

ACDGEN - AU / VST3 EDITION

User Manual

Spektro Audio

<http://spektroaudio.com/acdgen>

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1. About ACDGEN – AU / VST3 EDITION



ACDGEN – AU MIDI FX / VST3 Interface

ACDGEN is an advanced pattern generator that lets you generate MIDI sequences using one of eight different algorithms and manipulate them in many different ways. It's a powerful tool for live performance and music production.

Product Page: <http://spektroaudio.com/acdgen>

Current version: 1.1

AU / VST3 EDITION – System Requirements:

- 64-bit DAW compatible with VST3 or AudioUnit MIDI FX plug-ins
- Windows 10 or newer / macOS 11 or newer (Intel or Apple Silicon)
- Internet connection required for activation

[Download PDF manual](#)

2. Features

2.1 Real Time Controls



ACDGEN includes a number of parameters that can be used to manipulate the generated sequence in real time.

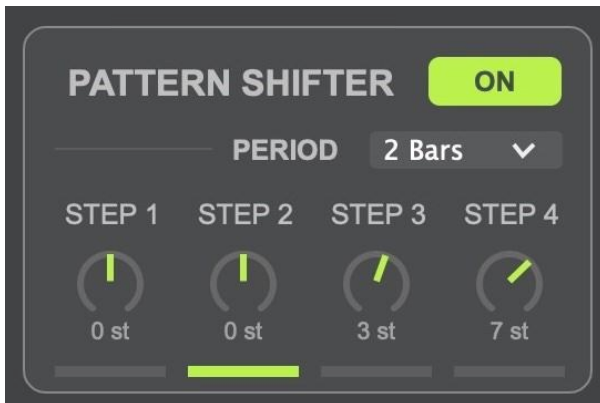
Here's a brief description of each parameter:

| Parameter | Description |
|------------------|---|
| Generate | Generates a new sequence |
| Variate | Generates a variation of the previously generated sequence |
| Restore | Restores the previously generated sequence |
| Swing | Adjusts the swing amount |
| Transpose | Transposes the notes |
| Length | Sets the length of the sequence |
| Note Len | Sets the proportional length of generated notes |
| Velocity | Sets the base MIDI velocity |
| Accent | Sets the accent amount |
| Rnd Vel | Sets the random velocity amount |
| Density | Sets the sequence's density (amount of notes) |
| Variation | Selects the active variation |
| Auto | When enabled, ACDGEN randomly switches between the 3 variations at the end of each sequence |

Length & Transpose Tab Controls

The Length and Transpose parameters are available as both knobs and tab controls. The knobs let you adjust their values freely while the tab controls let you quickly switch between Transpose and Length preset values.

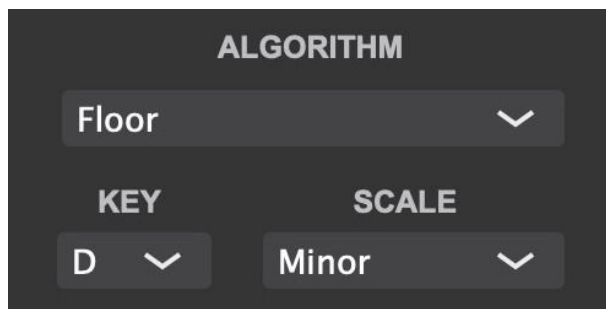
2.2 Pattern Shifter



The Pattern Shifter is a built-in 4-step sequencer designed to shift / transpose ACDGEN's main sequence.

| Parameter | Description |
|---------------|--|
| Period | Sets the period (clock rate) of the pattern shifter |
| Step 1 | Sets the amount of transposition (in semitones) for Step 1 |
| Step 2 | Sets the amount of transposition (in semitones) for Step 2 |
| Step 3 | Sets the amount of transposition (in semitones) for Step 3 |
| Step 4 | Sets the amount of transposition (in semitones) for Step 4 |

2.3 Algorithm / Key / Scale



These 3 settings are essential for getting the best results from ACDGEN.

