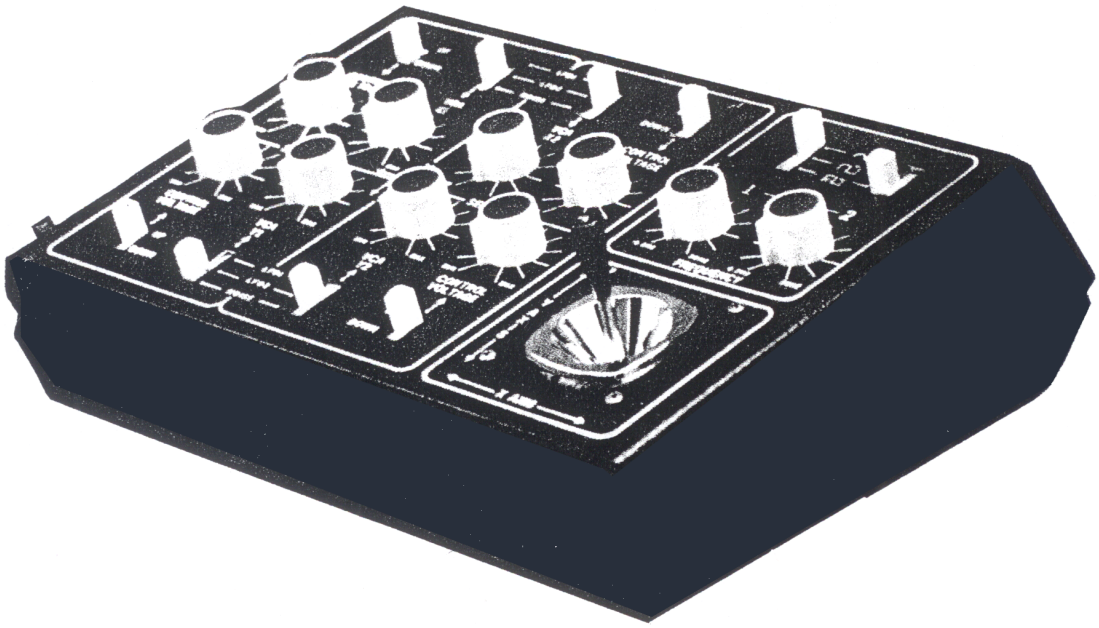
by OCTAVE

the CATSTICK synthesizer controller

PRELIMINARY SPECIFICATIONS



the CATSTICK synthesizer controller

A NEW AND VERSATILE ACCESSORY FOR ALL PATCHABLE SYNTHESIZERS

Modulation, that's what synthesizers are all about. It's "modulation" that gives dynamics to your synthesizer performances. Bending a note, adding growl, vibrato, trills, that's all modulation.

Up until now, you relied on sliders, knobs, ribbons, wheels and pedals to vary your modulation expression. Each device needed a hand (or foot) to control each modulation depth. One hand for vibrato, one for filter sweep, another to bend notes. Sometimes you'd end up with more modulation needs than your hands or feet could handle!

The new **CATSTICK synthesizer controller** frees your creativity by letting you control **4 different modulation depths** with ONE HAND! Utilizing a convenient "return-to-zero" spring-loaded joystick, two internal LFO's four internal VCA's and internal voltage processors, the CATSTICK allows you to obtain a different type of modulation for each of the four joystick directions; forward, backward, left and right. These directions, labelled Y1 (forward↑), Y2 (backward↓), X1 (left ←) and X2 (right →), each have separate VCA and Control Voltage sections (see panel) so that each direction of joystick movement can have its own particular modulation setting. And, the versatile output patching system provides you with independent control voltages, mixed control voltages and independent VCA operation for use with **any** patchable synthesizer.

Imagine connecting the CATSTICK to your CAT, KITTEN, MINIMOOG or OBERHEIM and getting vibrato when you pull the stick towards you, pitch bend when you move it to the right, filter growl when you move it to the left and then have it snap back to zero modulation when you release it!

For your STUDIO MOOG or ARP 2600, or other modular based synthesizer, you can use the CATSTICK in series with patchcords to turn on a modulation only when the stick is shifted off axis. And, the CATSTICK control voltages are still available to control other synthesizer parameters!

