

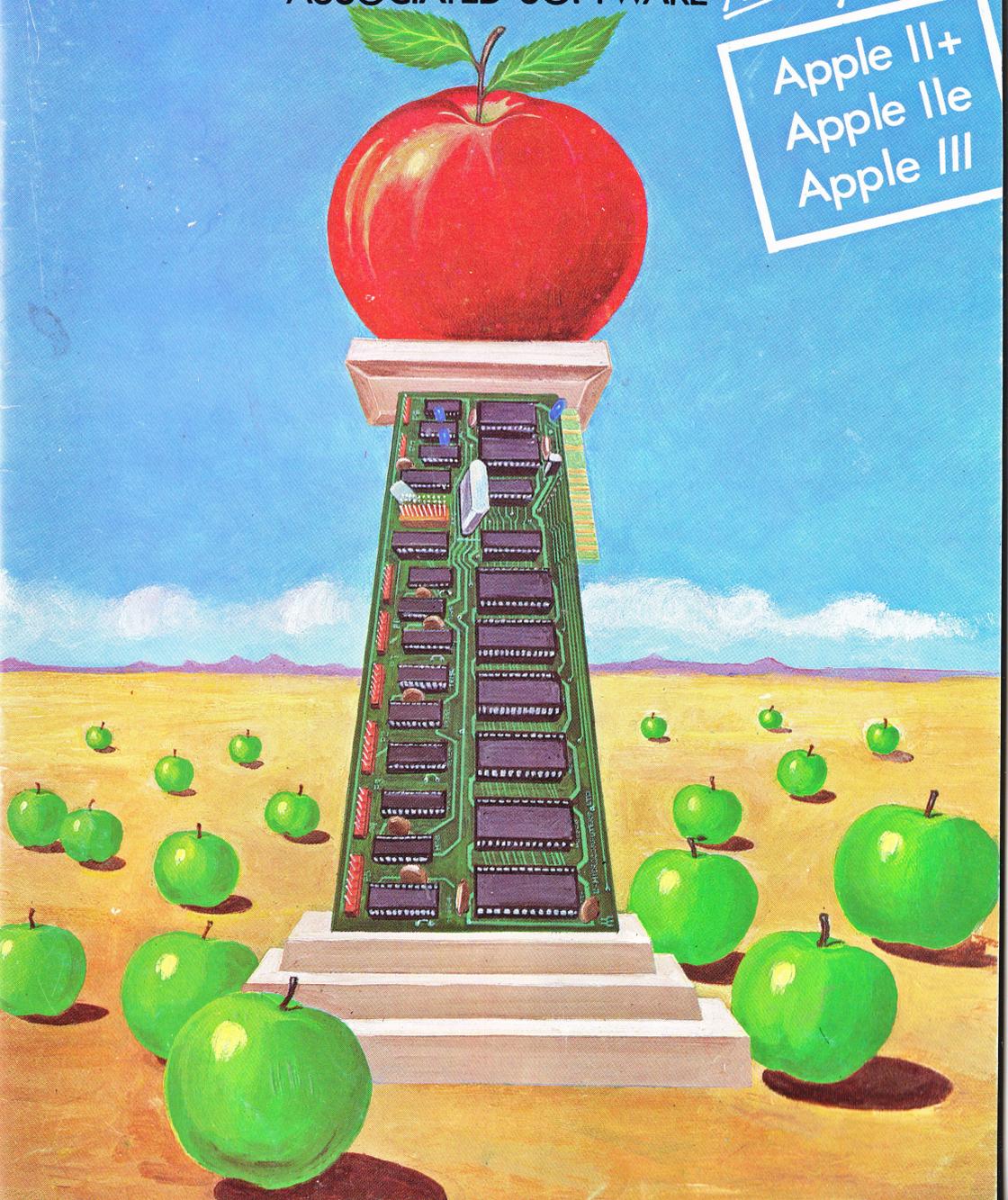
U-MICROCOMPUTERS

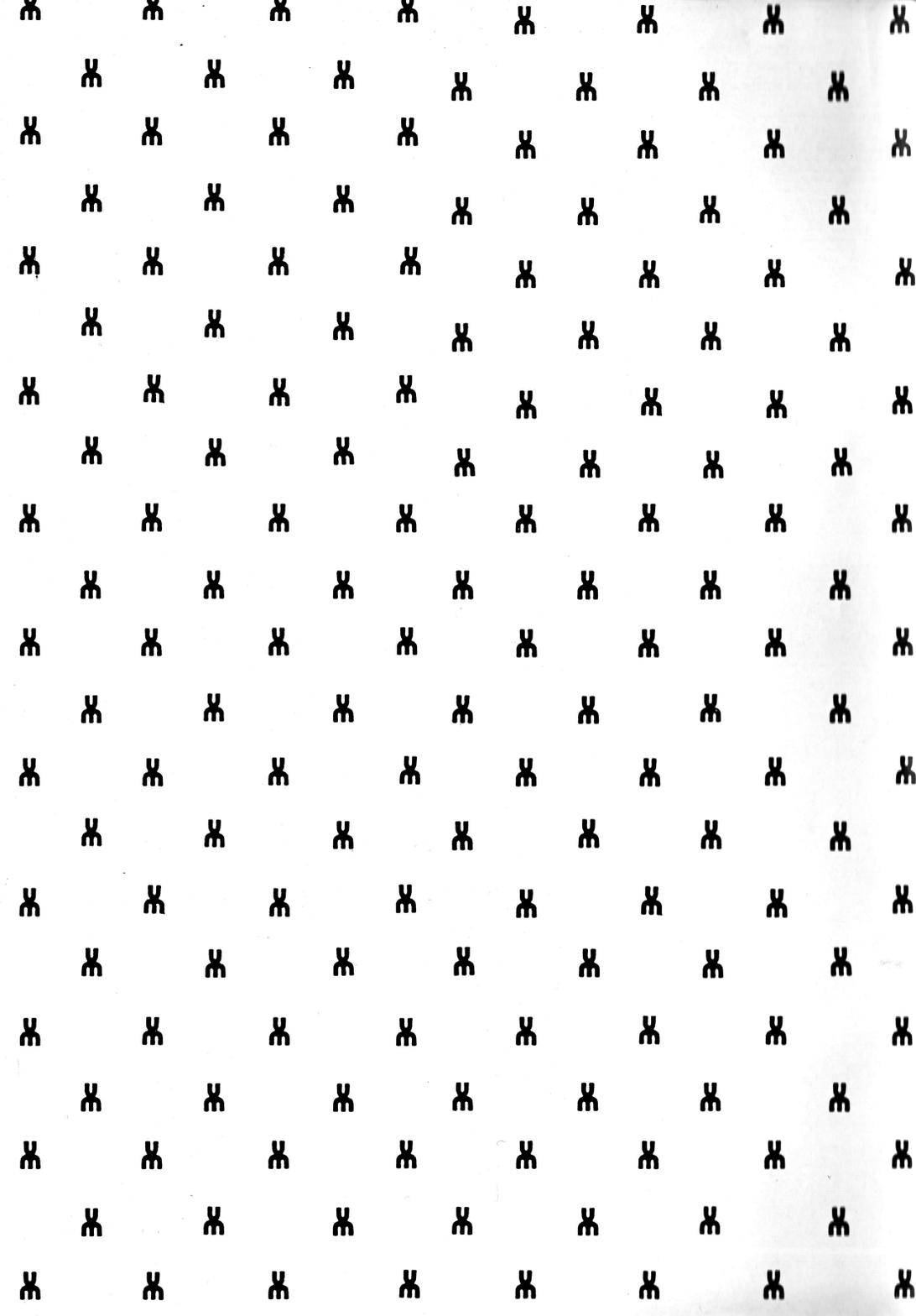
83/84 issue

APPLE EXPANSION CARDS
AND
ASSOCIATED SOFTWARE

*Lots of
NEW items
for..*

Apple II+
Apple IIe
Apple III





U-MICROCOMPUTERS

Apple Expansion Cards and Associated Software

A
range of quality
hardware and software products
to enhance
your Apple II and Apple III



