

Pro 3 Wavetable Generator

As you know, Oscillator 3 of the Sequential Pro 3 synthesizer is a digital wavetable oscillator. It provides 32 wavetables permanently stored in wavetable slots 1-32.

With Pro 3 OS version 1.1 and higher you can upload your own wavetables to slots 33-64 using Sequential's Wavetable Generator.

Wavetable Generator is a web-based utility hosted at: www.sequentialwaves.com/

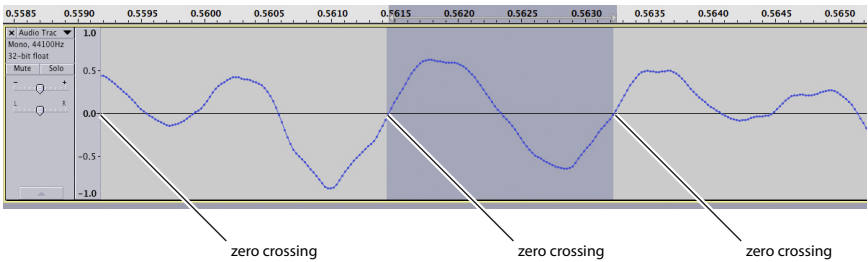
Requirements/Recommendations:

- Pro 3 synthesizer with OS version 1.1 or higher installed. If necessary, download the latest Pro 3 OS from the Sequential website's Support page.
- Computer with internet access
- Chrome, Firefox, or Safari web browser
- Collection of single-cycle waveshapes. You can create these using a variety of applications, including:
 - Audacity - <https://www.audacityteam.org/download/>
 - WaveEdit - <https://synthtech.com/waveedit>
- Individual waves must be 16-bit, 48kHz, and ideally, 1024 samples in length. Shorter lengths are supported by Wavetable Generator, but the shorter their length, the higher they will shift the pitch of the Pro 3 wavetable oscillator. All waves in a set must be the same length.
- When naming waves for a set, add numbers 01, 02, 03, and so on to set their order in the wavetable — for example: *01-fuzzy sine*, *02-narrow-pulse*, etc.
- Refer to your Pro 3 User's Guide for information about the Pro 3's wavetable oscillator, its wavetables, and how to select and use them.

Creating Single-Cycle Waves

When creating your own single-cycle waves, follow these guidelines:

1. Make sure the wave starts and ends on a zero crossing. Otherwise the wave may cause pops, clicks, or glitches during playback. Refer to the illustration below.
2. Make sure the single-cycle wave is the correct length — ideally 1024 samples. Refer to your sample editor's documentation to learn how to create waves of a specific length.



The start and end of a single-cycle wave should occur on a zero crossing to avoid pops, clicks, and glitches.

For more information on creating single-cycle waveforms, refer to these articles:

<https://forum.sequential.com/index.php?topic=39.0>

<https://groovesizer.com/make-your-own-single-cycle-waveforms/>

Using Wavetable Generator

Before you get started using Wavetable Generator do the following:

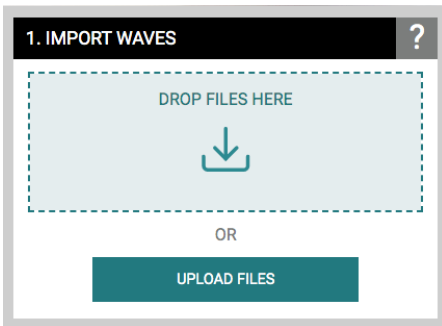
Before you begin:

1. Turn on your computer and open your web browser.
2. Go to the Wavetable Generator utility here: www.sequentialwaves.com/

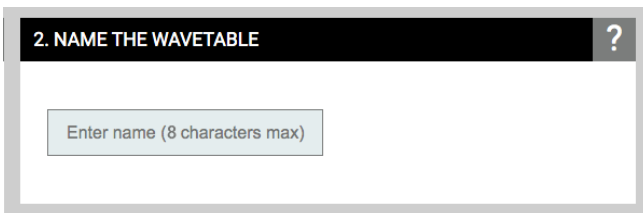
After you convert the 16 single-cycle waves into a wavetable you will save the SysEx-based wavetable file that Wavetable Generator creates, then transfer it to your Pro 3 using a MIDI Utility such as SysEx Librarian (Mac) or MIDI-OX (Windows).

