EMULATOR IIIXP

E-MU

The Emulator IIIxp professional digital sampling system delivers a new level of power, memory, voices and functionality to users in a variety of audio production environments. On the professional music scene, the EIIIxp is the perfect stand-alone digital sampler for both studio and live use. Or, add mass storage peripherals, computer-based sample editing, Remote Control/Librarian software, and a direct-to-disk recording system and the EIIIxp becomes the central engine of a sophisticated modular digital audio system—ideal for audio engineers, sound designers and post production professionals. ≡IIIᴮ
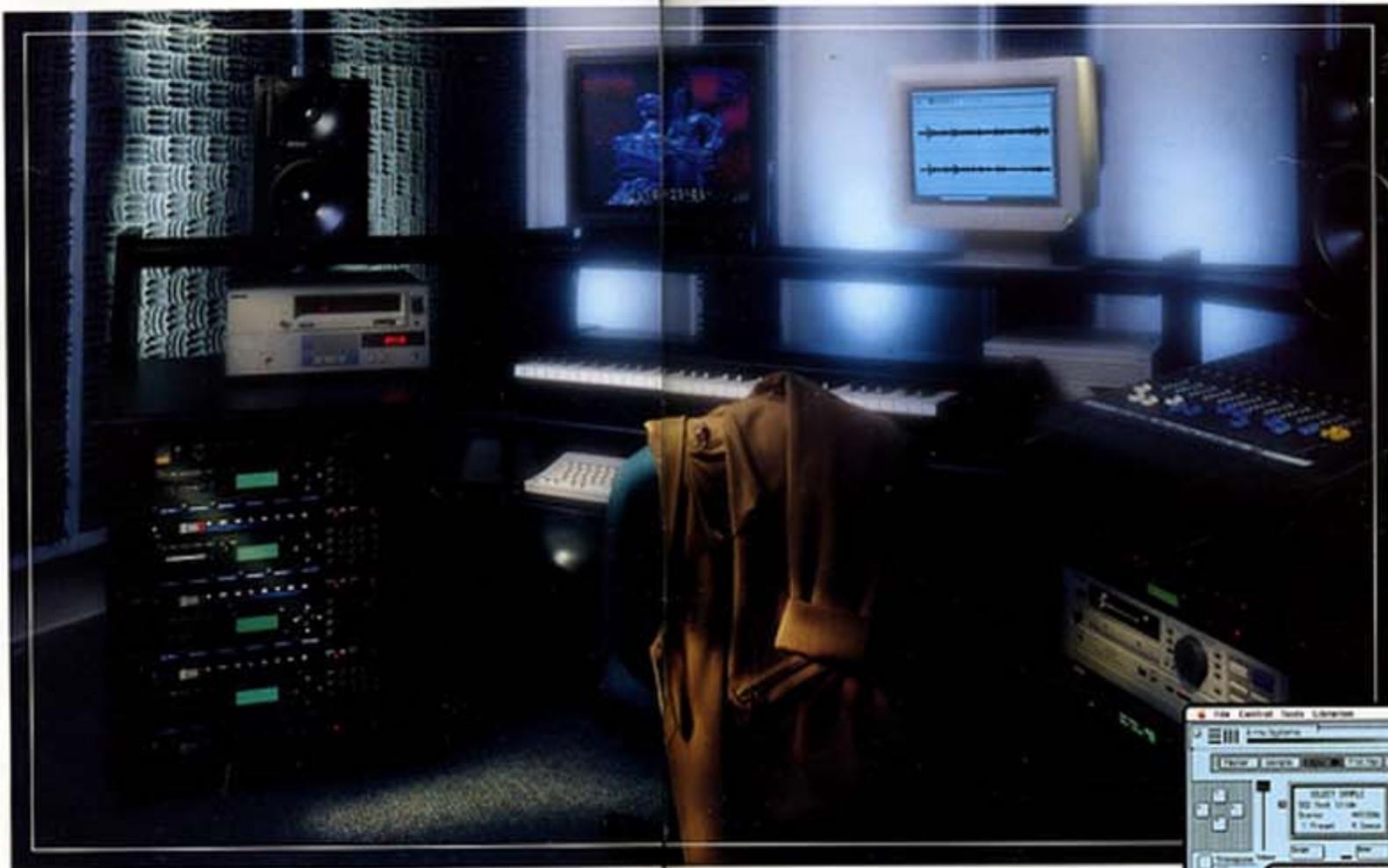
AUDIO QUALITY

E-mu is renowned for superb audio quality and innovative digital sampling products. Now, through the integration of E-mu's latest generation proprietary DSP technologies, EIIIxp offers audio quality and related functionality that sets new standards of performance and value.

