

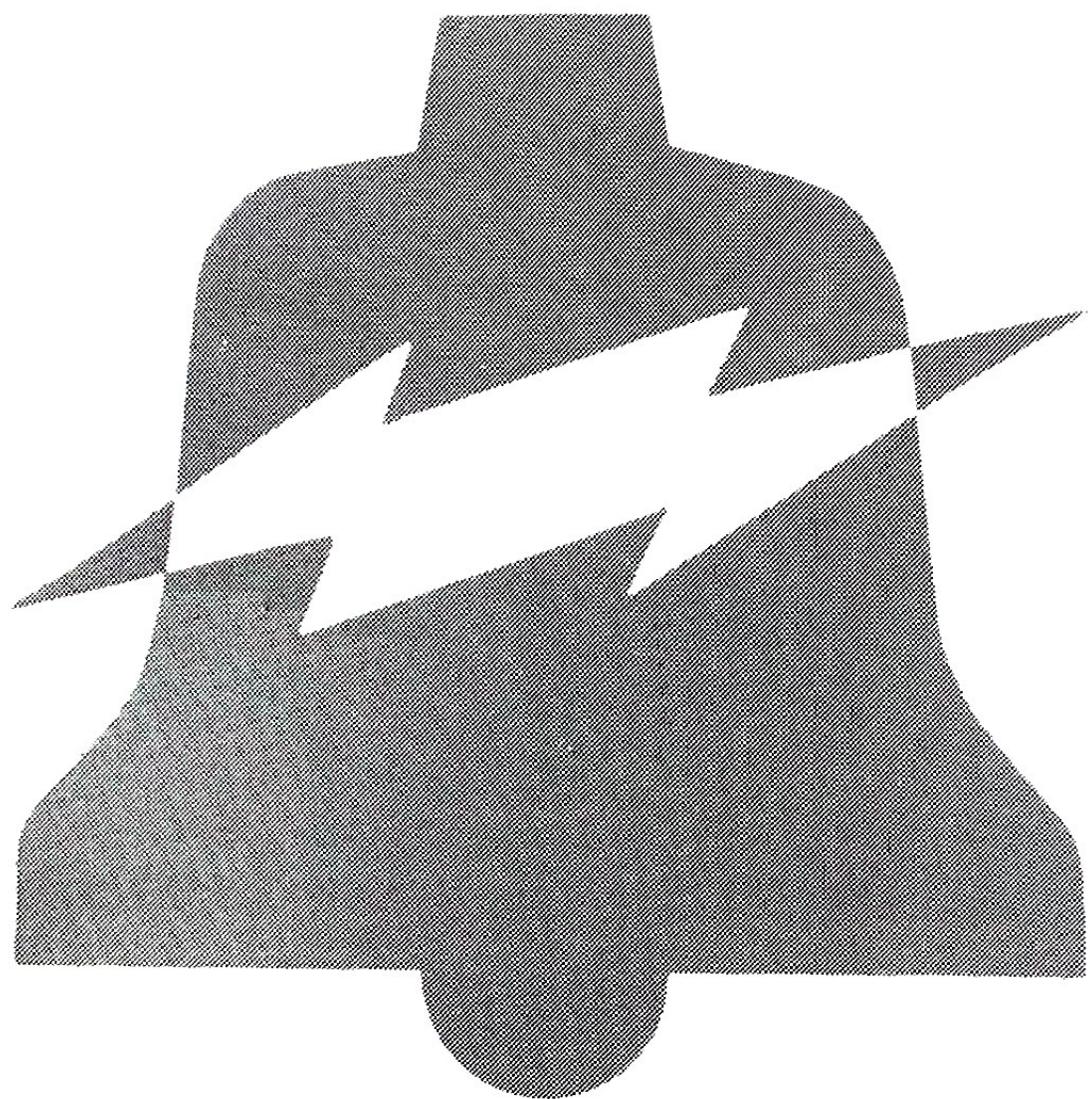
**JOHN BELL
ENGINEERING, INC.**

CATALOG #10

**MICROCOMPUTERS / INTERFACES
FOR
ENGINEERS — SCIENTISTS**

415-592-8411

en-gi-neer-ing n: a science by which the properties of matter and sources of energy are made useful to man in structures, machines, and products.



