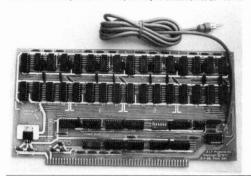
ALF MUSIC BOARDS

The 10-5-9 and 10-5-10 Quad Chromatic Pitch Generator boards are designed to be a low-cost start in computer-controlled music generation. The single board Pitch Generator produces one to four tones simultaneously, two boards can be used to produce eight simultaneous tones in stereo. Each of the four tones are separately controlled and can produce any of 96 tones which form an 8 octave range. This covers the entire standard piano range, plus 8 higher pitches. Special connections allow later expansion with accessory boards to control various sound parameters. Using the optional on-board crystal oscillator or a ZMHz source (external or pin 49 on the S-100 bus) all pitches are within 0.1% of the A-440 Hz standard. The 10-5-9 is S-100 compatible, and the 10-5-10 is compatible with parallel output ports. Kit prices for both versions range from \$111 to \$159 (depending on the number of simultaneous tones), the assembled price is \$185. Oscillator is an additional \$16. Available for produce evaluation: data sheet (free), demonstration record (\$1), and owner's manual (\$3 plus \$1 postage). ALF Products Inc.; 128 South Taft; Denver, CO 80228. (303) 234-0871.



6502 GOODIES

Dear Mr. Warren,

Received: 77 Jul 15

CGRS Microtech has finished a 6502 computer board for the S100 bus. Our board contains the 6502, TTL support circuitry, 2K bytes of RAM, 4K bytes of 2708 ROM, and a

connector for our DMA control panel.

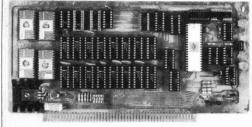
We have also developed a T.I.M. I/O card to go with our computer board.

We will soon have available a complete monitor/operating system along with editor/assembler/dissassembler/debugger. P.O. Box 368

Swope President

CRGR Microtech

Southampton, PA. 18966 (215) 757-0284



ZAPS CASSETTE OPERATING SYSTEM

Received: 77 Oct 17

The ZAPS Cassette Operating System consists of a full Z-80 assembler, text editor, in-memory file system, labeled cassette tape storage system with full cyclic redundancy checks on all tape operations, and a variety of other software utilities. The system is entirely resident in 14K of memory including all buffers and 1K bytes of symbol table space. It will run on most 8080 and Z-80 processors. It is distributed on Tarbell, Digital Group, and TDL standard tapes.

The ZAPS text editor is a full context editor, no line numbers are required. Only the actual data bytes are stored. Editor commands include input, insert, delete, replace, change, global change, up, down, top, bottom, string search, print and print current line number.

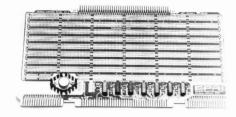
The assembler processes the ZILOG recommended form of mnemonics. A wide variety of pseudo operands are available including origin, end, define byte, define word, define string, and equate. Assembler variable names can be any length. All characters in the names are used to determine variable uniqueness. Features that the assembler shares with the rest of ZAPS include English error messages and the ability to accept numerical values in hex, octal, decimal, or binary form.

The system comes with a ninety page user manual, and is available for \$60. It can be purchased from local computer stores or directly from Algorithmics, P.O. Box 56, Newton Upper Falls, MA 02164 (617) 965-0545.

3000 HOLE GENERAL PURPOSE PROTOTYPING **BOARD FOR \$70**

Electronic Product Associates, Inc., announces the availability of a new General Pupose Prototyping board for use in the Micro-68 Micro-processor systems. The 8" X 14.8" (20.32cm X 37.59cm) GP-2 board is exorcisor bus compatible and has complete bus buffering already established on-board with 8833 driver/receivers. The GP-2 board contains Vcc and ground busing, 3000 holes worth of blank dip patterns for thirty-five 24, 40 or 42 pin dip packages, or 107 14 or 16 pin dip packages. thirty-rive 24, 70 oc. chages.
Price is \$170,00 and they are available from stock.
For additional details contact:
Patti Neumann
Vice-President
Electronic Product Associates, Inc.

Electronic Product Associates, Inc. 1157 Vega Street San Diego CA 92110



Number 19

Dr. Dobb's Journal of Computer Calisthenics & Orthodontia, Box E. Menlo Park, CA 94025

Page 45