

COMPUTER MUSIC WITH OR WITHOUT

THE COMPUTER!

EQUALLY TEMPERED DIGITAL TO ANALOG CONVERTER

Unlike more conventional R-2R ladder type digital to analog converters, the PAIA 8780 kit is based on a multiplying principle that allows the module to generate the exact exponential stair-step function required to make even the simplest linear response oscillators and filters produce equally tempered musical intervals. The 8780 uses only 6 bits of data to generate over 5 octaves of control voltage. In an 8 bit system, the remaining 2 bits are ordinarily reserved for trigger flags, but may be used to extend the range of the converter or provide micro-tonal tunings.

The module is physically and electrically compatible with the complete line of PAIA music synthesizer modules and is easily interfaced to any micro-processor with or without hand-shaking logic.

#8780 D/A CONVERTER KIT .. \$34, 95 .. (plus \$1, 00 postage)



THE PAIA HIGH LEVEL LANGUAGE FOR COMPUTER MUSIC DATA ENTRY (We call it a keyboard)

An n key roll-over scanning matrix encoder tied to a 37 note AGO keyboard provides 6 bits of data and both STROBE and STROBE control outputs. Input control lines to the encoder include SCAN (starts and stops encoder clock), RESET, START and RANDOM making the keyboard universally applicable to all computer/processors from the very largest to the very smallest.

NO COMPUTER? The encoded keyboard can be directly interfaced to the PAIA 8780 Equally Tempered Digital to Analog converter to provide an infinite hold Sample and Hold device. The keyboard contains its power supply for standalone applications.

(shipped freight collect)

WITH A COMPUTER.

MODULES:

Both the 8780 D/A and the 8782 Encoded Keyboard easily interface to any processor providing capabilities and control never before possible with music synthesizers.



An infinite hold, DIGITAL Sample and Hold and the heart of an entire system of modules that will be introduced over the next few months including: Memories, Polytonic Output modules and others.

WANT TO KNOW MORE?

An information package is available explaining how it all works and outlining the unlimited applications possible with computer technology applied to music synthesis,

Computer Music Information Pkg. \$1,00 postpaid

SIMPLE OR ELABORATE AS YOU LIKE!



Stock Fee. Price	Shipping	STOCK NO. Price	Shipping
2720-1 VCA \$12, 95	\$1.00	4711 Stereo Mixer\$29.88	3 lbs.
2720-2A VCO \$25, 95	1.00	4712 Reverb Module\$25, 95	4 lbs.
2720-3B Band Pass Filter \$12,95	1.00	4720 Wide Range VCO \$34, 95	1 lb.
2720-3L Low Pass Filter	1,00	4730 Multi-Modal VCF \$37, 95	1 lb.
2720-4 Function Generator \$20, 95	1,00	4740 Envelope Generator	2 lbs.
2720-5 Control Oscillator/Noise Source\$20, 95	1,00	4770 Watt Block Power Supply \$12.95	3 lbs.
2720-7 Power Supply\$24,00	2 lbs.	(Since Watt Blocks are often used in groups of two, line	
2720-8 Keyboard Case with Sample & Hold \$118,00	15 1bs.	cords are sold separately) LC-6 6 ft line cord \$.75	
2720-11 Envelope Follower Trigger	1,00	4780 12-event sequencer\$59.00	3 lbs.
2720-12 Inverter/Buffer \$9,95	1.00	4761 Road Module Case \$16, 95	9 lbs.
2720-14 Sine Converter/Pulse Width Modulator \$18,95	1,00	(buy two and we supply hinges, latch and carrying handle)	
4760 Wing Cabinet(compatible with '-8) \$15, 00	3 lbs.	4782 Road Keyboard/Case with Glide	32 lbs.
2720-9 Glide retrofit (replaces -8 panel)\$10, 95	1.00	AGO-37 Keyboard only \$60,00	5,00
4710 Balanced Modulator\$22, 50	1,00	AGO-18 Keyboard \$33,00	3.00



PHLANGER

Phil Spector's original "Big Hurt" sound, which can only be approximated by using frequency dependent phase shifters, is EXACTLY duplicated using PAIA's new constant time delay PHLANGER. This unit features a 1024 stage Charge Coupled Device analog shift register that exactly duplicates the effect of two tape recorders running slightly out of synchronization. Multiple user controls allow effects ranging from chorusing, voice doubling and reverb to full "jet Plane" effects. Optional foot pedals provide hands free control of internal oscillator sweep speed or manual spectrum sweeping.

#1500 PHLANGER KIT



EK-3 KEYBOARD ENCODER EXPERIMENTER'S KIT

Up-Date PAIA (or other) keyboards to the new digital format, Consists of encoder circuit board and all parts required to modify your present keyboard for use with computers and/or the 8780 D/A.

Off-print instructions from "COMPUTER MUSIC WITHOUT

THE COMPUTER", Polyphony 4/76.

