

Use Case

Use Case 1: Use RMB Cranio-Electro Stimulation device

Context of use: User intends to use device

Scope: RMB Cranio-Electro Stimulation device

Level: User-goal

Primary Actor: User

Stakeholders & Interests:

User – intends to use the device

Application of device – controls the device to make sure that user can use the device successfully

Precondition: User connects the ear clips properly.

Minimal Guarantees: Device works safety.

Success Guarantees: Device works safety and successfully.

Trigger: User presses the power button to start the device.

Main Success Scenario:

1. User holds the power button to power on the device.
2. Device is on.
3. Battery level section on screen displays the battery level when the device is running.
4. User selects the session-group from 20min, 45min and user designated.
5. Current section group section on screen displays the selected session-group.
6. User selects the session-type from Delta (2.5-5 Hz), Theta (6-8 Hz), Alpha (9-11 Hz) and Beta (12-15 Hz).
7. Current section type section on screen displays the selected session-type.
8. User presses start button to start the session.

9. Device tests connection to check the connection status.
10. Connection status section on screen displays connection status.
11. User selects an intensity from 1 to 8.
12. Intensity status section on screen displays intensity status, default is 1.
13. Device works according to the selected settings.
14. Device stops working after the session.
15. User holds the power button to power off the device at any time.
16. Device is off.

Extensions:

3.a. Battery level $\geq 50\%$:

3.a.1. Battery status section on screen displays "green".

3.b. $20\% \leq$ Battery level $< 50\%$:

3.b.1. Battery status section on screen displays "yellow".

3.c. Battery level $< 20\%$:

3.c.1. Battery status section on screen displays "red", cannot start the session instead of the battery has been replaced.

4.a. User selects user designated:

4.a.1. User designated exists:

4.a.1.a. Set status of user designated to current settings.

4.a.1.b. Current section group section on screen displays the selected user designated.

4.a.2. User designated does not exist:

4.a.2.a. Invalid input, current settings have no change.

9.a. No Connection:

7.a.1. Cannot start the session instead of status changing to “Okay Connection” or “Excellent Connection”.

11.a. User intends to change intensity level during session:

8.a.1. User selects any other intensity level during session.

8.a.2. Intensity level changes, intensity status section on screen changes.

13.a. Battery level < 10% during session:

9.a.1. Session will end early.

13.b. User intends to end session early during session:

9.b.1. User presses end-session button to end session early.

14.a. User intends to record a therapy and add to treatment history:

10.a.1. See Use Case 2.

14.b. User intends to replay selected treatments from history of treatments:

10.b.1. See Use Case 3.

Use Case 2: Record therapy

Context of use: User intends to record therapy

Scope: RMB Cranio-Electro Stimulation device

Level: Subfunction

Primary Actor: User

Stakeholders & Interests:

User – intends to record therapy.

Application of device – controls the device to make sure that user can record therapy successfully.

Precondition: A session is over.

Minimal Guarantees: Record function works safety.

Success Guarantees: Record function works safety and successfully.

Main Success Scenario:

1. User selects a therapy.
2. Screen displays selected history therapy.
3. User presses record button to record the section group, section type and intensity of last finished session on selected therapy.

Use Case 3: Replay therapy

Context of use: User intends replay therapy

Scope: RMB Cranio-Electro Stimulation device

Level: Subfunction

Primary Actor: User

Stakeholders & Interests:

User – intends to replay therapy.

Application of device – controls the device to make sure that user can replay therapy successfully.

Precondition: No session is running.

Minimal Guarantees: Replay function works safety.

Success Guarantees: Replay function works safety and successfully.

Main Success Scenario:

1. User selects a therapy.
2. Screen displays selected history therapy.
3. User presses replay button to set the current session group, current session type and current intensity as selected therapy.
4. User presses start button to start session as Use Case 1.

Extensions:

3. a. Therapy does not exist:

3.a.1. Current settings of session group, session type and intensity have no change.

Use case diagram:

