1.2.1 User Manual

Overview

The goal of Distributor is to make true multi-voice instruments. Distributor takes incoming notes and assigns them to outgoing voices based on a selected pattern. This is the way that early polyphonic hardware synthesizers and current day polyphonic analog synthesizers function. Using multiple voices allows each voice to have a unique sound. In analog circuits, variability due to component tolerances, device temperature characteristics, and tuning trim settings could lead to an individual synthesizer voice having a slightly different tuning or timbre. Distributor can also be used to make interesting patterns and chords with very different sounding voices, adding variety to an otherwise straightforward note sequence.

Performance & Octave Controls

Pitch and Mod Wheels
The Pitch and Mod wheels control CV data sent out of the Pitch and Mod CV output jacks. All of the output jacks are controlled simultaneously. It is up to the individual voice to have a pitch range or modulation function setting.

Octave
The Octave setting can be used to transpose the Distributor's note outputs. Octave 4 results in no transposition. A setting below 4 results in negative transposition, and above 4 results in positive transposition.

Hold
The Hold function can be used to sustain notes indefinitely. To hold notes, press and hold the Hold button, play the desired notes, and then release the hold button. Alternatively, you can press and release the hold button while holding down a set of notes. The notes will continue

playing after you release them. To turn off held notes, press and release the Hold button again without playing new notes while it is depressed.

Chord

The Chord function can be used to transpose a chord based on its lowest note. There are three ways to enter Chord mode. The first is to hold notes using the Hold function. Then while the notes are held, press and release the Chord button. The second way is to press and hold the Chord button, play the desired notes in the Chord, then release the Chord button. The third is to hold a set of notes, then press and release the Chord button while the notes are held.

Once notes have been stored using one of the above procedures, the chord can now be played with a single note. Each note triggers the chord with the lowest note in the chord played at the current note and the others transposed to their relative position. To exit Chord mode, press and release the Chord button.

Freeze

The Freeze function can be used to play a sequence of notes monophonically on a single voice. When the Freeze button is pressed the voice will lock at the position where the rotor is pointing until the button is released.

Voices Controls

Manual/Auto Selector

Distributor can automatically detect if the output CV jacks are connected and use the appropriate voices. If the Gate or Note output is connected a voice is considered active. Alternatively, a manual selection can be made.

Number of Voices

When the Voices display is selected, the number of Voices is set manually. Voices above this number are not used.

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Combination

The combination slider allows multiple voices to be triggered per note. The options are one, two, four, or eight voices per note.

Rotor

The rotor lamps show the state of the voices, on or off, and the rotor arm points to the next voice that will be allocated. As soon as a voice is used, Distributor's rotor arm moves to the next available position according to the Order and Pattern settings. Only voices that are off will be chosen unless Freeze is held or all voices are full.

Order & Pattern Controls
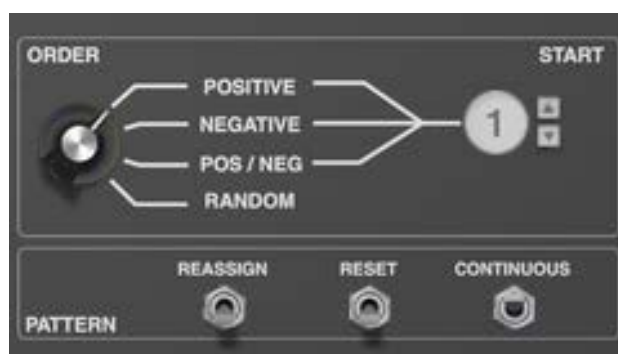
Order

Positive – Selecting positive order will cause voices to be distributed in a clockwise pattern.

Negative - Selecting negative order will cause voices to be distributed in a counter clockwise pattern.

Positive/Negative - Selecting positive/negative order will cause voices to be distributed in an alternating counter clockwise and clockwise pattern with the transition point determined by the start voice.

Random – Selecting random order will cause voices to be selected randomly.

