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Document EQ-000694-RN

eqWave Release 3 External Release Note

Issue 1   Date: 2020-12-03

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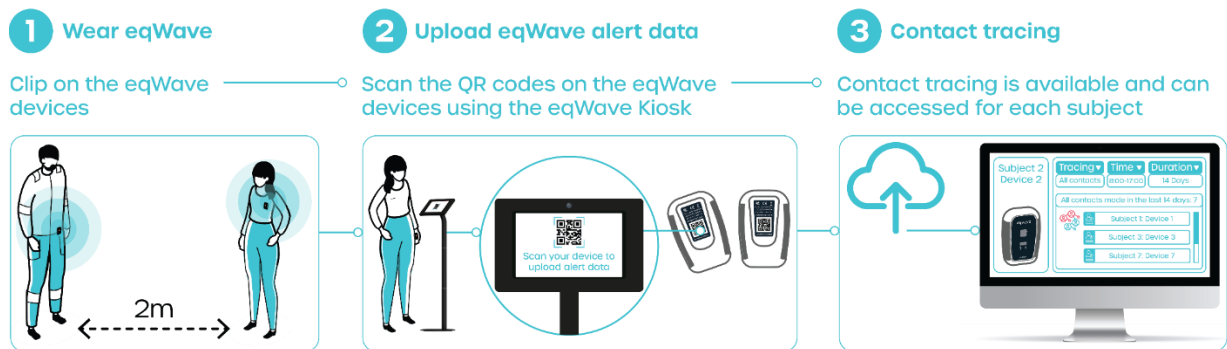# 1   eqWave End-to-End Contact Tracing Solution

New Release versions of the following products are available:

Equivital Product	Version
EQ-WAVE-SDD-01 eqWave Social Distancing Device	v0.38
eqWave Kiosk Android Application	3.3 (297)
eqWave Contact Tracing Web Application	1.0.20330.1

1.1 Introduction

Welcome to the second release of the end-to-end eqWave social distancing and Contact Tracing solution.

eqWave end-to-end Social distancing and Contact tracing solution

1.2 Purpose

This document outlines the next releases of the eqWave Firmware, App and Web Service.

1.3 Scope

The document details headline features, relevant supporting documentation and notification of known bugs and fixes for the release.

2   Detailed Features

2.1 eqWave Device Firmware

The upgraded v0.38 device firmware provides the following feature upgrades.

1. The firmware has been further optimised for power efficiency. This has increased battery life by up to 80% in benchmark comparisons with firmware 0.37. There are a number of components to this feature.

    a. Low power alert – after 30 mins of continuous alerting with the same 3rd party the eqWave will switch into a lower power alert design where the haptic motor is not utilised and the LED flashes less frequently.

    b. Radio power saving – Modification of the behaviour of the UWB radio to conserve power

2. V0.38 firmware has reduced file transfer time by a factor of 5. This has been achieved by implementing a number of changes.

    a. Log file sizes have been reduced by the exclusion of superfluous data

    b. Bluetooth advertising frequency is reduced to 2 mins on eqWave which are connected to USB power after 5 mins. This declutters the radio environment allowing faster connections for other eqWaves.

    c. The Bluetooth connections may be renegotiated between eqWave and master devices (Phones, Tablets & gateways) allowing greater data transfer rates.

3. In variants of the firmware with the "Mute" feature enabled, the large red LED will blink 5 times when the mute feature is activated or de-activated. Additionally, while the eqWave is in "Mute Mode" the battery LED blink frequency will be 2s (compared to 5s Normally)

4. The devices will ship with default factory firmware installed and available as the default on the update eqWave Android application. In addition, it will be possible for customers and partners to request the following firmware variants:

    a. Mute – a gesture triggered mode which will temporarily disable the Visual and Haptic alerts off for a period of 30 minutes. During this time infringement logging is still active. The mode can be exited prior to the 30 minutes by repeating the gesture.

    b. NoAlert – in this mode the Visual and Haptic are permanently disabled. Infringement logging is still active.

    c. Dwell– In this mode the eqWave will log a contact as usual, however the device will delay alerting the wearer for 60 seconds in order that momentary and accidental breaches do not raise unnecessarily distracting alerts.

    d. Dwell+Mute – In this mode both the features for Dwell mode and Mute mode are available

5. Alternate Alert Distance Thresholds: Three standardised alerting distances are available as options 1.5m, 6 feet and 2m. These cater to the European, USA and UK recommended minimum proximities. The table below illustrate the permutations of alerting feature and threshold distance which are available.

	Standard	No Alert	Mute	Dwell	Dwell + Mute
1.5m	✓	-	-	✓	✓
6 feet	✓	✓	✓	✓	✓
2.0m	✓	✓	✓	✓	✓

2.2 eqWave Kiosk Android Application

The eqWave Kiosk Android Application is a zero-touch interface for wearers to sync their eqWave with the rest of the system. The sync process uploads any available alert log data on the eqWave device to a configured web service end point. It also updates the device software and configuration if required.

The app is available on the Google Play store for free. In this release it has been updated to include the latest firmware (v0.38) as standard.

The latest app also retrieves additional information from eqWave devices to improve alert end time information presented in a Contact Tracing report. This additional information is only available from eqWave devices that have been upgraded to the latest firmware (v0.38).

Important: If you already have a previous version of this app installed, DO NOT uninstall it as this will delete any data previously retrieved from the wave devices

Upgrade or download your Kiosk Android APP from the Google Play store
- Search for eqWave in the Play store OR
- Scan this QR using your Android's camera

2.3 eqWave Web Service

The eqWave Web Service is available to all customers who have purchased eqWave devices. This service allows you to access raw alert log records that have been retrieved by the Android Kiosk app and distribute firmware to all connected Android Kiosk apps.

You can upgrade your subscription to eqWave+, which in addition provides Contact Tracing capability.

In this release, the Contact Tracing reports will indicate alert end times where previously they would have indicated '*Alert end time not available*'. The only known exception to this is if the device stopped alerting because it connected to the Android kiosk app to upload data. In this case, the Contact Tracing report will continue to say '*Alert end time not available*' as before.

3   Associated Application and Documentation

The following product documentation is available and should be read in conjunction with this release:

- **EQ-000536-UG - eqWave Quick Start Guide, Issue 8**
- **EQ-000604-UG - eqWave Web Service User Guide, Issue 3**

4   Known Issues

SUBJECT	DESCRIPTION
RTC time	The RTC (real-time clock) will set to an incorrect base time (1970) if the battery is allowed to become fully discharged. The FW update in this release does provide a buffer of 8-12h from the point at which the device shuts down before the this occurs. In this case the above occurs the device clock will need to be reset. This may be accomplished by: • Connecting the eqWave to the eqWave mobile app. • Using another eqWave device, which has an accurate clock, within bluetooth range (approximately 30m) of the eqWave requiring resetting. The device will automatically update using the correct time from its peer.
Multiple Devices in close proximity	It is not advisable to have more than 30 devices operational within ranging distance
Sleeping devices may wake	eqWave devices which have been put into sleep mode either manually via the eqWave application or automatically in response to a low battery may very occasionally spontaneously reawaken. This is not a casue for concern but may impact the expected battery life on that charge cycle or require a clock re-set.
Custom firmware files need to be stored in the Downloads folder on the Android app	On certain devices, the Android app is only able to access the Downloads folder. If any custom firmware files have been supplied, these need to be copied to the Downloads folder
Data with incorrect timestamps (typically 1970) cannot be accessed	If a device has its clock incorrectly reset, the alert logs have an incorrect timestamp, typically in the year 1970. These logs cannot be accessed via the webservice