



**INTERACTIVE MUSIC
MACHINE**

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INTERACTIVE MUSIC MACHINE

Interactive Music Machine, or IMM, is a musical performance tool for iOS. It lets you diagram behaviors for interactive performances. It was designed primarily as an intelligent solo instrument accompanist but has a multitude of uses which I hope you'll fully explore.

Typically, IMM is used to enhance solo performances. An artist sets up a number of IMM projects to define inputs (notes, volume or foot pedal) and the outputs to be triggered. The simplest case is to setup IMM to listen for a given pitch and then do something in response whenever it hears that pitch. Listen for C4 and play a C3 on the MIDI interface, for example.

It's easy to stack several outputs to input nodes so that an incoming pitch can trigger a MIDI chord. Or trigger several audio files to play back. Let your imagination run wild!

The rest of this document describes the basic features and functionality of the app. Toward the end is a collection of example projects with descriptions to help you get started.

I wish you great fun and great performances with IMM! And if you there are questions or comments, please don't hesitate to contact me at tom@tingjing.com

Happy Practicing and Performing!

Tom Gullion

PROJECTS

IMM projects are diagrams to describe inputs and outputs for performances

IMM Projects are diagrams to describe inputs and outputs for performance. When you first create a project, it simply displays the timestamp. Later, you can go back and give it a meaningful name. Research shows that sometimes the creative process is disrupted by the simply act of settling on a name. So IMM lets you stay in the flow of creativity and go back later when you decide to name it.

MEDIA

Please use iTunes file sharing for adding media files to IMM. You can add audio files (MP3, WAV, AIF, and CAF). For more information of file sharing, please see <https://support.apple.com/en-us/HT201301>

SETTINGS

Settings in IMM let you customize the app for your use. Please take a second to review the settings. I suggest leaving the default values to get started and then only adjust if necessary.

Of course, you'll want to select your midi device for the MIDI interface setting (if using an iOS MIDI synth as output).

INPUT TYPES

Input types receive stimulus and then trigger linked output types. For example, the following diagram listens for C4 and will play a MIDI note F4 whenever it hears the input note (C4).



NOTE

Note input types listen for the configured pitch.

VOLUME

Volume input types listen input volume exceeding the configured value.

PEDAL UP / PEDAL DOWN

Pedal input types listen for a hardware page-turner type pedal. Note that you could also use a generic bluetooth keyboard and use left-arrow or up-arrow for Pedal Up and right-arrow or down-arrow for Pedal Down.

OUTPUT TYPES

Output types are the actions that happen as the result of some input type.

NOTE ON

Note On output types send a MIDI note on message across the selected MIDI interface.

NOTE OFF

Note Off output types send a MIDI note off message across the selected MIDI interface.

NOTES OFF

Notes Off output types send MIDI note off messages for all previously played notes across the selected MIDI interface.

AUDIO FILE PLAY

Audio File Play output types play the named audio file.

AUDIO FILE STOP

Audio File Stop output types fade out playback of the named audio file.

GENERATOR START

Generator Start output types play the named midi sequence generator.

GENERATOR STOP

Generator Stop output types stop the named midi sequence generator.

PROJECT

Project output types load the named project.

DIAGRAM CONTROLS

ADD 

Adds a new input node.

MICROPHONE 

Toggles monitoring of the device microphone. You should have headphones plugged in when enabling this or feedback may occur. When enabled, a volume slider appears to adjust the microphone volume.

PLAY / PAUSE 

Play or pause the project.

STOP 

Stop the project and any audio/midi.

PERFORMANCE EXAMPLES

A few example project setups with brief explanations.

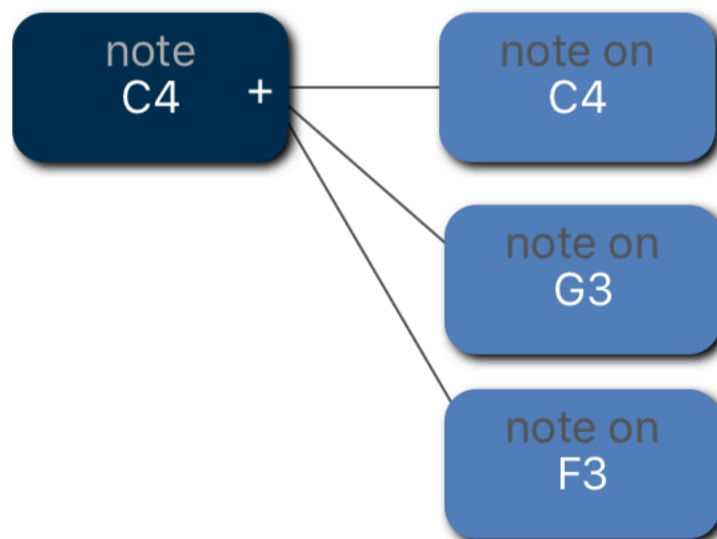
BASIC

Perhaps the most basic example: listen for a C4 and play a C3 (an octave down)