128k:

About U-Microcomputers

The microcomputer business has produced quite a number of fast growing innovative companies. U-Microcomputers is one of them. Apple dealers 1980, first cards introduced 1981, range greatly expanded and major software product (U-NET) launched 1982 and 1983.

Of course we are following a leader — Apple Computer Inc — and firmly believe that their success is based on the basic architecture of the Apple II (Applebus) and the incremental R & D from companies such as U-Microcomputers. We are fully committed to further development of Applebus and its recognition as a de facto international standard. It is more versatile than S100 and much, much more widely accepted. With the U-COM2 we make Applebus cards and software available to OEM's and system builders as well.

II+ or IIe?

All our products are compatible with II+ and most with the IIe, for each item + e or /// indicates compatibility.

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NEW

NEW
NEW

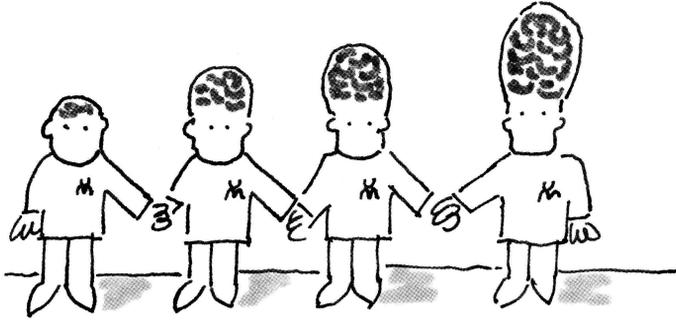
NEW
NEW

NEW

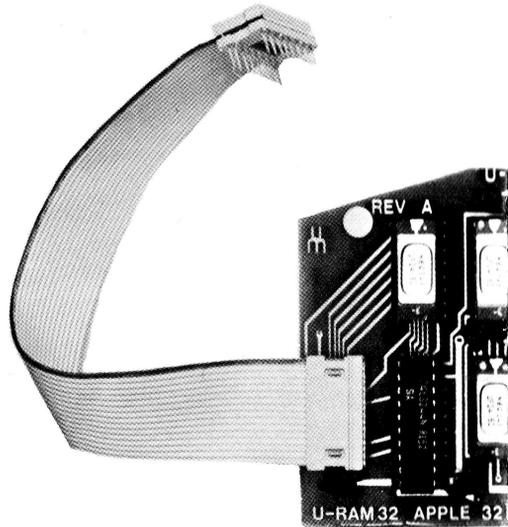
NEW

NEW

Memory Cards



The U-RAM range of cards covers the whole range of user RAM expansion possibilities. With two U-RAM 128 your Apple can have a massive 304K of RAM meaning it can handle bigger computation jobs and do jobs a lot faster. All cards work on the same principle. They are organised as 16K banks of RAM addressed through the slot into which they are located. If installed in slot 0 then the first 16K of each card is available through Apple inc. software. Otherwise there are various ways of using the RAM and we provide two extremely versatile packages VVE and VRD. We also provide two extremely useful utilities MMS and APR especially useful for graphics.



U-RAM 16 +

U-RAM 32 +

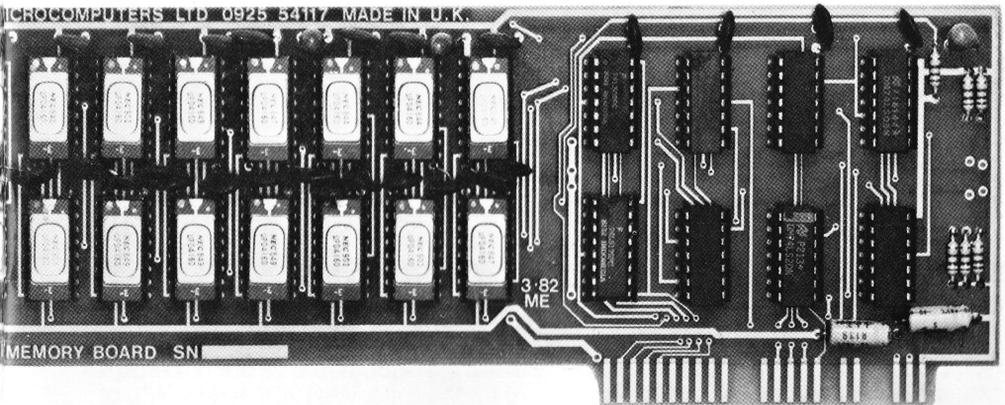
An add-on 16K memory card to increase your Apple II+ to 64K RAM. It is electrically identical with the Apple Language Card.

Features:—

- PASCAL compatible — runs all PASCAL applications package.
- CP/M compatible — increases RAM to 56K for packages such as WORDSTAR.
- VISICALC compatible — model size increased to 35K.
- Makes Integer ROM card obsolete as DOS 3.3 automatically loads INTEGER into U-RAM 16.
- Includes MMS.

Half the U-RAM 32 works like the 16K RAM card if installed in slot 0. With MMS both Integer and the DOS can be loaded onto the U-RAM 32. The VRD and VVE can use single or multiple U-RAM 32's. The maximum configuration for VVE is either a 16K or 32K card in slot 3 plus up to three U-RAM 32.

Lots of RAM!

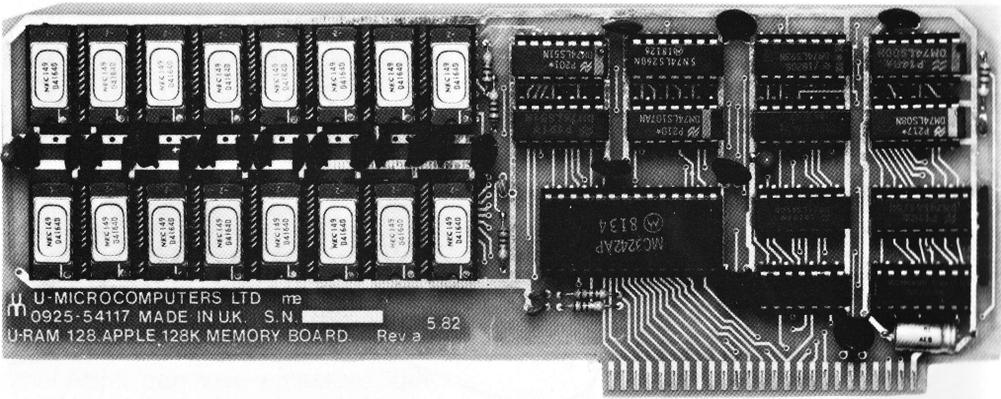


U-RAM 64 + e

U-RAM 128 + e

Use with VRD and VVE or user produced software. Expandable to 128K. A 64K RAM card for new or old Apples. Supplied with VVE, MMS and VRD.

