# SoundEditor KORG AG-10

The SoundEditor program provides easy control of the KORG AG-10, via Windows style interface.

## How the KORG AG-10 Tone Generator Works

The KORG AG-10 uses the AI² Synthesis system. This system uses PCM sound as a source, and a Variable Digital Filter (VDF) and Variable Digital Amplifier (VDA) to provide control of pitch, volume, timbre, etc. This type of system is used by many of today's professional synthesizers.
Many PCM sounds are created by digitally sampling acoustic instruments, analyzing the resulting data, and processing it so that it can be used in a tone generator. Some sounds are created synthetically using computers. On the KORG AG-10, these PCM sounds are called Multisounds, and are the basic sound components that form Programs.

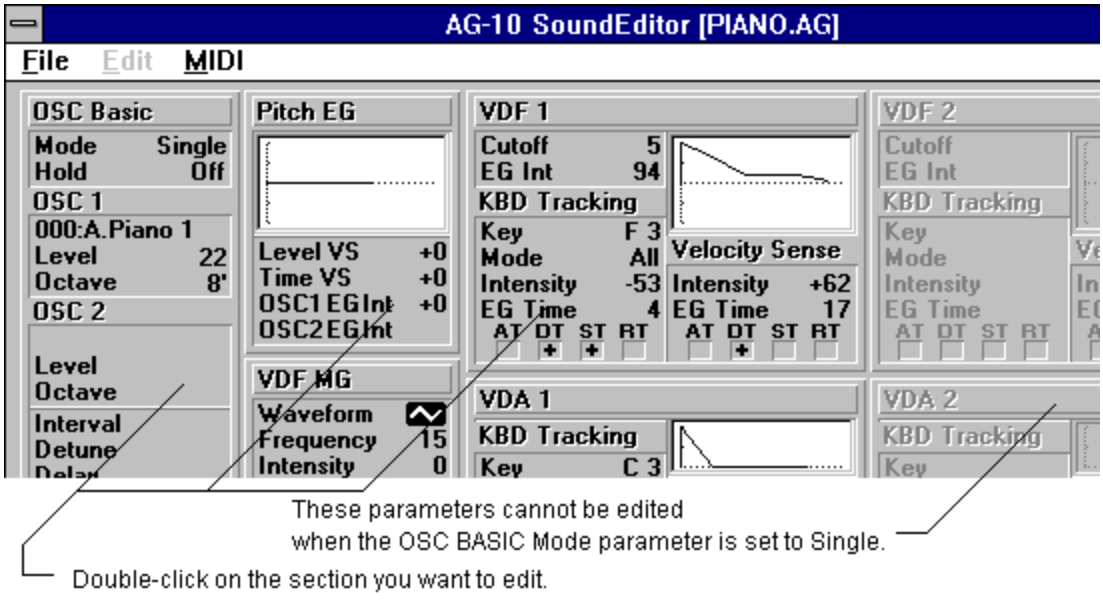
Sounds changes in many different ways, depending on the sound range, performance expression, and the passage of time. For example, a piano sounds decays naturally from the time a key is struck, even while the key is held down. Furthermore, high notes decay much faster than low notes. If we take a single sound and break it down into frequency components, we can see that higher overtones tend to decay faster. When a piano key is struck with less force, as we would expect, the volume level decreases. Furthermore, the number of high overtone components decreases.
For a violin, soft playing tends to produce sound with a slow attack, whereas, strong playing produces a more abrupt staccato sound that has a fast attack time. In order to create these many changing sound types, KORG AG-10 Programs have more than 100 adjustable parameters that allow precise, detailed sound creation.
To create a natural sound decay, we use a Variable Digital Amplifier Envelope Generator, VDA EG for short. For the overtone components we use a Variable Digital Filter Envelope Generator, or VDF EG. Both of these envelope generators have Velocity Sense parameters. These allow you to create sounds that when played softly have a slow attack rate with few overtones, but naturally evolve into fast attack sounds with more overtones as your playing gets stronger.
Program parameters are described on the following pages. After reading through the descriptions, try editing some of the parameters to see how they affect the sound.

