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AUGUST 1985

VOLUME 3
NUMBER 8

NEW ATARI 130 XE
A HANDS-ON REVIEW

FAMILY COMPUTING®

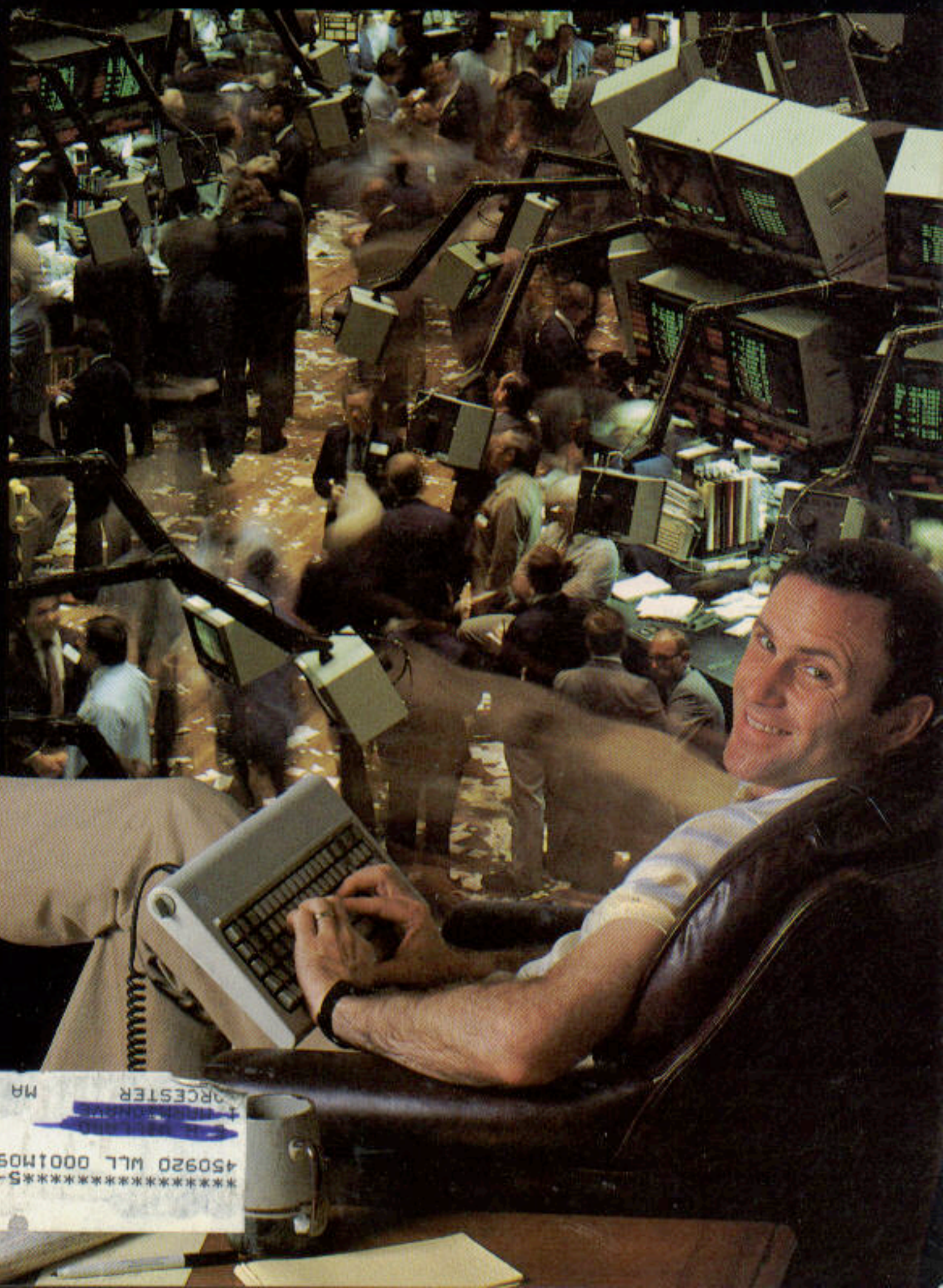
Be Your Own Stockbroker!

Organize Your Home Business with a Data Base

Buyer's Guide to Music Software and Hardware

K-POWER: Game Strategies, Music Programs, and a Contest

INSIDE: ORIGINAL PROGRAMS FOR ADAM, APPLE II SERIES, ATARI, C 64 & VIC-20, IBM PC & PCjr, TRS-80 COCO & MODEL III



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AUGUST
1985

VOLUME 3
NUMBER 8

FAMILY COMPUTING®

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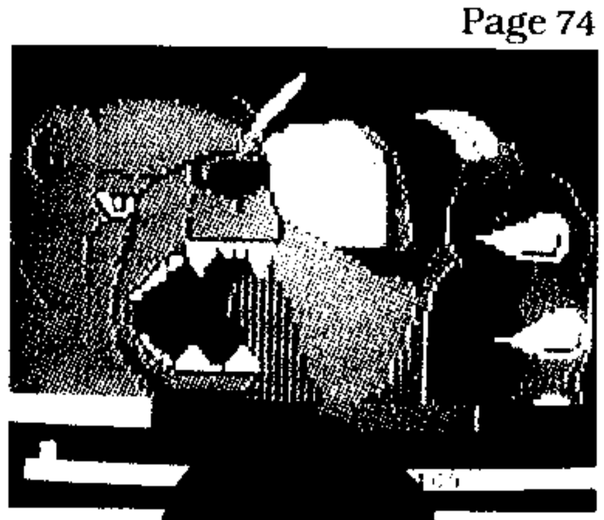

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COVER:
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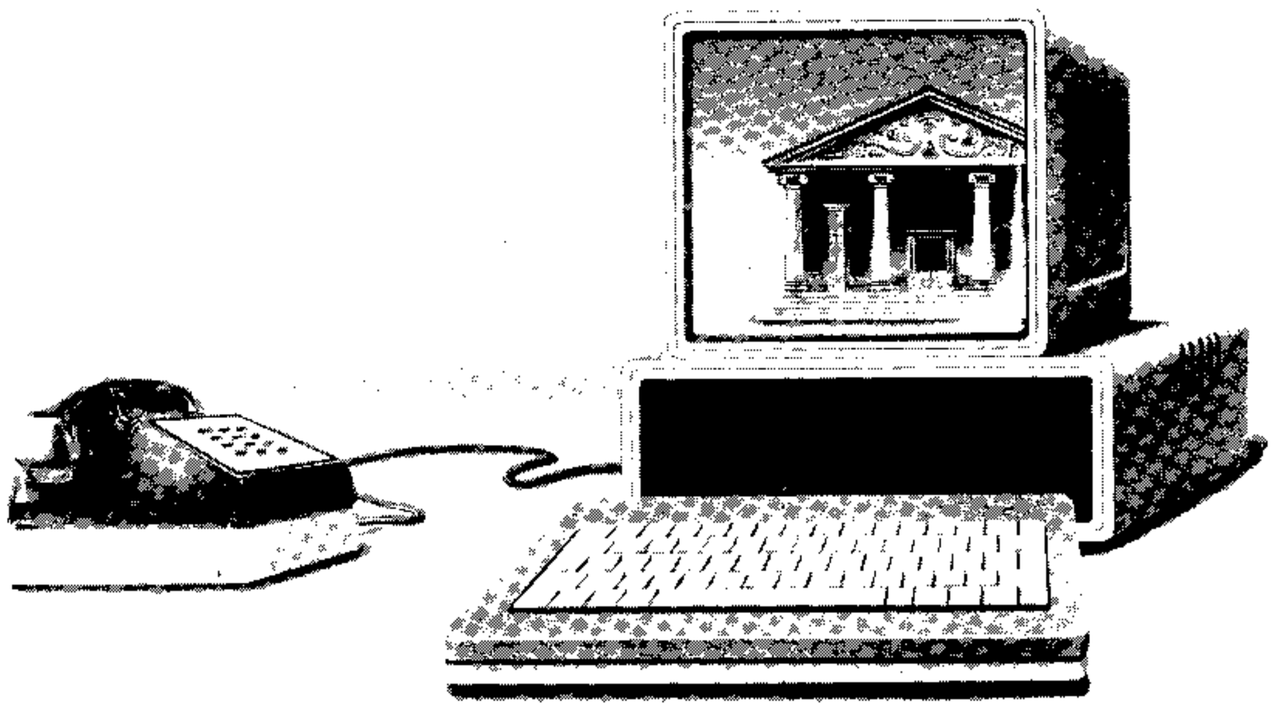

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LETTERS

MAC ATTACK

We are charter subscribers and are renewing for another year. We would have renewed for two years, but we have been waiting very patiently for our computing magazine to recognize our computer.