Algorithm selects which algorithm ACDGEN will use when generating new sequences. These are the algorithms currently available:

| Algorithm | Description |
|--------------|---|
| Normal | A simple and straight-forward 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 it's 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 |
| Arp3 | Algorithm inspired by arpeggiated sequences |
| Lead ★ | Generates sequences with longer and more sustained notes that can be used for lead lines and main melodies |
| Legato ★ | Generates sequences where all notes are played in legato (each note lasts until the next note) |

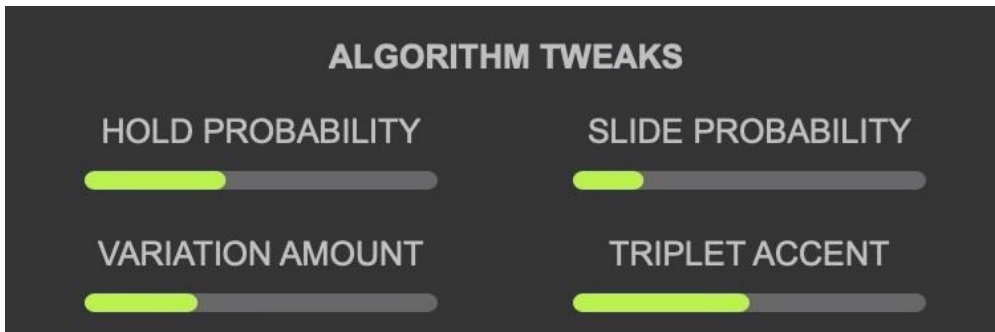
★ Only available in ACDGEN – AU / VST3 Edition

Key sets the key of the generated sequence and **Scale** sets the musical scale of the generated sequence.



Both Key and Scale can be controlled in real-time while Algorithm only affects new sequences.

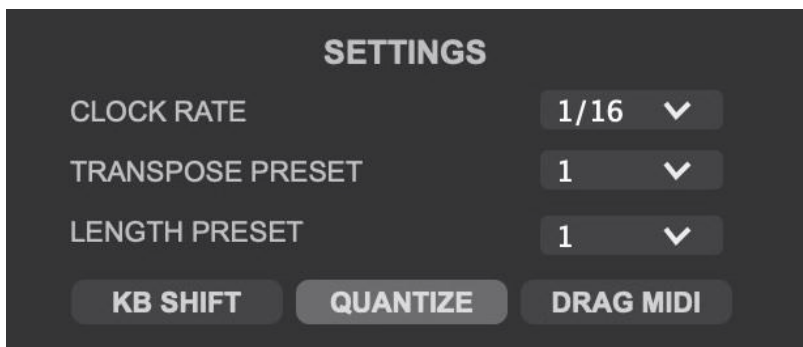
2.4 Algorithm Tweaks



ACDGEN lets you tweak some of the algorithms parameters so you can adjust the generated sequence to your liking. These settings only affect new sequences.

| Setting / Tweak | Description |
|--------------------------|--|
| Hold Probability | Sets the probability of generating notes longer than 1/16 |
| Slide Probability | Sets the probability of generating notes that slide to the next note |
| Variation Amount | Sets the amount of variation between the 3 generated variations |
| Triplet Accent | Sets the amount of accent for triplet notes |

2.5 Settings



These are some of the settings available in ACDGEN:

| Setting | Description |
|-------------------------|--|
| Clock Rate | Sets the clock rate of ACDGEN's sequences |
| Transpose Preset | Selects the active preset for the Transpose tab controls |
| Length Preset | Selects the active preset for the Length tab controls |
| KB Shift | Enables / disables Keyboard Shift |
| Quantize | Enables / disables post-transposition pitch quantization |
| Drag MIDI | Drag and drop to export ACDGEN's sequence as a MIDI file |

3. How to Install

3.1 How to Install on macOS

- 1 - Download the latest version of the ACDGEN file (ACDGEN_macOS_x.x.zip)
- 2 - Extract the content of the ZIP file and open the .pkg installer
- 3 - Follow the steps of the installer to install ACDGEN AU / VST3

If you have trouble opening the installer or the plug-in, check out the [Troubleshooting](#) section.



