Case: Normal Operation (Beginning a Session)

User	selectButton	qCustomPlot	sessionTimer	breathTimer	MainWindow	Device	Recording object	Log

This diagram shows the normal operation of the HeartWave device. The User is in the main menu where the first option is to begin a session. The session ends when the select button is pressed. After, the log of the session is displayed on the screen.

press() → selectButton

handleSelectButtonPress() → MainWindow

startSession() → Device

setBreathInterval()

setChallengeLevel()

startSession() (MainWindow self)

startTimer(5000) → sessionTimer

loops every 5 seconds

startTimer(1000) → breathTimer

loops every 1 second

loop [every 5 seconds until user calls for session to end]

  loop [every second]

  updateBreathPace()

updateSession() → MainWindow

update() → Device

update() → Recording object

setLengthOfSession(length+5)

updateCoherenceScore()

updateAchievementScore()

addToPlotPoints()

getRecordingCoherenceScore() → Device

getCoherenceScore() → Recording object

getRecordingAchievementScore() → Device

getCurrentAchievementScore() → Recording object

getRecordingLengthofSession() → Device

getLengthOfSession() → Recording object

getRecordingDataPoints() → Device

getFiveLatestPlotPoints() → Recording object

updateGraph() → qCustomPlot

getActiveIndicator() → Device

int (return)

turnOnIndicator()

playBeep()

user ends session

press() → selectButton

handleSelectButtonPress() → MainWindow

endSession()

stop() → sessionTimer

stop() → breathTimer

saveRecording() → Device

getLengthOfSession() → Recording object

getAverageCoherenceScore() → Recording object

getCurrentAchievementScore() → Recording object

getAllPlotPoints() → Recording object

Log() → Log

creates Log object

displayLog()

getLog(logNumber) → Device

returns Log object

getPlotPoints() → Log

updateLogGraph() → qCustomPlot

Log of session is displayed on screen