Every month there are plenty of programs for readers to have fun with, but never any for our Mac. We've tried using the programs designed for Apple but invariably there'll be a bug that keeps us from using it.

We're hoping that the new subscription year will bring us a computing magazine with Mac ideas, hints, and programs.

THE HARTWAYS
Miami, Florida

EDITOR'S NOTE: *Your patience will pay off! Later this year we'll be publishing product information and original programs for Macintosh.*

A TIP FOR TI OWNERS

In the Letters column in an earlier issue, Jim Klocek of Downers Grove, Illinois, expressed his woes about TI programs being in short supply. I'd like to inform him that he can write or call Learn-a-Bit, 7325 N. Alpine Road, Rockford, IL 61111; (815) 282-1111. It has a good supply of programs he may want (and hardware, too).

It also has classes for programming, etc. And the guys are good to work with and buy from.

JOHN L. GATZ
Rockford, Illinois

GAMING ADVENTURES

I discovered text adventures last weekend. I am not much of a book reader, so I was sure a text adventure would be no fun at all. I was wrong! An hour after I loaded it into my computer, my brothers and the next door neighbors were in my bedroom. Three hours later we finished. It was better than any board games I have played. Everybody should try at least one of these games. They really make my days off work gratifying.

MARK BREGEL
Los Angeles, California

CORRECTION

In the March issue's Buyer's Guide to Modems, we listed incorrect information about Prentice products. The POPCOM X100 retails for $475, or $495 with Dow Jones Straight Talk *and a Mac Cable, or* pfs: ACCESS. *The POPCOM C100 retails for $445, or $465 with* pfs: ACCESS. *We regret the error.*

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THE 99¢ DISKETTE

Are you paying too much for diskettes? Try our first quality, prime, 5¼" diskettes (no rejects, no seconds) at these fantastic sale prices and save, save, SAVE! Disks are packaged in boxes of 50; each box contains 5 shrink-wrapped 10-packs that include diskettes in sleeves, labels, and write-protect tabs.

Each diskette is certified to be 100% error free and comes with a lifetime warranty (if you have a problem, we'll replace the diskette). All diskettes include hub reinforcement rings and write-protect notch.

All diskettes are double density and work in either single or double density drives.

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DS, DD Diskettes, Box of 50
32403 **$64.50**–$1.29 ea.!

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BMC BX-130. 130 CPS, friction and tractor feed, special head for attractive print.
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Star Micronics SG-10. Full graphics, near letter quality mode, 2K buffer, 120 CPS. *OUR BEST SELLER!*
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34446 SG-10 with built-in Commodore Interface. **$269.00**
33265 SG-15. 15", 120 CPS w/NLQ. **$449.00**
33284 SD-10. 160 CPS w/NLQ. **$379.00**

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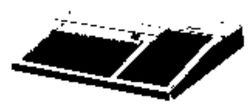
34292 SLP Printer, Parallel and Serial (for most computers). **$199.00**
34305 SLP Printer with built-in Commodore Interface. **$199.00**
34451 Axiom Elite 5. True letter quality at a great price! ..... *While They Last!* **$199.00**

Epson LX-80. 100 CPS w/NLQ. Our most popular Epson! Call for other models.
33871 ..... **$269.00**

TI 99/4A CORNER



Hardware

31031	Half height TEAC disk drive. DS, DD.	**$139.00**	**32972**	Myarc DS, DD Disk Controller Card	**$169.95**
20164	Box with Power Supply	**$59.95**	**13315**	Corcomp 32K Memory Card	**$109.95**
30235	Axiom Parallel Printer Interface	**$79.95**			
29802	Corcomp 9900 Expansion System	**$329.00**	**Software**		
29784	Corcomp RS-232 Standalone	**$127.00**	**32967**	Extended BASIC	**$69.95**
13300	Corcomp RS-232 Card	**$79.95**	**32597**	Data Base 99	**$34.95**
32986	Myarc RS-232 Card	**$79.95**	**32582**	Draw N Plot	**$34.95**
29770	Corcomp DS, DD Disk Controller Card	**$169.95**	**21467**	Dow 4 Gazelle. Flight Simulator	**$25.95**

We have been serving TI 99/4A customers in 50 states and worldwide since 1982! Request our free "Everything Book for the TI Home Computer," or take advantage of our $2.95 Dust Cover and Catalog special!

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COMMODORE BUYS

34484 Cardco G-Wiz Interface ..... **$Call**

33443 Indus GT Disk Drive – Includes word processor, spread sheet, and data base **$259.00**

33565 Graphics Printer Interface – PPI from DSI **$44.95**

34499 Cardco Digi-Cam picture digitizer ..... **$Call**

34501 Incredible Musical Keyboard from Sight and Sound **$39.95**

34516 Music Port from Tech-Sketch **$99.95**

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Volksmodem 12. New and powerful! 300–1200 baud smart, auto-answer, auto dial modem is compatible with most home computers that have a serial interface. Requires appropriate interface cable (most popular versions listed below; check with customer service for other models).

33724	Volksmodem 12 Smart Modem	Sug. Retail $299.00	**$199.95**
33988	Commodore Interface (includes disk software)		**$32.95**
34146	TI Volksmodem 12 Cable		**$11.95**
34470	Apple IIc Cable		**$11.95**

Other Modem Buys:

19112	Mark IIIL. 300 baud modem for TI	**$79.95**
31613	VM-6420. 300 baud modem for Commodore (includes disk software)	**$79.95**

Check with our Customer Service Department to order the modem or interface to match your brand and model of computer.

CARTRIDGE EXPANDER

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Stop wearing out your computer by endless cartridge swapping! Plus, all cartridge expanders let you reset your computer independently of power switch.

For TI 99/4A: Famous three slot design lets you keep your most commonly used cartridges plugged in and ready for instant selection!
13329 Sug. Retail $39.95 *Now Only* **$29.95**

For C-64: New two slot design lets you select either cartridge or "off" position for no cartridge! Slots are vertical for easy access — no blind fumbling behind the computer!
34220 2-slot Cartridge Expander for C-64. *ONLY* **$19.95**

The C64 cartridge expander is a great companion for the **Epyx Fast Load catridge** — you can keep it permanently installed, select it, select another cartridge, or turn it off.
34216 Fast Load for C64 Sug. Retail $34.95 **$29.95**

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31627 **C64/VIC 20 Dust Cover and Commodore Catalog**

34465 **TI 99/4A Dust Cover and TI Catalog**

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HELPFUL HINTS

TIPS BY TEENS

EDITED BY ROXANE FARMANFARMAIAN

Summer's the time to try out crazy experiments with your computer. Check out these hints for several great programming tricks, and some neat schemes for color and sound. **Reminder**: Turn off your computer and peripherals before tinkering with them. Parental guidance is recommended for young children undertaking these activities.

Get Your TI Voice Synthesizer To Say Those Phrases!