Audio systems can use the CATSTICK too! By utilizing the independent VCA's, a stereo or quad panning system can be set up to pan your synthesizer output (or any other audio source) to different channels in your sound system.

A return-to-zero, spring loaded joystick, 4 VCA's, 2 LFO's and internal voltage processors are all included in the CATSTICK. The feel-incredible! The patching system - 16 jacks for total flexibility! The construction - steel, of course!

The CATSTICK - once you try it, turning knobs will never be the same!

OCTAVE Electronics Inc.
DIVISION OF PLATEAU ELECTRONICS, INC.

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the CATSTICK concept:

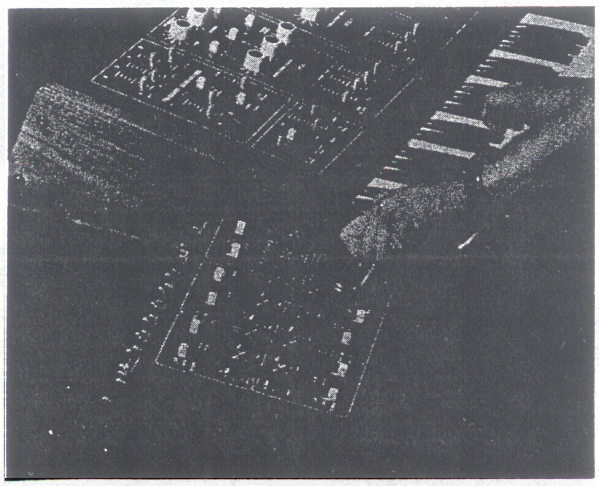
Totally responsive modulation control.
Made possible by a versatile synthesizer accessory device.

THE PROBLEM:
Most synthesizers provide adequate sound generating devices for creating an almost infinite variety of sounds.

However, they often lack an efficient method of expressively controlling synthesizer parameters during a performance.

THE REASON:
The average professional synthesizer is a relatively expensive instrument. The addition of an intricate controller system would add to the overall cost and would consume much of the already crowded panel space. Consequently, manufacturers have to compromise, resulting in simple pitch benders or modulation devices with limited control capabilities.

THE SOLUTION:
By providing a modulation control device as an accessory, synthesists who realize the need for more intricate control are free to purchase it separately. Thus, the cost of the basic synthesizer is minimized and more control capability can be packed into the external device without sacrificing synthesizer panel space.



THE CATSTICK
is the answer to this growing need for fast, efficient, expressive control of today's complex synthesizers.

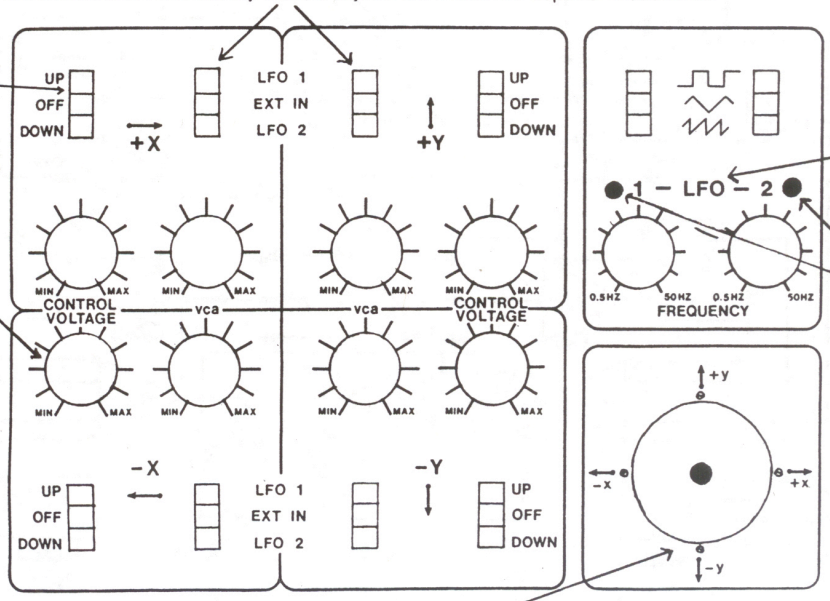
MODULATION
is what synthesizers are all about - it's what dynamic synthesis performances are made of. Pitch bending, vibrato, trills, filter growl, that's all modulation.