**JOHN BELL
ENGINEERING, INC.**

John Bell Engineering, Inc.

John Bell Engineering, Inc. was started in 1979 and open for business on January 1, 1980. JBE is 100% owned by John Bell and all of the products in this catalog were designed by John. Before JBE, John was a Senior Engineer at AMPEX in high speed digital recording and before that a Senior Engineer at Stanford Medical Rehabilitation Center.

The part numbers are date codes indicating when that product was designed. The part number 79-295 was designed in 1979 on the 295th day of the year.

GUARANTEE

John Bell Engineering, Inc. Products are guaranteed for 90 days from the ship date. This includes Parts and Labor. It does not include connecting the power backwards or over voltage on inputs. Repair is billed at \$75.00 per hour plus parts.

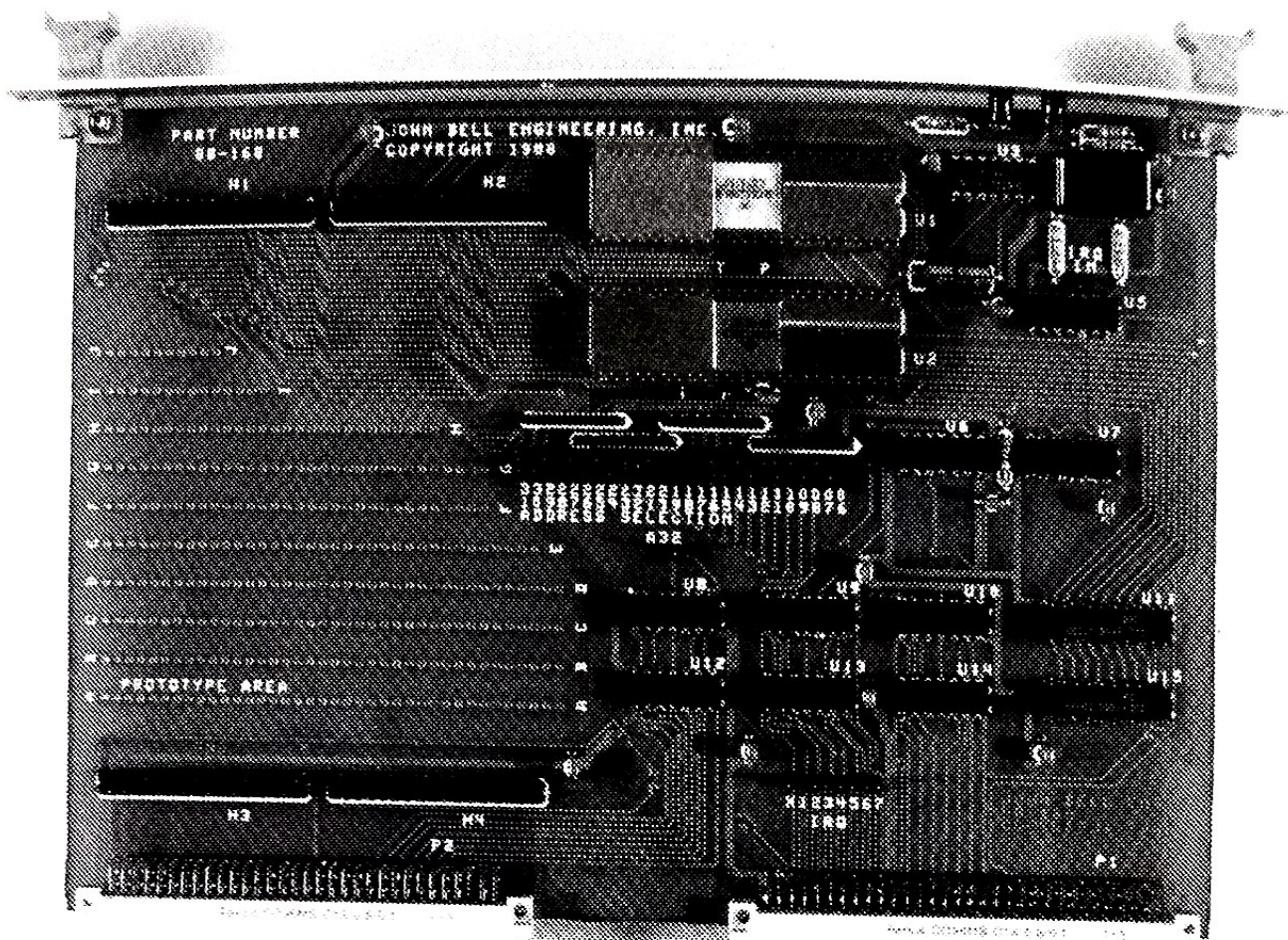
CONSULTING

John Bell designs products and writes software for your needs. The hourly rate is \$120.00. A per job rate is also negotiable.

