

Virus TI Technical Specifications

Sound Engine

- Various oscillator models including Virtual Analog, Wavetable, HyperSaw, Grain- and Formant Table types.
- A maximum of 192 parallel effects in total. Reverb and delay, chorus, phaser, frequency shifter, ring modulator, distortion, 3-band EQ and new Character processors.
- 2 independent multi-mode filters (HP, LP, BP, BS) and the Analog Filter which was modeled after the Moog MiniMoog™ cascade filter with 6-24 dB Slope and self-oscillation.
- 32-step user-programmable arpeggiator pattern for every patch.
- Modulation Matrix with 6 slots each featuring 1 source and 3 destinations.
- 3 LFOs with 68 waveforms to choose from. 2 fast ADSTR envelopes.
- Knob quantise for creating stepped controller movements. The stepping automatically syncs to the Virus clock or an incoming MIDI clock.
- Adaptive control smoothing for jitter-free modulations on all important parameters.
- Multi mode with embedded patches.

Hardware

- Dual DSP system which dynamically allocates its resources. Depending on the complexity of a patch everything in between 20 and 90 voices can be achieved (10-50 voices with Virus TI Snow).
- 512 RAM patches and 26 banks of each 128 ROM patches which can be exchanged by the user.
- 6 balanced outputs with +4 dB level and soft limiting algorithm. Studio grade 192 khz D/A converters with S/PDIF digital I/O. 2x24 bit inputs. Surround sound capabilities. The Virus TI Snow has 2 un-balanced outputs and no SPDIF I/O.
- The tempo of an incoming audio signal can be recognised and the Virus can lock to it within a very short amount of time (typically, for “4 on the floor” - style music, this happens in between 1-3 bars). Thereafter the Virus TI follows the tempo.

Software

- Virus Control VST/AU/RTAS compatible virtual instrument plug-in included to create an audio link in between the host sequencer and Virus hardware synthesizer.
- Audio and MIDI inputs and outputs can be used by the sequencer application as an audio and MIDI interface. Total Integration keeps working, even if you prefer to use another audio interface.
- Sample accurate and delay compensated timing.
- All knobs on surface can be used to control other software and hardware synthesizers (this feature is not available for the Virus TI Snow).
- Virus Control Center application for convenient memory backup of the entire Virus TI and exchange of content of ROM banks.
- Soft- and hardware specifications and details

Sound engine details

Huge voice count

The Virus TI series features a dual core DSP system with a high-speed local buss. This combo is capable of cranking out in between 20-90 voices. Also thanks to the high end design, we were able to improve the overall system response time (sometimes referred to as latency) which makes the Virus TI Series even snappier, especially for live musicians.

HyperSaw oscillators

HyperSaw is a multi-sawtooth oscillator. With a single parameter the user can alter the amount of parallel oscillators from 1-9, smoothly and in realtime. You can literally add more oscillators to fatten up the sound whilst playing a chord. The relative tuning and spread can be controlled as well. Using the highly efficient HyperSaw engine with 9 parallel oscillators per voice (each with it's own parallel sub oscillator) the Virus TI series can calculate over 1800 oscillators in realtime.

Programmable Arpeggiator

The Virus TI features a user-programmable arpeggiator. Every single Virus TI patch can store it's own arpeggiator pattern. You can build new patterns from scratch or use one of the 64 presets as a foundation.

PureSemitones

PureSemitones tunes the oscillator's semitone knob to pure intervals. The technology, derived from Access' PureTuning, tunes the intervals of the semitone parameter to the nearest harmonic and therefore combines a linear scale with intervals which are perfectly in tune. Sync sounds especially benefit from PureSemitones.

Delay and reverb per part

Each of the 16 parts in multimode can have it's own, dedicated delay and reverb.

