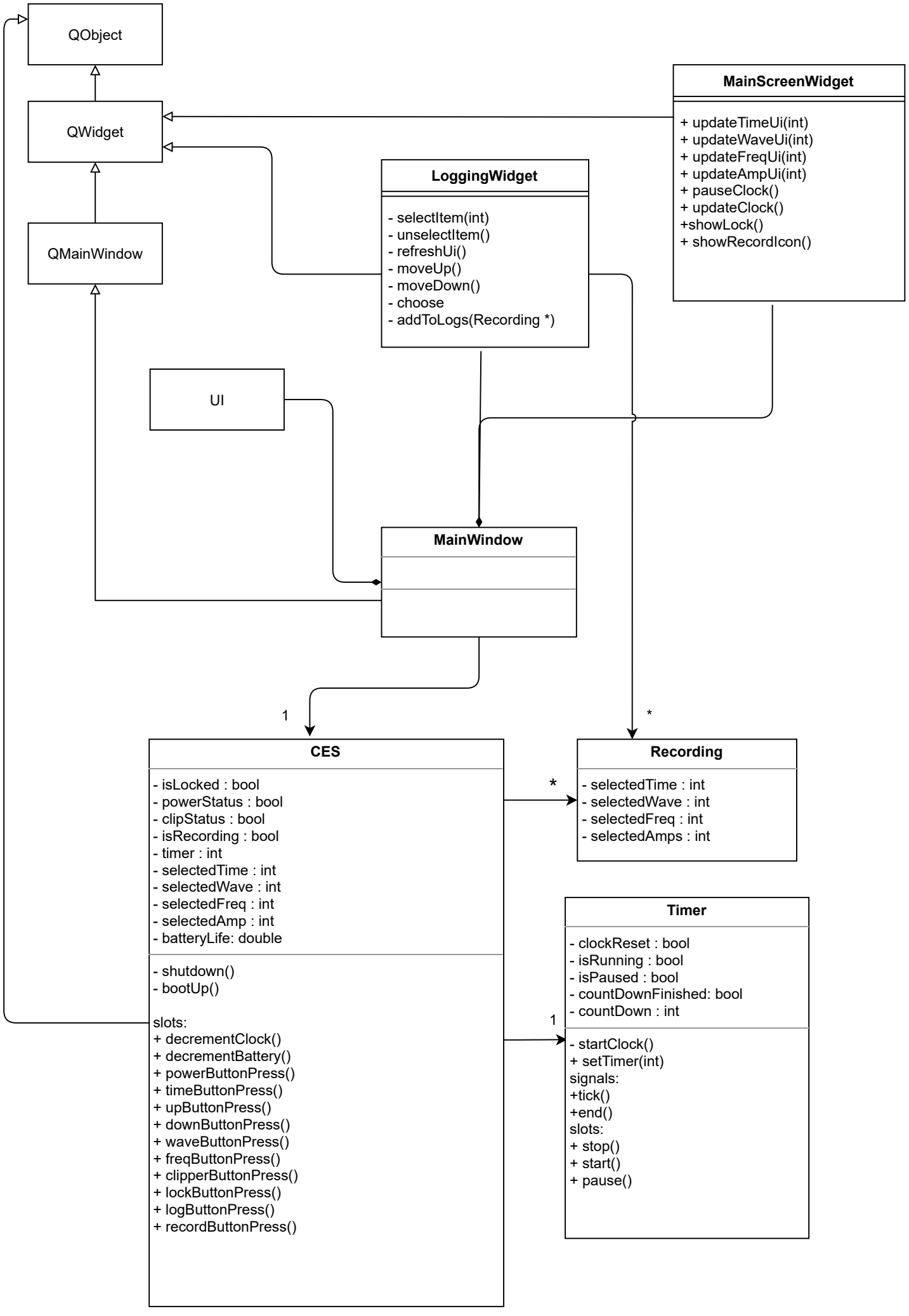
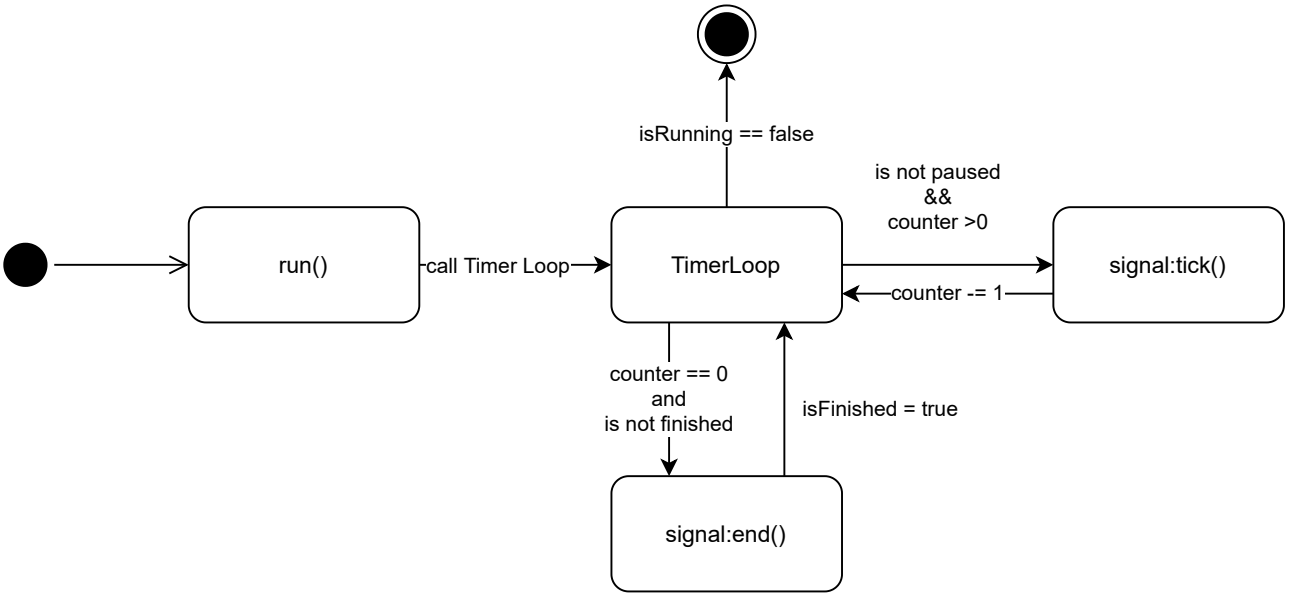

