

## Traceability Matrix

ID	Requirement	Related Use Case	Fulfilled By	Test	Description
1	The application interface contains a HeartWave Device that has buttons and displays	N/A	MainWindow.ui	Run the Simulations in Qt to observe the UI	Using QT, the user interface framework, the Heartwave device is replicated. All buttons are clickable with the mouse. There are also admin buttons to adjust the state of the device
2	The applications battery level is dependent on time and the number of therapy sessions	N/A	MainWindow, Device	Start treatment and observe the battery level. The battery level will decrease as the sessions continues	The Device class stores the battery level, where the mainwindow uses it to update the display. As the therapy session runs, the battery level will lower and the mainwindow will reflect the change in battery level
3	Turning the Heart Wave Device On and off	1,2,3,4	Device, Main Window	Press the on and Off button to see the Screen turn on and off	The Heart Wave device user can press the power button and either turn it on or off the MTC device. It will then displays the appropriate message on the device's display
4	Select Menu Options	1,3,4	Device, Main Window	Press up and down button to choose what you want to select and press the middle button to select the option	The Heart Wave device user can select their desired options from the main menu displayed on the main menu. Users can press the up, down, and ok buttons to choose and select the options.
5	Return to Main Menu	1,4	Device, Main Window	Press the main menu button and it will return back to the main menu	The Heart Wave device user can return to the main menu anytime by pressing the return to main menu button
6	Check if Electroid is on skin	2,4	Device	Tick/untick the on skin option.	The Heart Wave device will determine if the heart electroid is on the skin and will have an indicator to show if the electorid is on or off the skin

7	Decreasing Battery	4	Device, Main Window	Turn on the device	As the Heart Wave device is on, the battery level will decrease.
8	Device should turn off if it is out of battery	4	Device, Main Window	Turn on the device until the device runs out of battery	Once the Heart wave device is out of battery, the device and all the buttons will be not active
9	Changing Challenge Level	1,4	Device, Main Window	Go to the Settings and change the challenge Level	You can change the challenge level of the therapy sessions
10	Time of Session	3,4	Device, Main Window, Log, Recording	Run and End the session. Once the Session has ended, It displays the time the Logs of the Therapy	The Heart Wave device can display the therapy time using a QTimer.
11	Record Session	3,4	Device, Main Window, Log, Recording	Run and End the Session. Go to the History Session and select the last session.	The user can choose to record the therapy on the Heart Wave device to add it to the history logs when the user presses the back button during or after the therapy. The user can also view/clear the history treatment list on the Heart Wave device