Ever noticed how your Solid State Speech Synthesizer spells out some of the phrases in its vocabulary list? This is because it looks for each word in the list separately. The solution? Bracket the phrase with pound signs (#) to make the synthesizer treat the phrase as a unit. For example, type CALL SAY ("I AM THE #TEXAS INSTRUMENTS# HOME COMPUTER").

STEVEN BOOKER, *age 13*
Browns Mills, New Jersey

Start Off Your Programs With Pizzazz.

Want a neat-looking title at the head of your programs? ADAM, Apple, C 64, and IBM owners, just add the following lines to the beginning of any of your programs. To change the vertical position of the title, change the value of VE in line 10.

APPLE

```
10 VE = 12:HOME
20 INPUT "ENTER YOUR MESSAGE ";M$
30 HOME:FOR X = 1 TO LEN(M$)
40 FOR CH = 32 TO ASC(MID$(M$,X,1))
50 VTAB VE:HTAB X+(40-LEN(M$))/2
60 PRINT CHR$(CH):NEXT CH,X
```

ADAM

Type in the above program but change the 40 in line 50 to 31.

C 64

```
10 VE=11:PRINT CHR$(147);
20 INPUT "ENTER YOUR MESSAGE";M$
30 PRINT CHR$(147):FOR X=1 TO LEN(M$)
40 FOR CH=32 TO ASC(MID$(M$,X,1))
50 IF CH>128 AND CH<160 THEN CH=160
60 POKE 214,VE:PRINT
70 PRINT TAB(X+(40-LEN(M$))/2-1);
80 PRINT CHR$(CH);:NEXT CH,X
```

IBM

```
10 VE=12:CLS
20 INPUT "ENTER YOUR MESSAGE";M$
30 CLS:FOR X=1 TO LEN(M$)
40 FOR CH=32 TO ASC(MID$(M$,X,1))
50 LOCATE VE,X+(40-LEN(M$))/2
60 PRINT CHR$(CH):NEXT CH:NEXT X
```

WILLIAM HATCHER, *age 14*
McEwen, Tennessee

Wire Your CoCo To Your Stereo For A Light Show Setup.

Ever wish you could hook up your TRS-80 Color Computer to your stereo so colors on the screen would change to the beat of the music? Well, you can. You'll need a Radio Shack analog joystick (catalog no. 26-3008), two pieces of wire as long as the distance between your stereo and your CoCo and two shorter wires of equal length, one or two connectors like those on either end of the cable between your stereo and speakers, two alligator clips, a 100k ohm ½-watt resistor, two 4.3-volt Zener diodes, and a reference such as *First Book of Electronic Projects* (TAB Books). *Make sure your joystick and stereo are unplugged.*

1. Devise a connector as shown in diagram. Disconnect one of the speakers from your stereo. Plug one end of the connector into the stereo input jack, and the other end into the speaker. (For stereos without jacks, wire the connector directly to the stereo and speaker.) **Warning:** *Never* allow the wires connected to the alligator clips to touch when the power is on, otherwise you risk blowing the fuses in your stereo.
2. Open up the *right* joystick from the bottom and attach the alligator clips as shown. Plug in your joystick and turn on your computer.
3. Move the joystick to the bottom left corner and type in the following:

```
10 CLS(0)
20 A=8*(JOYSTK(0)+1)/64
30 CLS(A)
40 GOTO 20
```

4. Turn on your stereo, put on your favorite record (or tape), and RUN the program. You might have to move your joystick around a bit to get the best colors. If everything is wired correctly, colors will pulsate on your screen in time with the music.

DAN SCHIERL, *age 16*
Chilton, Wisconsin

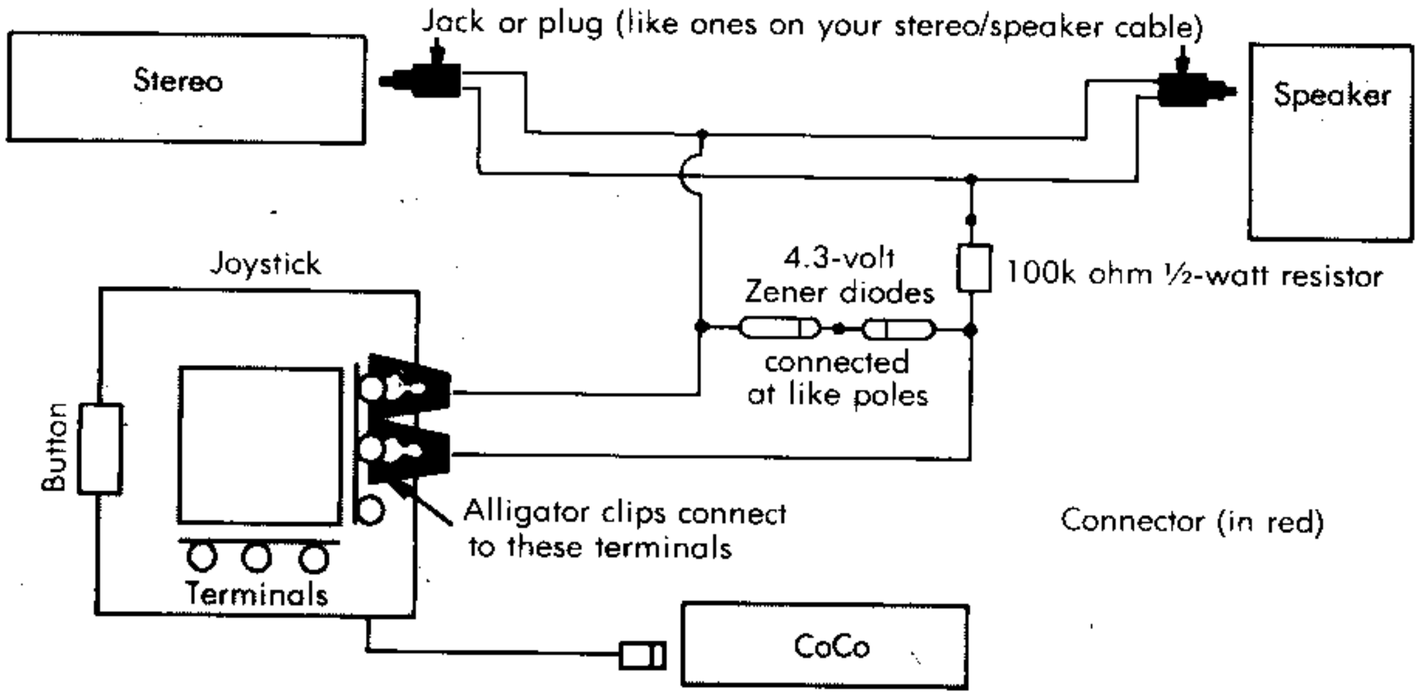


DIAGRAM BY SUSAN TAYLOR FROM SCHEMATIC BY RICHARD MATTHEWS/SEAR-MATTHEWS AUDIO SYSTEMS

Control That Printer!

Are you tired of le-e-eaning over to press the FORM FEED button when printing out a BASIC program? Ever wish your printer would beep when it's done printing? Try these routines, which work with Epson and compatible printers. Check your printer manual for other codes.