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VME I/O INTERFACE

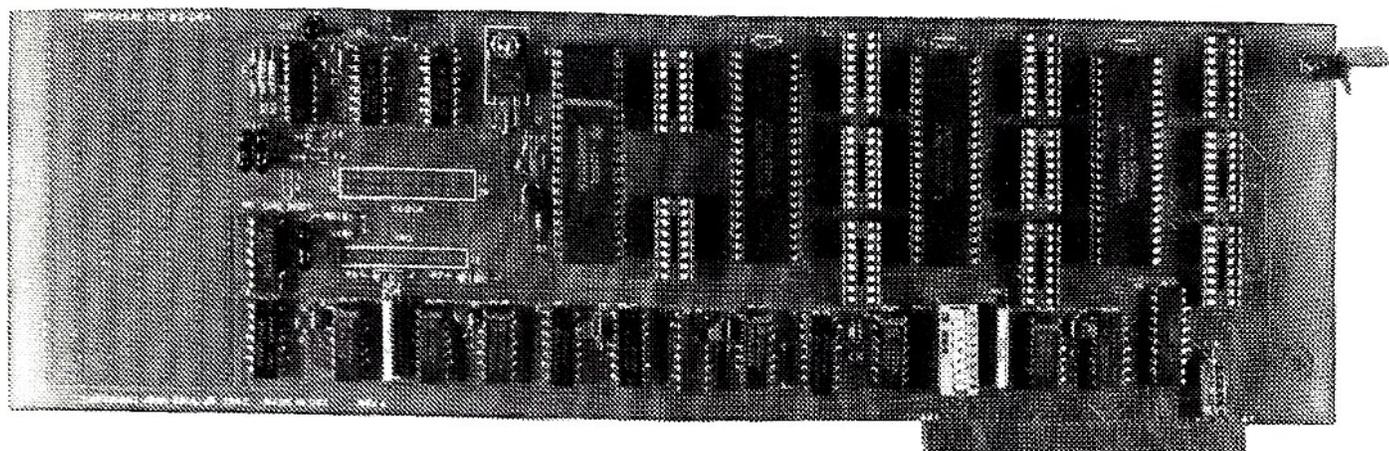


VME PARALLEL I/O INTERFACE

This low cost VME board has two 68230 parallel interface/timer chips that give it six 8 bit parallel I/O ports, 8 handshaking lines, two 24 bit timers and interrupt circuitry. This board is a double high Eurocard DTB slave A24 or A32, D16. This board has a multipurpose prototype area. You can build your circuit on the board or build a piggyback board that plugs onto the four 34 pin headers. Two of the headers connect to the two 68230's I/O ports and the other two headers connect to the P2 connector. +5, +12, -12 and Ground are also available to the prototype area via the 34 pin header connectors. This board has two front panel LED's, one for power and the other to indicate when the board is in use. This board can be addressed anywhere in the 32 bit or 24 bit address space via jumpers. See page 11 for quantity discounts.