THE JOYSTICK CONCEPT:
The CATSTICK frees your creativity by letting you control **4 different modulation depths** with one convenient "return-to zero" spring-loaded joystick. Each of the four joystick directions (forward, backward, right, and left) has a separate VCA and control voltage section (see panel) so that each direction of joystick movement can have its own independent modulation setting. And, the versatile output patching system provides independent control voltages, mixed control voltages and independent VCA operation for use with **any** patchable synthesizer.

A NEW PERSPECTIVE:
The CATSTICK opens up a totally new perspective on synthesizer control and often allows modulation styles not possible by any other means to become an important part of a performance. For example by connecting the CATSTICK to a VCO and VCF via the synthesizer control voltage inputs, it would be possible to control pitch bend in one direction, vibrato in the other direction, and filter sweep and growl in the other two directions, while moving the stick off axis allows combinations of these effects. And the professional spring-loaded joystick snaps back to its vertical position when released for quick return-to-zero modulation.

Each of the four joystick directions has it's own vca that is closed when the stick is in its normal vertical position and opens up as the stick is offset in the corresponding direction. The input of each VCA has a switch that selects either LFO 1, LFO 2, or external modulation. By inserting a plug into the respective panel jack (see rear panel description) the VCA can control the amplitude of an external device. A sensitivity control adjusts the maximum depth of modulation.

4 INDEPENDENT CONTROL VOLTAGES
Each of the 4 joystick directions has its own control voltage with selectable inversion and variable sensitivity. These control voltages can be used to sweep VCO's, VCF's or VCA's. The X and Y axis outputs are independently available on the rear panel. (see rear panel description).



TWO WIDE RANGE LFO's
each with sawtooth square and triangle wave forms.

LFO LED MONITOR
Gives a visual indication of the LFO speed.

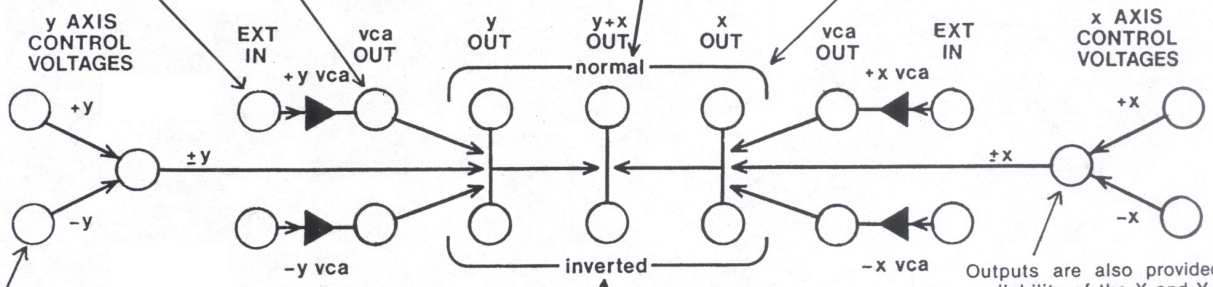
The panel is divided into 4 symmetrical sections-one for each of the joystick directions. This enables you to tailor specific modulations for each direction independently.

PRECISION SPRING-LOADED JOYSTICK
The perfect synthesizer controller. When released, it automatically snaps back to zero vertical position. When offset from this position, the modulation depth selected in each of the four possible directions is directly proportional to the amount of offset.

Each of the 4 VCA's has a separate input and output jack so that it can be used as an independent external processor. The VCA "External Input" jack is selected by the center position of the VCA front panel input switch and allows external signals to be processed by the VCA. The VCA output jack disconnects the VCA from the internal mixers. Thus, by using these jacks, a totally free VCA can be used for opening and closing external modulation paths such as those used in "patch cord" studio type synthesizers.

An X + Y output provides a mixed X and Y axis signal for control with all four joystick directions. For instance, by using the X + Y output to control the pitch of a VCO, the joystick can produce pitch bend up in the + Y direction, pitch bend down in the − Y direction, vibrato in the + X direction and trill in the − X direction. The other CATSTICK outputs can be used at the same time to control other parts of the synthesizer while the VCO is being modulated.

