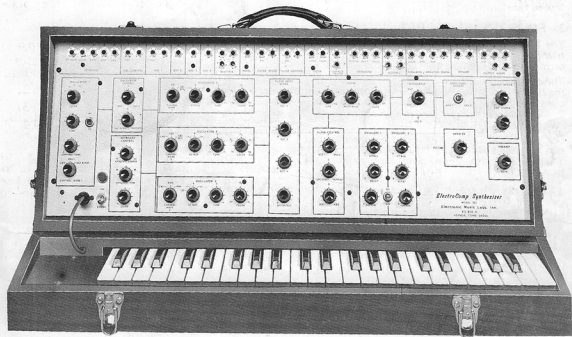


THE BEST PORTABLE SYNTHESIZER IN THE WORLD



We have the best portable synthesizer in the world, and we're proud to say so. We designed the 101 to be more capable than comparable synthesizers and it is.

We gave it four audio oscillators. No competing synthesizer has more than two or three. And our oscillators are the most stable synthesizer oscillators to be found anywhere.

We gave it more filter. The 101's filter is a major breakthrough in synthesizer design. It's the only multi-mode voltage controlled filter on any synthesizer under \$3000.

We gave it more modulator. The 101 has a variable modulator. Many competitors provide a ring modulator, but none provides a modulator that can be varied from ring modulation to any percentage amplitude modulation.

We gave it more keyboard. The 101 has the only two voice polyphonic keyboard capable of three and four note chords. And it's microtonal too.

We didn't stop there. The 101 has a sample and hold. The sampler generates random or ordered sequences of tones, produces spontaneous changes in timbre, or controls the entire synthesizer in place of the keyboard.

Add to this an amplitude shaper, 2 multi-stage envelope generators, 4 mixers, a noise generator, a microphone amplifier, and a full patch panel.

You expect quality. We give it. Only the 101 uses all Allen Bradley controls throughout, the best available anywhere.

Sure we're cocky, but it's easy to be cocky when you set out to do something and succeed. We're number 2 or 3 in synthesizer sales now, but we're going to be number 1.

Read on. If you're buying synthesizers, we can help you.

EML-101 \$1295

EML-101

SPECIFICATIONS

1. KEYBOARD.

The 101 uses a 44 note, two-voice polyphonic keyboard. Any two keys may be played at once and up to a four note chord produced.

The keyboard has variable tuning and may be transposed up to four octaves.

The keyboard interval may be adjusted to microtonal scales. Variable portamento permits gliding between tones.

2. KEYBOARD CONTROLLER.

The keyboard controller is used to set the interval and the amount of portamento. The interval is adjustable from 12 to 72 keys per octave. Portamento is adjustable from 0 to 1 second per octave. Portamento may also be controlled from foot pedal.

3. FOUR OSCILLATORS.

The 101 contains four voltage controlled oscillators which offer six waveforms: triangle, square, sawtooth, inverted sawtooth, pulse and sloped square. Three oscillators have continuously adjustable waveforms.

The oscillator frequency is controlled by the keyboard and selected inputs of the oscillator control. All four oscillators operate in the audio range; two cover the audio/subaudio ranges. The output frequency range is from .03 to 20,000 Hz. The sampler contains a fifth oscillator. Its output frequency range is from .2 to 40 Hz.

OSCILLATOR STABILITY. The 101 has the most stable synthesizer oscillators. Their stability is due to a proprietary circuit that maintains the oscillators at a constant temperature. Short term variations in pitch are typically less than $\pm 0.1\%$.

4. OSCILLATOR CONTROL.

The oscillator control determines the type and amount of variation in pitch. The variations may be of the following varieties:

- Envelope selection produces slow or rapid sweeps up and down in pitch with each key depression. The type of sweep is dependent on the settings of the envelope's attack, decay, and sustain controls.
- Oscillator selection produces repeating changes in pitch. The type of change is determined by the oscillator waveform selected. The speed of change is determined by the frequency of the selected oscillator. The wide range of the oscillators permits anything from slow vibratos to audio speed frequency modulation.

5. NOISE GENERATOR.

The noise generator is a sound source used for producing wind, thunder, and percussive effects.

6. FILTER INPUT MIXER.

The filter input mixer contains volume controls for three oscillators and the noise generator. The volume controls are used for selecting and proportioning sound sources to the filter. An input is available for adding external or other internal signals. This mixer may be used as a waveform inverter.

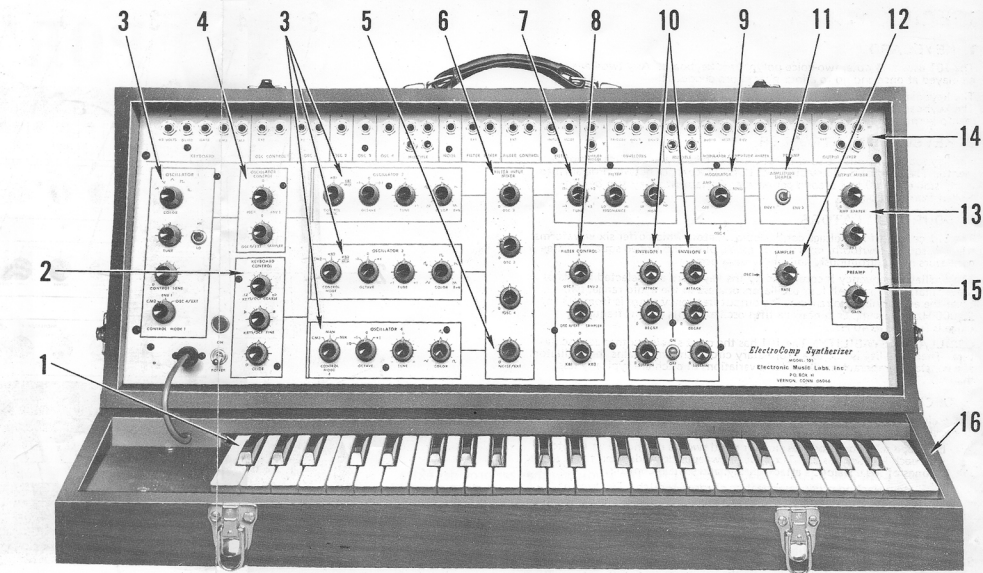
7. FILTER.

