Virtuoso 2000

128 Voice Expandable Sound Module



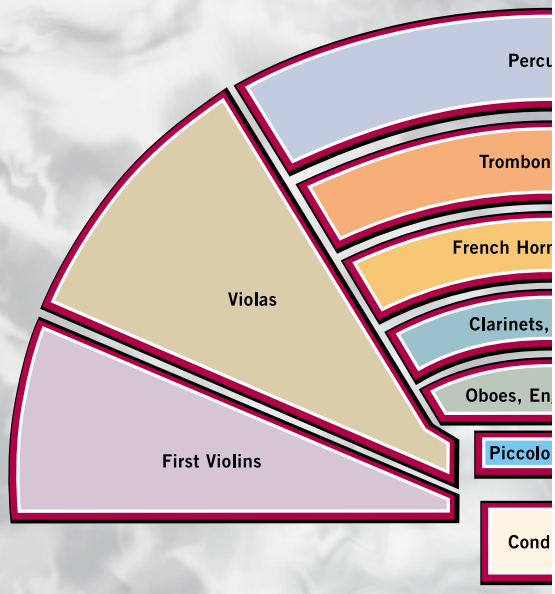
The new E-MU Virtuoso 2000 is a 128 voice expandable orchestral sound module that provides the modern composer/ musician with a brand new comprehensive orchestral sound set in a state-of-the-art package. E-MU's sound designers spent months sampling dozens of solo and section instruments, all from the same professional symphony orchestra, to develop an orchestral ROM sound set that is second to none in realism, versatility and consistency throughout all of its instrument sections. These samples have been meticulously crafted into presets optimized for the Virtuoso 2000's powerful architecture– the same platform as E-MU's award-winning Proteus® 2000 Sound Module. And with its 128 voice polyphony and lightning-fast MIDI response, the Virtuoso 2000 will play back your massive sequences with perfect timing. With over 25 years of sampling and audio experience, E-MU has created an orchestral masterpiece– the Virtuoso 2000.

E-MU



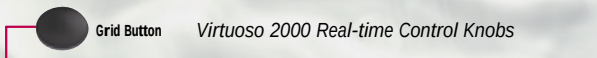
128 Voices

The Virtuoso 2000 offers the modern composer/musician everything needed to create realistic sequences with a minimum of effort at an affordable price. The most important feature of any orchestral module is of course its sound, and E-MU's sound designers spared no expense to create the definitive virtual orchestra on 64 MB of ROM. But to successfully incorporate these sounds into your music requires that your sound module also deliver all of the polyphony, processor power, and other features needed to create and play back realistic orchestral sequences. The Virtuoso 2000's 128 voice polyphony enables you to play back your thickest sequences without compromising a single note. This is especially important when playing back rich instrument sounds that require multiple layers to achieve realistic results. And Virtuoso 2000's powerful processor assures that your thick sequences play back with dead-on timing– so what you sequence is what you hear. Virtuoso also offers you 32 MIDI channels, giving you even greater flexibility by doubling the number of instruments that you can play on most other sound modules at one time. The Virtuoso 2000 is a professional instrument that delivers these tools like no other sound module available.



Professional Tools

In light of its quality sound set and massive polyphony, it's easy to forget that the Virtuoso 2000 also boasts the most powerful synthesis engine of any sound module on the market today, providing you with tools that range from subtle to extreme. The Virtuoso gives you instant access to 12 real-time controls from its front panel, allowing you to tweak your sounds without ever having to enter the edit screen. And you can assign these real-time knobs to control almost any parameter, so you can customize your Virtuoso 2000 for your specific project's requirements. You can also set Virtuoso 2000's real-time controls to transmit MIDI controller messages to your sequencer to record all your real-time modifications. Soften the attack of your strings, pan instruments– Virtuoso 2000 real-time controls allow you to easily experiment with your sounds and achieve new levels of expressivity.



Virtuoso 2000 Real-time Control Knobs

Tone: Controls the filter's frequency cutoff, making your sound brighter or darker.

Presence: Controls the filter's resonance or "Q" to add warmth to your sound.

Shape: Controls the filter amount.

Image: Adds new sounds and space to your preset.

Attack: Adjusts the attack time of the envelope.

Decay/Rls: Controls the decay and release time of the envelope.