Commodore 64/VIC-20

Enter `OPEN 4,4` to open a channel to the printer. Then type

`PRINT#4,CHR$(7);` (to ring bell), or
`PRINT#4,CHR$(10);` (for line feed), or
`PRINT#4,CHR$(12);` (for form feed)

Finally, enter `PRINT#4:CLOSE 4`

Atari/TRS-80 Model III/IBM

`LPRINT CHR$(7);` (to ring bell), or
`LPRINT CHR$(10);` (for line feed), or
`LPRINT CHR$(12);` (for form feed)

DAVE FORMAN, *12*
Greensburg, Pennsylvania FC

MUSIC SOFTWARE Continued

COMPANY	PRODUCT	HARDWARE REQUIRED	COMMENTS	EASE OF USE	# VOICES
Passport Designs 625 Miramontes St., No. 103 Half Moon Bay, CA 94019 (415) 726-0280	MONO/POLY SYNTHESIZER Included with Soundchaser 64 Synthesizer/educational	Commodore 64 plus Soundchaser 64 keyboard	Lets user create monophonic and polyphonic synthesized sounds.	EASY	1–3
Scarborough Systems 55 S. Broadway Tarrytown, NY 10591 (914) 332-4545	SONGWRITER $39.95 Composing tool	Apple II series, 48K; Atari, 48K; Commodore 64; IBM PC (needs color graphics monitor adapter)/PCjr, 64K	Simple composing tool saves melodies and songs.	EASY	3
Sequential Circuits 3051 N. First St. San Jose, CA 95134 (408) 946-5240	SONG BUILDER $39.95 Composing tool	Commodore 64	Lets user overdub up to three layers of notes.	AVERAGE	3
	SONG EDITOR $39.95 Composing tool	Commodore 64	Displays songs written with *Song Builder*. Lets user edit them.	AVERAGE	3
	SONG PRINTER $39.95 Printing tool	Commodore 64	Lets user print out music in standard music notation.	AVERAGE	3
	SOUND MAKER $39.95 Sound-making tool	Commodore 64	Provides 4-color graphic display that looks like front panel of synthesizer. Lets user change tone and volume of sound.	AVERAGE	3
Sight & Sound Music Software 3200 S. 166th St. P.O. Box 27 New Berlin, WI 53151 (800) 558-0910	MUSIC PROCESSOR $24.95 Synthesizer and composing tool	Commodore 64; Incredible Music Keyboard and joystick optional	Includes powerful music editor with command language similar to BASIC.	AVERAGE	3
	MUSIC VIDEO KIT $39.95 Educational/game	Commodore 64 plus joystick	Creates music videos including background scenes, actors, props, and music that user selects or writes with the program's help.	AVERAGE	3
	3001 SOUND ODYSSEY $24.95 Synthesizer/educational	Commodore 64; Incredible Music Keyboard and joystick optional	Includes powerful synthesizer and in-depth tutorial on sound synthesis, and sequencer for recording.	AVERAGE	3
	KAWASAKI SYNTHESIZER $24.95 Synthesizer and composing tool	Commodore 64; Incredible Music Keyboard optional	Two-disk set includes "The Performer" and "The Composer." Futuristic graphics enhance music.	DIFFICULT	3
	KAWASAKI RHYTHM ROCKER $24.95 Synthesizer	Commodore 64; Incredible Music Keyboard optional	Enables user to play synthesizer to bass and drum patterns while watching hi-res graphics displays.	DIFFICULT	3
Spinnaker Software Corp. 1 Kendall Square Cambridge, MA 02139 (617) 494-1200	ROCK 'N RHYTHM $26.95 Composing tool	Atari, 48K; Commodore 64 plus joystick	Record songs in a simulated recording studio. Play back songs on a jukebox.	AVERAGE	3-4
Springboard Software 7807 Creekridge Circle Minneapolis, MN 55435 (800) 328-1223	MUSIC MAESTRO $34.95 Educational/game	Apple II series, 48K; color monitor recommended	Lets children 4–12 create tunes, learn note names, combine graphics with music.	EASY	1
Sweet Micro Systems, Inc. 50 Freeway Drive Cranston, RI 02920 (800) 341-8001	SPEECH DEVELOPMENT SYSTEM $39.95 Utility software	Apple II plus/IIe, 64K plus Mockingboard stereo/ synthesizer card	Software utility allows user to modify phoneme string created by a text-to-speech algorithm.	AVERAGE	6
	DEVELOPER'S TOOLKIT $29.95 Composing tool	Same as above	Helpful utility program eases the development of music and sound, and speech enhanced software.	AVERAGE	6
Tandy/Radio Shack 1800 One Tandy Center Ft. Worth, TX 76102 (817) 338-2395	ORCHESTRA-90 $79.95 Synthesizer	TRS-80 CoCo, 16K; Models I/III/4, 48K	Connects computer to stereo; lets you create, play, and edit music. Built-in communications package for CoCo.	AVERAGE	5
Tech-Sketch Inc. 26 Just Road Fairfield, NJ 07006 (800) 526-2514	LIGHT PEN MUSIC COMPOSER AND PRINTER DUMP Included with Music Port Synthesizer and composing tool	Commodore 64 plus Music Port keyboard, and Light Pen	Lets user select from icon-based menu; build, edit, save measures; and record up to 10 minutes of music.	EASY	3
Triton Products P.O. Box 8123 San Francisco, CA 94128 (800) 227-6900	MUSIC MAKER $15.95 (cartridge) Composing tool	TI-99/4A (cartridge); storage system recommended	Compose by moving notes on a staff and watch notes on sound frequency chart.	AVERAGE	3
Waveform Corp. 418 N. Buchanan Circle, No. 12 Pacheco, CA 94553 (415) 825-1722	MUSICALC 1, SYNTHESIZER AND SEQUENCER $29.95 Synthesizer and composing tool	Commodore 64; ColorTone Keyboard optional	Holds 32 preset songs and sound "patches" at one time. Lets user record notes while performing or while sequencing one note at a time.	DIFFICULT	3
	MUSICALC 2, SCOREWRITER $19.95 Printing utility	Commodore 64 plus *MusiCalc 1* software	Prints scores from songs created using *MusiCalc 1*. Lets two or more Commodore 64s run *MusiCalc* at the same time to synchronize.	DIFFICULT	0
	MUSICALC 3, KEYBOARD MAKER $19.95 Composing tool	Commodore 64 plus *MusiCalc 1* software	Contains 70 preset scales and lets you create new scales in conjunction with *MusiCalc 1*.	AVERAGE	0
Yamaha International Corp. P.O. Box 6600 Buena Park, CA 90620 (714) 522-9011	FM VOICING PROGRAM $50 Synthesizer and composing tool	Yamaha CX5M plus YK-01 or YK-10	Lets user load and save own instrument sounds.	DIFFICULT	8
	FM MUSIC COMPOSER $50 Synthesizer and composing tool	Yamaha CX5M plus YK-01 or YK-10	Displays staff on-screen for composing.	DIFFICULT	8
	FM MUSIC MACRO $50 (cartridge) Synthesizer and composing tool	Yamaha CX5M; keyboard optional	Plug-in cartridge lets programmers add own sounds to own programs with their music computer.	DIFFICULT	8

All software on disk, unless otherwise noted.

SAVES/LOADS PRESET SOUNDS	SAVES/LOADS SONGS	ACCOMPANIMENT	INSTRUMENTS	COLOR GRAPHICS	RECORDS LIVE	SEQUENCES NOTES	TUTORIALS	PROGRAMMING INFO	PRINTS SCORES
N	N	N	Y	N	N	N	Y	Y	N
Y	Y	N	N	Y	Y	N	N	N	N
Y	Y	Y	N	N	Y	N	Y	N	N
Y	Y	Y	N	N	N	Y	Y	N	N
N	Y	N	N	N	N	N	Y	N	Y
Y	N	N	Y	N	N	N	Y	N	N
Y	Y	Y	Y	Y	Y	Y	N	Y	Y
N	Y	Y	N	Y	Y	N	N	N	N
Y	Y	N	Y	Y	Y	Y	Y	N	N
Y	Y	Y	Y	Y	Y	Y	N	N	N
N	Y	Y	Y	Y	Y	N	N	N	Y
Y	Y	Y	Y	Y	Y	Y	N	N	N
N	Y	N	N	Y	Y	Y	Y	N	N
Y	N	N	N	N	N	N	Y	Y	N
Y	N	N	N	N	N	N	Y	Y	N
N	Y	N	Y	N	N	Y	N	N	N
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
N	Y	N	N	Y	N	Y	N	N	Y
Y	Y	Y	Y	Y	Y	Y	N	Y	N
N	N	N	N	Y	N	N	Y	N	Y
N	Y	N	N	Y	N	N	Y	N	N
Y	T	Y	Y	Y	Y	Y	Y	N	N
N	Y	N	N	Y	N	Y	N	Y	Y
N	N	Y	N	Y	N	Y	N	Y	N

sounds available for playback in your compositions. A "Y" in this column means you have the flexibility to create your *own* instrument sounds and change those sounds until they're exactly as you wish. Creating and manipulating sounds usually is done by changing settings on your screen while listening to the results.

