CONTACT 5

the user group newsletter for june 1979 apple computer inc.®

APPLE HOT-LINE

AN ANNOUNCEMENT . . .

apple computer inc.®
(408) 996-9868

We have a new telephone number for those of you with questions!

(408) 996-9868

Write it down and keep it in a safe place. It's IMPORTANT!
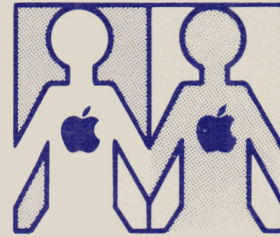
This is a direct line to our "Answer People," who are here to help you with APPLE II questions. Since it is a direct line, you won't have to leave a message with our PBX operator, or worse yet, have to wait on "hold" while someone else's questions are answered. If the line is busy when you call, it means "Please call back."

Our question answering service has been revised in this manner in order to better serve you. It was found with the old system that phone messages would back up terribly and it took a supreme effort to get them all answered. When we called you back, because of time zone differences, quite often there was no one there to answer.

This new system should enable us to help you in a much more efficient manner. We would like your comments, both pro and con, but PLEASE put them in writing so as not to tie the phones up.

When should you call Apple? Call us when your local User Group or your Dealer is unable to answer your question, then SHARE our response with them. In this way we will work together to continually improve the depth of technical support available locally. We're always happy to help you . . . .

LOCAL USER GROUPS
.. Apples everywhere

Apple User Groups are sprouting everywhere, including Europe. If this keeps up (and we're sure it will) there will be an Apple User Group in every neighborhood.

ALASKA—

APPLE-HOLICS
Sra Box 1313
Anchorage, AK 99502
G. K. Inman
(907) 344-1300
2nd Tuesday of Month,
7:30 P.M.

CALIFORNIA—

ABACUS USERS GROUP
Byte Shop
Hayward, CA 94540
(415) 886-2980
3rd Thursday of Month

APPLE BYTE USERS GROUP
14052 E. Firestone Blvd.
Santa Fe Springs, CA 90670
Loy Spurlock
(213) 921-2111
(714) 739-0711
2nd Saturday of Month

APPLE CORE
Computerland of Thousand Oaks
171 E. Thousand Oaks Blvd.
Thousand Oaks, CA 91360
Marion A. Clarke
(805) 495-3554
2nd Thursday of Month

THE APPLE PICKERS
Santa Rosa Computer Center
604 Seventh Street
Santa Rosa, CA 95404

APPLE P.I.E.
1st Thursday of Month,
7:30 P.M.
Collins Jr. High, Cupertino
3rd Sunday of Month, 3:30 P.M.

Computer Plus, Inc., Sunnyvale
Bobby Goodman (408) 255-5024
Fred Viles (408) 298-3728
APPLE USERS GROUP
11074 San Pablo Avenue
El Cerrito, CA 94530
Scott Starkweather
(415) 233-5010
APPLE
Computerland of Thousand Oaks
171 E. Thousand Oaks Blvd.
#104
Thousand Oaks, CA 91360
David Kay (805) 495-3554
2nd Thursday of Month
L.A. APPLE USERS GROUP
11911 Wilshire Blvd.
Los Angeles, CA 90025
(213) 826-8498

COLORADO–

APPLE PI
407 Peery Parkway
Golden, CO 80401
Austin R. Brown, Jr.
(303) 279-5388 (home)
(303) 279-0300 X2434 (work)
1st Thursday of Month,
7:30 P.M.
Room 271, Green Center
Colorado School of Mines,
Golden

FLORIDA–

(No name yet)
Southern Microcomputer Co.
5901E Northwest 151st Street
Miami Lakes, FL 33169
Victor Steeb
(305) 821-7401

HAWAII–

APPLE USER GROUP
7110 C Ohana-Nui Circle
Honolulu, HI 96818
Dennis Nyhagen

ILLINOIS–

NORTHWEST SUBURBAN
APPLE II USERS GROUP
650 Pompano Lane
Palatine, IL 60067
Ken Rose
(312) 359-6723 (home)
(312) 467-8578

INDIANA–

INDY APPLE PICKERS
c/o Home Computer Center
2115 E. 62 Street
Indianapolis, IN 46220
Doug McIntosh

NEBRASKA–
APPLE SAUCE OF LINCOLN-
OMAHA
2055 'O' Street
Lincoln, NE 68510
Russ Genzmer
(402) 435-4467