ORDER Part Number 88-168A \$399.95

IBM PC, XT, AT PERIPHERAL

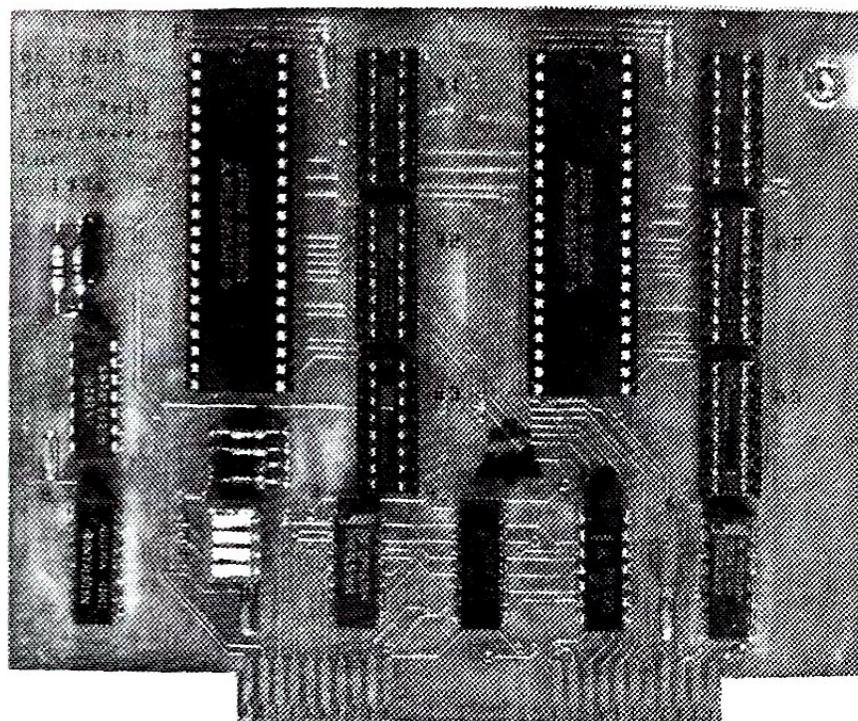


UNIVERSAL I/O

This board has three 8255 PIC's that make up the nine 8 bit parallel I/O ports. That's 72 I/O lines! This board also has 16 analog inputs. Each analog input has a 0-5 volt input voltage range, 8 bit resolution (256 steps) and 20 meg. input impedance. Conversion time is 200us per channel. This board also has interrupt-timer circuitry, prototyping area, and a LED to indicate power. A dip switch is used to select the I/O address (32 are used). This board is designed for the scientist and engineer to use in lab or industrial control functions. The ports interface via 16 pin ribbon cables. Sample programs are provided in the documentation. This board uses a full size slot in the IBM PC, XT or AT and other bus compatible computers. Cables, connectors, brackets and disk software are available (See page 8).

