

## U16S – Use with limited USB ports

### Advice to customers with sync versions of Carrier40 and EVO40

The largest sync/charge box supplied by PC Locs / Lock'n'Charge has 16 ports and so the largest carts (Carrier40 and EVO40) are provided with three host cables for the syncing function.

As laptops are made ever smaller, the number of external ports available is reducing. Macbook Air laptops have only two USB ports, and the newer Macbook has only one.

As a result it may be necessary to add a USB hub or to daisy-chain the U16S sync boxes (SCB) to allow connection of all three sync boxes simultaneously to a host laptop.

#### USB Hub Option -

The preferred solution is to use an unpowered USB2.0 hub to connect either two or three SCBs, depending on the number of USB ports available on the host laptop. It is advisable to utilise all available host USB ports when syncing to improve data flow - the more devices that are attached to any USB port, the slower the overall data transfer speed will be.

If the host has two available USB ports then connect one SCB directly to the host with 16 devices attached, and connect the other two SCBs to the host through a hub, allowing the best spread of devices over the two USB ports.

If the host has only one USB port, or if the volume of data to be synced is routinely low, then connect all three SCBs to the hub.

The USB hub may be left attached to the cart, or even installed inside the cart, and when the host laptop is disconnected, the SCBs will return to charge mode.

Two examples of suitable USB2.0 hubs are shown below, although there are many other similar products available from different manufacturers.



F4U041bt



F4U042bt

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### Daisy-chaining Option -

An alternative solution is to daisy-chain the U16S sync boxes to reduce the number of host cables. This may be done by connecting the first SCB to the host, with 14 devices attached, and then connecting the host cable from one or both of the other SCBs to ports 1&2 on the first SCB as shown in the diagram below. It is important that only the two ports shown are used to daisy-chain the SCBs. While this technique works, it has the disadvantage that the second and third SCBs will always be in sync mode and will not return to full charge mode after the host laptop is disconnected. To allow the SCBs to return to charge mode it is necessary to disconnect the daisy-chained host cables from the first SCB. In many instances, particularly with Carrier40 carts, this will not be a convenient option.