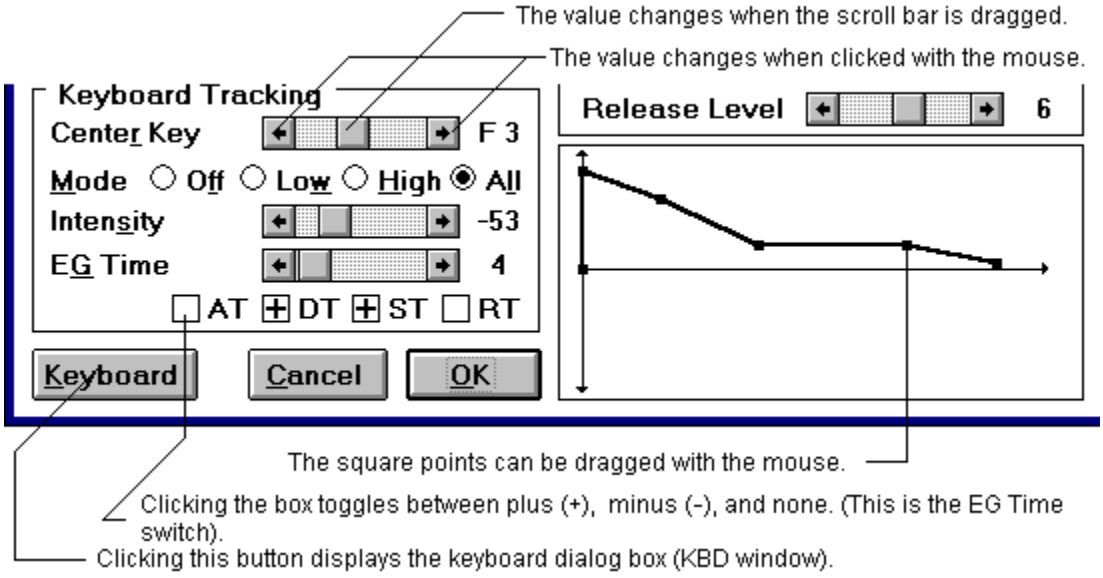
To recreate the sound of a real instrument, the first thing to do is select a Multisound that closely resembles the desired sound. After you have created a few sounds, experiment with original and imaginative sounds using the various Program parameters. Sounds can also be layered (overlapped) to create even more interesting sound combinations.

* Although the KORG AG-10 configuration resembles that of a synthesizer, and Programs can be edited, they cannot be stored by the KORG AG-10. The KORG AG-10 is basically a GM tone generator whose Programs conform to an agreed standard. For users who would like to explore the world of sound creation further, we recommend that you take a look at some of our other synthesizers and workstations. See your KORG dealer for more details.

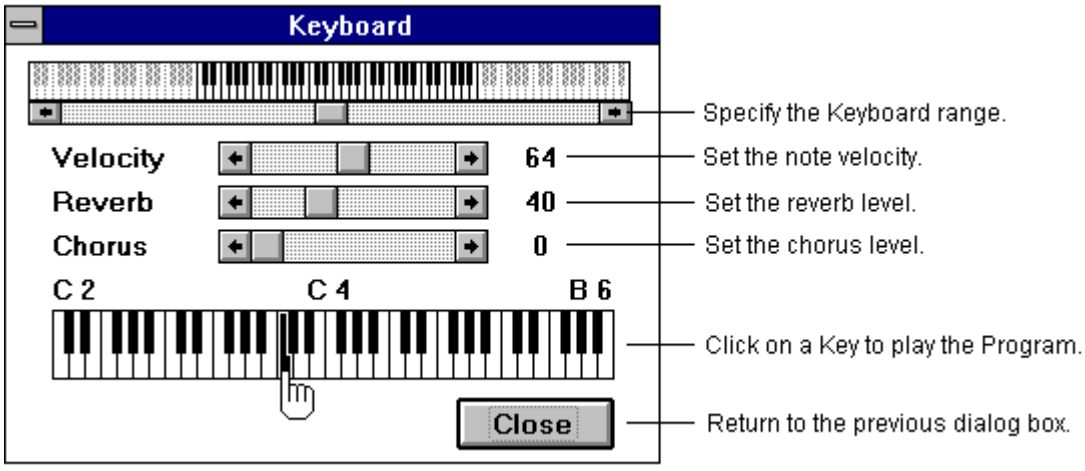
## About the Editing Function

To edit a particular section, double-click it. A dialog box will appear containing the relevant parameters.

