



eqWave

Quick Start Guide

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1 Introduction

The eqWave solution is designed to aid social distancing and provide robust data for contact tracing and business intelligence.

The system has three components.

- eqWave wearable device (pictured right)
- eqWave Android app
- eqWave Web Service



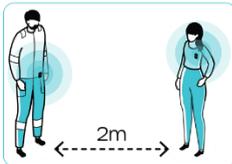
Where two people wearing an eqWave device infringe a pre-configured distance from each other the device will alert the wearers to remind them to separate and record the infringement for contact tracing. (No personal data is recorded)

This document will guide you through using the Equivital eqWave social distancing solution.

How eqWave works for you

1 Wear eqWave

Clip on the eqWave devices



2 Upload eqWave alert data

Scan the QR codes on the eqWave devices using the eqWave Kiosk



3 Contact tracing

Contact tracing is available and can be accessed for each subject



2 Using the eqWave device

2.1 LED indicators

The device LEDs display battery status as indicated by the battery icon on the front of the device and a traffic light colour status. The LED light colours below indicates the eqWave battery life status.



Battery: Good



Battery: Low



Battery: Critical, recharge as soon as possible



When the battery status is red or if no LEDs are illuminated the device must be recharged.

When the eqWave is in use, the battery LED will blink once every 5 seconds if no other SDDs are detected. If the eqWave detects other eqWaves the battery LED will illuminate. In snooze mode the battery LED will blink once every 10s (see Wearing eqWave on page 4)

During the detection of other eqWaves or when connected to a mobile device the blue LED will illuminate showing the Bluetooth is active.



Bluetooth: Active

2.2 Charging eqWave

The eqWave device should always be charged using the USB-C cable provided with the device or an Equivital multi-charger (such as the M-Charge-48).



The battery LED will flash once per second when battery charge is initiated. Once the device has been fully charged, the green LED will stay on.

During charging the eqWave is not active and will not alert if another eqWave is close by. As soon as the eqWave is disconnected from USB power it will be in operation mode and ready to use.



USB-C connector on eqWave

2.3 Wearing eqWave

eqWave may be worn clipped to clothing or a belt using the integrated garment clip, worn on a lanyard or kept in the users' pocket.

The optimum position for wearing the eqWave is clipped to the waistband or belt just above the hip. In this position eqWave gives the most accurate distance measurements and both alerting mechanisms are viable.

If the eqWave is removed from the body and placed motionless (e.g., on a desk) it will, after 30 seconds, enter snooze mode. While snoozing eqWave does not alert or create logs if another eqWave comes close but remains discoverable by Bluetooth devices so files log files may still be transferred.

The snooze state may also be used by Admins to eliminate spurious alerts and records while performing maintenance on a group of devices. In this case it is possible to enter snooze without being motionless for 30s (Please contact Equival for details)

2.4 Alerts

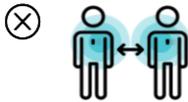
When eqWaves detect the distance between wearers is less than the configured threshold both devices will record the incident and begin to alert.



Safe 2 metre distance



Less than 2 metres,
increase your distance!



Alerts:



- Vibrating
- Visual
- Audible (optional)

Once reminded they are too close the wearers should distance from each other. When the eqWave measures the distance to be greater than the configured threshold the alert will cease.

Note: Alerts may take up to 5 seconds to activate/deactivate when wearers are moving towards/away from each other.

Muting alerts (optional)

There is an optional firmware (which may be applied by a system admin) which mutes the alerts for 30 minutes or until the mute is switched off.

The mute/unmute function is accessed by shaking the device or double tapping the device on a soft surface such as the palm of your hand or thigh. Activation / deactivation is signalled by 5 rapid flashes of the alert LED.

When mute mode is active the battery LED will blink every 2 seconds. This signifies the eqWave will log infringements but will not trigger alerts on the device.



2.5 Warnings

- ② eqWave is not intended to be used as protective equipment, but to assist the user and organisation in following official guidance and local standard operating procedures.
- ② The eqWave must be worn with the front of the device facing out, when worn on the garment clip. Best performance is achieved by clipping the eqWave to your belt on the side of the body.
- ② When worn on a lanyard, make sure the visual alert on the eqWave device is visible.
- ② To produce logs with correctly recorded time stamps eqWaves must have their clocks set before initial deployment.
- ① It is not advisable to have more than 25 devices operational within a 2m radius.
- ② Always make sure that you are wearing your eqWave device, so that the visual alerts are visible to other eqWave wearers around you.
- ② Always check the eqWave device prior to use. Do not use if it is not mechanically intact or if battery leakage has occurred within the case.
- ② Do not open the eqWave case or interfere with the internal electronic components.
- ② Always use the USB C charging cable provided or an Equivalt multi-charger to charge the eqWave device.
- ② The outside of the eqWave device can be cleaned using a damp cloth or alcohol wipe. It should not be fully immersed, or steam sterilised.
- ② At the end of its life the eqWave device should be disposed of as waste electrical equipment in line with local regulations.
- ② When shipping eqWave the devices must either be shipped with completely flat batteries or turned off using the 'Set device to sleep after sync' instructions provided in this guide.



3 The eqWave Android App

The eqWave application is available free of charge from the Google Play store:

Follow [this link](#)
to the Google
Play store

or

Search for
'eqWave'
in the Google
Play store

or

Scan this QR code on
your Android device



The eqWave app can be setup.