Our largest expansion board. Uses latest technology 64K RAM chips. Includes MMS, VVE and VRD.



To order

Cards	Software included		
	MMS	VVE	VRD
2-1010 U-RAM 16 for Apple II	✓		
2-1020 U-RAM 32 for Apple II		✓	✓
2-1030 U-RAM 64 for Apple II	✓	✓	✓
2-1040 U-RAM 128 for Apple II	✓	✓	✓

Software

- 12-1012 memory management system (MMS)
- 12-1020 versa Visicalc expand (VVE)
- 12-1030 versa RAM disk (VRD)
- 12-1040 Applesoft program relocater (APR)
- 12-1050 VVE80 display enhancement
- 12-1060 VVE80 Ile display enhancement

*... more RAM
and yet MORE RAM*

Software was originally supplied as separate items.

...memory card software

MMS memory manager ^{+e}

The main board RAM space on the Apple is 48K. When using DOS 3.3 approximately 11K of this space is taken up with the DOS itself leaving 37K for programs. Memory Manager software will relocate the DOS onto a RAM card freeing up the 48K RAM and allowing approx 30% bigger programs to be run. *This package is a must for the Ile because even though it is a 64K machine it works like the old 48K Apple II+!*

APR applesoft program relocater ^{+e}

When using hires graphics one or two 8K pages of memory are dedicated to generation of the graphics screen. And as they fall in the middle of the memory area they restrict the size of programs to only about 6K. APR moves BASIC programs above the hires graphics pages allowing them to become much larger without interfering with graphics. If used with MMS the APR allows programs of up to 32K to be run with graphics!

VVE versatile Visicalc expansion ^{+e}

VISICALC is the famous spread sheet calculation program. On the BASIC Apple II+ the size of model is limited to 35K with a 16K RAM card in Slot 0. Similarly with the Ile VVE is used to obtain larger models still inconjunction with the U-RAM cards, mixed or multiple cards! It supports a single U-RAM 64 or U-RAM 128 with either a Ile or a II+ with or without U-RAM 16.

VRD versatile RAM disc emulation ^{+e}

This package allows the memory space on RAM cards to be used as if it were disc storage space. So really its an extension to DOS 3.3. The RAM disc supports program chaining, sequential and random access data files and EXEC files. Our package is called versatile RAM disc emulation because it works with the whole range of RAM cards, U-RAM 16 to U-RAM 128 either mixed, or multiple cards or both. Thus a system can be expanded in steps.

The speed of access to data and programs via VRD significantly increases the power of the Apple Computer and is probably the most significant general enhancement since the introduction of Z80 cards.

VVE80 ⁺ display enhancement as well

This package gives 80 column Visicalc display on the U-TERM plus memory expansion. Similarly with the Ile.

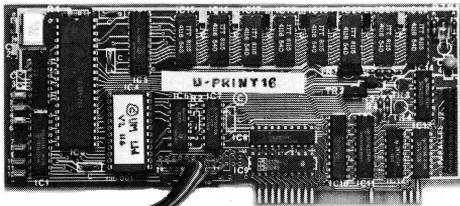
VVE80 Ile ^e

NEW

This package allows 80 column display on Apple's own Ile 80 column display board **and** memory expansion with the U-RAM 64 or U-RAM 128.



... *printer freedom card*



U-PRINT64

A 64K version now also available.

Buffer — 16K
Parallel — Centronics
Serial — RS232
Graphics — Epson & Apple DM.

Buying the right card for use with your printer **was** a jungle. Now there is one card that offers all the features in one that are separately available on the others. Its got a 16K buffer able to store 16,383 characters — thats 4 or 5 full A4 pages of text. The card receives this data from the Apple at high speed and then prints it out while the Apple is doing something else.

And it will connect to almost all printers because its got both serial and parallel output. The serial output is RS232 at baud rates 110 — 9600 baud. It also includes XON/XOFF features. A D25 connector is included to take the signals from the Apple and then your dealer can make up a cable to your printer.

The parallel output is Centronics compatible allowing most of the lower cost printers to be connected. A pcb type connector is fitted on the board. A cable from it to the printer with a Centronics type connector is available from U-Microcomputers.

Finally there is some clever software on the board to allow page formatting **and** a full set of graphics commands for the Epson printers. Dump Hires graphics! Manipulate them!

The comprehensive manual contains a table showing exactly how to configure a host of specific printers.

To order:

- 2-1240 U-PRINT 16 buffered serial + parallel printer interface
- 2-1242 U-PRINTCAB Centronics printer cable for U-PRINT 16 and U-PRINT 64
- 2-1250 U-PRINT 64 buffered serial + parallel printer interface

U-S232 ^{+ e III}

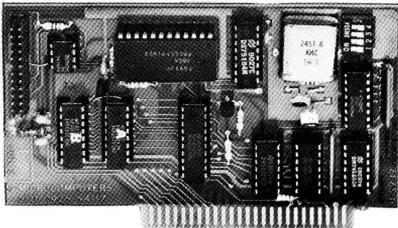
U-PORT ^{+ e III}

Our answer to the Apple Serial Interface problems — Apples own high speed serial interface doesn't handshake, hence forcing you to run the printer too slow and most other serial cards are only BASIC compatible.

Features:—

- BASIC, PASCAL and CP/M compatible.
- 13 baud rates from 75-19200
- RS232C compatible with handshaking.
- Communications capabilities — compatible with VISITERM.
- Wide range of packages supports US232.

*all the RS232
you'll ever need!*



To order

- 2-1110 U-S232 serial interface for Apple II
- 2-1110 U-S232 serial interface for Apple III

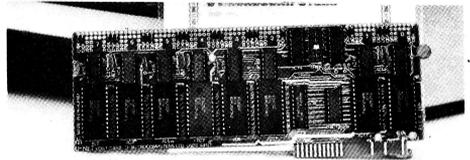
U-PORT is a single board having on it eight serial ports. These are RS232 type ports allowing both sending and receiving of data. Each port is, of course, individually addressable. The baud rates allowed, range from 150 to 19200. Three different rates may be simultaneously set up and then fed to eight ports grouped as 5, 2 and 1. All eight ports may be set to the same rate if required.

U-PORT may be installed in any slot except zero. 6pin PCB connectors are arranged along the top of the boards, but the customer or his dealer will need to provide appropriate cables and plug. These are 0V, RTS, TXD,, DCD, CTS and RXD.