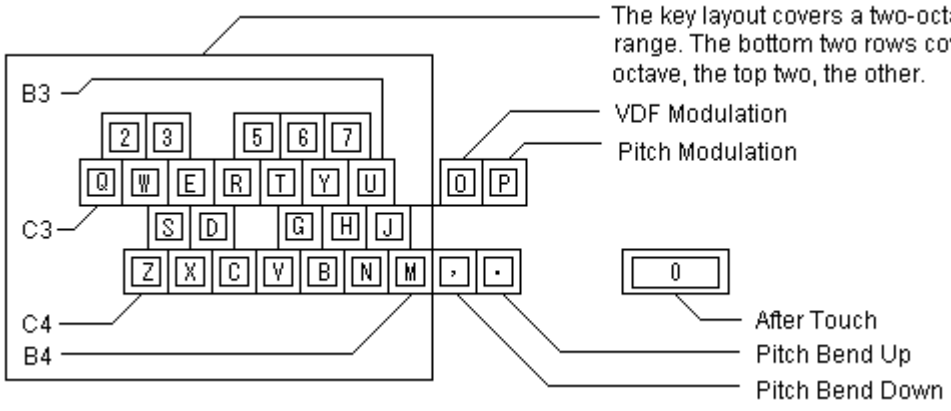



Clicking the Keyboard button displays the Keyboard window. By clicking on the keyboard you can play the current Program. You can also adjust the reverb and chorus effects levels.




The computer keyboard can also be used to play the Program.




## Editable Program Parameters

### OSC Basic

| | |
|---|---|
| Mode | Oscillator mode (type of Program) |
| Single | 1 oscillator Program |
| Double | 2 oscillator Program |
| Drums | Drum Program |
| Hold | Hold note after key is released |

### OSC1

| | |
|---|---|
| Multisound | Multisound for Oscillator 1 |
| Level | Volume of Oscillator 1 |
| Octave | Octave for Oscillator 1 (Standard pitch is 8') |

### OSC2

| | |
|---|---|
| Multisound | Multisound for Oscillator 2 |

| | |
|---|---|
| Level | Volume of Oscillator 2 |
| Octave | Octave for Oscillator 2 |
| Interval | Pitch shift relative to OSC1 in semitone steps |
| Detune | OSC1 and OSC2 pitch difference in cents |
| Delay Start | Time at which OSC2 produces sound relative to OSC1 |

**Modulation**

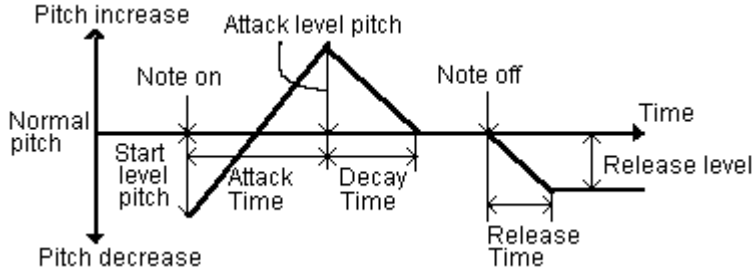
| | |
|---|---|
| VDF Bend Sweep | Change in VDF cutoff (program brightness) caused by pitch bend |
| VDF Mod2 MG | Change in VDF MG (wow) effect caused by Control Change 2 |

**After Touch**

| | |
|---|---|
| Bend Range | Change in pitch caused by aftertouch |
| VDF Cutoff | Change in VDF cutoff (program brightness) caused by aftertouch |
| VDF MG | Change in VDF MG (wow) effect caused by aftertouch |
| VDA Amplitude | Change in volume caused by aftertouch |

**Pitch EG**

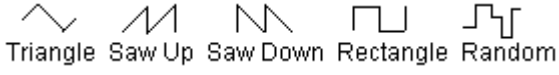
EG — Pitch change over time




| | |
|---|---|
| Velocity Sense | |
| Level | Pitch EG sensitivity to velocity |
| EG Time | Pitch EG time sensitivity to velocity |
| Intensity | |
| OSC1 EG | Intensity of the Pitch EG on OSC1 |
| OSC2 EG | Intensity of the Pitch EG on OSC2 |

