

1. What You Need To Have

Equipment

1. MIDI Keyboard with at least 2 Octaves.

The triggers for the patch are between MIDI notes 60 (middle c) and 84 (c'') (see Appendix A for details).

2. A MIDI Sustain Pedal. The patch expects messages from the pedal to be sent on controller id 64. If you have to change that for some reason, you can do so in the patcher called "SaMo_MidiPedalVel".

3. A computer running MaxMSP (at least version 5).

4. An audio interface. For a performance you will need 4 output channels. If you only want to practise, 2 channels are sufficient.

6. Headphones, preferably connected to a Headphone Amplifier.

5. It is recommended to use a MIDI controller with faders or knobs to control the patch. The device must have at least 5 individual control elements.

Soundfiles

The patch does not work without the proper audio files. If you received the patch without them, please write to mail@maximilianmarcoll.de .

2. What You Need To Know

Compatibility

The patch was developed and tested in Max 5 (v.5.0.8) on an iMac 2.5GHz Intel Core i5, Mac OS 10.6.8. Further testing was done using a MacBook Air, 1.6GHz Intel Core i5, MacOS 10.7.2 with both MaxMSP 5.1.9 and MaxMSP 6.0.1 .

Layers

The part of the electronics in this piece consists of 5 Layers:

1. The *Portrait*, a recording that plays throughout the entire piece.
2. *Birds*, electronically manipulated recordings of bird song.
3. *Sines*, sine tones.
4. *Noise*, filtered noisy drone like sounds.
5. *Impulses*, a series of impulses, occurring only in the last part of the piece.

For each of these layers there is a fader in the patch to set the respective level. The first layer, the *Portrait* shouldn't be very loud. It should provide a ground level of noise that still allows for the smallest sounds of the piano to be clearly audible. The starting of the portrait is the first

event of the piece. Start at a "realistic" mf-f level (at least 6 dB above the level that you found works for the rest of the piece) and slowly reduce the volume during the first minute or so.

The second layer, the *Birds*, should be at the same level as the live piano, so that when the piano doubles an event of the bird tapes, neither should be louder than the other.

The *Sine* layer should be at a comfortable mf level. When the piano plays the high d while a sine tone is played, the beatings should be audible.

Adjust the *Noise* layer so that the sounds fill the room but without sounding aggressive or too thin.

Finally, the *Impulses* layer, which is played in measures 225 to 280 only, should be embedded into the other sounds. It should be clearly audible without sticking out.

Signal Routing

By default all the playback signals are routed to output channels 1 and 2, the clicktrack for the pianist is routed to output channels 3 and 4. You can add the click track signals to the playback channels by choosing "click on ch 1 - 4" fro the pop-up-menu above the MIDI recall button.

3. What You Need To Do

Set the Sound Directory

The first thing you will need to do is load the audio files. Simply click on the button labeled "Set Sound Directory" and choose the folder you keep the sound files in.

Configure MIDI Connections

By default the patch will receive MIDI messages on all available MIDI ports and on all MIDI channels. You can specify on which ports and/or channels you want to control the patch by choosing an option from the menus in the left portion of the patcher window. Please note that you can specify different ports and channels for the keyboard and the control device (fader box).

The patch comes with a MIDI learn function to simplify the setup. To connect your controller: Click on the MIDI Learn button. It should then read "Listening...".

Now move the 5 control elements you want to use. As soon as the patch receives midi control messages with 5 different controller ids, the connections will be made automatically. The mapping of the controller ids to the faders of the patch is independent from the order in which the messages are received. The patch looks for 5 different controller ids, sorts them in ascending order and connects them to the *Portrait*, *Birds*, *Sines*, *Noise*, and *Impulses* Faders in this order. The click level fader will NOT be connected to the midi controller.

The MIDI connections are automatically stored with the patcher. Once you made your connections you don't have to repeat the setup process. Simply click on the button labelled "Recall MIDI" and your previous connections are available again.

Fader Positions

When you found levels that work for your performance situation you might want to store them. Click on the button labelled "Store Setting" below the faders to do so. By clicking on "Recall Setting", your previously saved fader positions will be restored. If your MIDI controller supports parameter feedback, its control elements will be set to the respective positions, too.

Starting the Patch

Hit SPACE or click on the button labelled "AUDIO OFF" to start the engine. The actual starting of the patch is done by the pianist.

4. How To Practise

In the upper right portion of the patcher window, there are controls to help you practise the piece with the electronics. After you select a measure to start at from the pop-up-menu, the START button will start the playback at the specified point. Click on the stop button (or press the a'' on your MIDI keyboard) to stop the playback.

You can also change the tempo of the piece. Please note that the audio quality will decrease significantly the more you deviate from the intended tempo of 104 bpm.

If your cpu suffers during playback, you can decrease the FFT size for the pitch shifting in the patcher called "SaMo_PiShi".

The option to change the tempo is to be used for practising only!!

5. APPENDIX

A: MIDI Note Trigger Mappings

60 (c'): starts the *Portrait*

61 (c#'): first tape section (measures 35 to 97) and triggers the sine for measure 98.

62 (d'): second tape section (measures 102 to 143) and triggers the sine for measure 144.

63 (d#'): third tape section (measures 146 to 152) and triggers the sine for measure 153.

64 (e'): stops the sine tone for measure 191.

65 (f'): fourth tape section and impuls layer (measures 225 to the end).

72 (c''): sine tone 2340 Hz

73 (c#''): sine tone 2325 HZ

74 (d''): sine tone 2350.5 Hz

75 (d#''): Noise A

76 (e''): Noise B

77 (f''): Noise C

78 (f#''): Noise D

80 (g#''): triggers a small click sound, to check if the setup is running.

81 (a''): stops everything

82 (a#'') - 85 (c#'''): trigger the final sound of the piece and stop the playback.

B: Reserved Keys

Do NOT send messages to targets with these names (unless you're sure you know what you're doing).

1_SaMo_Fader

2_SaMo_Fader

3_SaMo_Fader

4_SaMo_Fader

5_SaMo_Fader

SaMo_Click

SaMo_ClickLevel

SaMo_ClickOnMainOut

SaMo_ClickSetCue

SaMo_DSPState

SaMo_Flaeche

SaMo_FlaecheLevel

SaMo_FlaechenEndSetCue

SaMo_Grundierung

SaMo_GrundLevel

SaMo_Knatter

SaMo_KnatterLevel

SaMo_LoadTapes

SaMo_MidiColl

SaMo_MidiControlChannel

SaMo_MidiControlPort
SaMo_MidiKeyChannel
SaMo_MidiKeyPort
SaMo_MidiLearn
SaMo_MidiLearnDisplay
SaMo_MidiLog
SaMo_ParameterFB
SaMo_Parser
SaMo_PlaybackSpeed
SaMo_QuarterMax
SaMo_QuarterStop
SaMo_QuarterTrigger
SaMo_Sine
SaMo_SineLevel
SaMo_SoundDirectory
SaMo_Start
SaMo_StartPoints
SaMo_Tape
SaMo_TapeLevel
SaMo_TapeSetCue
SaMo_Tempo