If the cable is good, replace the heating pad.

22.S80 Body scan no results



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