Note

The VST3 plugin will be installed at /Library/Audio/Plug-ins/VST3 and the AU plugin will be installed at /Library/Audio/Plug-ins/Components.

3.2 How to Install on Windows

- 1 - Download the latest version of the ACDGEN file (ACDGEN_Windows_x.x.zip)
- 2 - Extract the content of the ZIP file and open the .exe installer
- 3 - Follow the steps of the installer to install ACDGEN VST3



Note

The VST3 plugin will be installed at C:\Program Files\Steinberg\VstPlugins\VST3.



Attention

The Windows installer is created using the NSIS framework which can trigger false positives in some anti-virus software (see this [page for more info](#)). If you'd rather not use the installer, please download the ACDGEN_Windows_x.x_ManualInstall.zip version of the plugin which only includes the .VST3 files that you can copy to your VST3 folder manually.

4. Using ACDGEN

4.1 MIDI Routing

While both the AU MIDI FX and VST3 plugins are capable of generating MIDI messages, they usually require different routing settings depending on your DAW of choice.

4.1.1 AU MIDI FX with Logic Pro X

Logic Pro X is capable of loading AU MIDI FX plugins directly into any instrument track. To load ACDGEN to your instrument track, you can use the following steps:

- 1 - Open the inspector of the instrument track
- 2 - Click on the MIDI FX button
- 3 - Go to Audio Units, Spektro Audio, and select ACDGEN

4.1.2 VST3 with Ableton Live

To use the VST3 version of ACDGEN with Ableton Live, follow the steps below:

- 1 - Create a new MIDI track and load the VST3 version of ACDGEN into it
- 2 - Create a separate MIDI track for your instrument
- 3 - Open Live's I/O settings (by clicking on the IO button available in the right side of Live's UI)
- 4 - In your instrument track, open the dropdown menu below "MIDI From" and select the MIDI track containing ACDGEN
- 5 - Click on the second dropdown menu below (where it says Post FX by default) and select ACDGEN

4.1.3 VST3 with BitWig

To use the VST3 version of ACDGEN with BitWig, follow the steps below:

- 1 - Create a new Instrument track
- 2 - In the Device panel, click on the + button to open the browser
- 3 - Navigate to Plug-ins > VST3 > Spektro Audio and select ACDGEN (we recommend using the Instrument version of the VST3 plugin in BitWig)
- 4 - Now add your instrument of choice to the same track by clicking on the + button in the Device panel and selecting your instrument. MIDI routing should be set automatically


4.1.4 VST3 with FL Studio

To use the VST3 version of ACDGEN with FL Studio, follow the steps below:

- 1 - Click on the + button in the Channel Rack and select the Patcher plugin
- 2 - In FL Studio's browser, navigate to Plugin Database > Installed > Generators > VST3
- 3 - Drag and drop ACDGEN to the Patcher plugin
- 4 - Now add your instrument of choice to the same Patcher plugin by dragging and dropping it from the browser to the Patcher plugin
- 5 - Remove the default MIDI IN routing by un-patching the green cable from "From FL Studio" to your instrument
- 6 - Route the MIDI OUT from ACDGEN to your instrument by dragging and dropping the green cable from ACDGEN to your instrument
- 7 - Click on the ACDGEN icon (puzzle piece) to open the plugin's UI
- 8 - Open ACDGEN's plugin settings by clicking on the cog icon in the top left corner of the plugin window.
- 9 - In the plugin settings, set the MIDI Output port to 1 (or any other port that you'd like to use)

4.2 Recording and Exporting ACDGEN's sequences

After creating a sequence that you like using ACDGEN, you may want to add it to your arrangement as a MIDI clip.

