

# BlueClip

## Introduction

Blueclip is a program to synchronise clipboards over bluetooth. When the clipboard changes on one computer the change is sent to the clipboard on the other computer. Sending can be manual or automatic – if set to automatic the programs can be left running in the background and synchronisation will happen with no further user action.

Multiple pairings can be set up but only one is chosen as the active one at any given time. A typical setup would be a one-to-many arrangement with the central device choosing which target to send to, one at a time.

Large buttons are displayed for easy accessibility and for people who use eyegaze control.

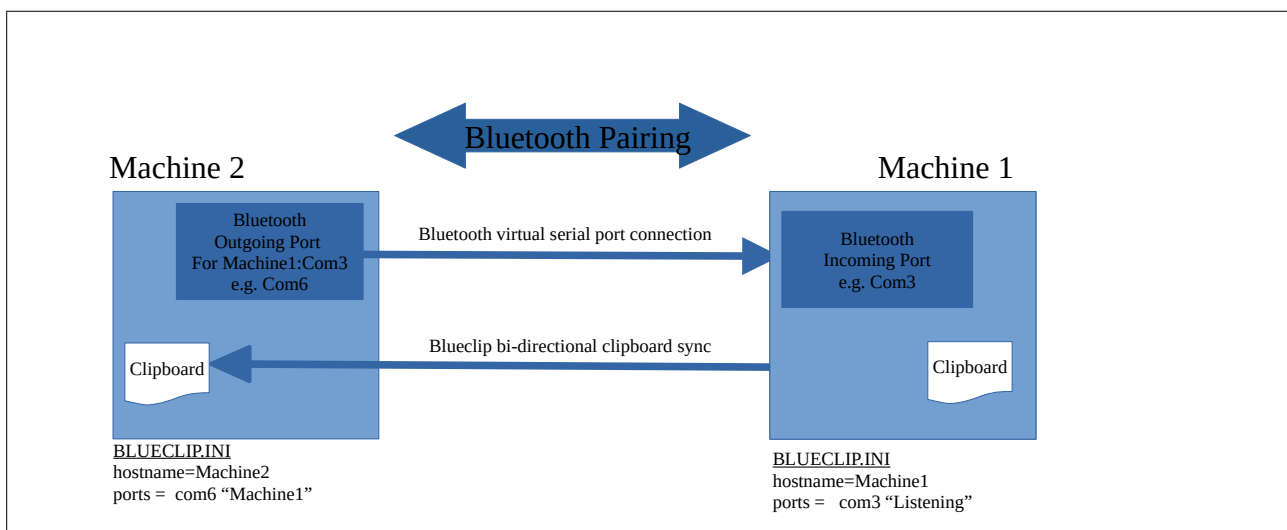
Why bluetooth sync? There are many utilities to sync clipboards over local area networks but these suffer from a number of disadvantages. If devices are on different subnets (e.g. one wired and one wireless) it can be hard to configure connections through firewalls & routers. Cloud based commercial solutions introduce other problems or can be too complex as they add other functionality. The Windows operating system has a built-in clipboard sync feature but this requires signing into a Microsoft Account which isn't always desirable and not possible on some kiosk-style devices. Bluetooth allows repeatable local fixed connections to be pre-configured which are independent of internet connectivity and not tied to network login accounts etc.

## Installation

Copy all the files to a suitable location (e.g. c:/program files/BlueClip/) and create a shortcut for the .exe file if desired. Blueclip runs from any location but keep all its files together in one folder.

## Configuration

1. Create a Bluetooth pairing between your devices in the normal way
2. Setup bluetooth serial connections. Note: One machine is setup with an **incoming** serial port which waits for a connection. The other machine is setup with an **outgoing** serial port that calls the incoming port on the first machine.
3. Edit the .ini files on each machine to tell BlueClip which ports to use.



## Windows 10

On Machine #1: [This machine becomes a Listener waiting for connection]

Bluetooth Settings|More Bluetooth Options-->comm ports tab: ADD, **Incoming connection**

Take note of virtual comm port number.

Edit BlueClip.ini and set the hostname, port and other options as desired.

*(N.B. ports entry can be multiline but typically the listener will only have one line.)*

```
e.g.  [DEFAULT]
      hostname = Machine1      ←the name of this machine
      autopaste = 1
      [PORTS]
      ports=
          com3 "LISTENING"    ←the port this machine is listening on
```

On Machine #2: [This machine becomes the Caller that calls the Listener]

Bluetooth Settings|More Bluetooth Options-->comm ports tab: ADD, **Outgoing connection**,

Browse to target = Machine #1 Port created above ←the target machine & it's port

Take note of new virtual comm port number just created (this might be different to Machine#1's port).

Edit BlueClip.ini and set the hostname, port and other options as desired.

*(Note the ports entry can be multiline as this machine can call multiple Listeners. Each line has the outgoing port just created on this machine but the name is the name of the target machine it connects to).*

```
e.g.  [DEFAULT]
      hostname = Machine2      ←the name of this machine
      autopaste = 1            ←auto sync whenever clipboard changes
      autominimise=1           ←auto minimise BlueClip once connected
      [PORTS]
      ports=
          com6 "Machine1"      ←list of this machine's ports and names
          com7 "Machine3"      of the targets they connect to
```

## Linux

Bluetooth pair the devices in the normal way.

>hcitool scan //scan bluetooth neighbourhood for devices to get machine #1's MAC (once for info)

>sdptool browse xx:xx:xx:xx:xx:xx //scan #1 services and note RFCOMM Channel Number under the Serial Port Service. (once for info but needs BlueClip running on #1)

>sudo rfcomm connect /dev/rfcomm0 xx.xx.xx.xx.xx.xx <channelnumber> //Will need to do this each time #1 is restarted

To run a server on Linux

Edit ini files, syntax for ports line is /dev/rfcomm0

```
ports=
    /dev/rfcomm0 "Machine1"    ←this machine's ports and the names
    /dev/rfcomm1 "Machine3"    of the targets they connect to
```

#1>sudo rfcomm watch /dev/rfcomm1

#2>sudo rfcomm connect /dev/rfcomm0 xx.xx.xx.xx.xx.xx

#1 run Blueclip

#2 run Blueclip

## Usage

Launch BlueClip.exe and it will keep trying to connect to the other machine. Once blueclip is launched on the other machine they will automatically connect.

If multiple machines are configured then clicking on change connection will try and connect to the next target. It will remember this new target and try and reconnect next time it's launched.

If the connection is interrupted blueClip will keep trying to reconnect.

Once connected if autominimise is enabled in the .INI file the app will minimise.

If autopaste is enabled then every time the clipboard changes it will be synchronised to the other machine. *N.B. If for some reason the synchronisation doesn't complete then repeating the same Copy again and again will not succeed. You will need to Copy something different to trigger another sync, and then go back and try and Copy the thing you originally wanted.*

If autopaste is disabled synchronisation only occurs when you click "Paste Now" (=paste to the other machine's clipboard).