NEW JERSEY–
APPLE TREE OF CENTRAL
N.J.
1411 Greenwood Drive
Piscataway, NJ 08854
Steve Toth
(201) 968-7498

NEW MEXICO–
THE APPLE CORPS
Personalized Computer Services
1803 Corte del Ranchero
Alamogordo, NM 88310
Earl J. Nielsen
(505) 437-8447

NORTH CAROLINA–
GREEN APPLES
c/o Greensboro Byte Shop
218 North Elm St.
Greensboro, NC 27410
Nancy Tenell
(919) 275-BYTE

MARYLAND–
MARYLAND APPLE II USERS
GROUP
Computerland Unlimited, Inc.
907 York Road
Towson, MD 21204
Kevin Parks
(301) 321-1553

MASSACHUSETTS–
APPLESEED
17 Saxon Road
Worcester, MA 01602
Donald M. Isaac

MISSOURI–
THE APPLE JACKS OF
ST. LOUIS
P.O. Box 8452
St. Louis, MO 63132
Creighton Calfee

PENNSYLVANIA–
(No name yet)
Computerland of Harrisburg
4644 Carlisle Pike
Mechanicsburg, PA 17055

TENNESSEE–
APPLE PI
Rt. #12, Cherokee Hills
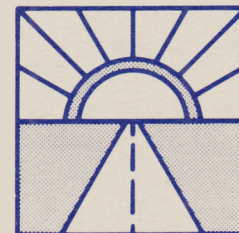Sevierville, TN 37862

Richard C. Secrist
(Formerly APPLEachian Users
Group)

UTAH–
APPLE
Tripower Electric
80 E. 4500 Street
Murray, UT 84107
Bruce Lerner
(801) 262-0860

WISCONSIN–
WISCONSIN APPLE USERS
c/o Cybernetic Mechanism
P.O. Box 11463
Milwaukee, WI 53211
Ken Blochowick
(414) 964-6458

BELGIUM–
EUROPEAN COMMUNITIES
COMPUTER CLUB
c/o R. Ettore
59, Rode Beukenlaan
1970 Wezembeek-Oppem
Belgium

FRANCE–
APPLE OEDIP
8, Place Ste-Opportune-75001
Paris, France
Schraen Dominique
508-46-21–508-47-71

LOOKING AHEAD

...New Literature and Products

Apple Magazine is here! The first issue of Apple is now available from your local APPLE dealer. The new magazine will be published three or four times a year, and each issue will have a different theme. The theme of this issue is education, or more specifically, how computers can be used in education.

In addition to articles on education, the magazine contains our catalog and information on some new apple products.

MORE CONTRIBUTED SOFTWARE

Volumes 3–5 of the Contributed Software Library are now available. These volumes are particularly well documented, so you should have no difficulty using them.

EDITORIAL

by Roger Cutler, Educational Specialist

With the next issue of CONTACT we begin a regular "EDUCATOR'S CORNER" column of news and ideas for educators. We know that many schools and teachers around the country have purchased APPLE II's. We hope, through this column, to let you know what other educators are doing with their APPLES. Many publications have asked us to locate interesting projects and articles written by educators. Let us hear from you, so that we may pass along the news to others.

Microcomputers represent a new and exciting medium for teaching and learning. During the next year there is going to be an explosion of educational software and courseware. We at Apple want to support and help coordinate these efforts. We need to know what you are doing and what your needs are.

As many of you know, the Minnesota Educational Computing Consortium (MECC) has selected the APPLE II microcomputer for the Minnesota School system. It is converting many of its educational programs to run on the APPLE II, often with graphics, color and audio enhancements. Watch this new column for news of how you can obtain these programs.

Another interesting project is underway at the Lawrence Hall of Science at Berkeley, California. In a special outreach project, the Hall is visiting schools in the San Francisco Bay Area with a van full of APPLE II's, bringing classes in programming to students right in their classroom. Joyce Hakansson, director of the project, reports an enthusiastic response wherever the "Apple Cart" goes.

Finally, we have plans at Apple to support education in many ways. You can expect to hear about them in the EDUCATOR'S CORNER.

OUT OF THE MIST....
Hey! I needed that...