The easiest way to export ACDGEN's sequences into your arrangement is to click and hold on the  button (available in the bottom right corner) and drag and drop it into your arrangement. You can also drop it to a folder to export a MIDI file.

Alternatively, you can record ACDGEN's MIDI output using a MIDI track in your DAW (this process depends on which DAW you're using).

 **Attention**

MIDI FXs are **not** rendered to MIDI clips exported via the Drag MIDI feature. If you'd like to store the MIDI output of the MIDI FXs, we recommend recording the MIDI output of the track containing ACDGEN to another MIDI track in your DAW.

5. MIDI FX

5.1 About MIDI FXs

ACDGEN – AU/VST3 Edition now includes 6 MIDI FXs ported from NGEN – Algorithmic MIDI Workstation: Accent, Chords, Echoes, Glitch, Humanizer and Spray.

ATTENTION

MIDI FXs are currently only available for ACDGEN – AU / VST3 Edition.

5.2 How to Use

To use one of the available MIDI FX, click on the MIDI FX panel and select one of the FXs in the FX Selector drop-down menu. The selected MIDI FX activates itself automatically.

The parameters available for each of the MIDI FXs are available under the FX Parameters area.

5.3 Available MIDI FXs

5.3.1 ACCENT

Accent changes the MIDI velocity of incoming MIDI notes according to its internal velocity sequence in order to create more repeatable and prominent accent patterns.

List of Parameters:

| Parameter | Description |
|-----------|---|
| Generate | Generates a new accent sequence |
| Length | Length of the accent sequence |
| Intensity | Increases the velocity of all MIDI notes to 127 |

5.3.2 CHORD

Chords transform single notes into chords by adding up to 4 notes on top of incoming notes based on specified intervals. There's also an option to quantize those additional notes or leave them unquantized.

List of Parameters:

| Parameter | Description |
|------------------|---|
| Quantize | Quantizes all intervals to the active key / scale |
| Chord Interval 1 | Interval of the first chord note |
| Chord Interval 2 | Interval of the second chord note |
| Chord Interval 3 | Interval of the third chord note |
| Chord Interval 4 | Interval of the fourth chord note |

5.3.3 ECHOES

Echoes is a MIDI delay effect that creates additional notes that are delayed by the specified delay time.

List Of Parameters:

| Parameter | Description |
|--|-------------------------------------|
| Time | Delay time |
| Feedback | Feedback amount |
| Probability (<input type="text"/>) | Probability of the echoes |
| Falloff (<input type="text"/>) | MIDI Velocity falloff of the echoes |
| Octave Random (<input type="text"/>) | Randomizes the octave of the echoes |

5.3.4 GLITCH

The Glitch MIDI FX can be used to mangle and glitch up sequences via a random ratcheting processor and pitch/velocity modulation. It's great for spicing up sequences and adding some IDM-style glitches to a performance.

List of Parameters:

| Parameter | Description |
|------------------|-----------------------------------|
| Repeats | Maximum number of note ratchets |
| Gate Length | Length of the note ratchets |
| Probability | Probability of a glitch happening |
| Random | Amount of glitch randomization |
| Pitch Mod | Enables octave randomization |

5.3.5 HUMANIZER

Humanizer is designed to make sequences sound more natural as if it was played by a human. It works by adding random amounts of delay and velocity modulation to incoming notes.

It's great for making polyphonic sequences sound less mechanical and static.

List of Parameters:

| Parameter | Description |
|---|---|
| Delay Probability (<input type="text"/>) | Probability of delaying a MIDI note |
| Velocity Probability (<input type="text"/>) | Probability of a modulating a note's velocity |
| Max Delay | Maximum delay length |
| Velocity Modulation (<input type="text"/>) | Depth of velocity modulation |

5.3.6 SPRAY

The Spray MIDI FX creates a delay-like effect by generating copies of incoming MIDI notes based on probability and random delay time.