**VDF MG** **Cyclic change (wow) in cutoff**

| | |
|---|---|
| Waveform | Modulation waveform |
| Triangle | Triangular waveform |
| Saw Up | Sawtooth waveform 1 |
| Saw Down | Sawtooth waveform 2 |
| Rectangle | Rectangular waveform |
| Random | Random waveform |




| | |
|---|---|
| MG | |
| Frequency | Modulation speed |

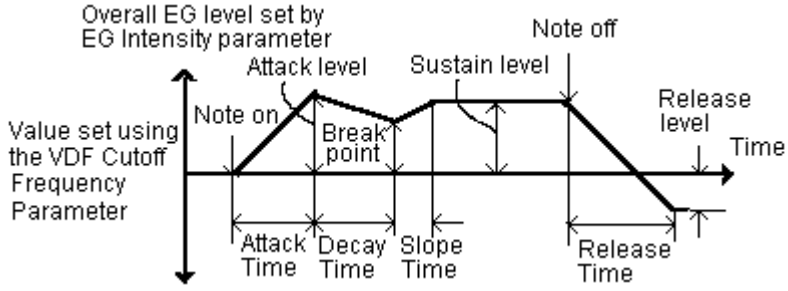
Intensity — Modulation depth
Delay — Time from key strike to modulation start
OSC Select
Off — No modulation
OSC1 — Modulation applies only to VDF1
OSC2 — Modulation applies only to VDF2
Both — Modulation applies to both VDF1 and VDF2

**Color** — **Feedback Effect**

OSC1
Intensity — Depth of OSC1 color effect
Velocity Sense — Change in OSC1 color effect caused by velocity
OSC2
Intensity — Depth of OSC2 color effect
Velocity Sense — Change in OSC2 color effect caused by velocity

**VDF1 and VDF2**

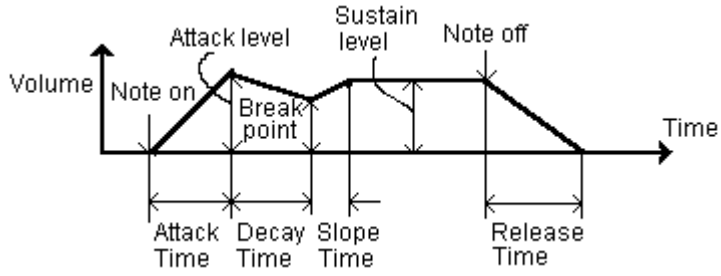
EG — Cutoff frequency change over time




Cutoff — Cutoff frequency for VDF1 and VDF2 (Program brightness)
EG Intensity — Depth of cutoff frequency change caused by EG
Velocity Sense
Intensity — Depth of EG Intensity relative to velocity
EG Time — EG time sensitivity to velocity
AT, DT, ST, RT — EG Attack, Decay Sustain, and Release parameters
Keyboard Tracking — VDF EG sensitivity to keyboard position
Center Key — When the Keyboard Tracking mode is Low or High, this is the key at which Keyboard Tracking starts. When the Keyboard Tracking mode is All, this is the key at which Keyboard Tracking has no effect, but keys above and below are affected.
Mode — Keyboard range where keyboard tracking is active
Off — No keyboard tracking
Low — Keyboard tracking below the Center Key
High — Keyboard tracking above the Center Key
All — Keyboard tracking across the entire keyboard
Intensity — Depth of cutoff frequency change caused by keyboard tracking
EG Time — EG time parameter sensitivity to keyboard tracking
AT, DT, ST, RT — Keyboard tracking Attack, Decay, Sustain, and Release parameters

**VDA1 and VDA2**

EG — Amplitude change over time




Velocity Sense

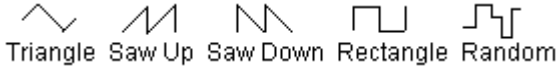
| | |
|---|---|
| Amplitude | Change in VDA1 and VDA2 EG level caused by force of touch |
| EG Time | Change in speed of VDA1 and VDA2 EG effect caused by force of touch |
| AT, DT, ST, RT | EG Attack, Decay, Sustain, and Release parameters |

Keyboard Tracking — VDA EG sensitivity to keyboard position

| | |
|---|---|
| Center Key | When the Keyboard Tracking mode is Low or High, this is the key at which Keyboard Tracking starts. When the Keyboard Tracking mode is All, this is the key at which Keyboard Tracking has no effect, but keys above and below are affected. |
| Mode | Keyboard range where keyboard tracking is active |
| Off | No keyboard tracking |
| Low | Keyboard tracking below the Center Key |
| High | Keyboard tracking above the Center Key |
| All | Keyboard tracking across the entire keyboard |
| Amplitude | Change in the level of VDA1 and VDA2 EG effects based on the keyboard position |
| EG Time | change in the speed of the VDA1 and VDA2 EG effects based on the keyboard position |
| AT, DT, ST, RT | EG Attack, Decay, Sustain, and Release parameters |