Well, here are some of the much praised subroutine Calls for the APPLE. This started out to be quite a project as most of the more obscure calls are buried deep in the heads of people back in Engineering. Then, just as we really got to digging, we received a copy of the ABACUS (Apple Bay Area Computer Users Society) newsletter. These guys have already done all the work! So, if what you need is not here, write to ABACUS at the following address for a copy of their list.

ABACUS
2850 Jennifer Drive
Castro Valley, CA 94546

It seems from the number of questions we get that most people consider Peeks, Pokes, and Calls to be somewhat magic. We've even had people ask for the Poke that would increase the capacity of their DISK II's! In light of this, maybe a short explanation of terms is necessary.

PEEK–This command allows you (or your program) to examine a specific byte of memory. It will always return a decimal number in the range of "0" to "255". The address to be examined is always specified in DECIMAL too. (This means that "PRINT PEEK (768)" will display the contents of address $300.)

POKE–Sort of the partner of PEEK. This command stuffs a specified decimal number into an address. "POKE 768,255" will change the contents of address 768 ($300) TO 255 ($FF). This command is useful for placing a machine language subroutine into memory. (See the TONE ROUTINE on page 45 of your "RED REFERENCE MANUAL".

CALL–This command runs a subroutine already in ROM (Read Only Memory) or a routine "POKED" into RAM (Random Access Memory) by your program. Again, see the TONE ROUTINE in your manual.

So, without further delay, let's plunge into the interesting world of PEEK, POKE, and CALL . . .

NOTE: *THE POINTERS 60–63 SPECIFY THE BEGINNING. AND ENDING ADDRESSES FOR A TAPE SAVE OR LOAD DATA BLOCK THEY TELL THE TAPE ROUTINE WHERE TO FIND THE DATA TO BE SAVED AND OR LOADED.* MACH LANGUAGE LOAD:

POKE 60, BEGIN MOD 256 (LOW ORDER START ADDRESS)

POKE 62, END MOD 256 (LOW ORDER END ADDRESS)
POKE 63, END /256 (HIGH ORDER END ADDRESS)

CALL-259 READS THE TAPE/IN PORT

MACH LANGUAGE SAVE:

POKE 62, END MOD 256 (LOW ORDER END ADDRESS)
POKE 61, BEGIN /256 (HIGH ORDER START ADDRESS)

POKE 62, END MOD 256 (HIGH ORDER END ADDRESS)
POKE 63, END /256 (HIGH ORDER END ADDRESS)

CALL-307 WRITES OUT TO TAPE

NOTE: *VERIFY ROUTINE LOOKS LIKE THIS. WE SPECIFY THE BEGINNING OF BLOCK A, THE SOURCE BLOCK AND THE END OF BLOCK A. WE THEN SPECIFY THE BEGINNING OF THE DESTINATION BLOCK.*

MACH LANGUAGE VERIFY:

POKE 60, BEGIN MOD 256 (LOW ORDER BEGIN ADDRESS)
POKE 61, BEGIN /256 (HIGH ORDER BEGIN ADDRESS)

POKE 62, END MOD 256 (LOW ORDER END ADDRESS)
POKE 63, END /256 (HIGH ORDER END ADDRESS)

POKE 66, VERIFY START MOD 256 (LOW ORDER ADDRESS)
POKE 67, VERIFY START /256 (HIGH ORDER ADDRESS)

CALL-458 VERIFY COMMAND

EXP: 800<1000. 1FFV MONITOR VERIFY FORMAT

NOTE: *MOVE AND VERIFY WORK THE SAME WAY. THEY TAKE 60 and 61 AS THE BEGINNING OF BLOCK A, THE SOURCE BLOCK.*

THEN TAKE 62 and 63 AS THE END OF THE BLOCK A, THE SOURCE BLOCK. THEN TAKE 66 and 67 AS THE BEGINNING OF THE DESTINATION BLOCK OR VERIFY BLOCK B.