Saves/Loads Sounds: A program that saves and loads individual sounds lets the user create libraries of instrument sounds for later use. These sounds can be reloaded and used in the performance and playback of compositions. If a program doesn't save instrument sounds, those sounds are lost whenever the computer is turned off.

Saves/Loads Songs: This feature lets the user save entire compositions (as opposed to individual instrument sounds). This save step comes after the user records or sequences the song.

Accompaniment: A "Y" in this column means the music program offers automatic computer accompaniment. You've probably seen organs and electronic keyboards that play bass, drums, and rhythm while you play along. In many programs, your computer can provide this kind of accompaniment.

Graphics: If the music program you're interested in has a "Y" in this column, it's likely you'll need a color monitor to get the most out of the program. Parts of programs with color graphics display have been known to disappear on monochrome screens.

Records: Many frustrated musicians have a secret desire to go to a recording studio and record a song "live." When a program has a "Y" in this column, the recording studio comes right into your home! Software that records live performances can record a song as you play it, and then play it back for you.

Sequences: With many music programs, it's also possible to sequence notes individually. This means you're able to arrange the notes you want, place them where you want them (visually on a staff, for instance), and have the computer play back the song when you're ready (as opposed to recording everything at once, live). With some programs, you move the notes onto a graphic display of a music staff using a joystick, KoalaPad, or mouse. Other programs use the keyboard to sequence a song.

Tutorials: Many programs featured in the software chart contain built-in tutorials. If a program offers a help screen or a tutorial covering subjects necessary for the program operation, you'll find a "Y" in this column. Educational games, by their inherent nature, also earn a "Y" in this column.

Programming Info: One of a best ways to make your own game programs shine is to add music to them. Software packages with a "Y" in this column include documentation for programmers who want to add freshly synthesized creations to their own programming efforts.

Prints Scores: One of the most popular features among the new composing programs is score printing. If you're running a program with a "Y" in this column, and you have a compatible printer with graphics capabilities, you can print sheet music of your compositions. For serious musicmakers, having the printed sheet music can be a big help when editing a large composition.

BLOW THE CRITICS AWAY

Once you've chosen product(s) suitable for your own musicmaking tastes, you'll find yourself jamming in no time. I know several of the products highlighted on these pages have proven invaluable in my own computer music endeavors. My critics (family and friends within earshot) have forgotten my mosquito-buzzing musical efforts of the past. Now they listen to my computer music and say, "That sounds a lot like *2001: A Space Odyssey*." I just smile.

HITCHHIKER'S GUIDE TO THE GALAXY

Infocom. Text adventure. Your mission: As Arthur Dent, use all of your rather limited faculties to survive *the* most bizarre Thursday since your Aunt gave you the thing, though you don't know what it is. (Hints and game for most computers)

Before you become a stick-in-the-mud, take everything you come across that's not nailed down.

A little sense will help you see the light.

To get the Babel fish, hang your gown on the hook, put the towel over the drain, the satchel in front of the panel, and put something useless on the satchel.

To get by the door in the Heart of Gold, you must remove the common sense particle from your brain and then hold tea and no tea.

The engine room isn't as dangerous as it sounds. Be persistent.

With name spoken, and towel upon thy head, carve thy name, and he'll think you're dead.

The putrid-looking snack obtained at the bar may not look interesting to a human, but for man's best friend it proves a delicious repast.

Steamed Fluff-plant will provide the fruit of knowledge.

Don't panic!!!—DAN LEVIN, *11, Burlington, Vermont*; KEITH FOGG, *14, Virginia Beach, Virginia*; ROBERT LEE, *12, Narragansett, Rhode Island*; MARK ABBOTT, *12, Springfield, Massachusetts*; AARON LLOYD, *15, Brooklyn, New York*; PAT WILSEY, *19, Grand Island, Nebraska*

HINT HOTLINE

CONAN, Datasoft (Apple). Arcade adventure. Your mission: To invade the evil wizard Volta's stronghold, make your way past his fiends, and rid the world of him.

On the first level, climb to the top of the castle without killing the bat, and jump onto the tree below. After you land, slowly walk left until you fall down a little, and then go as far right as you can. Below you, there is an invisible ladder. If you go down this, you'll receive a free life. —BRIAN HINKEN, *14, Cooper City, Florida*

SPY VS. SPY, First Star (Apple, Atari, C 64) Strategy/arcade. Your mission: To be the first spy to gather the necessary money and loot, stash it in your case, and leave the embassy in an awaiting airplane.

If you're playing against the computer, try playing a hard version but don't play with the hidden airport. Find the airport and water trap all the entrances. Then, simply wait there for the computer to collect everything. When it has it all, it'll go for the airport only to be killed by the trap. Simply search the nearby furniture, grab the briefcase, and split.—CHRIS DALTON, *13, Canon City, Colorado*

TEMPLE OF APSHAI, Epyx (Apple). Role-playing adventure. Your mission: To delve deep into the dark, dank dungeon, destroy the dastardly denizens, and get their dinero.

After you boot the game, answer "nay" to the Innkeeper's first two questions, and create a character as usual, complete with magical gear and healing salves. Then, when the Innkeeper asks what level you would like to explore, press CONTROL-OPEN APPLE-RESET to reboot the game. This will cause a drastic change in your character. He will retain any equipment that you gave him, but his ability scores will be 37s and 39s, and he'll have upwards of 36 of each treasure type.—JOE BEZDEK, *12, San Antonio, Texas*

SPY HUNTER, Sega (C 64 cartridge). Arcade/skill. Your mission: Race along hazardous highways and rapid rivers eliminating enemy cars, boats, and helicopters before they can eliminate you.

When the truck drops you off on the side of the road, you can maneuver the car to the black strip on the far right of the screen. There, you'll be impervious to most damage, and able to rack up points indefinitely.

When traveling by river in the advanced game, slow down enough to let the boats pass you from behind and destroy everything that gets in front of you. This reduces the number of mines in front of you, and eventually only the large boats (worth 1,500 each) will approach. Also, if you can stay to the left, you won't be forced back on land, and probably will obtain more points.

Resting an object on the "Ø" key throughout your game might make it easier to use oil and smoke.—SPECIAL Ks

TAIPAN, Avalanche Productions (Apple). Financial/strategy. Your mission: To set out with your ship to trade commodities throughout various Japanese ports, fight pirates, and try to become a millionaire.

When repaying money to Elder Brother, pay back more than you owe. This way he'll start paying you interest, and at about 10 percent a turn, you'll rack up quite a fortune in no time.—ROY LIU, *13, Belleville, Illinois*.

FLIGHT SIMULATOR AND FLIGHT SIMULATOR II, Microsoft (IBM) and subLogic (Apple, C 64, Atari). Simulation. Your mission: To learn to take off, fly, and land a small plane.

E. R. Martin recently has released a five-page booklet on the basics of using these two highly sophisticated programs. The booklet tells everything you need to know to go from takeoff to a simple landing. To get a copy of this manual, send $5 to E. R. Martin, 6351 Lynwood Hill, McLean, VA 22101.