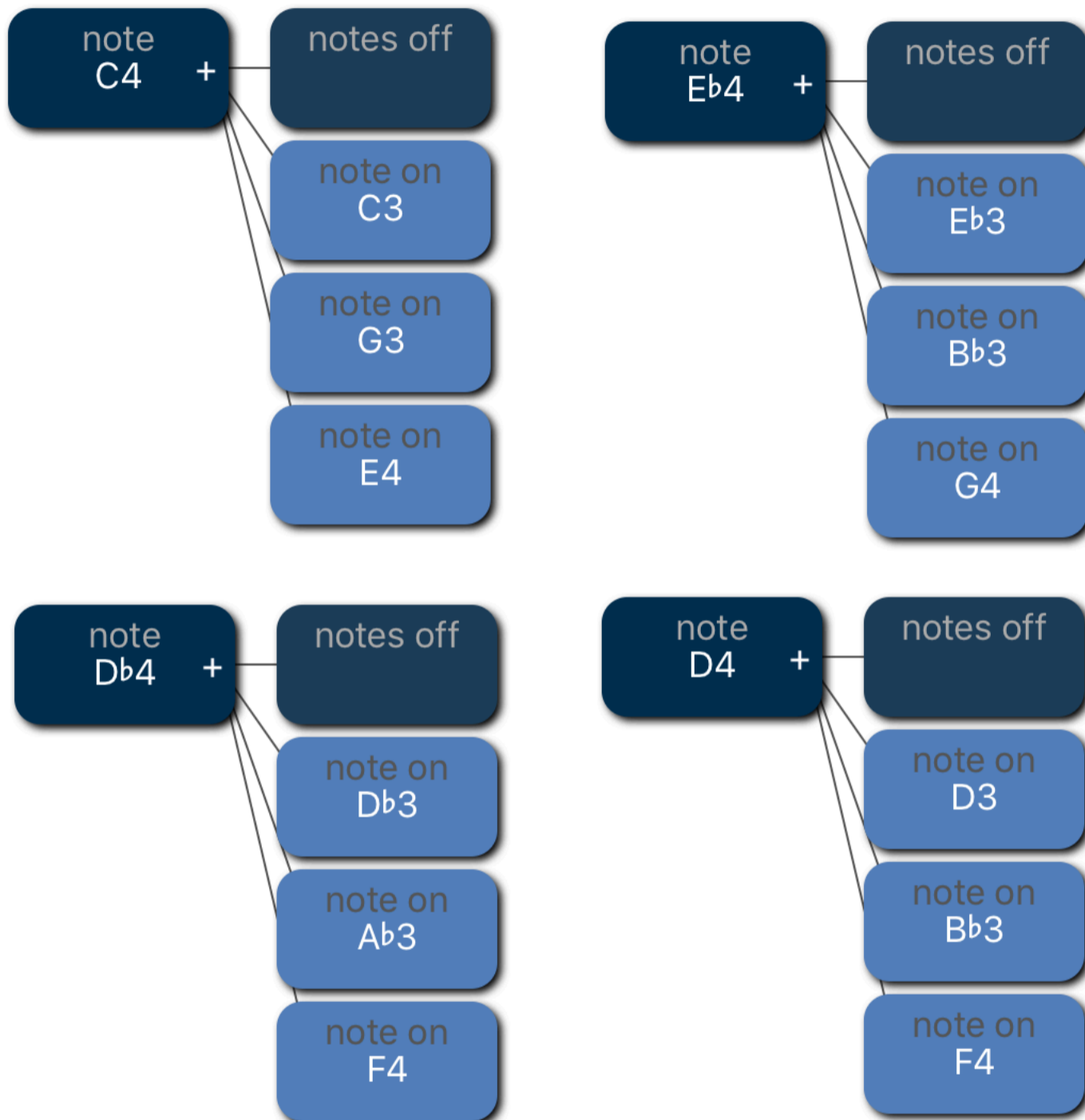
CHORDAL

Inputs can trigger multiple outputs. In this case, an input pitch of C4 will trigger a Csus chord.



AWAKEN CODA

This example is the chord progression for the coda section of a tune of mine. You can trigger the chord progression by playing any of the four input notes and the harmony will adjust to your playing. The “notes off” output will turn off any previously played MIDI notes.



PHRASE DETECTION

It's possible to link projects together. In this case, IMM will listen for a "phrase" or a sequence of inputs.

The first project (Phrase 1.1) listens for C4 and loads project Phrase 1.2 when triggered.



The second project (Phrase 1.2) listens for Eb4 and loads project Phrase 1.3 when triggered.



The third project (Phrase 1.3) listens for F4 and plays a percussion groove when triggered.



Note that this differs from a single project with three inputs for C4, Eb4 and F4. When the project is loaded, all previous triggers are cleared and reset with the new definitions from the new project. This lets IMM set scenes, analogous to cues.