MACH LANGUAGE MOVE:
POKE 60, BEGINNING OF SOURCE MOD 256 (LOW ORDER ADDRESS)
POKE 61, BEGINNING OF SOURCE /256 (HIGH ORDER ADDRESS)

POKE 62, ENDING OF SOURCE MOD 256 (LOW ORDER ADDRESS)
POKE 63, ENDING OF SOURCE /256 (HIGH ORDER ADDRESS)

POKE 66, BEGINNING OF DESTINATION MOD 256 (LOW ORDER ADDRESS)
POKE 67, BEGINNING OF DESTINATION /256 (HIGH ORDER ADDRESS)

CALL-468 MOVE COMMAND

EXP: 800<4000. 5000M

APPLE II MONITOR DIRECT CALLS LIST
CLEAR SCREEN:
CALL-936
LINE FEED:
CALL-922
SCROLL SCREEN:
CALL-912
NORMAL MODE:
CALL-380
INVERSE MODE:
CALL-384
DISPLAY REGISTERS:
CALL-321
ENTER MONITOR:
CALL-155
RING BELL:
CALL-198
SAVE REGISTERS:
CALL-182
VERT TAB:
POKE 37, VT
VERT TAB:
POKE 37, VT
SCAN INPUT BUFF:
CALL-144
LIST INTEGER:

CALL-8117
BASIC
RUN INTEGER:
CALL-6090
BASIC
SAVE INTEGER:
CALL-3776
BASIC
LOAD INTEGER:
CALL-3973
BASIC

SOME ADDITIONAL MONITOR CALLS:
CLEAR GR SCREEN
CALL-1998
CHANGE COLOR +3
CALL-1953
RESET TEXT MODE
CALL-1233
ADVANCE CURSOR
CALL-1036
BACKSPACE CURSOR
CALL-1008
CURSOR MOVE UP
CALL-998
CURSOR MOVE DOWN
CALL-922
SCROLL SCREEN
CALL-912
CLR TO END OF LINE
CALL-868
CLR TO END OF SCREEN
CALL-958
HOME AND CLEAR
CALL-936
WAIT FOR KEY PRESS
CALL-756
END AND CLEAR WORK SPC
CALL-8192 (INTEGER BASIC KILL!)
RETURN TO MONITOR
CALL-167 (SET TEXT MODE)
CALL-155 (RESET BEEP)
CALL-151 (RESET NO BEEP)
DISPLAY REGISTERS
CALL-321 (A=XX X=XX Y=XX P=XX S=XX)
GET A LINE OF INPUT:
CALL-665 LF PROMPT AND WAIT FOR INPUT
CALL-662 PROMPT AND WAIT FOR INPUT
CALL-657 WAIT FOR INPUT

ALL THESE RESPOND TO ESC AND ARROWS.
TO FIND INPUT CHARACTERS LOOK AT THE INPUT BUFFER BY PEEKING 512 to 767 DEC ($200 to $2FF HEX)

HOW TO
Disk Magic...

How many times have you started merrily programming in Integer Basic only to find out that you should have been using Applesoft? Well, for you Disk II owners, here's a trick that can save you a lot of typing.

Enter this line anywhere you have room in your program. In the example we've used line "∅", but this could be any available line number. (For this example, the symbol "@" means "Control D".)

```
∅ PRINT "@OPEN X": POKE 33,33:
   PRINT "@WRITE X": LIST:
   PRINT "@CLOSE": END
```
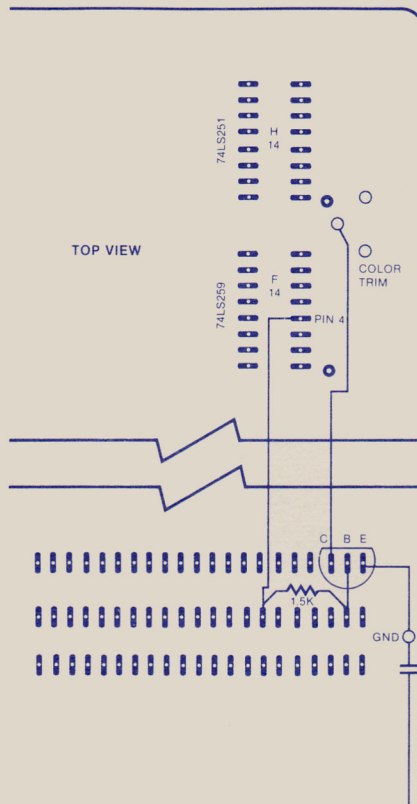
When this line's entered, type the command "RUN" and press "RETURN". Your program will now open a file called "X" and list itself into that file. When that operation is complete, get into Applesoft with the "FP" command and EXECute the file. Viola! Your program is now in Applesoft just as though you had entered it from the keyboard!