Multiple U-PORTS may be installed and in this case, so as to not overload Apples power supply, provision is made to connect in an auxiliary supply to the board.

The range of applications for U-PORT is very varied, including connecting to printers, VDUs, other computers, modems etc. A diskette is included with machine code software for basic operation of the board. The instruction manual gives programmers information.

U-Microcomputers is pleased to write further special software to customers orders as will be Apple dealers with capabilities for writing machine code software.



To order

- For Apple II
- 2-1120 U-PORT 8 serial interfaces
- For Apple III
- 3-1120 U-PORT 8 serial interfaces

The U-BCD is an interface card designed to allow the Apple computer to communicate with any digital panel meter having a BCD output (standard or optional on virtually all types of D.P.M.). Hence the Apple can, via the panel meter, collect and process measurement data from a wide variety of transducers, e.g., temperature, pressure, strain, voltage, current, power, displacement, etc.

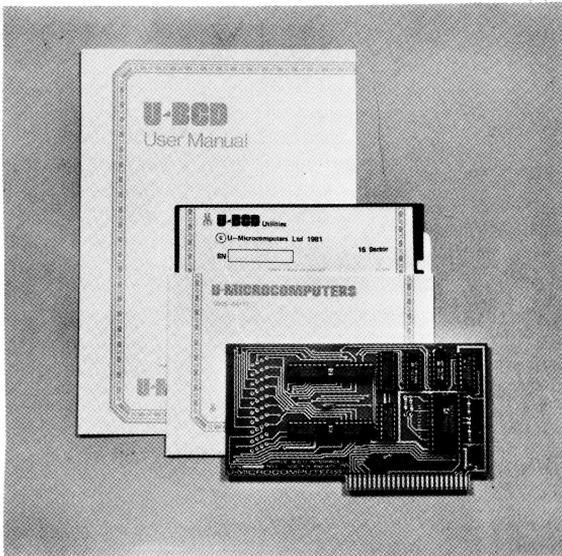
The board has provision for reading up to eight B.C.D. digits giving it the ability to assimilate data with extreme precision, i.e., to a resolution of 1 in 10,000,000.

An additional five lines are provided for handshaking purposes and monitoring of other D.P.M. states such as alarm, average and polarity.

The board is software controlled, in either BASIC or Machine Code allowing easy tailoring of the handshaking to the requirement of your B.C.D. output.

External connections to the board are made via a 37 way D type socket. Example software and instruction manual are included.

*Panel meters
OK!*



To order

- 2-1130 U-BCD panel meter interface for Apple II
- 3-1130 U-BCD panel meter interface for Apple III

The U-A/D is a complete interfacing system for many data acquisition and control applications. It consists of a control card plugging into any Apple slot except 0, which carries the digital circuitry and a separate shielded unit carrying the A/D converter and associated circuitry. This arrangement eliminates the effect of digital noise on the A/D converter.

The control card includes the following functions:—

- a) Interfaces the analog card to the Apple.
- b) Provides 32 digital I/O lines for input or output with 16 of them buffered to allow the card to drive relays, Led's etc.
- c) Four counter timers. These may be operated together to time intervals of over one hour or down to less than one millisecond. The time may just be read from the timers or they may operate an interrupt basis.

The analog card has a 12 bit A/D

converter with a conversion time of approx 25 microseconds. The A/D output is buffered and read into the computer via the control board as two 8 bit bytes. The A/D can be operated so as to give interrupts to the Apple or not. As standard the board provides 8 differential input channels to the A/D or it can accept 16 single ended inputs.

The input voltage accepted for full scale is set by resistors and ranges from 0V to $\pm 10\text{mV}$ to 0V to $\pm 10\text{v}$.

Soft controlled switching between up to three gain ranges is included.

Comprehensive documentation is included with example programs.

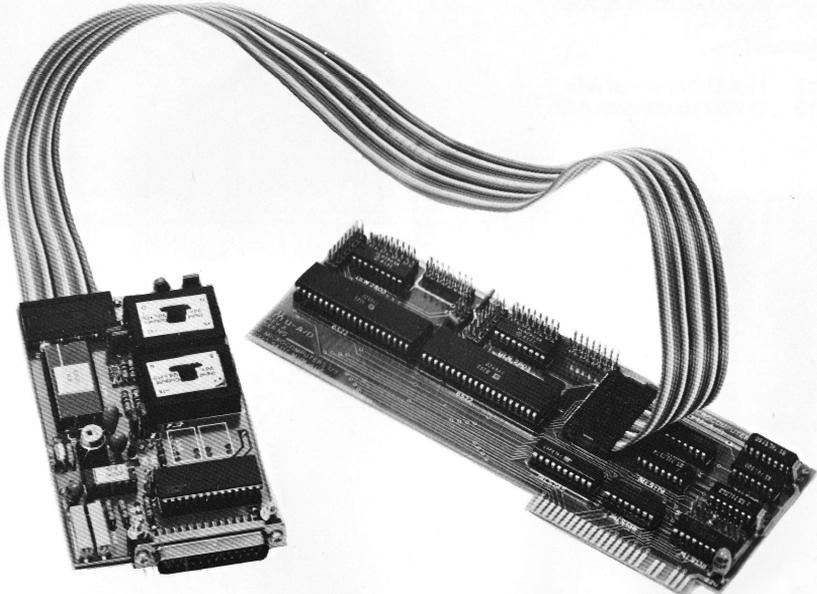
The manual is the best we've ever produced and really allows you to make the most of the U-A/D.

Specifications

Analogue resolution — 12 bits

Analogue channels — 8 differential

— 16 single ended
(available option)



Input voltage range	— 0 to plus 10V for correct operation	The U-DT is a complete digital interfacing system with timer capabilities. It provides 32 parallel I/O lines for input or output with 16 of them buffered to allow the card to drive relays, Led's etc. Four counter timers are included allowing time intervals from a millisecond to over one hour to be measured or used on an interrupt basis. These functions are provided through two 6522 VIA chips. The U-DT is the U-A/D board with the analog interfacing chips not fitted. Comprehensive documentation is included with example programs.
Full scale sensitivity	— set by resistors — $OV \rightarrow \pm 10mV$ to $OV \rightarrow \pm 10V$	
Input impedance	— $> 100 M\Omega$	
Source impedance	— $> 1k\Omega$	
Input capacitance	— 20 pF	
Analogue input via 25 way 'Cannon D' plug.		
Monotonicity	— 0 to 70°C	
Linearity	— ± 1 LSB (total)	
Gain tempo	— < 25 rpm	
Cycle time	— $< 50 \mu s$	
Sample acquisition	— $6 \mu s$	
Conversion	— $25 \mu s$ typical	

Options

Options for the U-A/D include 16 channel single ended MUX.