QObject
QWidget
QMainWindow
MainScreenWidget
+ updateTimeUi(int)
+ updateWaveUi(int)
+ updateFreqUi(int)
+ updateAmpUi(int)
+ pauseClock()
+ updateClock()
+showLock()
+ showRecordIcon()
LoggingWidget
- selectItem(int)
- unselectItem()
- refreshUi()
- moveUp()
- moveDown()
- choose
- addToLogs(Recording *)
UI
MainWindow
1
*
CES
- isLocked : bool
- powerStatus : bool
- clipStatus : bool
- isRecording : bool
- timer : int
- selectedTime : int
- selectedWave : int
- selectedFreq : int
- selectedAmp : int
- batteryLife: double
- shutdown()
- bootUp()
slots:
+ decrementClock()
+ decrementBattery()
+ powerButtonPress()
+ timeButtonPress()
+ upButtonPress()
+ downButtonPress()
+ waveButtonPress()
+ freqButtonPress()
+ clipperButtonPress()
+ lockButtonPress()
+ logButtonPress()
+ recordButtonPress()
*
Recording
- selectedTime : int
- selectedWave : int
- selectedFreq : int
- selectedAmps : int
1
Timer
- clockReset : bool
- isRunning : bool
- isPaused : bool
- countDownFinished: bool
- countDown : int
- startClock()
+ setTimer(int)
signals:
+tick()
+end()
slots:
+ stop()
+ start()
+ pause()



This state diagram shows the life cycle of a Timer Object. When the object is created and set to run with QThreadPool::globalinstance()->start(), it first calls the timerLoop(). At first its default for isNotPaused is true, meaning that the timer remain on a state of waiting for commands.

When the CES calls Timer::start(), it changes isNotPaused to false which begins the flow of sending a tick() signal and decreasing the counter value. If the counter value reaches 0, it sends a end() signal to the CES which the CES can interpret how ever it wants. Because the counter is now 0, the timer goes back to a state of waiting. The counter can be reset with calling Timer::setTime(int) . Timer::pause() will also set the timer to a wating state.

The object is destroyed when the CES call Timer::stop()