Requirement traceability matrix

ID	Requirement	Related Use Case	Fulfilled By	Test	Description
1	User holds the power button to power on the device.	Use Case 1: Use RMB Cranio-Electro Stimulation device	**mainwindow**	**Hold power button.**	**Device is on.**
2	Battery level section on screen displays the battery level when the device is running.	Use Case 1	**mainwindow, battery**	**Check battery level while the device is running.**	**Screen displays battery level properly.**
3	User selects the session-group from 20min, 45min and user designated, current section group section on screen displays the selected session-group.	Use Case 1	**Mainwindow, therapy**	**Select the session-group.**	**Session-group is selected and displayed properly.**
4	User selects the session-type from Delta (2.5-5 Hz), Theta (6-8 Hz), Alpha (9-11 Hz) and Beta (12-15 Hz), current section type section on screen displays the selected session-type.	Use Case 1	**mainwindow, therapy**	**Select the session-type.**	**Session-type is selected and displayed properly.**
5	User presses start button to start the session. Device tests connection to check the connection status, connection status section on screen displays connection status.	Use Case 1	**mainwindow**	**Press start button.**	**Session starts if there is connection. Screen displays connection status.**
6	User selects an intensity from 1 to 8, intensity status section on screen displays intensity status, default is 1. Device works according to the selected settings.	Use Case 1	**mainwindow, therapy**	**Select intensity.**	**Intensity is selected.**
7	Device stops working after the session.	Use Case 1	**mainwindow**	**Wait until session ends.**	**Device stops working after the session.**
8	User holds the power button to power off the device at any time.	Use Case 1	**mainwindow**	**Hold the power button.**	**Device is off.**
9	Battery level $\geq$ 50%, Battery status section on screen displays "green". 20% $\leq$ Battery level < 50%, Battery status section on screen displays "yellow". Battery level < 20%, Battery status section on screen displays "red", cannot start the session instead of the battery has been replaced.	Use Case 1	**mainwindow, battery**	**Change battery level.**	**Battery status of color works properly, cannot start session if battery level < 20%.**
10	User selects user designated. The user designated exists. Set status of users designated to current settings. The current section group section on-screen displays the selected designated.	Use Case 1	**mainwindow, therapy**	**Select user designated if designated exists.**	**Current settings are set as user designated. Screen displays the selected designated properly.**

11	User selects user designated. The user designated does not exist: Invalid input, current settings have no change.	Use Case 1	**mainwindow, therapy**	**Select user designated if designated does not exist.**	**Current settings have no change.**
12	No Connection. Cannot start the session instead of status changing to "Okay Connection" or "Excellent Connection".	Use Case 1	**mainwindow**	**Set connection as "no connection".**	**Can not start the session unless set connection as "Okay" or "Excellent".**
13	User intends to change the intensity level during the session. The user selects any other intensity level during the session. Intensity level changes, intensity status section on the screen changes.	Use Case 1	**mainwindow**	**Change intensity during the session.**	**Intensity is changed properly.**
14	Battery level < 10% during the session: Session will end early.	Use Case 1	**mainwindow, battery**	**Change battery level < 20% during session.**	**Session ends early.**
15	User intends to end the session early during the session. The user presses an end-session button to end the session early.	Use Case 1	**mainwindow**	**Press end-session button.**	**Session ends early.**
16	User selects a therapy. Screen displays selected history therapy. User presses record button to record the section group, section type and intensity of last finished session on selected therapy.	Use Case 2: Record therapy	**Therapy, dbmanager**	**Select therapy. Press record button.**	**Screen displays selected therapy. Settings is recorded.**
17	User selects a therapy. Screen displays selected history therapy. User presses replay button to set the current session group, current session type and current intensity as selected therapy. User presses start button to start session.	Use Case 3: Replay therapy	**Therapy, dbmanager**	**Selects therapy. Press replay button. Press start button.**	**Current settings are set as therapy. Screen displays current settings. Session starts.**
18	The user presses the replay button. Therapy does not exist. the current settings have no change.	Use Case 3	**Therapy, dbmanager**	**Press replay button if therapy does not exist.**	**Current settings have no change.**