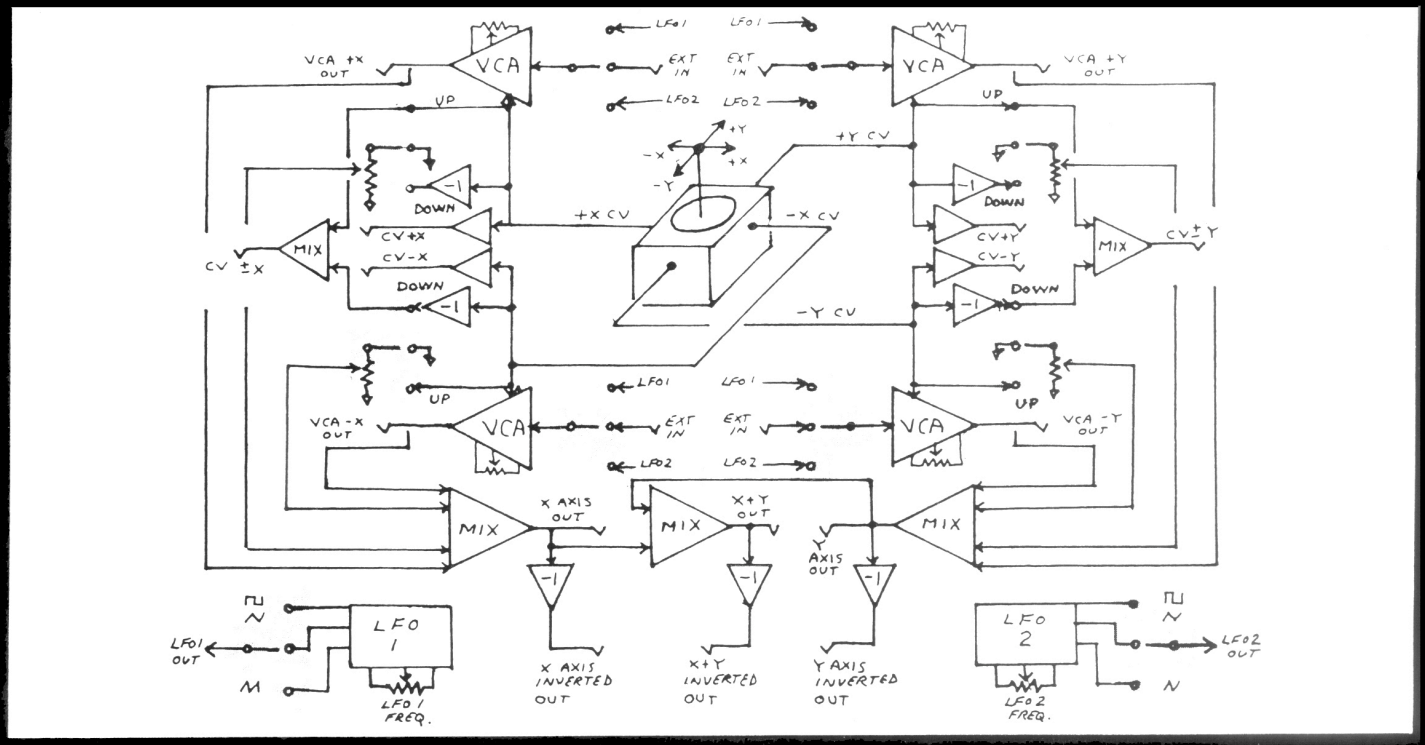
The X axis output provides the mixed signals from the + X and − X sections. It contains + X VCA, − X VCA, + X CV outputs. The Y axis output provides mixed signals from the + Y and − Y sections. It contains + Y VCA, − Y VCA, + Y CV, and − Y CV outputs. A typical setup would use the Y axis output to modulate the synthesizer VCO and the X axis output to modulate the synthesizer VCF. This would allow pitch bending effects in the forward and backward joystick directions (+ Y and − Y) and filter effects such as growl or sweep in the left and right directions (− X and + X).



Individual control voltage outputs for each of the four joystick directions allow complex signal processing in modular systems. These outputs can be used to turn on external VCA's for signal routing or they can be connected directly to control voltage inputs of other synthesizer modules such as VCO's, VCF's, Sample and Hold, etc. The CV outputs are zero when the joystick is vertical and increase linearly to greater than + 10 volts as the joystick is moved in the respective direction.