ORDER Part Number 83-064A \$229.95

IBM PC, XT, AT PERIPHERAL

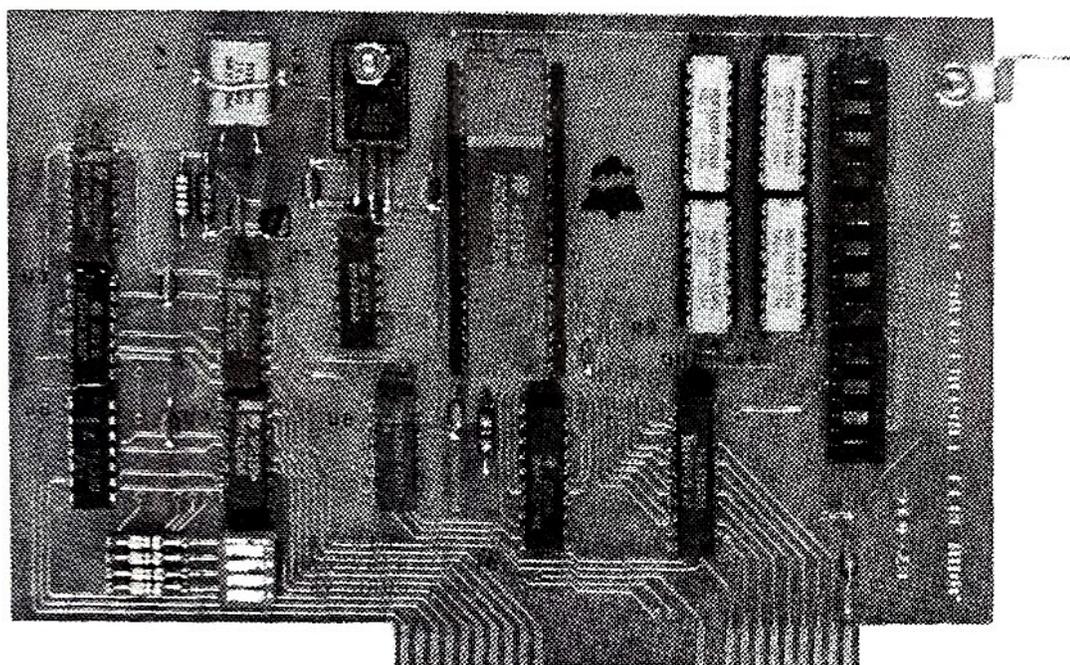


UNIVERSAL PARALLEL INTERFACE

This board is for the IBM PC, XT or AT. It has two 8255 PIA's that make up six 8 bit parallel input or output ports. The board fits into a short slot in the XT computer. This board uses a dip switch to select the I/O address. Eight of these boards can be used in one computer together. Cables, connectors, brackets and disk software are available (See page 8).

ORDER Part Number 86-108A \$99.95

IBM PC, XT, AT PERIPHERAL

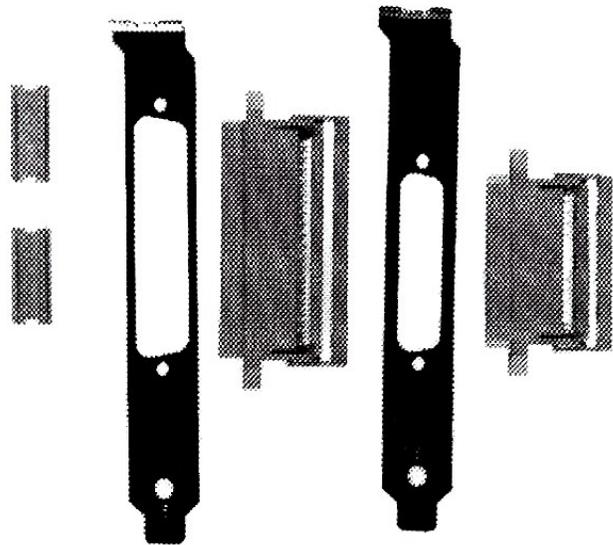
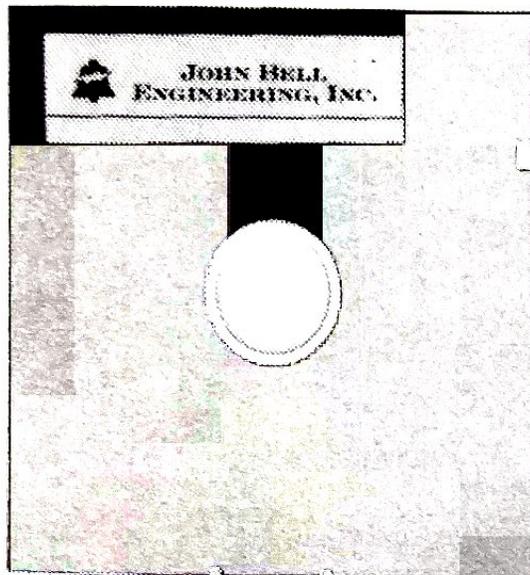


A-D CONVERTER

This board has 16 analog inputs that have a 0-5 volt input range. The input voltage range can be changed with the on board resistor networks to 0 to 10 volts or -5 to +5 volts and other ranges can be achieved with user supplied resistors, i.e. 0 to 25, 0 to 50, 0 to 250 and so on. The conversion time is less than 100us per channel. This board also has 3 TTL inputs and 3 TTL outputs that can be used to control other devices while using the A-D converter. This board connects via 16 pin ribbon cables. This board works in the IBM PC, XT or AT computers and compatibles. Cables, connectors, brackets and disk software are available (See page 8).

ORDER Part Number 87-016A \$99.95

IBM PC, XT, AT PERIPHERAL



DISK - BRACKETS - CONNECTORS

One 360K 5.25" disk with basic programs from the documentation of the 83-064, 86-108 and 87-016 (IBM boards). This disk also has programs from the JBE bulletin board which can be reached at (415) 591-3572 (1200 baud only). All of the programs on the disk are on the bulletin board and can be downloaded for free.