EIIIxp features true 16-bit resolution for the purest possible audio reproduction. It allows for virtually distortionless pitch transposition over an incredible 10 octave range. Aliasing, imaging, clock noise and other digital artifacts are eliminated by maintaining a constant or "fixed" sample rate of 44.1kHz, regardless of transposition. Finally, separate 18-bit DACs per output channel allow for increased headroom and ensure that EIIIxp's high audio quality is translated as accurately as possible to the analog domain. ≡IIIᴮ

FEATURES

EIIIxp features 32-voice polyphony, facilitating complex multi-timbral musical compositions and effects tracks—as well as dense multilayer sounds—without a paralyzing reduction in polyphony. Dual 50-pin SCSI connectors allow the user to link multiple EIIIxp modules and incrementally increase voice count and multi-timbrality.

Featuring 8MB of RAM standard, the EIIIxp can be expanded to 32MB easily and cost effectively (enough memory to load in the sounds from Proteus 1, 2 and 3 as well as Procussion with 12MB of RAM to spare).

For maximum power, EIIIxp is available in a Turbo version featuring a full 32MB of RAM and an internal 120MB hard drive loaded with sounds.

Superb sample playback is but one of EIIIxp's outstanding features. Impressive sampling capabilities have also been integrated into the system. AES/EBU digital I/O with XLR connectors allow the user to input sounds from a number of mediums, including external analog to digital converters and DAT tape recorders. Output can be routed directly to digital recorders or processors with compatible digital I/O such as hard disk recording systems or studio digital processing systems. Consumer digital I/O format offers the added convenience of compatibility with a variety of other input and output devices.

For added flexibility, a stereo analog sampling option is available that adds two channels of 64x oversampling sigma/delta analog-to-digital conversion.

After raw audio data has been captured, EIIIxp allows for extensive manipulation of the data via powerful sample processing functions. These include truncation (manual and automatic), crossfade looping, digital gain change, normalization and auto correlation (which allows for automatic location of optimum truncation and loop points). 32 digital variable-resonance lowpass filters allow for further audio "sculpting," from subtle timbral modifications to unique and stunning synthesis effects.

For mixing, EIIIxp delivers output flexibility with eight polyphonic +4dbm balanced outputs and two pairs of main stereo outs (1 pair XLR, 1 pair 1/4"). ≡IIIᴮ

EIII LIBRARY

E-mu Systems has long been the leader in the quality and diversity of digitally sampled sound libraries. EIIIxp is fully compatible with the vast and ever-expanding Emulator III library—currently 16 gigabytes in size! Our renowned EIII library encompasses nearly every musical instrument on earth, as well as a mind-boggling array of sound effects. Additionally, the EIIIxp is supported by the industry's leading third-party sound developers. ≡IIIᴮ

MASS STORAGE

EIIIxp's dual 50-pin SCSI connectors offer compatibility with a variety of mass storage devices, including CD-ROM, Syquest removable hard disk and Magneto/Optical drives. Any of these storage devices may be used to access the Emulator III library. With removable media such as Syquest and Magneto/Optical cartridges, users may obtain custom selections of sound banks directly from E-mu. ≡IIIᴮ

EIIIXP REMOTE CONTROLLER/ LIBRARIAN

The optional Remote Controller/Librarian software package is designed to streamline EIIIxp operation. The Remote Controller provides complete access to all EIIIxp functions from a Macintosh computer. The powerful Librarian allows the user to catalog, search and retrieve sounds from their entire library—even keeping track of sounds stored on removable media not mounted in a drive. ≡IIIᴮ

THIRD-PARTY SOUND DESIGN PACKAGES

EIIIxp is fully compatible with leading computer-based waveform editing systems, including Alchemy from Passport Designs and Digidesign's Sound Designer II. ≡IIIᴮ

CONTROLS

- **Sliders:**
  Mix Volume, Data

- **Keypad:**
  Select Preset, Transpose, Drive Select, Load Bank, Enter Data, Escape, Audition Key, Save Bank, Ten Key Pad

- **Cursor Control:**
  Cursor Up, Cursor Down, Cursor Left, Cursor Right

- **Data Entry:**
  Increment/Yes, Decrement/No

MODULES

- **Master/Globals:**
  Master Tune; Rename Bank; Erase Bank; Dynamic Allocation; Save as EIII Bank; Memory Available; Disk Utilities - *SCSI Setup, Mount Drives, Rename Disk Bank, Erase Disk Bank, Copy Software, Lock Bank &Drive, Disk Status, Format Disk, Backup, Erase Software;* Special - *Audition Key, Recalibrate, Contrast, Headroom, Main Output Format, Software Version, Diablo Channels;* MIDI - *MIDI Mix, MIDI Globals, MIDI Load Bank, MIDI Volume Pedal, MIDI Volume/Pan, Multimode Enable*

- **Sample Management:**
  Select Sample; Load Sample; Rename Sample; Erase Sample; Copy Sample; Setup - *Auto Truncate, Auto Normalize, Threshold, Left/Right Level, Source, Sample Length;* Place Sample; Arm Sampling; Force Sampling; MIDI Sample Dump

