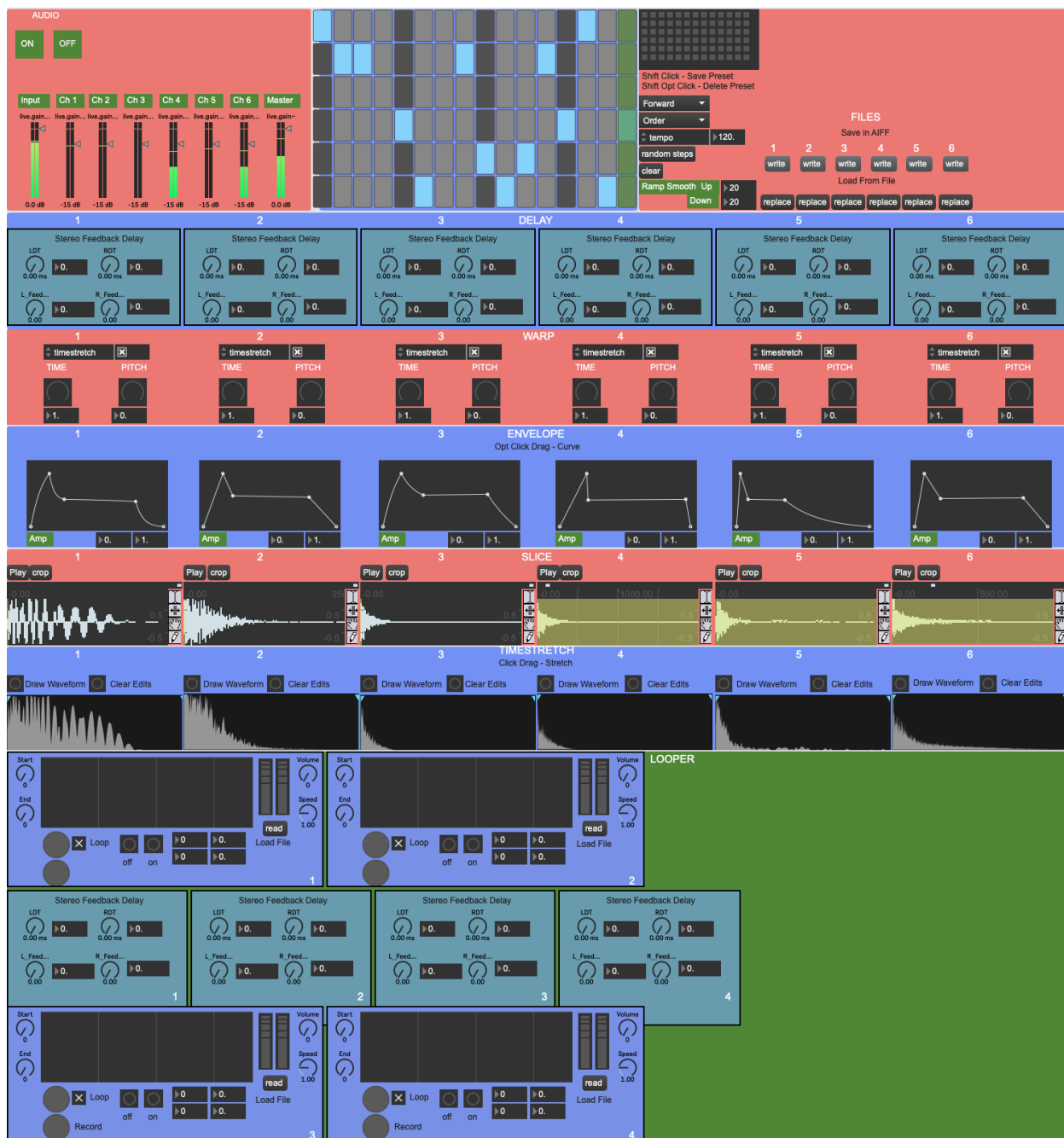


Product C

Paul Franklin

05/11/2023



Introduction

Welcome to the Product C README. This document provides a comprehensive overview of Product C, an innovative Max patch (Cycling 74/Max4Live) designed for music production and performance. Product C features a 6-channel live sampler and drum sequencer, complemented by 4 channels of live looping, offering an extensive range of functionalities for a versatile and interactive musical experience.

