

Background

Medtronic pumps series x23 and x54 (523, 554, 723, 754) have a feature called MySentry. The pumps having this feature are sending every ~5minutes a status update packet. If you manage to correctly receive this packet, you avoid waking up the pump on a regular basis and asking for the same information.

Technically, this was designed to reduce the power use on pump side.

Loop / FreeAPS have implemented a mechanism to use this feature, by keeping RileyLink / EmaLink in receive mode, when no other commands are in progress. As EmaLink uses much more power in receive mode than in idle mode, EmaLink will have 4 times less battery lifetime when used with pumps that have MySentry. On top of this, EmaLinks with firmware versions 2.2.16/3.8 and below have communication issues during bolus command when used with Loop /FreeAPS Autobolus branch (this bug is investigated separately and will be addressed in the next firmware)

Disabling the MySentry feature might result in a reduced battery lifetime in your pump but the difference should be minimal. There is no other known negative impact of disabling this feature.

This kind of patch is not needed for AAPS, as it does not use MySentry feature.

If you currently use a pump with MySentry, by implementing the proposed solution below, you should get:

- Up to 4 times battery lifetime from your EmaLink (check GitHub for details)
- Improved communication (less red/yellow loops, less bolus errors) for EmaLinks with firmware versions 2.2.16/3.8 and below

Solution: disable MySentry feature in rileylink_ios

Steps:

- Follow the first 4 steps for Loop Workspace build (<https://loopkit.github.io/loopdocs/build/loopworkspace/>)
- After step 4 ("Enter git pull --recurse") is finished, do the changes below
 - in "rileylink_ios/MinimedKit/Models/PumpModel.swift" you need to change one line
 1. find the procedure below (around line 54)

```
public var hasMySentry: Bool {  
    return generation >= 23  
}
```
 2. and change it to:

```
public var hasMySentry: Bool {  
    return false  
}
```
- Continue with the rest of the steps, until the freshly built Loop Autobolus is installed on your iPhone