List of Parameters:

| Parameter | Description |
|--|--|
| Time | Maximum delay time (in milliseconds) |
| Max Repeats (<input type="text"/>) | Maximum number of repetitions of delayed notes (similar to feedback) |
| Probability (<input type="text"/>) | Probability of spraying a note |
| Octave Random (<input type="text"/>) | Randomizes the octave of the sprayed notes |
| Falloff (<input type="text"/>) | MIDI Velocity falloff of sprayed notes |

6. Troubleshooting

6.0.1 I can't find ACDGEN in my DAW's Plug-ins list

- Check if your DAW is compatible with either AU MIDI FX or 64-bit VST3.
- After installing ACDGEN, check if the files were properly installed at `/Library/Audio/Plug-ins/VST3` and `/Library/Audio/Plug-ins/Component` on macOS and `C:\Program Files\Steinberg\VstPlugins\VST3` on Windows.

6.0.2 When trying to open the installer on Windows, my anti-virus software flags it as a virus / trojan

- The Windows installer is created using the NSIS framework which can trigger false positives in some anti-virus software (see this [page for more info](#)).
- If you'd rather not use the installer, please download the `ACDGEN_Windows_x.x_ManualInstall.zip` version of the plugin which only includes the `.VST3` files that you can copy to your VST3 folder manually.

6.0.3 When trying to open the `.pkg` file on macOS, I get an error similar to "ACDGEN cannot be opened because it is from an undefined developer."

- Right click on the `.pkg` file and select Open from the contextual menu.
- Another popup will appear asking you to confirm that you'd like to open the file. Click on the "Open" button.

6.0.4 When scanning for the ACDGEN plugin on macOS, I get an error similar to "ACDGEN cannot be opened because it is from an undefined developer."

- Open System Settings and navigate to Security & Privacy, General.
- You should see a message at the bottom that says *"ACDGEN cannot be opened because the developer cannot be verified"*.
- Click on "Open Anyway".

- Try scanning for plugins again in your DAW and you should now get a message that reads *"macOS cannot verify the developer of ACDGEN. Are you sure you want to open it?"*.
- Click on Open and you should be able to open ACDGEN from your DAW.

6.0.5 ACDGEN loads but I can't get any MIDI notes out of it

- Check the [How To Use](#) section for more information about MIDI routing.
-

If you come across any other issues, please get in touch with us at <https://spektroaudio.com/contact>.

7. Change-Log

7.1 Version 1.1

7.1.1 Added

- 2 New Algorithms:
- Lead: Generates sequences with longer and more sustained notes that can be used for lead lines and main melodies.
- Legato: Generates sequences where all notes are played in legato (each note lasts until the next note). This mode can be used with sustained / legato instruments such as strings and pads.
- New [MIDI FXs](#) ported from NGEN:
- Accent: Modify the velocity of generated MIDI notes using an independent 8-step velocity sequencer with optional Intensity parameter.
- Chords: Generate chords by generating up to 4 extra notes based on user-adjustable intervals.
- Echoes: A MIDI delay fx that features additional features such as random octave changes and MIDI velocity falloff.
- Glitch: Mangle and glitch up sequences via a random ratcheting processor and pitch / velocity modulation
- Humanizer: Adds a more natural feel to sequences via random delays and velocity changes.
- Spray: Delay-like effect that generates copies of certain notes based on probability and random delay time.

7.1.2 Changed

- Minor design improvements to the GUI
- Improvements to existing algorithms (specially Floor)

7.1.3 Fixed

- Improved note-off timing
- Improvements to the GUI display's accuracy and responsiveness

- Minor performance improvements

7.2 Version 1.01

7.2.1 Added

- Native support for Apple Silicon
- Phrygian scale

7.2.2 Fixed

- Export MIDI clips should now contain the correct note length in all clock rates
- ACDGEN no longer crashes when trying to restore a previous sequence before generating a second sequence
- Fixed a bug that would cause ACDGEN to generate noise in certain DAWs (Windows only)

7.3 Version 1.0 – 2022-02-15

- Initial Release