- **Digital Processing:**
  Select Sample; Setup - *Loop Type, Loop In Release, Reverse Playback;* Loop - *Auto Correlation, Crossfade Looping, Quick Compress, Truncate After Loop;* Truncate; Auto Truncate; Taper; Gain Change - *Normalization;* Undo/Redo; Cut/Copy/Paste - *Insert, Mix, Crossfade*

- **Preset Management:**
  Load Preset; Rename Preset; Erase Preset; Copy Preset; Create Preset; Preset Size; Stack Mode; Velocity Switch Level; Merge Presets

- **Preset Definition:**
  Load Zone; Edit Assignment; Erase Zone; Copy Zone; Crossfade/Switch; MIDI - *Basic Channel, MIDI Mode, MIDI Overflow, Send Preset Change, Receive Preset Change, Left Wheel, Right Wheel, Pressure, Pedal, MIDI A, MIDI B, Footswitch 1, Footswitch 2;* Arpeggiator - *Status, Mode, Tempo, Latch, Extension Count, Extension Interval, Velocity, Echo Count, Echo Amount, Harmony 1, Harmony 2, Glissando, Note Value, Cruz Control, Clock;* Pitch Bend Range

- **Real-time Controls:**

Sources	Destinations
1) Left Wheel	0) Off
2) Right Wheel	1) Pitch
3) Pressure	2) VCF Cutoff
4) Pedal	3) VCA Level
5) MIDI A	4) LFO -> Pitch
6) MIDI B	5) LFO -> Cutoff
	6) LFO -> VCA
	7) Attack
	8) Pan
	9) Crossfade

- **Footswitch Controls:**

Sources	Destinations
7) Footswitch 1	0) Off
8) Footswitch 2	1) Arpeggiator On/Off
	2) Arpeggiator Latch
	3) Sustain
	4) Preset Increment
	5) Cross-Switch
	6) Preset Decrement

- **Dynamic Processing:**
  Select Zone; Setup - *Tuning, Delay, Chorus, Original Key, Disable Loop, Disable Side;* VCA - *Level, Pan, Attack, Hold, Decay, Sustain, Release;* VCF - *Cutoff, Q, Tracking, Envelope Amount, Attack Hold, Decay, Sustain, Release;* LFO - *Rate, Shape, Delay, Variation, LFO -> Pitch, LFO -> Cutoff, LFO ->VCA, LFO -> Pan;* Auxiliary Envelope - *Destination, Envelope Amount, Attack, Hold, Decay, Sustain, Release;* Velocity To - *Pitch, VCA Level, VCA Attack, VCF Cutoff, VCF Q, VCF Attack, Pan, Sample Start, Auxiliary Envelope;* Keyboard Mode - *Mode, Solo, Arpeggiator, Nontranspose;* Real-time Control Enable; Output Channels-*Submix*

SPECIFICATIONS

- **Computer:**
  32-bit CPU, 80-character display, 8 megabytes standard, expandable to 32 megabytes of nonproprietary sound RAM

- **Data Storage:**
  3.5" micro-floppy for system software, 120 megabyte hard disk (optional), SCSI port for external storage devices including CD-ROM, Magneto/Optical drives, etc.

- **Data Encoding:**
  16-bit linear; 18-bit linear DACs (one DAC for each of the 8 outputs)

- **Digital Input Sampling Rates:**
  32kHz, 44.1kHz, 48kHz

- **Digital Output Sampling Rate:**
  44.1kHz

- **Signal to Quiescent Noise:** >100dB

- **Dynamic Range:** 96dB

- **Frequency Response:** 20Hz -20kHz

- **THD + Noise:** <.05%

- **THD:** <.03%

- **Output Level:** +4dBm nominal

- **Output Impedance:**
  50 ohms; will drive 600 ohm load

- **Stereo Phase:**
  Phase coherent ±1 degree at 1kHz

- **Audio Channels:**
  32 mono channels, 16 stereo channels

- **Digital Filters:**
  32, four pole lowpass filters with resonance (one per channel)

- **Transposition Range:**
  10 octaves (±5 octaves from original pitch)

- **Inputs:**
  MIDI In, AES/EBU digital input, stereo analog inputs (optional)

- **Outputs:**
  Eight balanced audio outputs (configured as four pairs of stereo outputs w/programmable panning, main outputs available on XLR jacks or 1/4" phone jacks), Stereo Phones, MIDI Out, MIDI Thru, AES/EBU digital output

- **Interfaces:**
  SCSI (two 50-pin connectors, advanced SCSI links), RS-422, MIDI, AES/EBU and consumer digital I/O formats

- **Dimensions:**
  17.25" (44cm) W, 5.25" (13cm) H, 13.5" (34cm) L

- **Weight:**
  19 lbs (8.6 kg) for standard unit

- **Power:**
  100-240 VAC, 50/60Hz, less than 50 watts

- **Options:**
  120MB internal hard disk drive
  8MB RAM expansion
  (up to three may be added to base unit)
  Stereo Analog Sampling
  Remote Control/Librarian for Macintosh

All specifications subject to change without notice.
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