



# Note Synth

By  
BackLine Engineering

*Note Synth* is a pitch-to-MIDI note converter that can act like a Guitar Synthesizer using the Line 6 MIDI Mobilizer. Up to two MIDI notes can be generated at the same time to create chords, and up to two previous MIDI notes can keep playing when a new note is played. Virtually any single note instrument or audio input signal can be used to generate MIDI notes.

## Getting Started

To generate MIDI output, first plug in the MIDI Mobilizer to your iPhone, iPod or iPad. For the audio input, you can use the built-in microphone or plug-in an external microphone or instrument to the headset input jack (using buffered audio inputs available from several manufactures). If using the built-in microphone, make sure to keep it away from any speaker playing the audio. If connected to an instrument, make sure the signal is not too strong, which is indicated by a red meter bar display at the top of the screen. You also need to make sure your instrument is in tune as Note Synth outputs discrete MIDI notes that are detected by the note you are playing. Next, connect the MIDI output cable from the MIDI Mobilizer to a keyboard with MIDI input or a MIDI sound module. Note: due to the way the iPhone OS External Accessory layer works with external devices, there will be a small amount of MIDI output latency.

## The Audio Meter

You can use the audio meter at the top of the main page to see the strength of your input signal. When the signal is too strong, the meter turns red. The MIDI note value will be displayed below the meter bar. Keep in mind that only single notes will be recognized (no chords) and low notes are harder to convert into MIDI values. If you want to output low notes, simply adjust the MIDI note offset up to two (-24) octaves below the note you are playing (see below).

## The Audio Flow Through Switch

If an instrument, microphone or headset is plugged into your device, the input signal will flow through directly to the audio output allowing Note Synth to be part of your effects chain. In some cases, you may want to generate MIDI notes without this enabled. To do this you can turn the Audio Flowthrough switch off.

## The Sustain Notes Switch

Some MIDI instruments remain playing (sustained) until a new note is played. The Sustain Notes switch determines how many of these notes will be played at the same time. For example, if 3 is selected, the current note will play plus the two previous notes will continue to play.

### **Event Threshold Slider**

Use this slider to adjust for different input signal levels. Use lower settings for soft notes and higher settings for loud notes. You can test the setting by looking at how fast the note values change below the audio meter as you play. Low settings will have less latency, but may cause some false triggering.

### **Setting the MIDI Channel**

There are three MIDI channel settings, one for each of the two MIDI notes and one for the MIDI program change number (described below). This allows you to set up each note for a different MIDI instrument if desired. You can also turn off MIDI note output or the program change output by setting these controls below 1. Press the left or right arrow to change values, or swipe your finger across the control to increase or decrease values quickly. Make sure the MIDI channel matches the corresponding MIDI capable keyboard or sound module channel.

### **Setting the MIDI Note Offset**

For each note, this control allows you to set the note pitch relative to the note you are playing. For example, set these values to 0 and 5 to generate a MIDI chord. Or set a note to play one octave down using a value of -12. The range for each note is plus or minus two octaves from the note you are playing (-24 to +24). MIDI notes will not be output when this offset causes a MIDI note value to be above or below the standard MIDI note range. Press the left or right arrow to change values, or swipe your finger across the control to increase or decrease values quickly.

### **Setting the MIDI Program Number**

You can send MIDI program change messages to change the current MIDI instrument in an attached keyboard or sound module. The MIDI program change messages will be sent using the MIDI PC channel number selected. Press the left or right arrow to change values, or swipe your finger across the control to increase or decrease values quickly. Make sure the MIDI PC channel matches the MIDI capable keyboard or MIDI sound module channel.

### **Saving, Loading, Deleting Your Settings**

The Setting Files screen allows you to maintain a library of setting files. To perform any of these actions, you must enter a file name by typing in the search bar or clicking on an existing file name. All current control settings are saved in a .DAT file. When a setting file is loaded, and a MIDI PC channel is active, a MIDI program change message is also sent to the attached keyboard or sound module. Using the MIDI Mobilizer, you can also activate these setting files by receiving a MIDI program change message on MIDI channel 1. The MIDI present number will correspond to file name location in the list. The best way to organize this is to start your file names with a number equal to the location in the file list (for example '1 piano chords', '2 octave bass', etc).