

An Introduction to Bluetooth® for QC20-W

Overview

The QC20-W communicates with a PC using *Bluetooth* wireless technology. Before you can connect the QC20-W you must provide *Bluetooth* capability on your PC. This can be done either by enabling the PC's built-in *Bluetooth* device (if fitted) or by using a proprietary USB Bluetooth dongle.

In order to communicate with the *Bluetooth* dongle (or a built-in device) a *Bluetooth* stack must be installed onto your PC. The *Bluetooth* stack is a collection of software drivers that the device will use to communicate with the PC and any software using *Bluetooth*. There are several *Bluetooth* stacks available the most common ones being:

1. Microsoft
2. Widcomm (by Broadcom)
3. Toshiba
4. Blue Soleil

(Ballbar 20 software will only work with devices using the Microsoft® stack).

Laptops with built-in Bluetooth

When PCs (usually laptops) have a built-in *Bluetooth* device they will also have a stack installed by the manufacturer. The first action is to identify if this is the Microsoft stack. To do this, first install the Ballbar 20 software. When installation is complete search for a QC20-W from within Ballbar 20 software using the following steps:

- Start the software in 'advanced' mode > Setup and run a ballbar test > quick check > then using the right hand arrow advance through the next three screens.
- A message towards the top of the screen should now say 'Port: COM1' in red text. Click the arrow next to this text and select QC20-W from the drop down list.
- Now click 'search'. At this point the software will do one of two things.
 1. Show an error message 'There is no Bluetooth radio present'
 2. Search and connect to the ballbar and start showing live ballbar readings

When the error message is shown it is most likely that this is due to the *Bluetooth* device not using the Microsoft stack. At this point there are two options, the simplest being to use a dongle that uses the Microsoft stack (see paragraph below '*Finding a dongle that uses the Microsoft stack*'). The alternative is to attempt to get the built-in device to use the Microsoft stack. This is potentially complex and different for each built-in device.

For HP laptops - see [HP support website](#)

Finding a dongle that uses the Microsoft stack

If you do not have on-board *Bluetooth* capability on your PC then you will need to obtain a USB *Bluetooth* dongle (sometimes referred to as USB *Bluetooth* adaptor). USB dongles can be split into three categories:

1. Devices designed to use the Microsoft stack
2. Devices provided with a non Microsoft stack, but that can work with a Microsoft stack.
3. Devices that cannot work with the Microsoft stack

Unfortunately the packaging is not always clear as to which stack the device will use so it is not possible to give definite rules for choosing devices. However, it is still worth checking the packaging, since:

1. Dongles that specifically refer to Widcomm, Broadcomm or Blue Soleil may be more difficult to set up as they are designed for operation with their own stack.
2. If a dongle is packaged without any software, it will have been designed to use the Microsoft stack and so will stand the best chance of working 'out of the box' with Ballbar 20 software.

Installing a USB Bluetooth dongle

Whichever dongle you select, it will be necessary to plug it into a USB port. If the dongle is capable of operating with the Microsoft stack the PC should automatically recognise the dongle and install the generic *Bluetooth* tools required.

WARNING: Do not install software that came with the dongle as the software could overwrite the Microsoft stack with its own stack, preventing it from working with QC20-W.

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