How to connect the Wii Remote to PureData.

Getting Started

Firstly you will need the following;

- A PC with bluetooth connectivity or a seperate bluetooth adapter - This is because the Wii Remote will be connected to a PC via Bluetooth.
- A Wii Remote - Will be used as a ‘instrument’ vertical movement will be linked to velocity and horizontal movement will be linked to pitch
- GlovePIE - GlovePIE is a program intended to emulate computer input hardware, such as joysticks and keyboards.
- PureData - Will be where the code is built which enables the Wii Remote to work.
- LoopMidi - This software is used to create a virtual loopback MIDI-ports to interconnects application on Windows that want to open hardware-Midi-ports for interaction. The ports created only exist while the LoopMIDI application is running.

Step 1

Firstly, you need to connect your Nintendo Wii remote using bluetooth. To do this open up bluetooth window on your PC and search for devices whilst holding down buttons 1 and 2 on the Wii remote. If it asks for a pin you could skip this process as there is no PIN for the Wii Remote. Once connected you will be notified on your PC and also the first blue light on the Wii Remote will turn solid to indicate it has been connected.

Step 2

Once the Wii Remote has been connected open GlovePie and LoopMidi

Step 3 - Inserting script to GlovePIE to detect emulation

Insert this code below into GlovePIE
This script is an example of how to get values of wiimote Pitch and Roll function

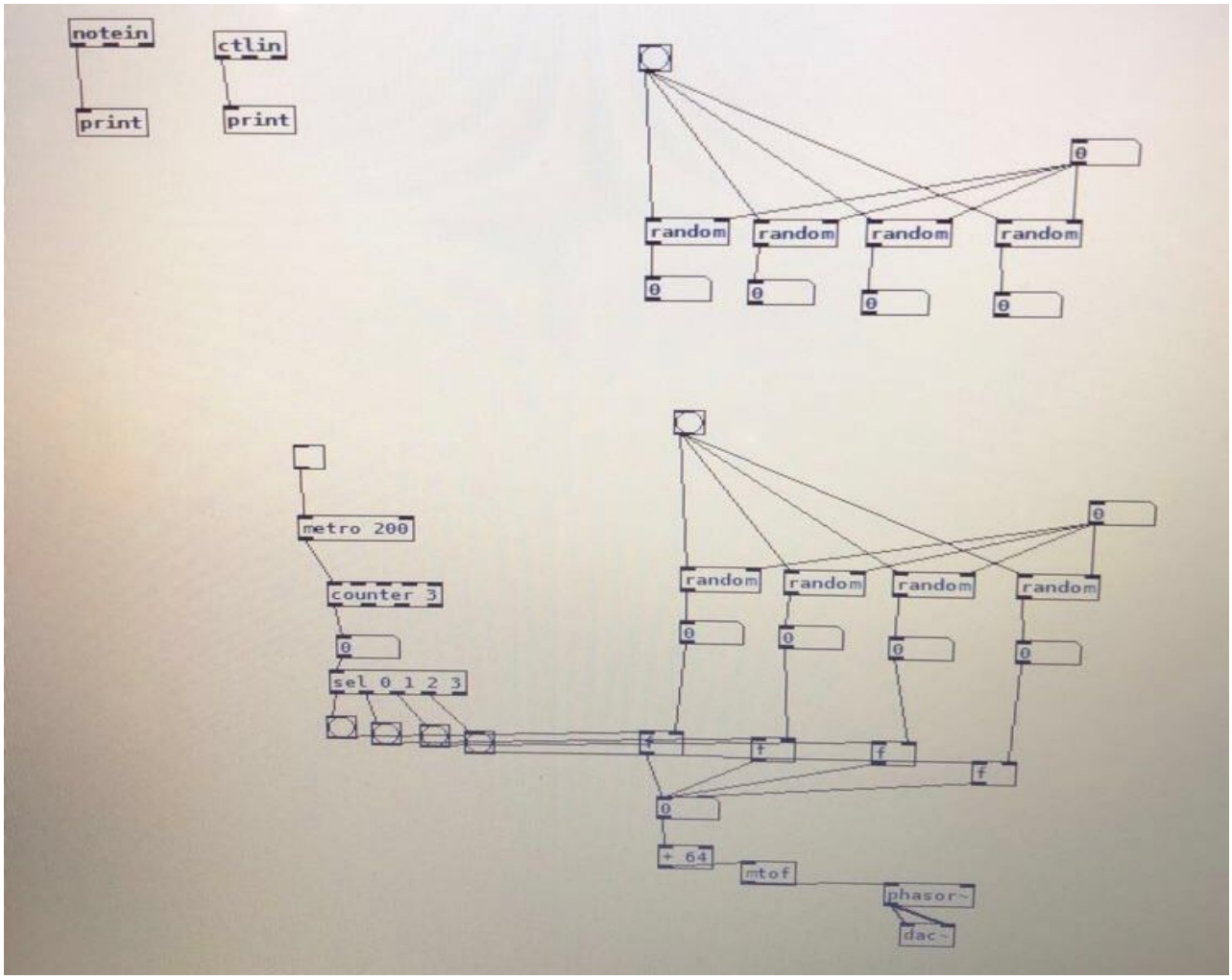
```
*/
   var.roll = Wiimote.Roll
   var.pitch = Wiimote.Pitch
   debug = "Roll " + Var.roll + "  " + "Pitch " + Var.pitch
/*
```

Step 4 - Detecting output

Now select ‘detect output to emulate’ this should show all the different buttons on a Wii Remote. Once they have been detected click ‘Run’ this should show values corresponding to the Wii remotes movement.

Step 5 - Connecting GlovePIE, loopMIDI and Puredata together

Click on the GUI tab in GlovePIE and in the drop down menu of ‘output devices’ there should be an option that corresponds to loopMIDI, in my case it was ‘Midi2 loopMIDI port’. Lastly, open Puredata and click on ‘Midi Settings’ which is located in the ‘Media’ tab. Now assign the input to loopMIDI port (the same port that was selected in GlovePIE).



The image above shows a patch that was created to receive signal coming from the Wii Remote. The random value would determine pitch and the 4 boxes are played in a 4/4 time signature. Copying this patch should result in the patch working with the Wii Remote.

Good to know -

- If your pc is unable to find your Wii Remote, Press the little red sync button that is beneath the battery case on the back of the wii controller and try again.
- If there are little red line on an object in Pure Data it means you need to download ‘cyclone’. This can be done by clicking ‘Help’ > ‘Find Externals’ > typing ‘cyclone’ in the search bar and downloading it.
- GlovePIE uses the four Wii LED lights at the bottom of the remote to indicate status. When the appropriate script is running the first LED will be lit, when the GUI code generation mode is active then first and last LED light will be lit.
- If a Mac PC was to be used instead of using GlovePIE one could use OSCulator and would not need loopMIDI software. Be sure to download OSCx library via the Help and Find Externals.