

USER MANUAL

VERSION 2.0

GETTING STARTED

The ACDGEN hardware unit can send MIDI data to computers and other MIDI-enabled gear via USB and standard MIDI DIN5.

In order to receive MIDI data via its MIDI IN DIN 5 jack, unscrew the unit's bottom lid and set the dip switch to the ON position (or connect the included jumper in older hardware revisions).

To clock ACDGEN, either send MIDI Clock from another MIDI gear to ACDGEN or enable the internal clock. Set **Density** to fully counterclockwise to mute all notes, hit the **Generate** button to create a new sequence, and slowly start turning **Density** clockwise in order to start sending MIDI notes to the MIDI destination (USB port or MIDI OUT port).

HARDWARE CONTROLS

The hardware potentiometers available on the unit can be used to control multiple ACDGEN channels and additional parameters.

When selecting a different channel or accessing one of the additional parameters, the potentiometer will only become active once it has reached the current position for that parameter (similar to a pickup method). The LED will blink in white to indicate that the potentiometer has become active.

CHANNELS

With the new 2.0 firmware, ACDGEN can now sequence **four channels** simultaneously and independently.

Each channel can be configured via the Software Customizer (MIDI Channel, MIDI CC number and range, and additional ACDGEN settings). These settings are stored in the device's memory and are automatically recalled during the boot process.

The four channels are associated with four different colors to help identify which is active. These colors are displayed when the channel is selected and when it generates a note.

Although each channel can be configured independently, they all follow the same Key, Scale, and Swing Amount settings.

To improve the rhythmic relationship between the channels, channels 2-4 have a sequencer offset enabled by default. To disable it, hold Function and Generate (LED will blink twice in red).

ALGORITHMS

- **Normal:** A simple and straightforward random algorithm.
- **Floor:** Uses a smaller selection of notes and has a higher probability of playing the fundamental / base note (great for basslines).
- **FifthOct:** Limits the note selection to the fundamental / base note and its fifth.
- **Upwards:** Generates a sequence that tends to go up in the selected scale.
- **Up-Stepped:** Similar to Upwards but it can also alternate between higher notes and the fundamental / base note.
- **Downwards:** Generates a sequence that tends to go down in the selected scale.
- **Down-Stepped:** Similar to Downwards but it can also alternate between lower notes and the fundamental / base note.
- **Arpware:** Combines different techniques used in the other algorithms and regular arpeggiators.

PARAMETERS & FUNCTIONS

- **Key:** Sets the key for the playback quantizer.
- **Scale:** Toggles between minor and major scale.
- **Algorithm:** Selects which algorithm will be used for pattern generation.
- **Shift:** Transposes the pattern diatonically (in key).
- **Length:** Sets the length of the pattern (2, 3, 4, 5, 6, 7, 8, 16, or 32).
- **Generate:** Generates a new pattern / Creates a variation of the current pattern (long press, LED blinks twice).
- **Function (FN):** Modifier button which allows access to additional parameters (see below).
- **Octave (FN + Shift):** Shifts the octave of the generated patterns (this setting is stored in memory).
- **Note Len (FN + Length):** Sets the base length of the generated MIDI notes.
- **Vel RND (FN + Density):** Sets the amount of MIDI Velocity randomization.
- **Internal Clock (FN + Scale):** Enables / disables the internal clock.
- **Internal Clock Rate (FN + Key):** Sets rate of the internal clock.
- **Swing Amount (FN + Algorithm):** Sets the amount of swing.

SHORTCUTS (FN + GENERATE)

Certain features can be accessed by holding down Function, tapping Generate x number of times, and then releasing Function:

- **Channel Selector (FN + 1x GEN):** Selects to the next ACDGEN channel. The LED will show the color of the active channel.
- **MIDI CC Sequencer Toggle (FN + 2x GEN, GREEN LED):** Enables / Disables the internal MIDI CC sequencer for the active channel.
- **Keyboard Shift Toggle (FN + 3x GEN, PURPLE LED):** Enables / Disables sequence transposition via incoming MIDI notes for the active channel.
- **Auto Variate Toggle (FN + 4x GEN, LIGHT BLUE LED):** Enables / Disables automatic variation every 4 bars for the active channel.
- **Normal / Half Tempo Toggle (FN + 5x GEN, LIGHT BLUE LED):** Switches between normal tempo and half-tempo.
- **Channels Offset Toggle (FN + HOLD GEN, RED LED):** Enables / Disables the beat / sequencer offset for channels 2-4.

LED Blink: Action executed

LED Fade In: Parameter Enabled (ON)

LED Fade Out: Parameter Disabled (OFF)

MIDI CC CONTROL

While ACDGEN is a generator it was also designed to be controlled via MIDI Control Changes.

This allows the user to control parameters, create presets and generate new patterns from DAWs or other hardware sequencers.

Channels can be controlled independently via the MIDI Channels 1-4 or globally via MIDI Channel 5.

MIDI CC values are automatically mapped from 0-127 to the appropriate range for the specific parameter / setting.

The LED will flash **purple** whenever the unit receives a MIDI CC message.

CHANNEL SETTINGS

MIDI CHANNELS #1-4

CC #	PARAMETER
1	GENERATE
2	VARIATE
3	SHIFT
4	LENGTH
5	DENSITY
6	ALGORITHM
7	RANDOM VELOCITY
8	OCTAVE
9	NOTE LENGTH
10	BASE VELOCITY
11	SLIDE PROBABILITY
12	HOLD PROBABILITY
13	SCALE RANGE
14	RANDOM MODE
15	SHIFT MODE
16	KEYBOARD SHIFT
17	MIDI CC SEQUENCER TOGGLE
18	MIDI CC NUMBER
19	MIDI CC MIN
20	MIDI CC MAX
127	OUTPUT MIDI CHANNEL

GLOBAL SETTINGS

MIDI CHANNEL #16

CC #	PARAMETER
1	KEY
2	SCALE
3	SWING AMOUNT
4	TEMPO DIVISION
5	SHIFT RANGE
6	LED NOTE DISPLAY
7	MIDI THRU
8	INTERNAL CLOCK OUTPUT

CUSTOMIZATION

The unit can be customized via the **ACDGEN Customizer** software / Max for Live device.

By clicking on the **Save** button on the software's UI, your settings are stored in the hardware memory and recalled on power up.

- **Slide Probability:** Adjusts the ratio of note slides in generated patterns.
- **Shift Range:** Sets the range of the Shift parameter (+/- 12 st, +/- 24 st, or +/- 36 st).
- **Shift Mode:** Selects which mode will be used to shift / transpose the MIDI notes.
- **Swing Mode:** Selects which preset values will be assigned to the the 6 swing levels.
- **Hold Probability:** Sets the probability of generate hold steps (to generate notes longer than 1/16th).
- **Scale Range:** Sets the range of the active intervals available for the first algorithm.
- **MIDI CC Sequencer Toggle:** Enable / Disable the internal MIDI CC sequencer.
- **MIDI CC Number:** Selects the MIDI CC number / destination for the MIDI CC Sequencer.
- **MIDI CC MIN / Max:** Sets the minimum and maximum values of the CC sequence.
- **KB Shift:** Enables sequence transposition via MIDI notes (received via MIDI In).
- **LED Note Display:** Enables / Disables the display of outgoing notes on the LED.

FACTORY RESET

The ACDGEN hardware unit can be reset to its default factory settings by performing a Factory Reset.

To perform a **Factory Reset** set all knobs fully clockwise, Scale to Major, and power the unit while holding down the Generate and Function buttons.

The LED will light up red for 2 seconds to indicate that the unit has been reset.