HELP FOR ADVENTURERS

Questbusters, The Adventurer's Newsletter, is an excellent publication for those of you who love adventure games. Features include excellent reviews of both text and graphic adventures, book reviews, a swap shop, and much more. Subscriptions are $15 for 12 issues. To order, send your name, full address, and computer brand to *Questbusters*, 202 Elgin Ct., Wayne, PA 19087.

Atari Tones

MUSIC PROGRAMS

BY JOEY LATIMER

Going out to the baseball game is one of America's favorite summer pastimes. For old and young fans alike, one of the greatest parts of the game is the "seventh-inning stretch" when spectators rise and belt out "Take Me Out to the Ball Game."

In this month's Microtones, we've programmed a version of this famous song for those of you who don't make it out to the ballpark. For baseball fans who view the action on the tube and get cheated out of the "stretch" by commercials, this one's for you!

HACKER NOTES: John Jainschigg, FAMILY COMPUTING's technical editor, has arranged a wonderful four-voice version for Atari computers. Due to hardware limitations, the programs for the rest of the machines were arranged for three parts. The song contains a rolling bass, a syncopated rhythm part (Atari has two rhythm parts), and a melody line riding on top of the mix.

The notes and durations for each voice are read into arrays from DATA statements. If an error message appears when you run the program, or if you find the computer playing strange notes, the first places to look for typing errors should be the DATA statements. Check each line of data for missing or extra commas, or incorrectly typed numbers.

ATARI/*TAKE ME OUT TO THE BALL GAME*

```
10 DIM A(96),B(96),C(96),D(96)
20 POKE 752,1:PRINT CHR$(125)
30 POSITION 8,10:PRINT "TUNING UP ... PLEASE WAIT."
40 C1=1:FOR I=1 TO 63:READ A,B
50 FOR J=1 TO B:A(C1)=A:C1=C1+1:NEXT J:NEXT I
60 FOR I=1 TO 94 STEP 3:READ A,B
70 B(I)=0:C(I)=0
80 B(I+1)=A:C(I+1)=B
90 B(I+2)=A:C(I+2)=B
100 NEXT I
110 C1=1:FOR I=1 TO 68:READ A,B
120 FOR J=1 TO B:D(C1)=A:C1=C1+1:NEXT J:NEXT I
130 PRINT CHR$(125)
140 POSITION 5,10:PRINT "TAKE ME OUT TO THE BALL GAME"
150 FOR I=1 TO 96
160 SOUND 0,A(I),10,8
170 SOUND 1,B(I),10,5
180 SOUND 2,C(I),10,5
190 SOUND 3,D(I),10,8
200 FOR D=1 TO 50:NEXT D
210 SOUND 1,0,0,0:SOUND 2,0,0,0
220 NEXT I:GOTO 150
1000 DATA 121,2,60,1,72,1,81,1,96,1
1010 DATA 81,3,108,3,121,2,60,1,72,1
1020 DATA 81,1,96,1,81,6,72,1,76,1
1030 DATA 72,1,96,1,91,1,81,1,72,2
1040 DATA 91,1,108,3,72,1,72,1,72,1
1050 DATA 72,1,64,1,60,1,53,1,64,1
1060 DATA 72,1,81,1,96,1,108,1,121,2
1070 DATA 60,1,72,1,81,1,96,1,81,3
1080 DATA 108,3,121,2,108,1,96,1,91,1
1090 DATA 81,1,72,4,72,1,64,1,60,1
1100 DATA 0,2,60,1,0,2,60,1,64,1
1110 DATA 72,1,81,1,86,1,81,1,72,3
1120 DATA 64,3,60,4,0,2
2000 DATA 60,47,60,47,53,45,53,45,60,47,60
2010 DATA 47,53,45,53,45,56,47,56,40,53,45
2020 DATA 53,45,53,42,53,42,64,40,64,45,60
2030 DATA 47,60,47,53,45,64,45,60,47,68,47
2040 DATA 72,45,72,45,72,45,60,42,60,47
2050 DATA 56,40,60,42,64,45,60,47,64,45
3000 DATA 121,3,162,3,128,2,144,1,162,1
3010 DATA 144,1,128,1,121,3,162,3,162,1
3020 DATA 144,1,136,1,128,1,144,1,162,1
3030 DATA 144,3,193,2,204,1,217,3,144,3
3040 DATA 217,1,193,1,182,1,173,1,193,1
3050 DATA 217,1,162,1,144,1,136,1,128,1
3060 DATA 144,1,162,1,121,3,162,3,128,2
3070 DATA 144,1,162,1,144,1,128,1,121,2
3080 DATA 136,1,162,1,173,1,162,1,182,1
3090 DATA 144,1,121,1,182,3,182,3,173,3
3100 DATA 162,1,173,1,162,1,144,1,162,1
3110 DATA 193,1,217,1,193,1,173,1,162,1
3120 DATA 144,1,128,1,121,1,193,1,144,1
3130 DATA 162,1,182,1,217,1
```

COMMODORE 64/*TAKE ME OUT TO THE BALL GAME*

```
10 DIM A(96,2),C(96,2),D(96,2)
20 S=54272:PRINT CHR$(147):POKE 53281,0
30 POKE 214,8:PRINT
40 PRINT TAB(8);"TUNING UP ... PLEASE WAIT."
50 FOR I=0 TO 23:POKE S+I,0:NEXT I:POKE S+24,15
60 POKE S+5,48:POKE S+6,204:POKE S+12,71
70 POKE S+13,116:POKE S+19,48:POKE S+20,204
80 C1=1:FOR I=1 TO 63:READ H,L,N
90 FOR J=1 TO N:A(C1,1)=H:A(C1,2)=L:C1=C1+1
100 NEXT J:NEXT I
110 FOR I=1 TO 94 STEP 3:READ H,L:C(I,1)=0:C(I,2)=0
120 C(I+1,1)=H:C(I+1,2)=L:C(I+2,1)=H:C(I+2,2)=L
130 NEXT I
140 C1=1:FOR I=1 TO 68:READ H,L,N
150 FOR J=1 TO N:D(C1,1)=H:D(C1,2)=L:C1=C1+1
160 NEXT J:NEXT I
170 PRINT CHR$(147):POKE 53280,2
180 POKE 214,8:PRINT
190 PRINT TAB(6);"TAKE ME OUT TO THE BALL GAME"
200 POKE S+4,33:POKE S+11,33:POKE S+18,33
210 FOR I=1 TO 96
220 POKE S+1,A(I,1):POKE S,A(I,2)
230 POKE S+8,C(I,1):POKE S+7,C(I,2)
240 POKE S+15,D(I,1):POKE S+14,D(I,2)
250 FOR D=1 TO 100:NEXT D
260 POKE S+8,0:POKE S+7,0
270 NEXT I:GOTO 210
1000 DATA 16,195,2,33,135,1,28,49,1,25,30,1,21,31,1,25
```

```
1010 DATA 30,3,18,209,3,16,195,2,33,135,1,28,49,1,25
1020 DATA 30,1,21,31,1,25,30,6,28,49,1,26,156,1,28,49
1030 DATA 1,21,31,1,22,96,1,25,30,1,28,49,2,22,96,1,18
1040 DATA 209,3,28,49,1,28,49,1,28,49,1,28,49,1,31
1050 DATA 165,1,33,135,1,37,162,1,31,165,1,28,49,1,25
1060 DATA 30,1,21,31,1,18,209,1,16,195,2,33,135,1,28
1070 DATA 49,1,25,30,1,21,31,1,25,30,3,18,209,3,16,195
1080 DATA 2,18,209,1,21,31,1,22,96,1,25,30,1,28,49,4
1090 DATA 28,49,1,31,165,1,33,135,1,0,0,2,33,135,1,0,0
1100 DATA 2,33,135,1,31,165,1,28,49,1,25,30,1,23,181
1110 DATA 1,25,30,1,28,49,3,31,165,3,33,135,4,0,0,2
2000 DATA 42,62,42,62,44,193,44,193,42,62,42,62,44,193
2010 DATA 44,193,42,62,50,60,44,193,44,193,47,107,47
2020 DATA 107,50,60,44,193,42,62,42,62,44,193,44,193
2030 DATA 42,62,42,62,44,193,44,193,44,193,47,107,42
2040 DATA 62,50,60,47,107,44,193,42,62,44,193
3000 DATA 16,195,3,12,143,3,15,210,2,14,24,1,12,143,1
3010 DATA 14,24,1,15,210,1,16,195,3,12,143,3,12,143,1
3020 DATA 14,24,1,14,239,1,15,210,1,14,24,1,12,143,1
3030 DATA 14,24,3,10,143,2,9,247,1,9,104,3,14,24,3,9
3040 DATA 104,1,10,143,1,11,48,1,11,218,1,10,143,1,9
3050 DATA 104,1,12,143,1,14,24,1,14,239,1,15,210,1,14
3060 DATA 24,1,12,143,1,16,195,3,12,143,3,15,210,2,14
3070 DATA 24,1,12,143,1,14,24,1,15,210,1,16,195,2,14
3080 DATA 239,1,12,143,1,11,218,1,12,143,1,11,48,1,14
3090 DATA 24,1,16,195,1,11,48,3,11,48,3,11,218,3,12
3100 DATA 143,1,11,218,1,12,143,1,14,24,1,12,143,1
3110 DATA 10,143,1,9,104,1,10,143,1,11,218,1,12,143,1
3120 DATA 14,24,1,15,210,1,16,195,1,10,143,1,14,24,1
3130 DATA 12,143,1,11,48,1,9,104,1
```