Product C represents the core software element that drives the functionality of its hardware counterpart, Product D. This README will guide you through the unique features, intuitive design, and technical intricacies of Product C, offering essential insights into its operation and how it enhances the creative workflow for musicians and producers. Whether used standalone or in tandem with Product D, Product C stands as a powerful tool in the realm of music creation.

Video Series Overview

This series includes four videos, each focusing on a different aspect of Product C:

Sequencer Walkthrough: An in-depth look at the sequencing functions, demonstrating how to create and edit sequences.

https://youtu.be/X_rHDqXc8i0?si=BlAaMRG2Oiv8uyNn

Sampler Overview: A guide to the sampling features, showing how to use and manipulate samples.

https://youtu.be/TWR6hnoqBLA?si=lsS7jbAC_PtolpEA

Looper Functionality: Highlights the looper's capabilities, showcasing its use in composition and performance.

<https://youtu.be/ie7K6RaoaDQ?si=biv4nKbaQS1tIWzh>

Musical Demonstration: A practical demo combining sequencer, sampler, and looper features to illustrate Product C in a musical setting.

<https://youtu.be/EeoqAu2cc30?si=T9LRINwLufwR7-8p>

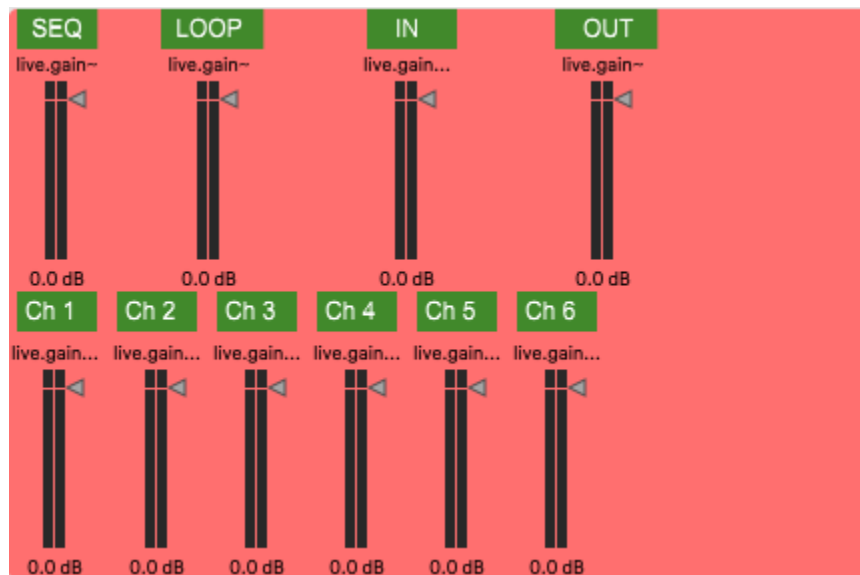
These videos provide a straightforward guide to Product C's features, suitable for users at any skill level.

Written Explanation:

Mixer

The Mixer in Product C provides intuitive controls for managing audio levels:

- **Channel Volume Sliders:** Each sequencer channel has a dedicated volume slider, allowing for precise control of individual track levels.
- **Master Volume Controls:** Separate master controls are available for audio input, output, sequencer, and looper sections, ensuring overall volume management is straightforward and effective.
- **Adjusting Volume:** To adjust volume, click and drag the sliders. Alternatively, click on a slider to enter a specific value manually. After typing a value, click outside of the slider to confirm the adjustment.