The inverted version of the X axis, Y axis and X + Y axis outputs are also available for inverse modulation effects. These could be used, for example, to pitch bend one oscillator up while simultaneously pitch bending another oscillator down. Or for sweeping two filters in opposite directions at the same time.

Outputs are also provided for direct availability of the X and Y axis control voltages. The CV ± Y output provides zero volts with the stick in the vertical position, greater than + 10 volts with the stick in the full + Y position, and less than − 10 volts with the stick in the ful − Y position. Similarly, the CV + X output provides less than − 10 volts in full − X direction to greater than + 10 volts in the full + X position, while zero volts corresponds to the vertical stick position. These outputs are normally used on attenuated inputs of the synthesizer modules for balanced modulation effects. For instance, by connecting the CV ± Y output to a VCO with an input attenuator, pitch bending up and down could be obtained by adjusting the attenuator on the VCO to the desired interval range.



TECHNICAL SPECIFICATIONS

CONTROL VOLTAGE SECTIONS:

X axis, Y axis and X + Y axis outputs have control voltages continuously variable via the front panel controls from 0 to +8 volts with the stick in the respective direction. Control voltage range on the CV +Y, −Y, +X and −X outputs is from 0 to approximately +12 volts with the stick in the full offset position for the respective direction. The CV +X and + Y outputs have range of ± 12 volts. Accuracy is within 0.5 Volts. CV outputs are unattended.

VCA SECTIONS:

Input impedance for each VCA is 100 kohms DC coupled
Output impedance is 1 kohm DC coupled
Maximum undistorted input voltage is 10 Vpp
Maximum output voltage is 30 Vpp
Maximum VCA gain is unity with stick offset in the full direction and the VCA gain control on full.

LFO SECTIONS:

Both LFO s are identical

Sawtooth output: Frequency range approximately 0.4Hz to 100Hz Amplitude 10Vpp (±5V)

Triangle output: Frequency range approximately 0.2Hz to 50Hz Amplitude 10Vpp (±5V)

Square output: Frequency range approximately 0.2Hz to 50Hz Amplitude 0 to +12 volts

NOTE: Output impedance of all patch bay output jacks is 1Kohm DC coupled.

Physical Dimensions: 13"x9"x3.5" (33cm x 22.9 x 8.9cm) 7 lbs. (3.2Kilo)

POWER: 5watts, 98Vac - 120Vac, 50/60Hz (internal conversion to 200Vac - 240Vac)

INTERFACING

LEAD SYNTHESIZERS - the CATSTICK can be patched into the pedal inputs on the MINIMOOG, MICROMOOG, CAT, KITTEN, ODYSSEY, AXXE, etc. Simple modifications can be added to control any voltage controllable parameter on the synthesizer with the CATSTICK.

MODULAR SYNTHESIZERS - Interface the CATSTICK directly with the modular MOOG, ARP, ROLAND, EMU, etc. systems. CATSTICK VCA's can be used in series with patch cords to open patch paths when the stick is moved off axis. And the CATSTICK control voltages are still available to control other synthesizer parameters.

POLYPHONIC SYNTHESIZERS - Use the CATSTICK directly with POLYMOOGS. Minor modifications allow the CATSTICK to replace with pitch wheels on PROPHET synthesizers and to add further control capabilities to polyphonic OBERHEIMS, ROLAND, and ARP synthesizers.

AUDIO SYSTEMS - Audio systems can use the CATSTICK too! By utilizing the independent VCA's, a stereo or quad panning system can be set up to pan your synthesizer (or any other audio source) to different channels in your sound system.

Octave Plateau has the facilities necessary for adapting any synthesizer for use with the CATSTICK, either with multiple cables or with one convenient multiwire cable. Please write for details concerning your particular requirements.

The power of a synthesizer lies in its ability
to express musical creativity.

However, without convenient control of pitch bending,
vibrato, growl, and other forms of modulation,
a synthesizer cannot be utilized to its fullest
potential.