IBM PC*jr* w/CARTRIDGE BASIC & TV OR MONITOR w/SPEAKER/*TAKE ME OUT TO THE BALL GAME*

```
10 DIM N$(3)
20 CLS:WIDTH 40:KEY OFF:SOUND ON
30 FOR I=1 TO 3:N$(I)="":FOR J=1 TO 4
40 READ A$:N$(I)=N$(I)+A$:NEXT J:NEXT I
50 LOCATE 10,5:PRINT "TAKE ME OUT TO THE BALL GAME"
60 PLAY N$(1),N$(2),N$(3):GOTO 60
1000 DATA V10MF03L4C04L8C03AGEL4G.D.L4C04L8C03AGE
1010 DATA L2G.L8AG#AEFGL4AL8FL4D.L8AAAAB04CD03BA
1020 DATA GEDL4C04L8C03AGEL4G.D.L4CL8DEFGL2AL8AB
1030 DATA 04L8CP4CP4C03BAGF#GL4A.B.04L2C
2000 DATA V803L8P8EEP8EEP8FFP8FFP8EEP8EEP8FFP8FF
2010 DATA P8GGP8GGP8FFP8FFP8F#F#P8F#F#P8GGP8FF
2020 DATA P8EEP8EEP8FFP8FFP8EEP8EEP8FFP8FFP8AA
2030 DATA P8D#D#P8EEP8GGP8F#F#P8FFP8EEP8FF
3000 DATA V802L4C.01G.BL8AGAB02L4C.01G.L8GAA#BAG
3010 DATA L4A.EL8D#L4D.A.L8DEFF#EDGAA#BAG
3020 DATA 02L4C.01G.BL8AGAB02L4C01L8A#GF#GFA02C01L4F.
3030 DATA F.F#.L8GF#GAGEDEF#GAB02C01EAGFD
```

TI-99/4A/*TAKE ME OUT TO THE BALL GAME*

```
10 DIM AN(96),CN(96),DN(96)
20 CALL CLEAR
30 PRINT "TUNING UP ... PLEASE WAIT."
50 CT=1
60 FOR I=1 TO 63
70 READ A,B
80 FOR J=1 TO B
90 AN(CT)=A
100 CT=CT+1
110 NEXT J
120 NEXT I
130 FOR I=1 TO 94 STEP 3
140 READ B
150 CN(I)=40000
160 CN(I+1)=B
170 CN(I+2)=B
180 NEXT I
190 CT=1
200 FOR I=1 TO 68
210 READ A,B
220 FOR J=1 TO B
230 DN(CT)=A
240 CT=CT+1
250 NEXT J
260 NEXT I
270 CALL CLEAR
280 PRINT "TAKE ME OUT TO THE BALL GAME"
290 FOR X=1 TO CT-1
300 CALL SOUND(200,AN(X),0,CN(X),5,DN(X),3)
310 NEXT X
320 GOTO 290
1000 DATA 262,2,523,1,440,1,392,1,330,1,392,3
1010 DATA 294,3,262,2,523,1,440,1,392,1,330,1
1020 DATA 392,6,440,1,415,1,440,1,330,1,349,1
1030 DATA 392,1,440,2,349,1,294,3,440,1,440,1
1040 DATA 440,1,440,1,494,1,523,1,587,1,494,1
1050 DATA 440,1,392,1,330,1,294,1,262,2,523,1
1060 DATA 440,1,392,1,330,1,392,3,294,3,262,2
1070 DATA 294,1,330,1,349,1,392,1,440,4,440,1
1080 DATA 494,1,523,1,40000,2,523,1,40000,2
1090 DATA 523,1,494,1,440,1,392,1,370,1,392,1
1100 DATA 440,3,494,3,523,4,40000,2
2000 DATA 659,659,698,698,659,659,698,698,659
2010 DATA 784,698,698,740,740,784,698,659,659
2020 DATA 698,698,659,659,698,698,698,740,659
2030 DATA 784,740,698,659,698
3000 DATA 262,3,196,3,247,2,220,1,196,1,220,1
3010 DATA 247,1,262,3,196,3,196,1,220,1,233,1
3020 DATA 247,1,220,1,196,1,220,3,165,2,156,1
3030 DATA 147,3,220,3,147,1,165,1,175,1,185,1
3040 DATA 165,1,147,1,196,1,220,1,233,1,247,1
3050 DATA 220,1,196,1,262,3,196,3,247,2,220,1
3060 DATA 196,1,220,1,247,1,262,2,233,1,196,1
3070 DATA 185,1,196,1,175,1,220,1,262,1,175,3
3080 DATA 175,3,185,3,196,1,185,1,196,1,220,1
3090 DATA 196,1,165,1,147,1,165,1,185,1,195,1
3100 DATA 220,1,247,1,262,1,165,1,220,1,196,1
3110 DATA 175,1,147,1
```

MICRONOTES

Bet you *never* thought you could make music with a 2K Timex-Sinclair computer! Well, it's a cinch with Simulsion's ***The Fantastic Music Machine and Light Show***, a cassette with two special-effects programs for only $9! "Music Composer" makes your keyboard a 3-octave musical instrument, which plays music through your radio as you press the keys. It lets you store, edit, and play back up to 400 notes. With "The Light Show," which animates a kaleidoscopic pattern, you can accompany your music with your own patterns or computer-generated random effects. (Simulsion, Box 894, Lemon Grove, CA 92045.)

Good news for **Mockingboard** owners! You'll never again need to open your Apple to control the Mockingboard's volume if you get **A-Max** ($49), a self-contained pair of speakers with an earphone jack and individual amplifiers. A-Max will give your Apple II/II plus/IIe or IBM PC (the IBM adapter costs $8) stereo sound even if you don't have a Mockingboard. Available from Sweet Micro Systems, 50 Freeway Drive, Cranston, RI 02920; (800) 341-8001.