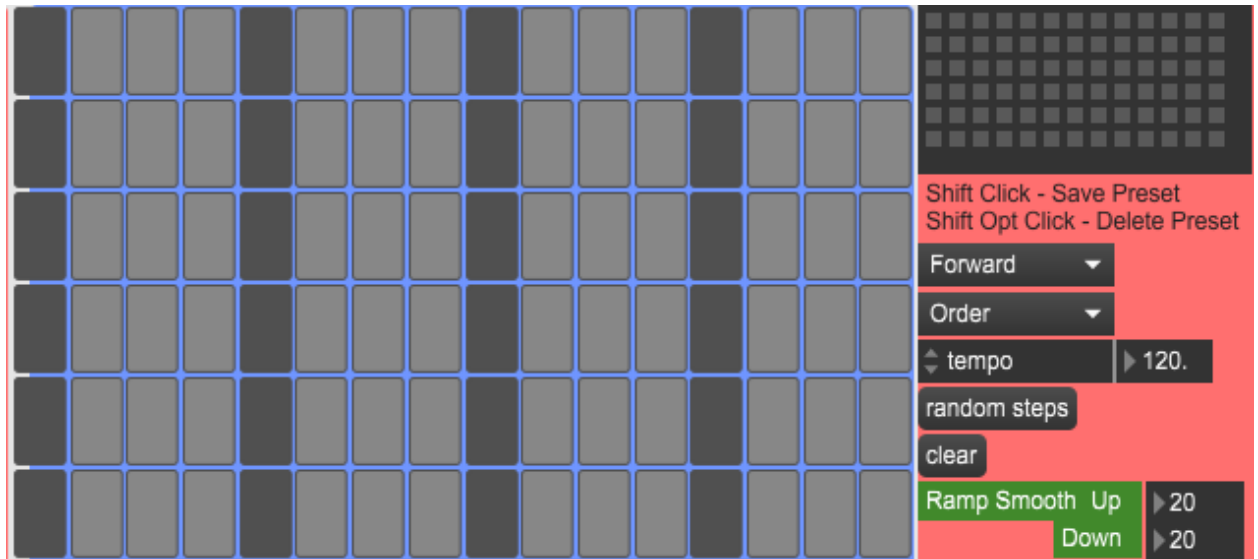


Grid Interface

The Grid Interface in Product C is a key component for sequencing audio:

- **Channel Representation:** Each row in the grid corresponds to an audio channel, with channel 1 at the top and channel 6 at the bottom.
- **Steps and Timing:** Each column represents a 1/16th note. Activate or deactivate a step by clicking on the corresponding rectangle in the grid.
- **Preset Grid:** Located to the right of the main grid, the preset grid allows you to store and recall patterns. Shift-click to save a pattern; click to load. Shift+Opt (Alt on Windows) deletes a saved preset.
- **Playback Direction:** A dropdown menu below the preset grid lets you select the direction of playback.
- **Playback Type:** Another dropdown menu allows you to change the playback type, with options like random and other patterns.

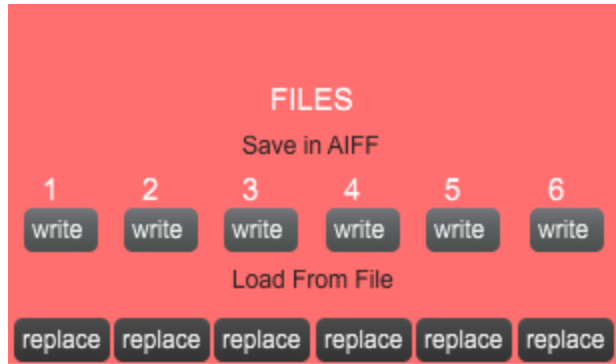
- Tempo Control: Adjust the tempo by clicking and dragging, or by typing in a specific value.
- Random Steps: This button generates a random pattern on the grid.
- Clear Grid: Clears the entire grid of any activated steps.
- Ramp Smooth Up/Down: This feature helps mitigate the audio zipper effect that can occur with rapid starting and stopping of audio. It's an advanced feature and can be ignored by novice users.



File Selection

The File Selection area in Product C allows you to manage audio files easily:

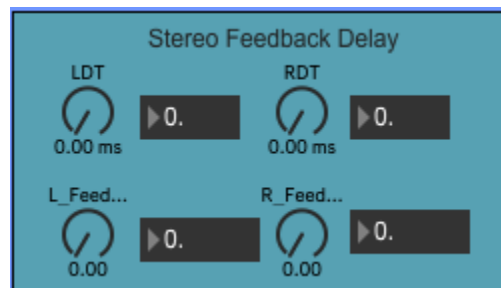
- Replace: Clicking 'Replace' opens a file explorer to load audio files into the selected channel. Supported file formats include MP3, WAV, and AIFF.
- Write: Use 'Write' to save the current waveform in the active channel as an AIFF file.
- Recording to Channels: To record audio directly into a channel, press the corresponding number key (1-6). These act as toggles; press the same number key again to stop recording.