To order

For Apple II

2-1212	U-A/D 8 channel A/D
2-1213	U-A/D 16 channel A/D

For Apple III

3-1212	U-A/D 8 channel A/D
3-1213	U-A/D 16 channel A/D

To order

2-1220	U-DT digital I/O and timer for Apple II
3-1220	U-DT digital I/O and timer for Apple III

Digital Interfacing

U-CENT ^{+e III}

U-4 DISC ^{+e}

A low cost interface to Centronics compatible parallel printers. Includes 4 foot cable with connector. Compatible with DOS 3.3, UCSD OS, and CP/M. User written graphics software (using bit 8) supported and examples for several printers included.

A no nonsense very simple to use interface!

To order

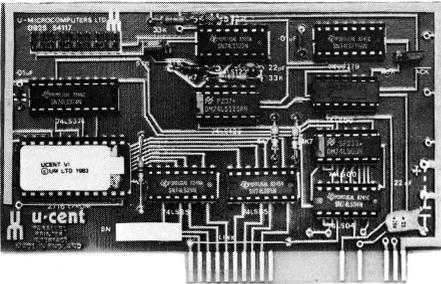
- 2-1230 Centronics parallel interface for Apple II
- 3-1230 Centronics parallel interface for Apple III

More and more Apple compatible drives are coming onto the market — but many of them are without controllers or the controllers are relatively expensive. The U-4DISC disc controller is our solution. It can control up to four drives all plugging into the U-4DISC. They appear to the Apple to be drives on adjacent controllers (eg S6, D1 and D2 plus S5, D1 and D2) and the adjacent slot is not available for other cards.

The card contains U-Micros own boot controller PROM. Source listings for this are given in the manual. It has been tested and proven with Applesoft, PASCAL, CP/M and VISICALC.

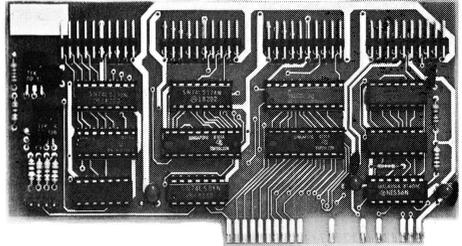
To order:

- 2-1280 U-4DISC Four drive disc controller



Low cost Centronics for II or III

** up to four drives!*

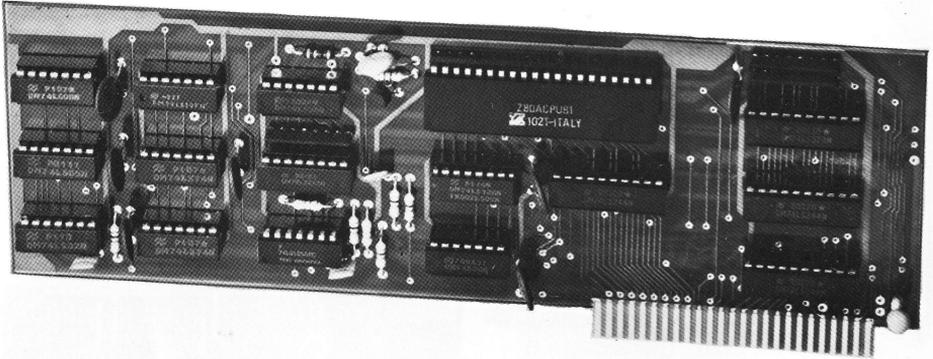




A plug in Z80 processor card. The 4MHz Z80 runs in parallel with the Apples 6502 processor. It allows your Apple to economically run the CP/M or BOS operating systems: CP/M is a system for most 8080 and Z80 based computers and it provides a common environment for Languages and Applications software independent of the actual machine. Hence a very wide range of ready to go software is available.

The U-Z80 is fully compatible with other Z80 cards on the market.

The CP/M hardware



To order

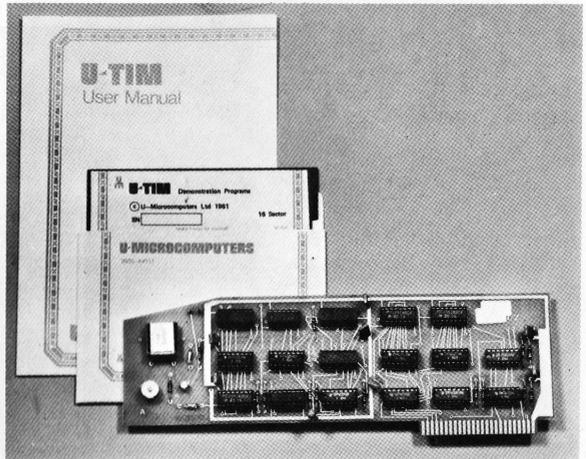
2-1310 U-Z80 processor card for Apple II

U-TIM ^{+ e}

U-TIM is a low cost timer for the Apple II, that can be installed into any slot except 0. It will record intervals of up to one hour with a readout down to one millisecond. U-TIM will also generate an interrupt at intervals ranging from one millisecond to one hour. All timing is to 1 microsecond accuracy. Programming is simple — a command word is POKED into the card setting interrupts, initiating timing etc. The time interval is then accessed by PEEKING and directly reading digits corresponding to milliseconds, 10 milliseconds, seconds, 10 seconds, minutes, and 10 minutes. Full instructions are provided along with example BASIC programs and a machine code routine to handle interrupts.

An example PASCAL program with driver is also included in the manual.

-- unique accuracy & precision!



To order

2-1320 U-TIM interval timer

U-TERM⁺

U-TERM is an 80 column upper and lower case display board for the Apple utilising slot 3. It is compatible with BASIC, PASCAL and CP/M without loading software from disc. With BASIC the card must be booted with PR#3 whilst with PASCAL and CP/M the boot is automatic and the PASCAL control A function is disabled. U-TERM is ideal for word processing programs such as WORDSTAR. It is also fully compatible without patching with Applewriter II.

The shift key is not fully decoded on the Apple II and in general modifications are needed to use it. U-TERM however includes a very easy to install shift-key utilisation accessory that just "plugs in and clips on". Dismantling the Apple and

keyboard is not required! This only applies to Apples from since around early 1980 (i.e. the vast majority) with the piggy-bank encoder and reset protect board.

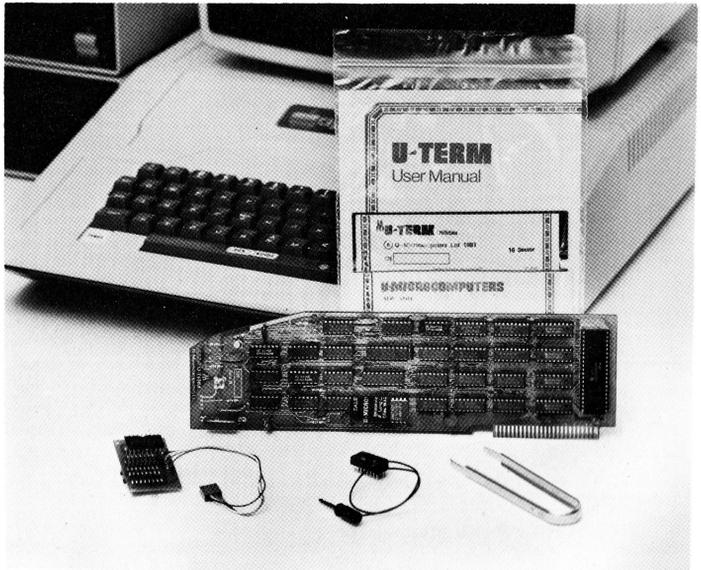
A disc of Utility programs is provided including software for generation and loading of alternative character sets.