Back to Black and White

If you are one of the pioneers that bought your APPLE before the days of the color killer modification (S/N 6000+), and you use a color TV as a monitor, then this hardware modification may be of interest to you.

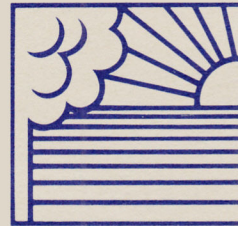First add two parts, a 2N3904 transistor (or equivalent) and a 1.5K resistor, to the breadboard section of your Apple as shown in figure 1. The transistor base and one end of the resistor should be tied together. Then wire the other

end of the resistor to IC F14-pin 4, wire the transistor emitter to ground. The capacitor next to the edge on the corner will do as a ground.

To test the final product, put your APPLE back together and turn it on; go into BASIC, type GR, then type TEXT. The screen should go from color to black and white.

IMPORTANT! Please wait until your APPLE is a year old before making this modification as it will void your warranty.

OUTSIDE THE ORCHARD
NEW PRODUCTS
...of interest to Apple users

... BASIC Teacher

This BASIC teaching package contains 13 lesson programs 6–16K in length. Lessons 1–12 teach Integer BASIC. The topics covered include statements and commands, keyboard control functions, loading and running programs, etc. Lesson 13 uses graphics and sound to explain peeks, pokes, and calls a user may need to produce graphics and sound effects.

Price of the BASIC Teacher is $19.95 on tape or $29.95 on disk. For a more detailed description of this package contact Charles Mann & Associates, 1926 South Veteran Avenue, Los Angeles, CA 90025.

... The big cover-up

Want to keep your Apple clean and happy? Then buy it a Computer Canopy dust cover. They are made of heavy padded vinyl and come in 12 colors.

Delivery is three weeks from Digital Dynamics Inc., P. O. Box 27243, San Antonio, TX 78227. (512) 231-2012.

. . . They laughed when I sat down to play

Turn your Apple into a concert organ. Play the keyboard just as you would an organ. And you can save your compositions for later play or editing. $9.50 from Computers Etc. . . , 13 A. Allegheny Ave., Towson, MD 21204. (301) 296-0520.

. . . Space Pilot

Try your hand at landing a space ship on the moon. The ship responds exactly as a real one, so you've got to be good to keep from crashing. $9.50 for your 32K Apple from Computers Etc.

. . . Continuing Medical Education

This approach to continuing medical education uses a disk-based 32K Apple II to deliver its courseware. Lectures written by 80 prominent authors from 30 medical schools present interactive and individualized conversations for AMA Category 1 credit to the physician/user.

Approximately 60 lectures, lasting 30–45 minutes, are currently available in Internal Medicine, Surgery, Primary Care, Urology, and Psychiatry. Additional lectures are being developed in these and other areas.

If you would like to receive more information about this system, please write or call Milliken Communications Corp.,

1100 Rearch Blvd., St. Louis, MO 63132. 1 (800) 325-4136.

. . . Home control

A new foreground/background system for home control called Apple Butler gives the Apple II the capability of running two programs concurrently; one for the monitor and control of systems in your home, and one for any other task you care to do.

The Butler provides up to 16 analog inputs for temperature, light, moisture, or any other input data. Up to 32 switch inputs are provided for security or fire sensors, push buttons, magnetic reed switches, or other on/off inputs or status indicators from controlled devices. Up to 32 output latches are available for control of output devices.

Several control modules will be available for the Apple Butler system. The first will be a solar heating control system to control a solar hot water heater, a solar assisted home heating system, a water-heating fireplace heating system, or a combination of the three. Other systems are planned for control of automatic swimming pool equipment, sprinkler systems, home or commercial greenhouses.

The Apple Butler costs $595 from your local Apple II dealer or from Home Computer Center, Inc., 2927 Virginia Beach Blvd.,

Virginia Beach, VA 23452. (804) 340-1977.

. . . Apple '21'

Here is a true Las Vegas Blackjack game. One, two, or three players can challenge the "dealer" to win on the table. This game keeps track of all your winnings and losses and gives you a balance when you leave the table. Any player can quit or join at any time without disturbing the game.

The program requires 24K and uses the Apple HIRES routines.

Price is $9.95 from Softape, 10756 Vanowen St., North Hollywood, CA 91605.