The 101's filter represents a major breakthrough in synthesizer design. It is the only multi-mode voltage controlled filter available on any synthesizer priced under \$3000. This means the 101's filter is continuously variable from low pass to band pass to high pass. All competing synthesizers are limited to low pass operation. This difference provides the 101 with an enormous edge in the control of timbre.

8. FILTER CONTROL.

The filter control determines the amount and type of variations in timbre. Its function is analogous to the oscillator control. The variations are of the following varieties:

- Envelope selection produces slow or rapid sweeps up or down in timbre.
- Oscillator selection produces repeating changes in timbre.
- Sampler selection produces sequential or random changes in timbre.
- The filter control provides for continuously variable tracking. Timbre can become duller, brighter or remain constant with increasing pitch.
- The filter can be controlled from the lowest or highest key depressed. This permits the control of pitch with one key and timbre with a second key.
- The filter control has provisions for patching in external signals for controlling timbre.
- These effects may be combined to produce more complex variations.



9. VARIABLE MODULATOR.

The 101's modulator is a synthesizer first. It is the only modulator that can be adjusted to any percentage of amplitude modulation or to ring modulation.

The modulator is normally controlled by oscillator 4. The wide range of oscillator 4 permits extremely slow tremolos, banjo-like strumming, or eerie ring modulation. An external input permits the replacing of oscillator 4 with external signals.

10. TWO ENVELOPE GENERATORS.

The envelope generators produce waveforms used to shape pitch, timbre, and loudness. Their shape can be precisely set with the attack, decay, and sustain controls. An external trigger is available.

11. AMPLITUDE SHAPER.

The amplitude shaper is a voltage controlled amplifier. In combination with the envelope generators it is used to shape the loudness of each tone. Either envelope may be selected.

12. SAMPLE AND HOLD.

The sample and hold generates a waveform used to produce random or ordered sequences of tones, spontaneous changes in timbre, or to control the entire synthesizer in place of the keyboard. An oscillator is provided in the sampler for determining the sampling speed. Its range is from 0.2 to 40 Hz. Provision for external speed control of the sampler has also been provided.

13. OUTPUT MIXER.

The output mixer permits the proportioning of the amplitude shaper and other internal and external signals. It may also be used as a waveform inverter.

14. PATCH PANEL.

The patch panel provides inputs and outputs for practically every function in the synthesizer. It enables you to:

- Introduce external sound sources at numerous inputs.
- Reorganize the synthesizer to express your creativity.
- Inexpensively and conveniently expand your synthesizer.
- Monitor the synthesizer at any point with headphones.

Output impedances are 470 ohms and are well matched for all professional equipment. All outputs are short-circuit proof. For your convenience, standard size phone jacks and plugs are used throughout.

Patching is generally not required for live performance since the most used sounds can be achieved by using the four mixers of the 101.

15. MICROPHONE AMPLIFIER.

The microphone amplifier permits the introduction of external sound sources through the use of microphones or electric pickups.

The output of the microphone amplifier may be patched into any of the synthesizer's many inputs. Interesting effects can be achieved by processing voice, guitar, and organ through the filter and modulator. Signals of sufficient amplitude may be patched directly to inputs without going through the microphone amplifier.

16. CASE.

The 101's package consists of a rugged wooden core covered with wood-grained formica. It weighs 29 pounds and folds to form its own carrying case. A storage trough is provided behind the keyboard.

MORE SYNTHESIZERS.

EML-200 STUDIO SYNTHESIZER. The studio synthesizer provides extra capability for the 101 at a sensible price. It means you can combine the 101 and 200 and have as much capability as most large modular synthesizers.

The 200 adds 3 oscillators, an excellent reverb, an electronic switch, high pass and low pass filtering, another microphone amplifier, a large stereo mixer with interchannel panning, a third envelope generator, two more ring modulators, and another sample and hold. The 200 is priced at \$ 950.

EML-500 KEYBOARD SYNTHESIZER. The 500 was designed to be the world's largest selling synthesizer. It is a modestly priced synthesizer with many of the features responsible for the 101's fame — the same stable oscillators, the same multi-mode voltage controlled filter, the same variable modulator, the same sample and hold.

Add to this, a 3½ octave keyboard, 2 modulating oscillators, 2 audio oscillators, a microphone amplifier/noise generator, an amplitude shaper, an envelope generator, and the lowest price for any real keyboard synthesizer — \$ 895.

BUYING A SYNTHESIZER. Electronic Music Laboratories' synthesizers are regionally available from local representatives or directly from the factory. To order, send a letter and a check for 50% of the purchase price to:

electronic music laboratories, inc.

P.O. Box H, Vernon, Connecticut 06066 Tel: (203) 875-0751

Purchases by rated institutions are payable 30 days from the date of invoice. Synthesizers are shipped by United Parcel Service fully insured.