A 40/80 column switch is optionally available which allows the monitor input to be selected between the U-TERM output or the standard Apple output.

To order

2-1330 U-TERM 80 column display for Apple II
2-1331 40/80 switch

*80 col. display
for II+*



U-M68000 +

U-TALK + e

A plug-in card to give your Apple the power of the 68000 16/32 bit processor. The power of a mini-computer at the price of an Apple add-on!

The 68000 features:

- 14 Addressing Modes
- 32 bit data and address registers.
- 56 very powerful instruction types including signed and unsigned 16 bit multiply/divide.
- Operation on five main data types.
- Memory mapped I/O.
- 16 MB addressing range.

The U-M68000 implementation allows you to use these features through a new 68000 assembler.

The board is supplied with two manuals and the following software:

- (a) Menu driven assembler
- (b) Symbolic assembler with Editor (using 6502 subroutines for basic I/O)

Simultaneous operation of the 68000 and 6502 is possible with the 68000 working at 100% of full speed and the 6502 at 30% of full speed.

We are pleased to cooperate with software vendors on implementation of systems and applications software. This particular product is manufactured by Simon Computers Ltd.

The U-TALK Apple speech synthesis card uses the National Semiconductors DIGITALTALKER chip set. This includes the speech chip itself and two 64K bit ROMS containing speech data (143 popular words). It produces high quality speech including emphasis and natural inflection.

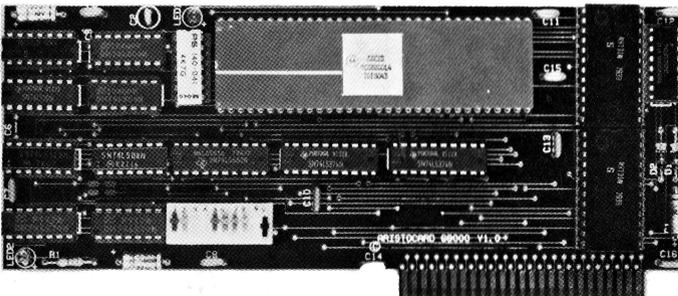
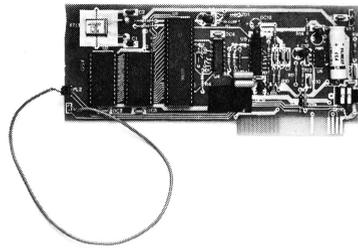
Gov. blimey!

The audio output can be to the Apple's built-in speaker or if better quality is required, can be output via a 3.5 mm jack socket to a larger speaker or hi fi system.

The manual includes programming examples in BASIC and machine code and there is a demonstration diskette with games on.

To order

2-1350 U-TALK Speech synthesis card

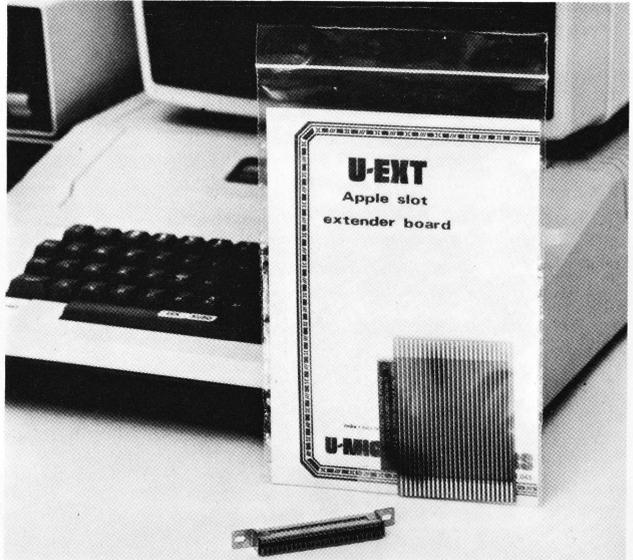


32 bit power for !!



U-EXT is an Apple slot extender board with slot connector. It is designed to aid trouble shooting and board development.

slot in your ideas



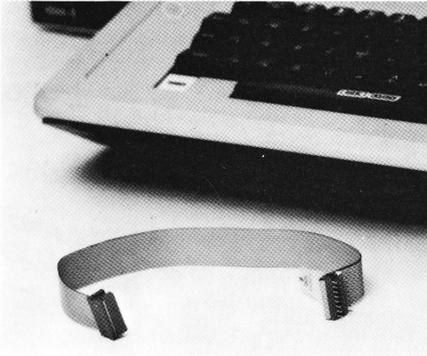
9.50

12.00

To order

- 2-1410 U-EXT extender board for Apple II or Apple III
- 2-1420 Game socket extender for Apple II
- 2-1430 U-PROT prototype card for Apple II
- 3-1430 U-PROT prototype card for Apple III

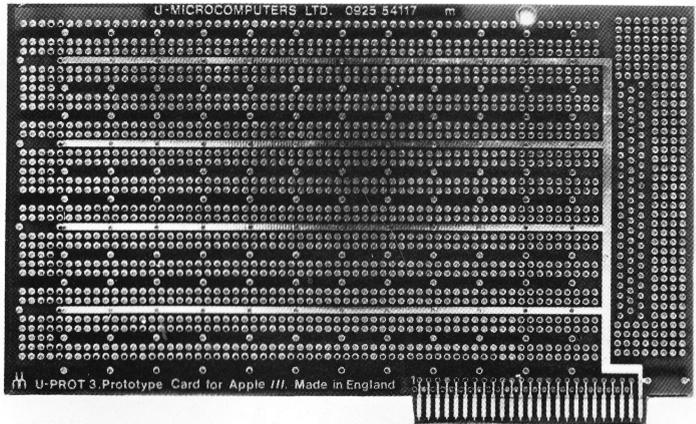
GSE Game Socket Extender is a simply installed plug and socket for bringing the game I/O socket functions out to the front of the computer. The plug goes into the game socket, while the socket is fed out under the front of the lid and then trapped and firmly held as the lid is "popped" down.



The U-PROT is a card designed to allow custom building of circuits for one off applications or prototyping and development. It is made of standard material with spacing to allow a range of IC's and other components to be easily fitted.

a must for prototyping ✱

A winning AID!