Graintable oscillators

The Graintable oscillators applies techniques as those used in granular sampling and pitch-shifting algorithms to synthesizer Wavetables. It opens up a whole exciting world of new possibilities. Imagine bending any Wavetable far beyond what is sonically possible with common Wavetable synthesizers. It all happens in realtime and of course all parameters can be modulated in realtime as well.

The formant-based oscillators work in a similar fashion, only with one crucial difference: the formants remain fixed as you play. This effectively turns the oscillator into a filterbank on steroids comprising up to 256

resonant bandpass filter poles, whereby the cutoff of each virtual pole is determined by the harmonics in the current Wavetable index.

Multi Mode

Multi Mode doesn't just reference every patch in each of the 16 parts (as most synthesizers do); it embeds all patch data for every part. There is no longer any need to be cautious of editing single sounds that might be used by multi mode patches. Sounds can be tweaked and tailored to build stacks or to compliment each other without the risk of overwriting a patch which may be used in another song or Multi Mode preset. The second new mode is the Sequencer Mode, which replaces the Multi/Single mode from the Virus A-B-C series. In contrast to the new Multi Mode, it references the patches in single mode, so you could say that it makes the Virus TI Series feel like a synthesizer with 16 true single modes.

Wavetable oscillators

In addition to the award winning Virus oscillators the Virus TI series introduces Wavetable oscillators. These sophisticated new oscillators put a completely new array of sounds at your disposal. From gritty, screaming, somewhat LoFi sounding textures to silky-smooth wave cascades - the sky is the limit. Now imagine processing the WaveTable with Access' self-resonating MiniMoog™ Filter... A mixture between Virus oscillators and WaveTable oscillators is also possible. The Virus also allows PWM-style modulation and the degree of interpolation between the individual waves can be altered. As a result a Wavetable can morph from smooth to coarse to stepped (which makes it sound similar to a wave sequence). It's like turning a nice ambient patch into a dark, gritty sonic monster by only changing one continuously variable parameter.

Section Locking

A new technology enabling the TI to lock specific aspects of a sound from changing. For instance locking everything but the arpeggiator. Now when browsing through the library the sound character will remain unchanged, but the arpeggiator pattern will alter depending on the settings of the selected new patch. Forget about random patch generators. This is so much more fun. It's practically like having a completely new and intuitive sound design tool to your disposal. All you need to do is to choose what you dislike about a patch and find something better within the huge TI library which counts thousands of onboard patches.

Modulation Matrix

Mod Matrix is comprised of 6 slots; each with one source and three destinations.

Hardware Details

Dual DSP system

The Virus TI DSPs are not only faster, they come in pairs*. A highly effective local buss in between the processors boosts performance even further.

* Virus TI Snow features only one DSP

Studio Grade Converters

192 Khz studio grade D/A converters (+4dB balanced output), with soft limiting algorithm. 24 bit A/D converters. The Virus produces one of the hottest signals in the industry. Live keyboards can leave their DI boxes at home and plug the symmetrical outputs right into the stage box (special cable required).

Digital I/O and USB

The Virus TI comes with SP/DIF (44.1khz/48khz) digital I/O as standard. The USB port is compatible with the USB 2.0 Specification and works with USB and Hi-Speed USB systems, peripherals and cables. Port speed is 12 mbit/sec.

Big and bright display

Which can show graphics in 128x32 pixels. The display shows up to 4 rows of text and graphics. In most cases three parameters are being displayed at the same time. As a result, there are only 1/3 of the menu pages in comparison to the previous Virus series.

Editing

3 edit knobs underneath the display which can edit three parameters at the same time. The 3 soft knobs can also act as programmable and nameable knobs for every individual patch.

Painless rack mounting

Virus TI Desktop only: The entire I/O board can be rotated by 90 degrees which makes rack-mounting the Virus much more fun. Instead of having to find special jack plugs or waste loads of rack space, simply turn the whole I/O section and voilà! - all the sockets are at the back of the rack mounted Virus TI Desktop. (Rack mounting kit is optional).