ORDER Part Number FD-1 \$5.00

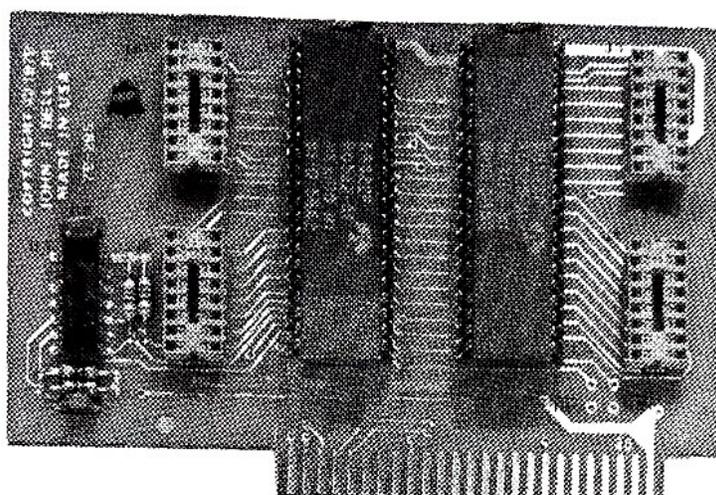
BRACKETS & CONNECTORS

These brackets can be installed in the same slot as the card or in empty slots. Two sizes are available, 25 pin and 37 pin. Also, 16 pin headers and ribbon cable are available.

ORDER

BK-25	\$5.00	RIBBON CABLE \$2.00 per foot, 25 or 37 conductor.
BK-37	\$5.00	
CON-25	\$9.00	
CON-37	\$9.00	
HED-16	\$1.00	

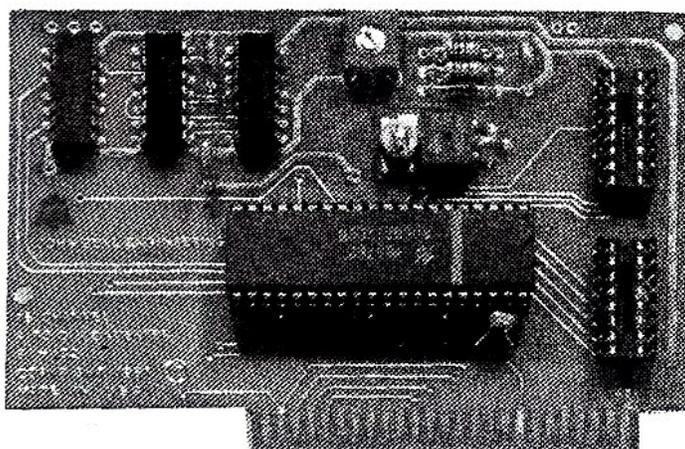
APPLE IIe PERIPHERALS



PARALLEL INTERFACE

This board has two 6522 VIA's that make up the four 8 bit parallel I/O ports. This board plugs into one of the Apple II or Apple IIe slots. Connection to the ports is via four 16 pin dip sockets. Example programs are included.