Delay

Product C features a Stereo Delay for creating echo effects:

- **Adjusting Parameters:** Click and drag the dials to modify the delay settings. Alternatively, click on a number box to type in a specific value directly.



Warp

The Warp section in Product C includes a Timestretch feature to control the relationship between time and pitch:

- **Timestretch Activation:** Toggle Timestretch to link or unlink time and pitch. When active (x showing), time and pitch can be adjusted independently. When inactive (x not showing), changes in time will correspondingly affect pitch and vice versa.
- **Advanced Timestretch:** This feature is only operational when Timestretch is active. It allows for more intricate manipulations of the waveform. Easily toggle this feature on or off for quick adjustments. See below for the explanation of this feature.



Envelope

The Envelope feature in Product C provides a standard ADSR (Attack, Decay, Sustain, Release) control, shaping the volume of the sample over its playtime:

- **Creating and Editing Points:** Click on the envelope graph to add points, shaping the ADSR curve. You can add as many points as needed to fine-tune the envelope.
- **Curving Points:** To create curves between points, hold the 'Opt' key (Alt on Windows) and click and drag the line between two points.
- **Deleting Points:** Remove points by Shift-clicking them.
- **Clear and Amplitude Controls:** The 'Clear' button removes all points, resetting the envelope. The 'Amplitude' setting adjusts the envelope's minimum and maximum values. The default range is between 0 and 1, which suits most use cases. Adjust this setting if you need to clip the signal more aggressively.



Slice

The Slice section in Product C enables precise editing and cropping of samples:

- **Waveform Viewer Tools:** Use the tools on the right side of the waveform viewer for editing. The cursor tool allows you to select specific parts of the waveform.
- **Selection and Cropping:** Click and drag to make a selection on the waveform, then use the 'Crop' function to keep only the selected portion of the sample.

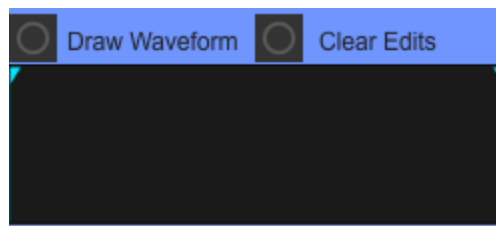
- **Playback and Visualization:** The 'Play' button lets you listen to the selected area. A progress bar at the top of the viewer visually indicates the duration of the waveform being played. This is especially useful to verify if the entire sample fits within the designated time when triggered by the grid or other controls.



Timestretch

The Timestretch feature in Product C allows for flexible manipulation of audio samples:

- **Creating Stretch Points:** Click within the waveform viewer to create a new stretch point. This point serves as a marker for stretching the waveform.
- **Adjusting Stretch:** Click and drag from the created point to stretch the waveform between this point and the nearest existing point. This enables selective stretching of specific sections of the waveform.
- **Clear and Draw Functions:** Use the 'Clear' option to revert any changes and return to the original waveform. The 'Draw' function applies and makes your changes permanent, altering the waveform as stretched.



Looper

The Looper in Product C allows for continuous playback of audio, creating loops from your samples. Key features include:

- **Loading Audio:** Import a file or record directly within the program to load audio into the looper.

- Recording: Utilize the 'Record' button to start and stop recording. It acts as a toggle - press once to begin recording and again to cease.
- Loop Activation: The 'Loop' button toggles the loop on and off. When the 'X' is displayed, the loop is active and will play continuously.
- Playback Controls:
 - 'On': Plays the entire sample once from beginning to end.
 - 'Off': Halts playback.
- Loop Start and End Points: 'Start' and 'End' controls enable you to designate the specific section of your sample to be looped.