Patch memory

Virus TI Desktop/Keyboard/Polar: 512 RAM patches and 3328 ROM sounds + 16 Multi Mode slots which embed all patches used + 112 referring Multi Mode slots. Virus TI Snow: 512 RAM patches and 512 ROM sounds + 64 Multi Mode slots which embed all patches used.

Tap Tempo

There is a dedicated Tap tempo button. The tap tempo algorithm used is based on SyncXtreme, Access' acclaimed tempo sync algorithm.

Illuminated Logo

Illuminated Access Logo on the rear of the Virus TI Keyboard and Virus TI Polar. The logo pulsates in standby mode, and can be statically on during normal operation or pulsate to the tempo (like the tempo LED) which is especially nice for those drummers used to playing to a visual tempo source.

Dimensions and weight Virus TI 2009

Virus TI Desktop

- Height: 8 cm (3.2 inches)
- Width: 47 cm (18.5 inches)
- Depth: 18.8 cm (7.4 inches)
- Weight: 3.4 kg (7.4 pounds)

Virus TI Snow

- Height: 5.9 cm (2.3 inches)
- Width: 28.2 cm (11.1 inches)
- Depth: 14.9 cm (5.87 inches)
- Weight: 1.5 kg (3.3 pounds)

Virus TI Keyboard

- Height: 11.5 cm (4.6 inches)
- Width: 99.5 cm (39.2 inches)
- Depth: 37 cm (14.6 inches)
- Weight: 13.9 kg (30.6 pounds)

Optional rack mounting kit

- Height: 6.2 cm (2.4 inches)
- Width: 48.6 cm (19.3 inches)
- Depth: 20 cm (7.88 inches)
- Weight: 1.0 kg (2.2 pounds)

Virus TI Polar

- Height: 11.2 cm (4.4 inches)
 - Width: 56.5 cm (22.3 inches)
 - Depth: 33.5 cm (13.2 inches)
 - Weight: 8.4 kg (18.5 pounds)
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Configurations and Compatibility

Inputs and Outputs

- 6 Symmetrical outs with +4dB studio level ❖?❖
- Optional Soft Limiting for every output ❖?❖
- 192 Khz/24bit D/A converters ❖?❖
- 2 Inputs with 24-bit A/D converters ❖?❖
- 4 different input sensitivities ❖?❖
- USB for audio, midi and data connection ❖?❖
- USB2 compatible device, 12Mbit data transfer rate ❖?❖
- S/PDIF In/Out for Digital I/O. ❖?❖
- Dedicated headphone out. ❖?❖
- Pure Tuning (Licensed)

What's in the box?

- Virus TI
- Printed Quick start manual in English, German, French and Spanish
- Power Cable
- USB Cable
- Power Supply (Virus TI Desktop/Snow only)
- Replacement knob

Electrical requirements

- Line voltage: 100-240V AC ⚡?⚡
- Frequency: 50Hz to 60Hz, single phase ⚡?⚡
- Maximum continuous power: 30W ⚡?⚡

Environmental requirements

- Operating temperature: 50° to 95° F (10° to 35° C)
- Storage temperature: -40° to 116° F (-40° to 47° C)
- Relative humidity: 5% to 95% noncondensing
- Maximum altitude: 10,000 feet

Compatible sequencers

Macintosh

- Apple Logic 8 or higher
- Steinberg Cubase SX/SL 3.1 or higher
- Pro Tools 7.3 M-Powered, LE or TDM or higher
- Ableton Live 7 or higher

Windows

- Steinberg Cubase SX/SL 4 or higher
- Pro Tools 7.3 M-Powered, LE or TDM or higher
- Cakewalk Sonar Producer 7
- Ableton Live 7 or higher
- Image Line FL Studio 5 or higher

*Please note that other sequencers/versions might work as well but eventually do not support all functionality.
We strongly recommend only using certified products.*