. . . Light Pen

A new light pen that installs directly into the Apple II I/O sockets is now available from Symtec Inc. The light pen can be used on any standard TV or display monitor in black and white or color and can provide x,y coordinate values of up to 255 in y and up to 511 in x. That's good enough to isolate a single hi-resolution point.

Provided with the light pen is a demonstration cassette written in integer BASIC. A complete listing of the light pen routine and suggested uses for the light pen is included in the applications manual.

Price for orders is $249.95. Advanced orders and inquiries can be directed to Computerland of Southfield, 29673 Northwestern Hwy., Southfield, MI 48034, (313) 356-8111, 11am–6:30pm Tues–Fri; or Symtec Inc., P. O. Box 462, Farmington, MI 48024.

. . . APPLE CLOCK

A Real-Time Calendar/Clock for Apple II keeps time and date in 1 msec increments for over a year. The calendar, clock, and event timer functions are easily accessed from BASIC; and a rechargeable battery keeps the clock "ticking" when the computer is off. A software con-

. . . Fast Floating Point

The AMD9511 Fast Floating Point Processor Board increases the computation speed of the APPLE II such that the calculation of 5000 sines requires only about 24 seconds rather than 133 seconds. The table below shows the speed increases for

various math functions:

The price for the fully assembled and tested board is $450.00, including shipping and handling. From your local Apple dealer or Computer Station, 3659 Nameoki Road, Granite City, IL 62040. 1 (618) 452-1860.

FUNCTION	AMD9511 BOARD	APPLESOFT II
X=SGN(I)	14 seconds	14 seconds
X=SQR(I)	15 seconds	250 seconds
X=SIN(I)	24 seconds	133 seconds
X=COS(I)	24 seconds	135 seconds
X=TAN(I)	27 seconds	246 seconds
X=ATN(I)	27 seconds	224 seconds
X=LOG(I)	25 seconds	114 seconds

trolled interrupt is provided to allow pre-programmed activities to take place.

By adding the Apple Clock to this manufacturer's Remote Control System you have real-time control and monitoring of remote devices over regular AC wiring.

Price of the Apple Clock is $199 assembled and tested. Delivery is 30 days. Mountain Hardware, Inc., 5523 Scotts Valley Drive, Scotts Valley, CA 95066. (408) 438-4734.

. . . Quality Software

This company has a new line of software for the Apple II. TEXT EDITOR ($17.95) allows management of free form text. U-DRAW ($17.95) is a hi-res programmable graphics editor with tape I/O. ELECTRIC CRAYON ($17.95) is a graphics editor similar to U-DRAW, but in lo-res color. MUSIC BOX ($12.95) gives three octave sound with no additional hardware. NUMBER CRUNCHER ($9.95) is a set of single precision math and ASCII to HEX subroutines. CHRISTMAS TAPE ($9.95) is a musical Christmas caroler with blinking color Christmas tree. Also available are games at $12.95 each.

Available from Apple dealers or the Muse Co., 7112 Darlington Drive, Baltimore, MD 21234. (301) 661-8531.

. . . Hello Houston, this is Apple control

Energy Technology has announced an interface for the Apple II that allows a user to remotely control any 24V, 110V, or 220V utility or appliance to which an Energy Technology remote unit is attached. The system utilizes Energy Technology's industrial remotes which consist of 110V plug-in, 24V thermostat override, 24V non-thermostat override, and 220V in-line models. All units are shipped completely assembled and tested. The Apple II Interface is $189.00; remotes range in price from $85.00 to $120.00. Energy Technology, Inc., 102 Conway, P. O. Box Q, Las Cruces, NM 88001. (505) 524-8615.

. . . Trade you my PET for your Apple

If you, or one of your friends, bought a PET or a TRS-80 and now want to trade up to an APPLE II, don't dispair, there is a way. Newman Computer Exchange will buy that used machine. They have a used computer "blue book" and procedure letter that your friendly Apple dealer can get by writing or calling:

Newman Computer
Exchange, Inc.
1250 North Main Street
P. O. Box 8610
Ann Arbor, MI 48107
(313) 994-3200

Here are examples of their trade-in allowance:

TRS-80	
TRS-80, 4K, level I	$225.00
CRT-41 Recorder	20.00
12" Video Display	70.00
	$315.00

PET	
2001—8K	$400.00

You can't get all your money back, but you can get half of it back, which you can then apply to a new APPLE II.