To Use Wavetable Generator:

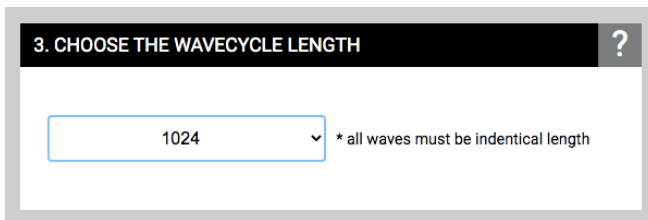
1. With Wavetable Generator open on your browser, drag and drop the 16 single-cycle waves into Section 1 of the utility. Alternatively, click the **UPLOAD FILES** button and load the files using the file dialog that appears.



2. In Section 2 of the utility, enter a name for the wavetable. Names can be a maximum of 8 characters in length.



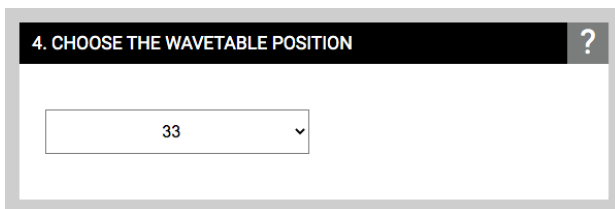
3. In Section 3 of the utility, specify the wavecycle length. Make sure this matches the length of the waves that you created. All waves must be an identical length. Waves of 1024 samples are best.



3. CHOOSE THE WAVECYCLE LENGTH ?

1024 * all waves must be identical length

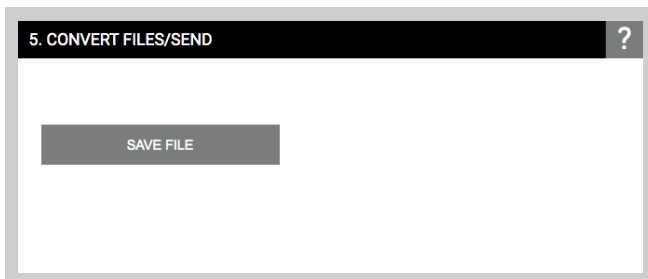
4. In Section 4 of the utility, specify the wavetable position. You will then be able to select your custom wavetable by number and name using the SHAPE knob in Oscillator 3.



4. CHOOSE THE WAVETABLE POSITION ?

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5. When the above fields and menus have been filled in, the SAVE FILE button is enabled (green). Click this button to save the wavetable as a SysEx file on your computer. You can then transfer the wavetable file to the Pro 3 using a MIDI utility such as SysEx Librarian (Mac) or MIDI-OX (Windows).



5. CONVERT FILES/SEND ?

SAVE FILE

Transferring Wavetables to the Pro 3

After you have converted a set of waves into a Pro 3-compatible wavetable, you can transfer it to the Pro 3.

To transfer a custom wavetable to the Pro 3:

1. Turn on the Pro 3.
2. Connect the Pro 3 to your computer with a USB cable.
3. On the Pro 3, press the GLOBAL button, then press Soft Button 2 and set MIDI SYSEX CABLE to USB. Press the GLOBAL button again to exit.
4. Use a MIDI utility such as SysEx Librarian (Mac) or MIDI-OX (Windows) to open the wavetable you created.
5. Send the wavetable to the Pro 3 (refer to your MIDI utility's documentation).

Using Your Custom Wavetable

To use your custom wavetable:

1. In the Pro 3's MIXER section, turn up OSC 3 LEVEL.
2. On the Pro 3, turn Oscillator 3's SHAPE knob to navigate to the number of your custom wavetable.
3. Play a few notes on the keyboard to hear to your wavetable.

In this way, you can load up to 32 custom wavetables using the Wavetable Generator utility. Custom waves reside in slots 33-64. Slots 1-32 are permanent factory wavetables.

Be sure to save your custom wavetable SysEx files to your computer in case you want to share them with other Pro 3 users or archive them.