Movement: Adjusts the amount of LFO movement in the preset for rhythmic and stereo effects.

Rate: Controls the rate of the movement.

Dynamic 1: Can be variable, but often controls touch sensitivity (velocity to amp envelope).

Dynamic 2: Can be variable, but often modulates your velocity to filter amount.

FXA: Adjusts the level of the first FX engine.

FXA: Adjusts the level of the second FX engine.

Section Strings

(Legato, Spiccato, Pizzicato, Tremolande– featuring various bowing styles and effects)

Concert Hall/Large Ensemble
16 Violins
15 Violas
10 Celli
6 Double Basses

Concert Hall/Small Ensemble
5 Violins
5 Violas
5 Celli
3 Double Basses

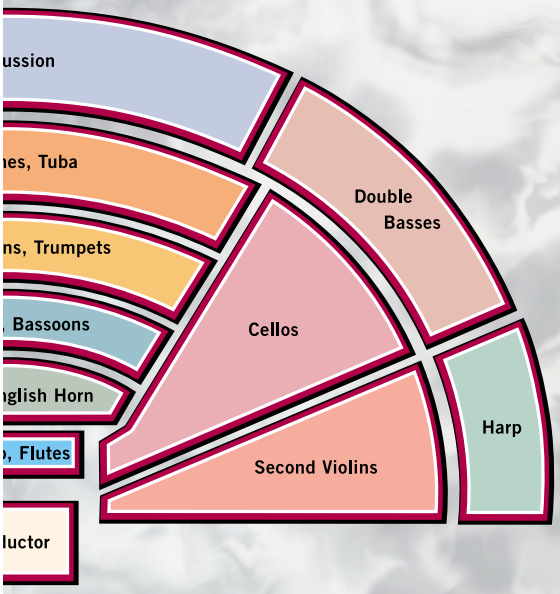
Studio/ Small Ensemble
5 Violins
5 Violas
5 Celli
3 Double Basses

Solo Strings

(Legato– with and without vibrato, pizzicato)

Violin
Viola
Cello
Double Bass





Brass
(velocity switching between pF /ff samples)

Trumpet
French Horn
Trombone
Bass Trombone
Tuba

Woodwinds
(velocity switching between pF /ff samples)

Piccolo
Flute
Oboe
English Horn
Clarinet
Bass Clarinet
Bassoon
Contra Bassoon

Percussion

Percussion Battery
(includes over 20 instruments)

Plus:
Harp
Orchestral Bells
Tubular Bells
Bell Tree
Celeste
Xylophone
Marimba

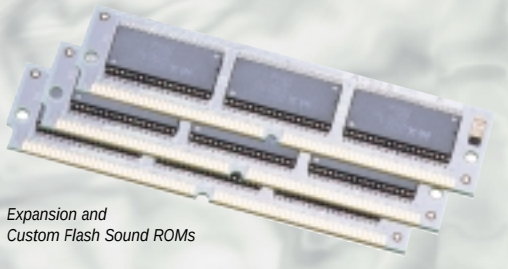
Sound

To create the Virtuoso 2000's 64 MB sound set, E-MU's sound designers spent hundreds of hours sampling musicians from the same professional symphony, many playing vintage instruments. All instruments were recorded using four microphone pairs for each instrument at a consistent 96 kHz sampling rate with 24-bit depth for pristine audio quality. Additional samples were recorded from the audience seats to provide "ambient" sound, allowing you to blend more or less of the natural hall sound into your instruments. The Virtuoso 2000 even offers you mixed stage/ambient presets that use the additional sub outputs for four speaker applications.

E-MU's sound designers created more than just a comprehensive collection of orchestral samples– they developed a true virtual orchestra. To achieve a truly convincing orchestral score, your sequence must play back as more than just a sum of the individual instrument parts. By developing the Virtuoso 2000's sounds with your final composition in mind, and not as separate instruments in a vacuum, E-MU's sound designers have created an orchestral sound set second to none in realism and consistency. The Virtuoso 2000 showcases this consistency by providing you with several presets that place multiple instrument types across the entire keyboard (i.e. double basses through violins) to give you seamless access to entire instrument families.