**Pitch MG1 and MG2 Cyclic change (vibrato) in pitch**

| | |
|---|---|
| Waveform | Selection of modulation waveform (how change is effected) |
| Triangle | Triangular waveform |
| Saw Up | Sawtooth waveform 1 |
| Saw Down | Sawtooth waveform 2 |
| Rectangle | Rectangular waveform |
| Random | Random waveform |

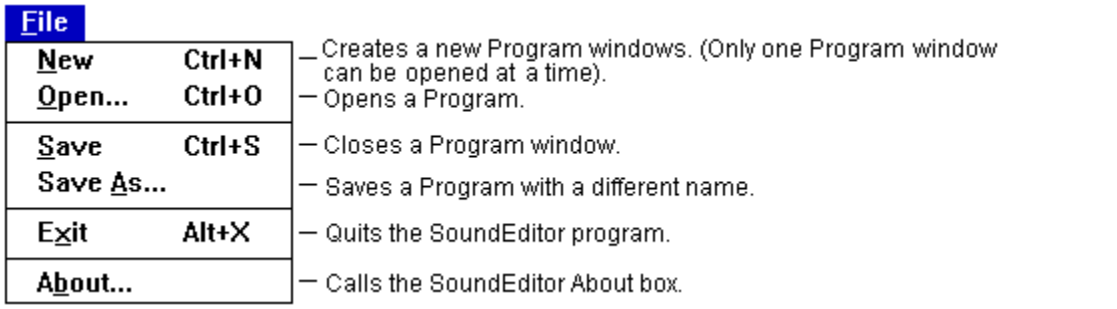


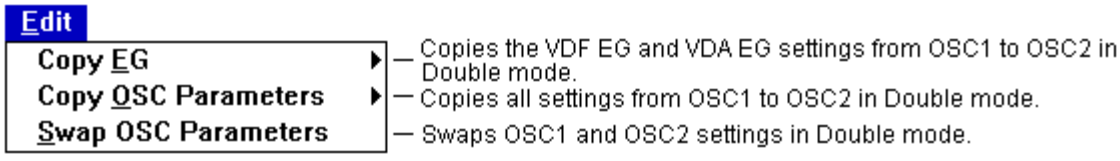

MG

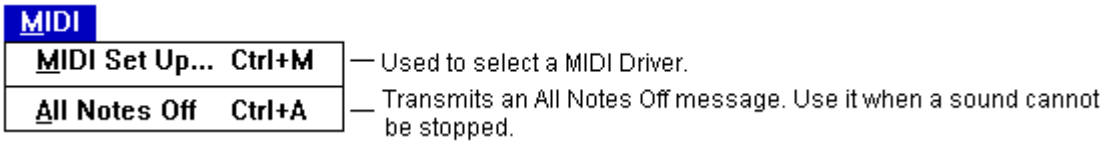
| | |
|---|---|
| Frequency | Modulation speed |
| Intensity | Modulation depth |
| Delay | Time from key strike to modulation start |
| Fade In | Rate at which modulation starts |
| Key Sync | |

| | |
|---|---|
| Off | Modulation continues regardless of new notes |
| On | Modulation restarts form each key press |
| Frequency Modulation | |
| KBD Track | change in speed of pitch MG based on Keyboard track |
| AFT & Mod1 | change in speed of pitch MG based on aftertouch and Control change 1 |
| Intensity Mod | |
| After Touch | Depth of pitch MG effect caused by aftertouch |
| Mod1 | Depth of pitch MG caused by Control change 1 |

## About the Menus




## Select MIDI Driver

Choosing MIDI Set Up... from the MIDI menu displays the MIDI Setup dialog box.
Set the MIDI Port to "...(Your Sound Card Driver) MIDI Out" MIDI Port. Please refer to your sound card manual for correct MIDI Out driver.



## KORG AG-10 Setting when Quitting the SoundEditor

When you quit the SoundEditor program, the KORG AG-10 settings are as left follows:

- The Program being edited is selected on MIDI Channel 1.
- The reverb and chorus effect depth for all channels is set to the value specified in the Keyboard dialog box.

## Advanced Operation

If your sequencer can use Bank Select and Systen Exclusive messages, you can use the Programs that you have made with it.

**1.** Program data can be selected as Program 97 in the Drum Program bank (Controller 0=62 and 32=0). This Program is usually lost when the KORG AG-10 is powered off.

**2.** The SoundEditor saves the edited Program as a Standard MIDI file with .AG extension in which the Program is embedded as System Exclusive data. Please rename your saved files with .MID extension in order for your sequencer program to read. This file can then be dumped to the synthesizer, if your sequencer is able to transmit System Exclusive data.