ps[c]yched

for string quartet, bikes and electronics

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Performance notes

ps[c]yched requires four preferably old bikes to be sourced in the vicinity of the performance location. The bikes are arranged upturned behind the string quartet, preferably on risers ca. 0.3-0.5m high, so that players may reach easily the pedals, spokes and rear wheel of the bikes. The bikes must be pointing house left/stage right. The players are required to access the bikes from behind, and must be able to move freely between a position behind the bikes and their seated positions.

The players will each require two copies of the score - one on a music stand in the normal position, and one at their bike position. Between violin 1 and violin 2, and between viola and cello, is placed a laptop on a stand. Each laptop screen must be visible to the relevant pair of players. Each player requires at the bike position a double bass bow, a light wooden beater or stick, and a cloth that may become dirty through contact with the bike tyres/rims.

Electronics

ps[c]yched requires three laptops - one running Cycling74's MAX software (v6 or above), and two running Processing (v2). The MAX laptop requires a good quality stereo PA with subwoofer. The MAX laptop also requires a Behringer BCR2000 rotary controller for level adjustment.

Each bike has a contact mic placed on the frame at the player-side rear dropout, such as an AKG411 or similar. The mic signals should be routed to inputs 1-4 of MAX. The mic signals are routed through the MAX patch direct to the output/PA so no further amplification of the mic signals is necessary. Levels are controlled within the patch via the BCR2000.

A local private network should be set up between the three laptops. OSC messages will be sent from MAX to the two others each running the Processing script notercycle.pde. One Processing laptop should be configured to display two treble staves (for violins), the other alto/bass staves (for viola/cello). Blocks of code in the notercycle script itself need to be uncommented in order to achieve this staff configuration (see the notercycle README file and the script itself). There are MAX patches in the max and processing folders for testing the network/OSC configuration.

Score & playing the MAX patch

The score indicates cue numbers that correspond to preset numbers in the preset object in the MAX patch. To ready the patch for playing, switch on audio/dsp, the input routing menu should be set to 1 2 3 4 (the 1->all setting is for testing), the inputs menu should be set to 'live' (not 'file' - the file setting is for testing if live mic input is not available), then raise the 'main out' volume slider (controlled from the BCR2000). The first cue to begin the piece, cue 9, is triggered by the violin one entry spinning the bike rear wheel - the cue is triggered in the patch using the right cursor arrow key on the computer keyboard. Subsequent cues are triggered also using the right arrow key. Starting with cue 13, there is a c.3 second delay between pressing the key (which advances the 'pre cue' counter), and the cue being triggered. This is to give the players time to see the cue number flash on the laptop screens before the cue point actually arrives.

cue number, sometimes applied only to a particular part or parts

computer starts sampling this part

computer stops sampling

computer plays back latest sample

push rear wheel once by hand anticlockwise to freewheel, generating clicks, decaying naturally

keep pushing rear wheel repeatedly, generating clicks continuously, varying the interval between pushing

pedal by hand to turn wheel, with varying degrees of vigour; occasionally draw pedals back and re-engage to make 'clunk' sound

continue in the current mode of playing, unchanging, up until the moment or cue at the end of the arrow

allow freewheeling to decay naturally

play 'chimes' on the spokes with a wooden beater or light stick; combine with rubbing or other modes of excitation

whatever the current material, make it fragment and decay

pedal by hand to turn wheel, with minimal clicking, braking the wheel with the other hand using a cloth for protection (so creating 'running' noise by continuous pedalling, but braking the wheel with the cloth/hand to prevent freewheeling)

not. PLAY — notation appears in real-time on laptop screen; play from the notation, using the notation as a 'core' for making variations

BOW — using a double bass bow, bow the spokes of the rear wheel