Start
The start voice sets the voice number that will be chosen first when Reset is enabled, and the start and end of the alternating pattern in Positive/Negative mode.

Reassign
When Reassign is enabled, the next voice choice does not depend on any previous notes. Disabling Reassign allows voices that were recently used for a certain pitch to be reused for the same or nearby pitches. The assignment algorithm finds an available voice that previously had the closest MIDI note value to the new MIDI note. This can be useful for minimizing portamento effects or for making complex patterns. Note that the Rotor cannot show the correct next voice when Reassign is enabled.

Reset & Continuous
The Reset switch generally causes the next voice to go back to the start voice when enabled. The Continuous switch generally causes the pattern to proceed to the next voice when enabled. More specifically, there are four combinations of Reset and Continuous which give four distinct patterns:

Reset – off, Continuous – off
The pattern always continues where it left off. The next voice will remain on the same voice if it is available, otherwise it will be chosen according to the pattern.

Reset – on, Continuous – off
The next voice is always the lowest available voice with respect to the start voice.
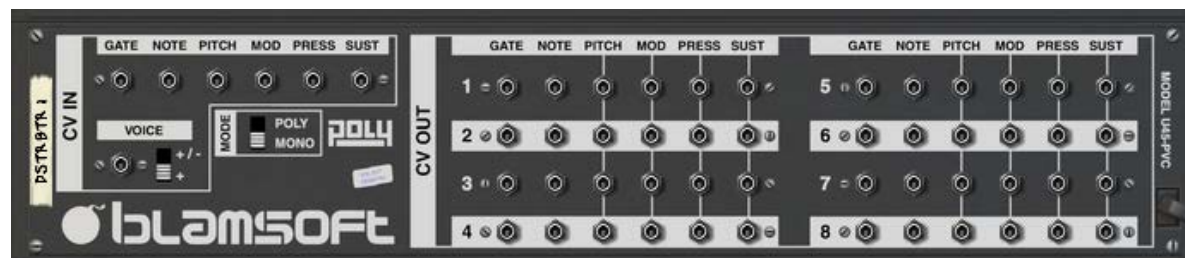
Reset – off, Continuous – on
The pattern always continues where it left off. The next voice will be chosen according to the pattern.

Reset – on, Continuous – on
As long as the start voice is held, the next voice will be chosen according to the pattern. When the start voice is free the pattern will begin at the start voice.

CV Connections

CV In
Gate, Note, Pitch, Pressure, Sustain
The Distributor can distribute notes and performance data coming from an external controller. The Gate and Note inputs are allocated to voices internally. The Pitch, Mod, Pressure, and Sustain signals are mirrored on all of the respective outputs.

Voice
The next Voice to be allocated can be chosen by CV with the Voice input. The Voice CV input can be set to Unipolar or Bipolar mode. In Unipolar mode, Distributor expects positive input and zero maps to the start voice. In Bipolar mode, Distributor maps the most negative input to the start voice, zero to the middle voice and the most positive input to the end voice.

CV Out
The CV outputs are used to connect the external voices to Distributor. The Gate and Note jacks provide the routed velocity and MIDI note outputs for the individual voices. The Pitch, Mod, Pressure, and Sustain jacks provide the performance data and are common to all voices.

Mode
Distributor can be used as a voice controller for the Polymodular System. Set the mode switch to Poly to output PolyCV that can control the other Polymodular devices. Use Mono for standard CV connections.

Tips & Tricks

Setting up a Combinator
Starting in version 1.2.0, Distributor is categorized as an instrument. Receive Notes and Performance Controllers are turned on for Distributor by default.

Automating the Start Voice
By turning the Reset switch on and automating the start voice setting, you can control exactly which voice will play a note. This can be useful to create glitching melodies where various notes are played by different synths. Using diverse patches on the different synths adds to the glitchiness.

Visit www.youtube.com/blamsoft and check out the Glitch Hop tutorial under Distributor Tutorials for more information.