U-NSCRUMP + e

A NEW DEVICE TO
PROTECT YOUR APPLE
SOFTWARE INVESTMENT

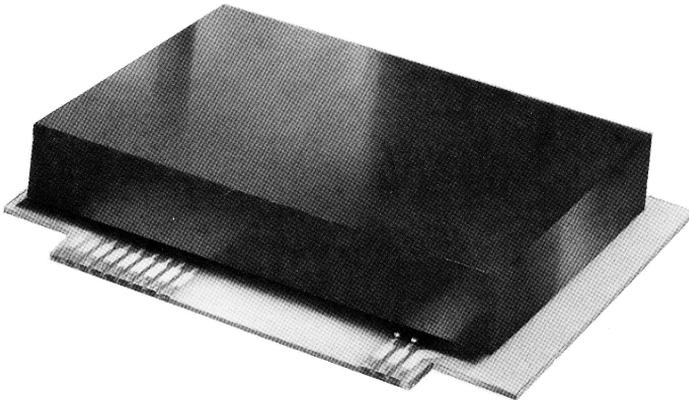
FOR

Software houses
OEM's
Every dealer publishing
software

U-NSCRUMP is an Apple slot peripheral card with PROM memory containing machine code programs that allow checking of a password and a serial number. The device is resin "potted" to discourage finding what's inside. This card will only be supplied to bona fide software authors and publishers. In their own interest programmers are advised to encrypt the password and serial number information.

A software pack is supplied as a separate item that includes software and examples. Support for DOS 3.3, TASC (compiler from Microsoft) UCSD Pascal and Fortran, CP/M and for Apple III SOS is included.

*... the password
to security*



To order

- 2-1440 U-NSCRUMP for Apple II
- 2-1441 U-NSOFT software pack for U-NSCRUMP

SB Structured Basic ^{+e}

49,95

A true Structured Basic interpreter (this is not a pre-compiler) which has all the benefits of Pascal plus many other features, runs all existing Applesoft programs and uses DOS 3.3 as its operating system.

Take a look at these features, unique to Structured Basic:

Procedure Names Subroutines called by name as with PASCAL. No line references needed.

Structured Commands REPEAT . . UNTIL, WHILE . . ENDWHILE, FOR . . NEXT, IF . . THEN . . ELSE . . ENDIF

Advanced CASE Statement IF (expl), (expn) . . Case 1 . . Case n . . Else . . End if

Disk Procedure Libraries

Procedures not resident in the program are automatically read from disk and added to the program without interruption.

Procedure Overlaying Memory occupied by procedure called from disk can automatically be released for other uses when procedure is finished.

Local Variables Lists of variables may be declared for local use by each procedure making recursive programming possible and avoiding bugs caused by re-using variable names.

*For the Novice
and professionals
alike!*

To order

14-1000 Structured Basic

Disposal of Variables Unique 'RELEASE' command allows memory occupied by unwanted arrays to be reclaimed for use.

Additional Graphics Commands

Graphmode, Page, Hires, Lores, Superimpose, Textmode, Mixed, Full, Fillwith, Screen.

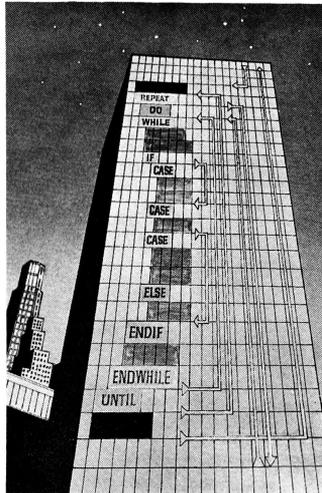
Passed Parameters Variables may be passed to procedures as arguments.

Compatibility Virtually all Applesoft/DOS 3.3 programs will execute without modification.

Interpretive in nature All 32 new commands may be used in immediate mode, entered, listed and executed in programs just like other Basic Commands.

Improved Error Handling ONERR, ERRSTART, ERREND.

Structured Basic written by Patrick Buckland of Island Computers Ltd. I.O.W. and is distributed by U-Microcomputers Ltd.



U-COM2

64K compatible processor board

The U-COM2 is software and hardware compatible with the Apple II+ computer. However its internal design and layout differs. In addition it should run all software and accept all peripherals for the ITT 2020, PEARCOM, BASIS 108, FRANKLIN ACE and other Applebus microcomputers.

The 1mHz 6502 processor is provided with 64K of dynamic RAM (using 8 x 4164 64K bit chips) and a 2K EPROM. This corresponds to the 12K of EPROM and 48K RAM of the Apple II plus but makes the U-COM2 more flexible. The 2K EPROM incorporates U-Microcomputers own boot and monitor code. It respects the established and documented entry points and is fully compatible with DOS, BASIC, UCSD PASCAL and CP/M. However to run PASCAL and 56K or 60K CP/M an additional 16K card is required in slot zero. A special socket is provided on the board for the flying lead from the RAM card. The reset may be activated either through the keyboard or through separate connections.

8 peripheral slots are provided with the standard Applebus pin outs and memory addressing. They include slot zero. Similarly game I/O and speaker outputs are provided. Omitted from the U-COM2 is a cassette interface. Hence a compatible disk drive or network interface is necessary in order to load applications and systems software. Alternatively for dedicated applications a self booting EPROM card should be used.

The basic U-COM2 does not include any video generation but there is a connector for an optional 40 column display (see below) or of course an 80 column card (such as U-TERM) can be used.

U-COM2 power requirements are (ie without accessory boards):

	U-COM2 with 40 col video	U-COM2 only
+5V	1.02A	850mA
-5V	0	0
+12V	18.5mA	18.5mA
-12V	0	0

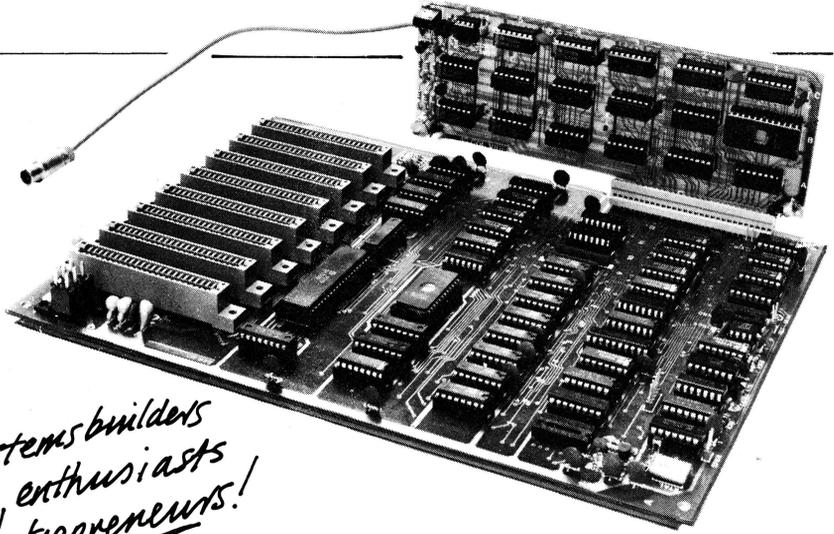
The board is 11 x 8.5in (280 x 215mm) with five holes for mounting. It weighs 1 lb 2 oz (500 grams).

40 column display

The U-COM2 40 col display board plugs into an additional dedicated slot with polarising connector. The connector is too long to plug into any of the 8 Applebus slots. With this card installed normal video signals are generated including 40 col text, low res graphics, high res graphics and the standard mixed graphics and text modes. It includes a 2716 EPROM with character set making production of customised character sets reasonably convenient. There is room to have upper and lower case sets although they are not provided by U-Microcomputers. A track on the motherboard must be cut in order to operate 60Hz rather than 50 Hz. The top of the 40 col board is approx 3.25 in (85 mm) from the top surface of the U-COM2 board when fitted. It weighs 4 oz (100 grams).