#EK-3 KEYBOARD ENCODER EXPERIMENTER'S Kit\$14.95 (plus \$1,00 postage)

NAME:

THE magazine for the electronic music enthusiast, Published rterly, it's filled with patches, circuit modifications and ideas, applications and "how to's". A wealth of information at a bargain price. One year subscription (4 issues): \$4.00 USA, \$5.00 Canada and Mexico, \$6,00 international,

IN A SELF-CONTAINED PROGRAMMABLE DRUM SET

While most electronic rhythm units offer only a limited choice of pre-determined rhythm patterns, the PAIA Programmable Drum Set allows the user to tailor pattern, time signature and drum sounds to each application. Among the unique features provided by the unit are touch sensitive electronic controls and the provision for an independently structured bridge rhythm.

Battery powered, the Drum Set includes a "memory save" switch which provides a lowered "keep-alive" voltage to the drum set's 256 byte memory. Kit includes all parts, case, detailed assembly and

using instructions.

#3750 PROGRAMMABLE DRUM SET KIT

(plus \$3,00 shipping & insurance)



ELECTRO-LARYNX/PYGMY RETRO-FIT

Convert your Pygmy Amp to produce the popular new "Talking Guitar" effects.

The modification kit includes a replacement speaker bezel which concentrates the sound from the speaker and emits this higher pressure signal from a small hole. The sound pressure is fed through a 6 ft. length of tubing to your mouth for formant processing.

ELECTRO-LARYNX RETRO-FIT ... \$5,00 .. (plus 50¢ shipping)

NHAT.....NO PYGMY?

Order this versatile portable mini-amp from this brochure and receive the electro-larynx retro-fit as a FREE bonus.

A NEW DEMOTAPE

Vinyl sound sheets - like our old demo record - are nice. But you have to order so many of them that they get incredibly out of date before you use them all up. We're switching to demo cassettes (more expensive - but also more current). The first one is available NOW and is a collection of the telephone demo classics plus a new cut featuring the PHLANGER and a short demo of the new computer music

DEMO CASSETTE\$3.00 (plus 50¢ postage)

WEAR A NEW FULL COLOR PAIA GNOME T-SHIRT



Just like the one shown on the mailing flap of this brochure. Featuring the popular copyrighted GNOME character used in PAIA catalogs, screen printed on a polyester and cotton T-shirt. Specify size; Small, Medium, Large, X-Large. COLOR T-SHIRT\$4.95 postpaid

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(signature)

CHARGE ORDER?

Try our 24 hour demo/order line for fastest possible service!

1-(405) 843-7396

posit is required for COD shipment.



2720/R SYNTHESIZER KIT (shown upper left)

Everything you need to begin synthesizing sounds ranging from flutes, snare drums and the sound of the wind to creating sounds from your own imagination. You can even process external signals from guitar, microphone, etc. The ideal place to start for the semi-professional or serious amateur with applications in the small recording studio, radio stations and is excellent for grade school through university level music labs. Package contains one each of the 2720 series modules and includes step-by-step instruction and using manuals plus materials for 8 audio and 12 control voltage patch cords. #2720-R SYNTHESIZER KIT \$269,00... shipping wt. 26 lbs.

4700/S SYNTHESIZER KIT (upper right)

For the pro musician you can't beat our 4700/S Synthesizer package. It costs about 50% of what "mini" packages from other manufacturers do - and you can judge for yourself whether it's a mini or not. Module complement includes Road keyboard with glide, two road module cases, two balanced modulator VCA's, Stereo Mixer, three Watt Block power supplies, Control Oscillator/Noise Source, Reverb, three 4720 VCO's, 4730 VCF, two Envelope Generators and 12-Event Sequencer. Includes our Well illustrated, step-by-step assembly instructions and Using manual, Includes patch cord kit. #4700/S SYNTHESIZER KIT \$499.00 shipped freight collect (60 lbs)

ELECTRONIC MUSIC SYNTHESIS TO FIT EVEN THE MOST LIMITED BUDGET

OZ Mini-Organ (lower left)

Oz is polytonic with over 6-1/2 octaves range from it's specially manufactured 1-1/2 octave keyboard. Large scale integration and CMOS technology allow battery-powered portability. Output jack and switch selectable step or multiple pulse trigger provides simple synthesizer interface. Oz has a unique pressure sensitive pitch bender that transposes single notes or whole chords and a built-in speaker and amplifier.

Interface OZ with the Gnome for a completely portable, polytonic synthesizer-like instrument complete with speaker and amplifier for less than you'd expect to pay for a guitar.

GNOME Micro-SYNTHESIZER (lower right)

With normalized controls and easy to use ribbon controller you'll be able to produce those far-out electronic sounds even if you've never been near a synthesizer. The Gnome has two envelope generators (one with repeat for cyclic effects), Noise Source, VCA, VCF and VCO.

The Gnome can make outer space sounds for rock musicians, demonstrate principles of music and accoustics for educators, provide rhythmic pulses for modern dance groups and sound effects for theatre companies. It can even be modified to process external signals and is one of the neatest toys in the world for the audiophile.

FAMO ELECTRONICS 1020 W. WILSHIRE BLVD. OKLAHOMA CITY, OK 73116



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The latest in music technology..... COMPUTER MUSIC!
(With or without the computer)