ALESIS | product overview

Ion Keyboard

Product Description

The Alesis ION is a 49-key, velocity sensitive, analog-modeling synthesizer with 12-bit real time controllers. Built with 500 MIPS processing power, the ION offers continuously variable wave shapes, plus sync and FM synthesis. 16 filter types are included, along with two LFOs, sample & hold, and arpeggiator—all of which sync to MIDI clock. The ION has 8-voice polyphony with 3 oscillators per voice, and is 4-part multi-timbral. A powerful and intuitive modulation matrix is built in, as well as a 40-band vocoder that does not use up any polyphony.

Positioning

The world's most powerful analog modeling synth offering incredible sound and amazing value at half the price of synths with half the features.

Applications

The Alesis ION is perfect instrument for the keyboardist seeking a synth powerful enough to create never before-heard sounds or classic analog synths tones. Fitted with 30 12-bit realtime controllers, the ION excels in live stage performance, or in recording high-resolution controller information to a MIDI sequencer.

Key Features & Benefits

1) 500 MIPS (million instructions per second) processor
- Huge power for great realism
- More flexible modeling
- Absolutely no “zipper” noise

2) Powerful DSP effects
- 4 simultaneous mono/stereo “overdrive” effects
- Stereo master effects
- 40-band vocoder

3) 160 x 160 pixel screen
- High resolution graphic display
- Gives instant visual feedback of most recent controller in use

4) 30 12-bit 360-degree knobs
- Extensive, ergonomic control
- Provides 32X the resolution of typical MIDI controllers
- Compatible with sequencers via NRPMS (Non-Registered Parameter Numbers)

5) 24-bit balanced I/O
- 4 TRS 1/4” outputs
- 2 TRS 1/4” inputs for processing external sounds

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Synthesis

Method: Analog modeling. Polyphony and parts: 8-voice, 4-part multitimbral. Oscillators: 24 total. Oscillators: 3 oscillators with continuously variable waveshapes, oscillator sync, and FM per voice. Filters: 2 multimode resonating filters with 16 different filter types to choose from. Filters can be run in series, parallel, or stereo. Modulation: 2 LFOs with sine/triangle/sawtooth/square waves, separate sample & hold generator per voice. Other: Arpeggiator with multiple note order settings and 32 rhythm patterns. Unison mode. Portamento (four types) with legato mode. Display: 160 x 160 high-resolution graphic LCD.

Effects

4 simultaneous drive effects (1 per part): compressor, RMS limiter, tube overdrive, distortion, tube amp, and fuzz pedal. Stereo master effects: (shared): super phaser, string phaser, theta flanger, thru-zero flanger, and 40-band vocoder.

Sound Locations

512 preset programs, 32 preset multitimbral setups (all user-rewritable).

Keyboard

49-key synth-action with velocity sensitivity.

Connections

Audio outputs (all 24-bit 1/4" TRS): 4 outputs (2 x stereo), 2 inputs (1 x stereo). Other: Sustain and expression pedal inputs (1/4"). Headphone jack (1/4"). MIDI in, out, and thru.

Power and Dimensions

Power: 100–240V AC, 50/60Hz. Dimensions (H x W x D): 3.75" x 33" x 13" (96mm x 839mm x 331mm). Weight: 20lbs (9kg).

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Talking Points

What is ION?

It may be helpful to give some of the background story of the Ion in order to understand how to pitch it against the competition.

The Ion was built because the designers couldn't find an Analog Modeling synth that they wanted to buy. They had three main complaints with the synths that were on the market.

1. They didn't sound very good.
2. They were difficult to use.
3. They were too expensive.

Alesis advantages:

- **Ion Sounds Better -** The Ion objectively has a higher quality sound engine than any of the competition. It runs faster, can produce higher and lower frequencies without aliasing, and thus sounds more "real" and less "digital. " This is showcased in the 512 great-sounding presets.
- **Ion's Intuitive Design -** We have a huge graphic LCD that shows parameter information cleanly and clearly. The entire LCD interface is only 1 layer deep – there are no submenus. It is almost impossible for users (or salesmen) to get lost. The control panel is large (it takes up the entire front panel – contrast this with the competition) and intuitive. Every control has a single function – no shift buttons or multiple layers of confusing silkscreen.
- **Ion Costs Less -** At $799 we have the perfect match of performance and price. We have the features and sound quality that professionals demand, but we are priced low enough for the average musician.

Nobody else has:

- **160 x 160 graphic LCD** – This is the largest (biggest size and highest resolution) on any analog modeling synth AT ANY PRICE POINT.
- **30 360-degree pots** – These are ANALOG pots. Everybody else is using DIGITAL encoders, or normal, "dumb" pots. The Ion's pots have over 300-times the resolution of encoders. Benefit: smooth, analog feel. No zippering.
- **17 different filter types** – More than anyone else, and we will be adding more in subsequent software updates. More filters = a wider variety of sounds.

Important numbers:

8 Voices
3 Oscillators per voice
2 Filters per voice
17 Filter types
40-band Vocoder
512 Presets

Other neat stuff:

- Upgradeable OS. New features can be added via MIDI.
- Tons of extra sounds (for free!) at our website, including "signature" banks from leading sound designers.
- All inputs and outputs are 24-bit and balanced.

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FAQs

Q. What is analog modeling?
A. Analog modeling synthesis is the most efficient way to create and manipulate sounds today. Old "true" analog synths used circuits and oscillators to actually create new sounds. The problem with that was that analog circuits were unstable, and if you created a patch you liked, you would probably never be able to reproduce it. Enter analog modeling synths. Rather than relying on a series of wires and knobs, they use an actual CPU full of pre-programmed sounds. Instead of turning a knob or moving a slider to manipulate voltage, like on a true analog synth, an analog modeling synth uses MIDI messages to alter its patches. The advantages of an analog modeling synthesizer are many: it's very easy to recreate and even store a favorite patch, they are not temperamental like analog synths are, they don't require a degree in electronics to use, and, maybe most important of all, they are far more inexpensive than real analog synths.

Q. What does 500 MIPS mean?
A. 500 MIPS stands for "500 Million Instructions Per Second." It is the name of the sound engine inside the ION, and it provides up to FIVE TIMES the processing power of synthesizers costing much more. What this means is more realistic sounds, more flexible modeling, and quicker response times to control changes. No other synth can even come close to the ION's processing power for the price.

Q. How much control do I have over my sounds?
A. Tons. The ION has 30 real-time high resolution knobs, 69 buttons, a pitch wheel, and two assignable mod wheels. It also has 4 simultaneous insert effects as well as master effects, plus an incredible 40-band vocoder. There is no shortage of sound manipulation ability here.

Q. What kind of effects does the ION have?
A. The ION can support up to four simultaneous stereo insert effects per patch including compressor, limiter, tube amp and overdrive, distortion, and fuzz. Additionally, stereo master effects can be applied. These include chorus, flanger, phaser, and a fullfeatured
vocoder that can process up
to 40 bands with no impact on the polyphony.

Q. So why ION?
A. ION's stunningly realistic analog modeling is unsurpassed by any synth in its class. Designed by the same team behind our flagship Andromeda True-Analog Synth, its sounds range from standard classics to those you could never have thought possible. Each voice has three oscillators with variable wave shapes: sine, triangle, sawtooth, and square. You can work with these or anything in between. Throw in FM, oscillator sync, two multi-mode filters per voice with 16 filter types to choose from, flexible LFOs, and a killer arpeggiator and you've got the world's most powerful analog modeling synth. And all this at half the price of synths that have half the features ION does. So why not ION?

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