Expandable

In addition to its 64 MB orchestral sound set, the Virtuoso 2000 also provides you with two internal ROM slots for further expansion, allowing you to add up to 64 MB of additional sounds. E-MU offers you a comprehensive library of expansion ROMs that are plug-and-play right out of the box. You can even create your own custom expansion ROMs using E-MU's state-of-the-art E4 Ultra Samplers. E-MU breaks the sound module paradigm again by delivering an open-ended system that allows you to customize your sounds like no other. And Virtuoso 2000 offers you a host of other useful features that allow you to focus on creating your art: SoundNavigator to quickly find the right patch quickly, simple storage and recall of your Multi-Mode setups, E-MU's patented digital filters that give you incredible control of your sound, 24-bit effects, assignable analog and digital outputs, and much more. The Virtuoso 2000 redefines state-of-the-art orchestral sound modules– all in one rackspace.



Expansion and Custom Flash Sound ROMs

Expansion Sound ROMs for the Virtuoso 2000 include:
- **Siedlaczek Orchestral Library**
- **Sounds of the ZR, featuring the acclaimed Perfect Piano**
- **World Expedition**

Specifications

Controls

Power Switch, (4) Real-time Controllers, Data Entry Control, Master Menu Select, Edit Menu Select, Audition Riff/ Program Change View, Multi Setup Select, Cursor Control, Save/Copy, Home/Enter, Master Volume, Backlit 2 x 24 Character LCD

Menus

• Main Menu

Preset Selection, Bank Selection, Instrument Category Selection, ROM/USER Selection, MIDI Channel Selection, Channel Volume, Channel Pan

• Master Menu

Transpose, Tune, Master Bend Range, Master Velocity Curve, Mix Output, FX Mode, FX MultiMode Control, Master FX A Algorithm, Master FX B Algorithm, MIDI Mode, SYSEX ID, MIDI Enable, MIDI Bank Select, MIDI Program -> Preset Re-mapping, Preset Change Enable, RealTime Controller assign (A-H), MIDI Footswitch Controller Assign, Tempo Control (up/down), Knobs Preset Quick Edit, Knobs Deep Edit Enable, Knobs Transmit MIDI Enable, Preset Edit all Layers Enable, Calibrate Knobs, Send MIDI SYSEX Data, User Key Tunings, Output Format (analog, S/PDIF, AES pro), Demo Sequence (1-4), Master Tempo Screen Viewing Angle

• Multi Menu

Name, Restore, Save

• Save/Copy Menu

Save Preset, Copy Preset, Copy Layer, Copy Patch Cords, Copy Bank, Randomize, Copy User Bank to Flash

• Edit Menu

Preset Name, Instrument (Layer 1-4)
Per Layer Parameters:
Key/Velocity/Real-time Controllers Crossfade/Switch zones, Transpose, Tuning (Course/Fine), Volume/Pan, Amplifier Envelope Mode (Factory, Time, Tempo), Amplifier Envelope (6 rates, 6 levels, repeat), Chorus + Width, Sound Start Offset and Delay (Delay = Time, Tempo), Non-Transpose Enable, Solo Mode, Multiple Trigger, Melody (last, low, high), Synth (last, low, high), Finger Glide, Assign Group, Glide Rate/Curve, Filter Type, Filter Frequency, Filter Resonance, Filter Envelope Mode (Time, Tempo), Filter Envelope (6 rates, 6 levels, repeat), Auxiliary Envelope Mode (Time, Tempo)
Auxiliary Envelope (6 rates, 6 levels, repeat),
LFO 1 Sync (Free Run, Key Sync),
LFO 1 Shape (16 waveforms),
LFO 1 Rate (Time, Tempo),
LFO 1 Delay (Time, Tempo),
LFO 2 Variation, LFO 2 Sync (Free Run, Key Sync),
LFO 2 Shape (16 waveforms),
LFO 2 Rate (Time, Tempo),
LFO 2 Delay (Time, Tempo), LFO 2 Variation,
Patch Cords (24, >60 sources, >60 Destinations),
Pitch Bend Range, Mix Output
Preset Common Parameters:
Preset Patch Cords (12)
Effects: FXA, (>30 Algorithms, Delay, High Frequency Damp, FXB -> FXA Send, Send Amount), FXB , (>30 Algorithms, Feedback, LFO Rate, Delay, Send Amount)
Initial Controllers A-L
Keyboard Tuning (Equal, Just C, Vallotti, 19-Tone, Gamelan, User 1-8)
Preset Link 1 (Preset #, Key Range, Velocity Range, Volume, Transpose, Delay (time, tempo)
Preset Link 2 (Preset #, Key Range, Velocity Range, Volume, Transpose, Delay (time, tempo), tempo offset
Audition Riff Selection, Play Solo Layers