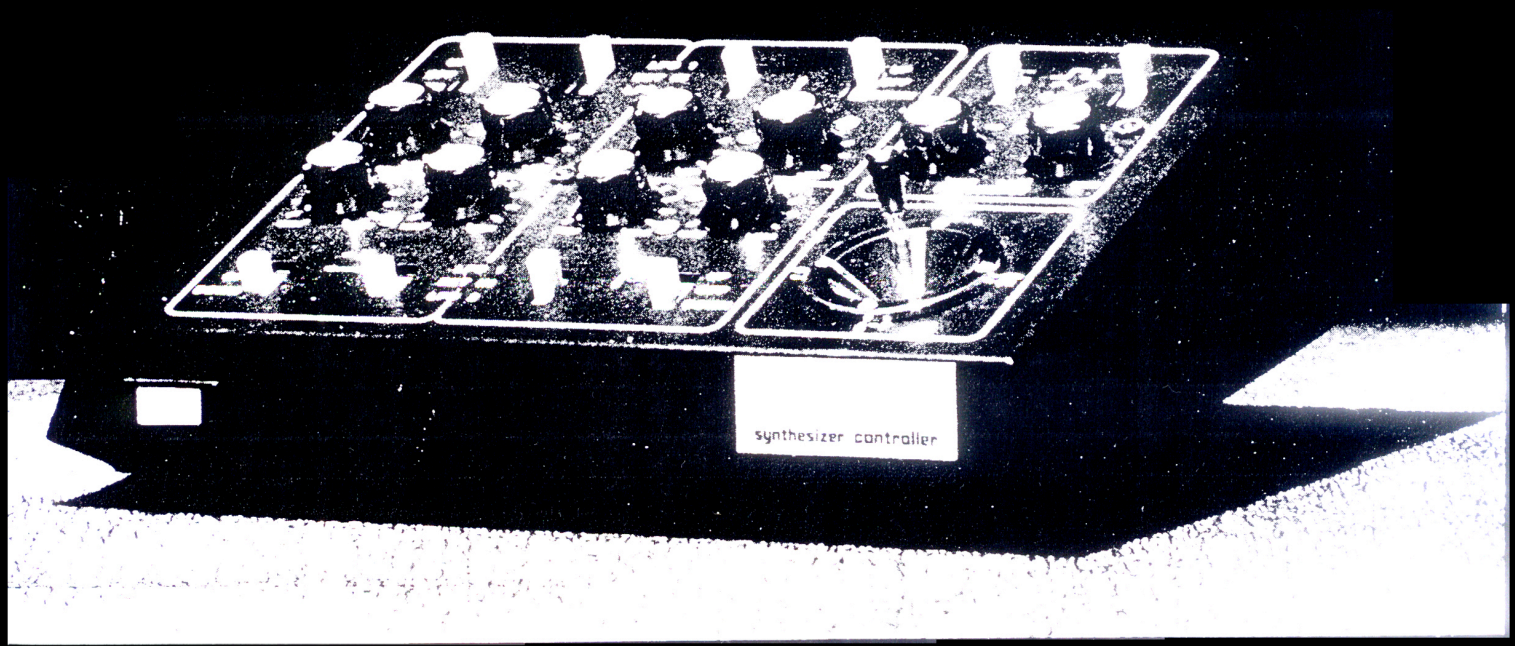
Whether they be wheels, ribbons, knobs, sliders or pedals,
synthesists have had to settle for the simple
controllers supplied with their instrument for lack of any
better alternative.

Until now.

Because now, there exists an accessory device that opens a
new perspective into the efficient control of any
patchable synthesizer

Introducing . . .

the CAT STICK
synthesizer controller
By OCTAVE-PLATEAU



OCTAVE-PLATEAU, INC.
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the CATSTICK synthesizer controller

THE BETTER ALTERNATIVE TO WHEELS, RIBBONS, PRESSURE PADS, KNOBS, SLIDERS AND PEDALS, FOR ANY PATCHABLE SYNTHESIZER

WHAT IS IT?

The CATSTICK is a precision, spring-loaded joystick controller that lets one hand control four different modulation settings - one for each of the joystick directions. By moving the stick off axis, combination modulations of different proportions are possible. When the stick is released, it springs back to its vertical, zero modulation position.

HOW DO YOU USE IT?