(*For more music/computer news, check out this month's Buyer's Guide.*)

—LINDA WILLIAMS

WHAT'S IN STORE

NEW HARDWARE*/MARKET UPDATE

BY NICK SULLIVAN

COMPUTERS

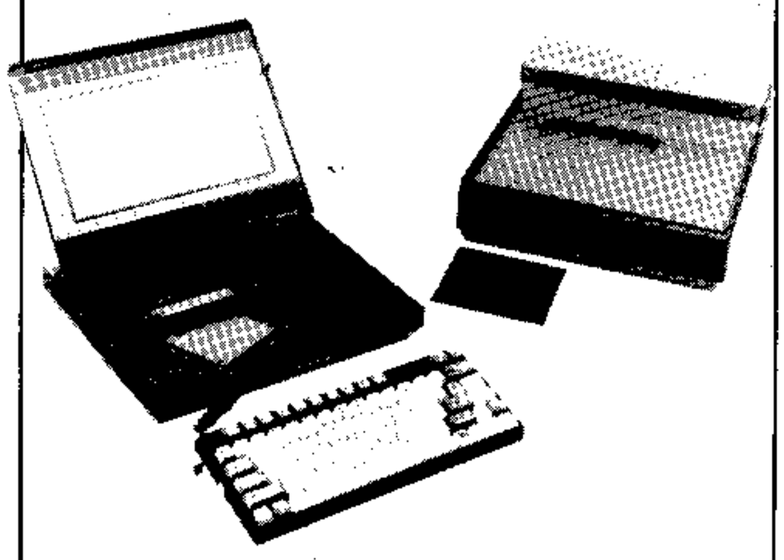
Kaypro 2000

MANUFACTURER: Kaypro, 533 Stevens Ave., Solana Beach, CA 92075; (619) 481-4300

PRICE: $1,995

Kaypro, which made its name as the manufacturer of the no-nonsense, good-value Kaypro 2 (now 2X) transportable computer, has brought these same qualities to its new Kaypro 2000 laptop computer. "We're the Volkswagen of computer manufacturers," says David Kay, vp-marketing.

The 2000 is IBM-compatible, has 256K RAM (expandable to 768K), an 80 by 25 (character by line) screen display, and comes with *WordStar* and *CalcStar* software on disk, and 720K of disk storage on one 3.5-inch internal drive. A second 3.5-inch drive may be added; for those who want to



use a 5.25-inch disk drive, Kaypro sells a Disk Adapter. Keep in mind that there is now little IBM software available in the 3.5-inch disk format.

The keyboard is detachable, and has flip-out feet to adjust the slope angle. The LCD (liquid crystal display) screen, while better than that on many other more expensive laptops, still takes getting used to.

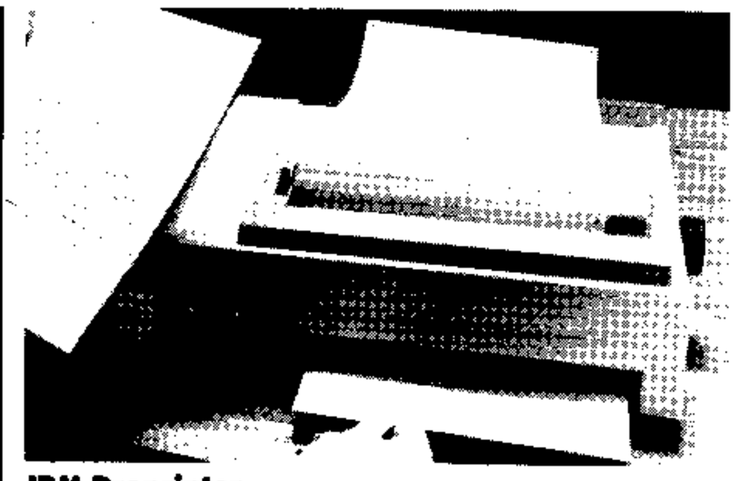
PRINTERS

IBM Proprinter
IBM Color Jetprinter

MANUFACTURER: IBM Information Systems Group, 900 King St., Rye Brook, New York 10573; (914) 934-4822

PRICE: $549 (Proprinter); $745 (Jetprinter)

IBM has introduced two advanced, and reasonably priced, printers. The dot-matrix Proprinter, which prints



IBM Proprinter

in three speeds, accepts both continuous-form and single-sheet paper. The single sheets and envelopes are fed in through the front, even while the continuous form paper is in place. Being able to switch between the two types of paper with "no fuss" will be a significant advantage.

The Proprinter can produce drafts at an extremely fast 200 characters per second (cps); it prints in near-letter-quality mode at 40 cps. It can print graphs, charts, or drawings with as many as 1,280 dots per square inch.

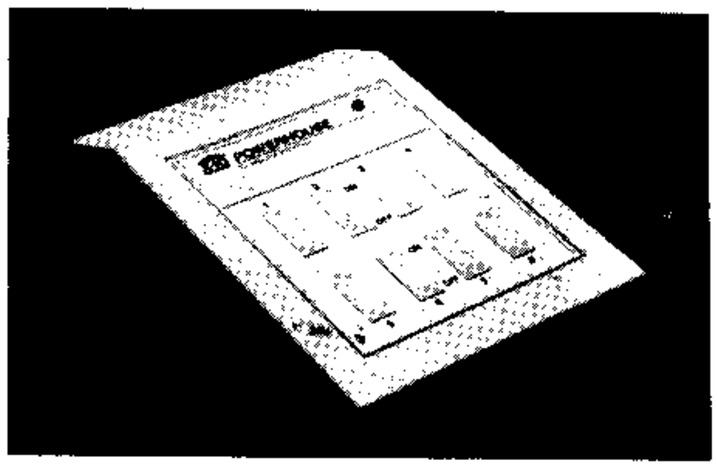
The IBM Color Jetprinter, designed primarily for office use, is significant in that IBM's entry to the field should legitimize color printing and spur sales of all such printers. The Jetprinter contains both a black cartridge and one with seven colors that squirt ink onto paper to produce 62 hues. The inks stored in easy-to-change cartridges flow onto the paper through four ink-jet nozzles. The Jetprinter also prints high-resolution graphics, and near-letter-quality text at a top speed of 33 cps.

MISCELLANEOUS

X-10 Powerhouse

MANUFACTURER: X-10 USA, 185A LeGrand Ave., Northvale, NJ 07647; (201) 784-9700

PRICE: $125



The X-10 Powerhouse home-control device, which connects to the serial port of the Apple IIe or IIc (and is planned for the Commodore 64), can be configured to control lights and appliances around your house. The system works by sending signals over existing house wiring. Each light or appliance that you wish to control must be connected to modules, which accept the signals from the computer. The modules ($99) are available at Sears and Radio Shack outlets. In addition, the X-10 unit is sold by Radio Shack under the name "Plug 'n Power," and by Sears as the "Sears Home Control System." The connecting cable costs $25.

The included software graphically steps you through each room of your house in vivid color, and prompts you to use the joystick to select lights, TVs, stereos, etc. that you wish to control, and the times you want them on or off. After installation and programming are completed, the Powerhouse unit may be disconnected from the computer, which may be turned off or used for other tasks.

MARKET UPDATE

Commodore Business Machines has reorganized its customer-service and support systems to give customers faster product service and access to information on new products. The new network of national service centers includes more than 1,000 locations. RCA provides service at 160 of these centers. In addition, a new hot line, (800) 247-9000, will handle hardware and software questions, and inquiries about dealer locations from 9 a.m. to 12 midnight Eastern time, weekdays.

Votrax has added an internal speaker to its Type-N-Talk Speech Synthesizer ($265). The "talking computer peripheral," which connects to the RS-232C port of any computer, converts text into conversational English. It also has an external speaker jack.

**These products have been announced by manufacturers, but are not necessarily in the stores yet. Some products may still be under development, and others may be in test markets only. Call or write the manufacturer for expected date of delivery.*