Technical Specifications

Audio Channels: 128
MIDI Channels: 32
Presets: 1024 (512 RAM (user), 512 ROM)
Multis: 64–128
Layers: 4
Sound Memory: 64 MB (expandable to 128 MB)
Internal Expansion slots: 2 additional
Expansion format: ROM SIMM (32 MB/16 MB), Flash Memory SIMM (16 MB/32 MB)
Filters: 6th/12th order (50 different types)
Data Encoding: 16-bit linear, 18-bit DAC's
Signal to Noise: >92 dB
Frequency Response: 20Hz - 20kHz (+2/-1dB)
THD + Noise: <0.02% (1 kHz sine wave, A- Weighting)
Power Consumption: 15 Watts
Voltage Input: 90VAC - 260VAC at 50 Hz - 60Hz
Maximum Output Level: +4dB
Output Impedance: 1000 Ohms
Effects Engine: 24-bit internal processing

Audio Inputs

Effects Return 1 In (stereo), Effects Return 2 In (stereo)

Audio Outputs

6 polyphonic (configurable as three pairs of stereo with programmable panning), Stereo digital S/PDIF (AES pro compatible)
• MIDI Jacks
IN x2, Thru x2, Out

Rack Dimensions

Height 1.75", Width: 19", Depth: 8.5"

*all specifications are subject to change



Grid Button: Use the Grid Button to select the row of parameters to be controlled by Virtuoso 2000's four real-time knobs.

Quick Edit LED's: These LED's indicate that you have moved the knob from its default position.

Cursor: Move between the different fields on the screen using the two cursor buttons, enabling you to edit these values using the data knob.

Master: Access Virtuoso 2000's global parameters such as MIDI channel filters, Clock Tempo Control, SYSEX commands and more using the Master Button.

Edit: Use the Edit Button to enter the "deep" parameters of Virtuoso 2000's advanced synth engine.

Data Knob: Turn the Data Knob to change the parameter value currently selected by the cursor.

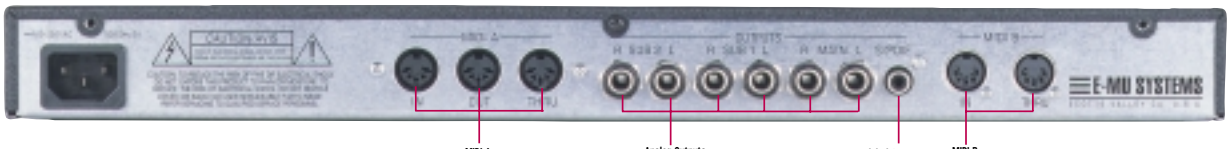
Quick Edit/Real-time Control Knobs: You can use the real-time control knobs to both quickly edit your preset parameters and act as assignable real-time MIDI controllers. The default settings are labelled on the front panel in three rows, all of which can be custom configured per preset. These knobs serve as your navagational tools when you enter "Deep Edit" mode.

Audition: You can press the Audition Button to hear a riff of the current preset.

Multi: You can use the Multi Button to save and recall different Multi-Mode setups.

Save/Copy: Press the Save/Copy Button to save an edited preset and copy setups and preset parameters from one preset to another. The Save LED lights up to indicate that you have changed the current preset in either "quick edit" or "deep edit," and acts as a reminder to save the new preset before moving on.

Home/Enter: You can use the Home/Enter Button to confirm a save, enter a new field or return to its home position.



MIDI A: MIDI input, output and thru for MIDI channels 1A-16A.

Analog Outputs: Six analog outputs that you can individually assign to different channels in Deep Edit mode.

Digital Output: S/PDIF output.

MIDI B: MIDI input, output and thru for MIDI channels 1B-16B.

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E-MU

P.O. Box 660015, Scotts Valley, CA, USA, 95067-0015
Tel. 831.438.1921 • www.emu.com
United Kingdom Office: Suite 6, Adam Ferguson House, Eskmills Industrial Estate, Musselburgh, Scotland EH21 7PQ • Tel: +44 131 653 6556