- as a kiosk or for admin use
- as an admin tool for batch software update of eqWaves

As a Kiosk:

The app performs three important functions:

- Updates firmware and configuration for the eqWaves. The firmware can be downloaded from the configured eqWave server.
- Sets the internal clocks to ensure eqWave devices produce accurate logs.
- Downloads log data from the eqWaves. The app will upload the logs to the eqWave server if configured.

The eqWave app can also put eqWave devices to sleep (also referred to as Transport Mode).

The application is designed to run on Android version 9 device or later. We recommend using Samsung Galaxy Tab A 10.1 (2019). If you have a device running an earlier version of Android, the Play Store may not return any results when searching for the eqWave app.

As an admin tool for batch activities:

The app can update multiple eqWaves without having to individually scan each eqWave. More details in the Admin section below.



4 Using the eqWave app

1. Scan the QR code on the back of an eqWave using the camera on the mobile device (either front or rear cameras may be selected in the admin settings).
2. The app will automatically connect to the correct eqWave and perform all required functions automatically.

Important! Do not move away from the mobile device running the eqWave app while downloads or updates are in progress.

3. There will be a success screen to let you know the process has been completed.



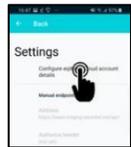
5 eqWave Web Service

The eqWave solution requires the data collected on the wearable devices to be sent to the Web Service for viewing or export. The Web Service also offers the ability to update firmware on the eqWave devices when they are scanned using the eqWave Android app.

A user account for the Web Service will be required. Contact Equivital if you have not been provided one. The Android kiosk tablets must be configured to send data to your account on the web service.

5.1 Configuring a data endpoint

1. Open the eqWave Android application.
2. Touch the screen to bring up the admin setting menu.
3. Enter your device PIN (or equivalent) to access the admin menu.
4. Select the Settings menu.
5. Select the eqWave service.
6. In the server configuration pages, enter username and password supplied to you. If the details entered are valid, you will see that several other options, related to data handling, have become selectable. These are default settings and need not be modified.



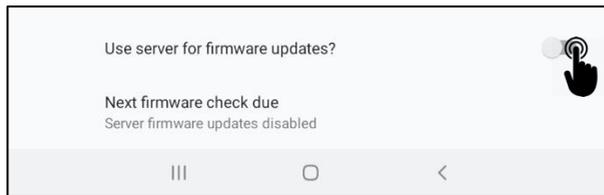
Note:

The eqWave app will extract logs from devices that connect to it even if a server URL is not set. This can be switched off via a toggle in the Admin settings page.

For further steps on accessing alert logs and contact tracing, refer to EQ-000604-UG - eqWave Web Service user guide.

5.2 Enabling the App to use the Web Server for firmware updates

1. Under server configuration, enable 'Use server for firmware updates' so that the app downloads the latest available firmware via the web service.



Note: Any locally uploaded file will be replaced if the app has been able to download a firmware file from the Web Service



6 Admin functions of eqWave App

6.1 Batch update of firmware on multiple eqWaves without scanning

The eqWave app can update firmware on several devices without the need for scanning each of them, a convenient feature called BFU for an admin user responsible for updating device firmware and configuration.

To use this feature, a **.txt** file with target device serial numbers, **one per line**, needs to be supplied to the app. There is no limit on the number of devices.

1. Copy the **.txt** file to the Downloads folder on the Android Device.
2. Go to Admin Settings and scroll down to see the Upload BFU file option.
3. Select your **.txt** file with target device serial numbers. uploaded previously.
4. Confirm the file has been accepted and 'Enter BFU mode' to start the process.
5. Progress will be displayed on screen and when complete, a log file will also show success and issues.



6.2 Set the device to sleep after sync and other options

1. The device can be put to sleep at the end of the sync process by enabling the option in the Admin settings screen. This works for both the scan option and the BFU option. To take the device out of sleep mode, plug it into USB. The sleep mode is also called Transport mode.
2. The rear camera can be used instead of the front camera by using the toggle in the Settings screen.

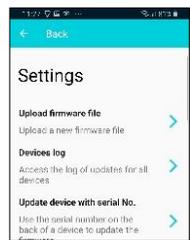
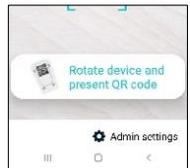


- The app can display detailed sync activity information on the sync screen and can stay on the sync screen after the activity is complete if the respective options are enabled in the Settings screen.

6.3 Update the firmware for eqWave using a locally uploaded file

Equivalt recommends the use of the Web Service for firmware updates, as outlined in the previous section. The Android App also supports supplying a firmware file directly to the App. This can be done by following the steps below:

- Copy the supplied firmware file to the Downloads folder on your Android device.
- Open the eqWave application.
- Go to the Admin settings menu. Enter your PIN (or passcode) when prompted.
- In the server configuration sub menu, **disable** 'Use server for firmware updates'.
- Go back to the main Settings Menu and select 'Upload firmware file' to select the .zip file provided by Equivalt.
- A success message will be displayed, click 'Done'.
- You can confirm the updated firmware version in the Settings screen.
- Exit admin settings.



Note: the eqWave app will only update firmware if the devices have an older version than the one configured on the app.

Devices cannot be downgraded to earlier versions of firmware.



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Thank you & Please keep apart to keep each other safe.