ORDER Part Number 79-295A \$69.95

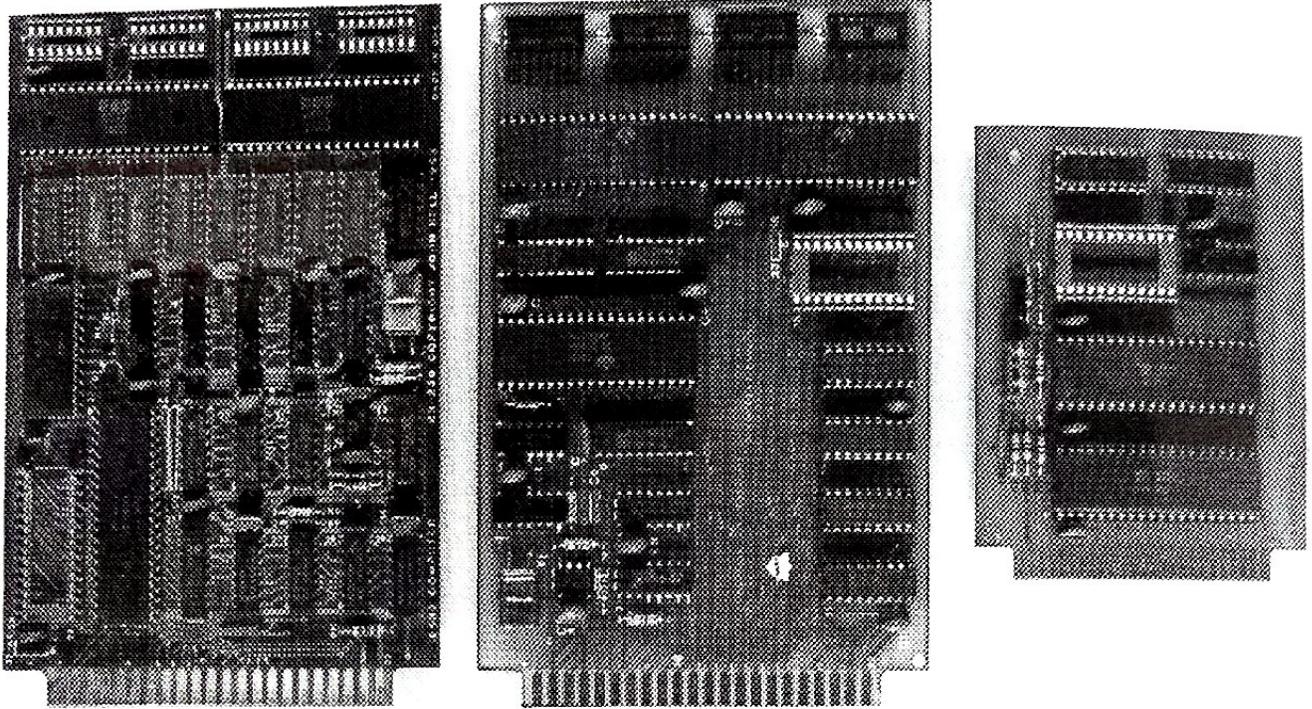


A-D CONVERTER

This board has 16 analog inputs that have a 0-5 volt input range, 8 bit resolution and high impedance (>20meg.). Conversion time is less than 100us per channel. Two 16 pin dip sockets are used for input. This board plugs into a slot in the Apple II or Apple IIe computer. Example programs are included.

ORDER Part Number 81-132A \$89.95

SINGLE BOARD COMPUTERS



SINGLE BOARD COMPUTERS

These are 6502 processor computer - controllers. The board on the left (83-230A) has two 6522 VIA's that make four 8 bit parallel I/O ports, a 6850 serial port, 55K of DRAM and socket for an EPROM (2716, 2532 or 2564). The board size is 4.5" by 6.5". The middle board (81-260A) has two 6522 VIA's that make four 8 bit parallel I/O ports, 2K of RAM and a socket for an EPROM (2716 or 2532). The board size is 4.5" by 6.5". The board on the right has one 6522 VIA that makes two 8 bit parallel I/O ports, 1K RAM and a socket for an EPROM (2716 or 2532). The board size is 3.3" by 4.2".

ORDER Part Number

83-230A	\$179.95
81-260A	\$139.95
80-153A	\$89.95

Ordering Information 9am to 4pm PST (415) 592-8411

We accept checks, money orders and cash. Add 6.5% sales tax in California and \$2.00 to \$4.00 for shipping. Add \$2.20 more for COD. Will call orders must be preceded by a phone call to check stock and time of pickup.

Send Orders To:

John Bell Engineering, Inc.
400 Oxford Way
Belmont, CA 94002

Quantity Discounts

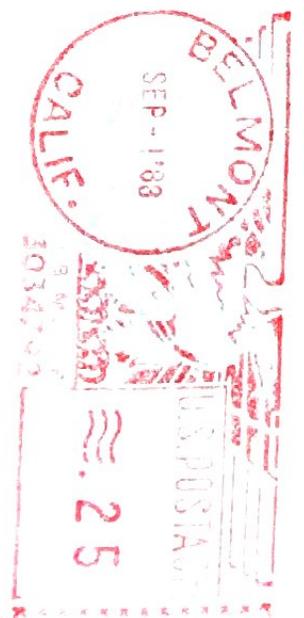
1-4	0%	25-49	17%	100-199	30%
5-9	10%	50-74	23%	200-499	34%
10-24	12%	75-99	27%	500-up	35%

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FROM:
John Bell Engineering, Inc.
400 Oxford Way
Belmont, CA 94002

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TO:

Computer Enthusiast
DALLAS R. SHELL
212 S. NORWAL
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