Keyboard

The keyboard connector is compatible with the Apple keyboard. It requires 7 bit parallel input plus strobe. The Cherry UB70 - 0007/c keyboard has been tested satisfactorily with the U-COM2 and can also be easily modified to make the shift key work correctly. It is available from Cherry or distributors. Clearly dependent upon applications you may



*
*For systems builders
 OEM's, enthusiasts
 and... entrepreneurs!*

require no keyboard, special keypad, numeric pad only, alpha-numeric only or even alphanumeric keyboard plus numeric keypad.

U-COM2/Power Supply

The requirements of the U-COM2 are given above but of course if Applebus boards are fitted the requirements will be higher. The U-COM - PSU is our own power supply. It is of the open frame type and uses a toroidal transformer. Its outputs are 5A at +5V, 150mA at -5V, 3A at +12V, 250mA at -12V hence it is rather beefier than the original Apple switched mode power supply. It comes complete with output cable and connector to the U-COM2. In general in order to use, it will require mains wiring, a mains on/off switch and a mains fuse holder and fuse connecting before being attached to the U-COM2. It weighs 4 lb (2kg) and has dimensions 8.3 x 3.0 x 4.8 in (210 x 65 x 100mm). Tapped mounting holes are provided.

Our full range of Applebus boards are available for the U-COM2.

U-COM2/CASE

A plain metal case for OEM's and system builders. Made from aluminium and sprayed black (top) and grey (base). The front panel has a single cut-out for a mains switch but other holes, e.g. for LED's or switches could be added. The rear panel has a large cut out for cables. Also included is a cut out for a mains socket and fuse holder. The box is predrilled to allow fixing of the U-COM2 mother board on plastic stand offs and for fixing of the U-COM2/PSU.

The dimensions are 10 x 17 x 4 ins. (254 x 432 x 102 mm) and it weighs approx. 7lb (3kg).

To order

- | | |
|--------|---|
| 4-1000 | U-COM2 processor board |
| 4-1100 | U-COM2/40 40 col board |
| 4-1200 | U-COM - PSU power supply 50Hz
220/240V |
| 4-1210 | U-COM - PSU power supply 60 Hz
110V |
| 4-1220 | U-COM/CASE |

Other Products

U-NET ^{+ e III}

A professional standard network system for the Apple II and smaller micros such as the VIC 20 and BBC Micro. It incorporates sophisticated file handling, multiple language capabilities, multiple printers and spooling and a range of storage devices from minidisks upwards.

*Educationalists
please note!*

NEW

USP

Sinclair ZX Spectrum expansion cards.

NEW

IBM

Expansion cards.



A commitment to quality

All U-Micros products are produced to the highest standards.

All edge connectors are gold plated and the boards have solder resist masks applied both sides.

Comprehensive manuals are included and, where appropriate, software. All the Apple *III* versions of our cards are supplied with SOS compatible drivers.

U-MICROCOMPUTERS

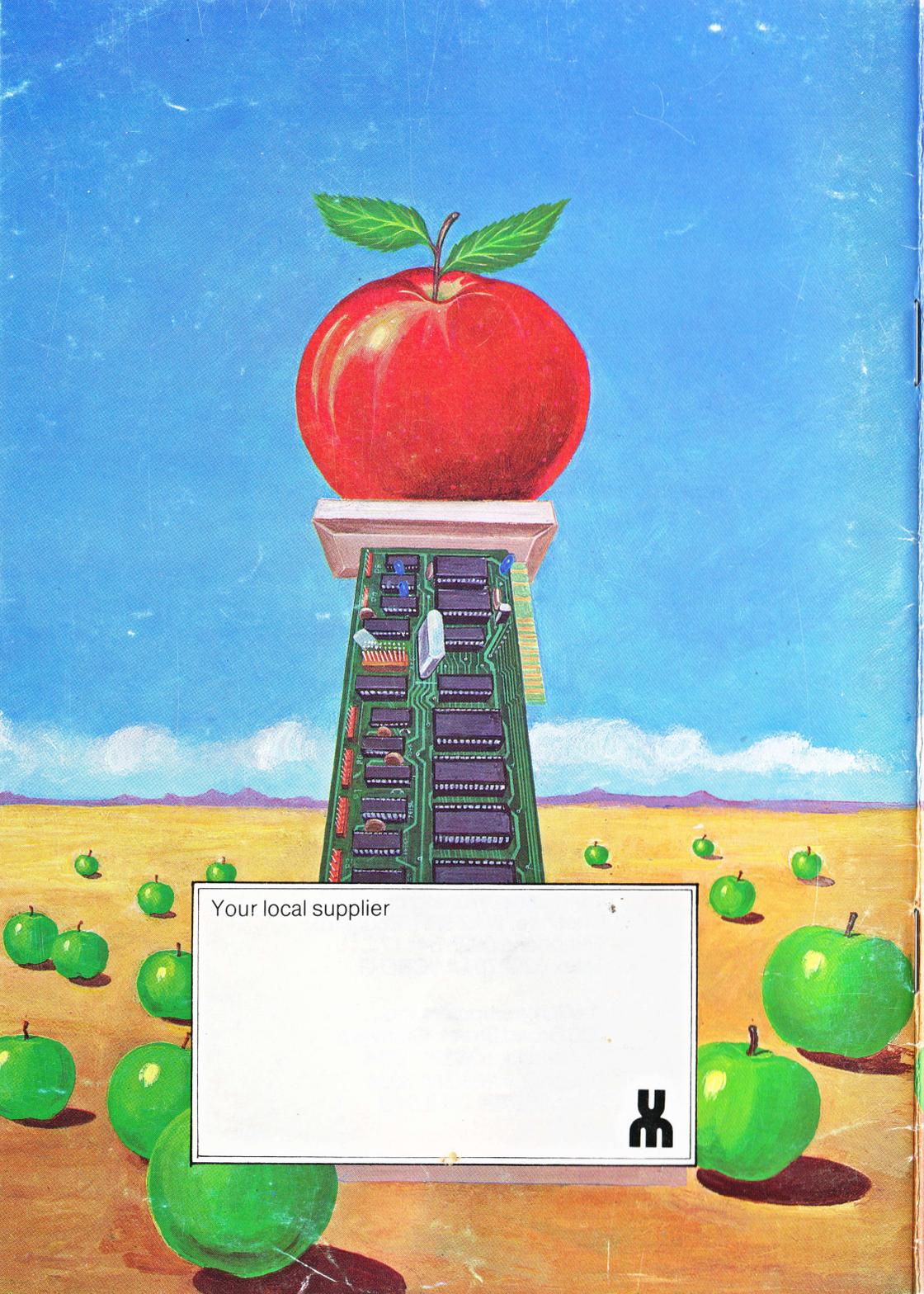
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Technical Improvements Excepted

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