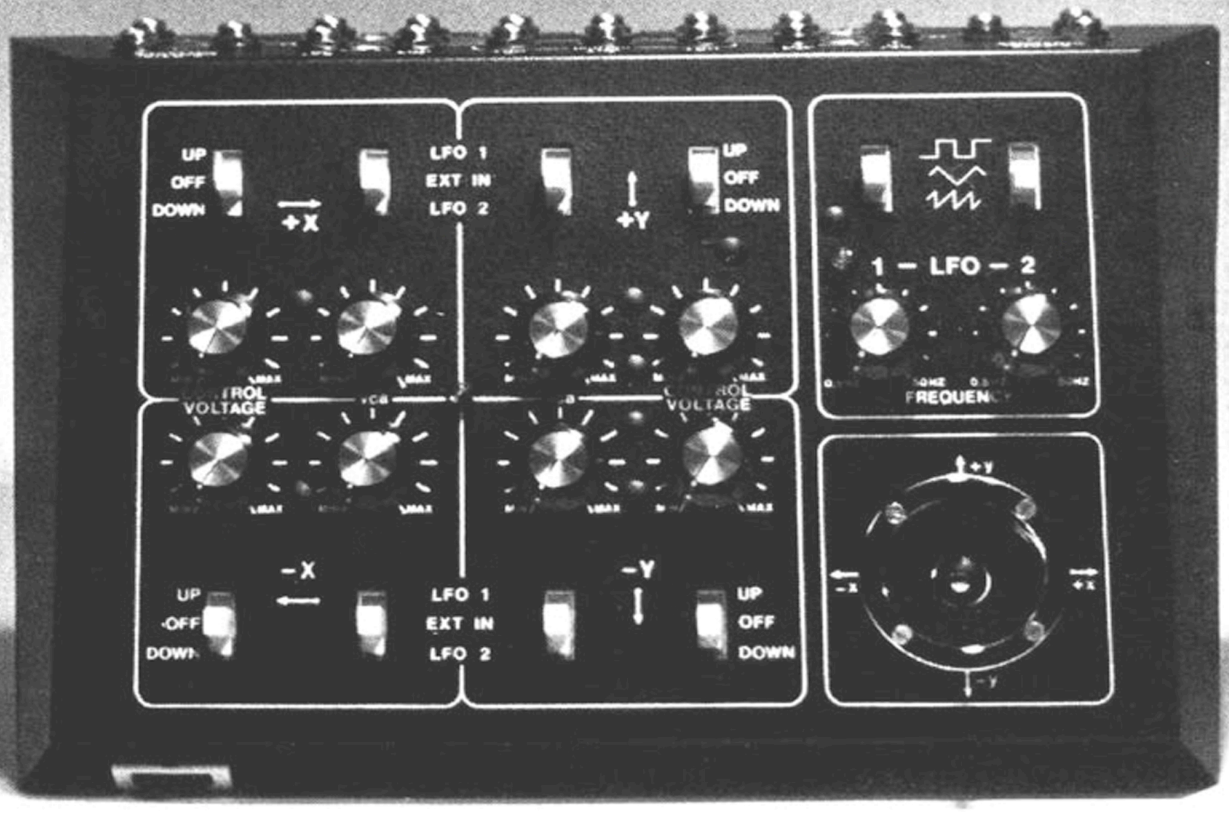
For portable synthesizers, like the CAT, Odyssey, or Minimoog, you can connect the CATSTICK outputs to the VCO, VCF or VCA inputs normally intended for footpedal controls. This lets you use the CATSTICK LFO's and control voltages to modulate the synthesizer as the joystick is moved. In patchable systems like the ARP 2600 or Modular Moogs, you can connect the CATSTICK VCA's in series with patchcords to allow real-time control of synthesizer patches.

WHO CAN USE IT?

If you own a MINIMOOG, CAT, KITTEN, ODYSSEY, 2600, OBERHEIM, MODULAR SYSTEM or any other synthesizer with control voltage inputs, you can use a CATSTICK. And, if you don't have control voltage inputs or want more, we'll show you how to modify your instrument or do it for you at a very modest cost. We can also modify your synthesizer for "single cable" connection to the Catstick outputs.

PATCHING VERSATILITY

Included are four VCA's (each externally accessible), two wide-range LFO's with rate monitors, and a complete internal voltage processing system. The twenty-jack rear panel patch bay allows access to all of the internal control voltage signals and makes the CATSTICK a versatile addition for both performance-oriented and studio synthesis systems.



For further information, and the location of your nearest dealer, write:

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