Island CoCo News

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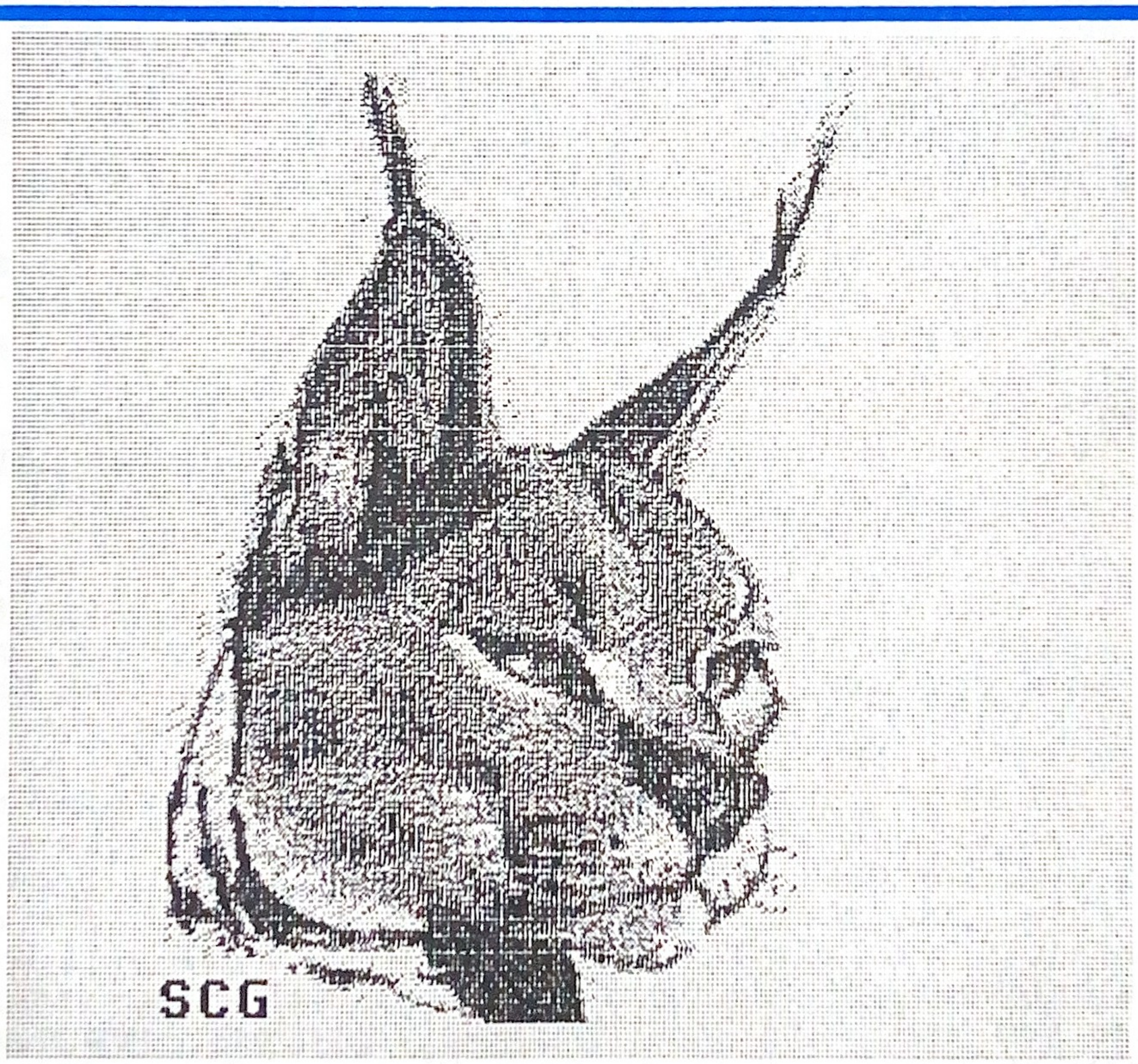


The Island CoCo Club

PC BBS
(516) 795-5874

Long Island, New York
* For the Tandy Color Computer *

Summer Edition
Published Bi-Monthly

.....From the Editor

Welcome to the Summer Issue of The Island CoCo News. Word is really buzzing around on PC BBS, specially in the CoCo Conference. Info on the three new machines replacing our lovable CoCo is pouring out. We have a nice article, submitted by Steve Gilbert on the MM/1 by Kenneth-Leigh Enterprises, as well as additional information submitted by Gerald Angus. Included are articles on the TC9 TOMCAT by Frank Hogg Laboratory (Reprinted from "LLIST", Newsletter of the Calgary Colour Computer Club). In this issue, is a flyer from Kenneth-Leigh Enterprises about their New Computer & newsletter.

Steve Gilbert drew a fantastic picture for our front cover. Took him a little while, but the result is GREAT!

Thinking of adding a 3 1/2" drive to your CoCo??? Jim Snider, from Color Computer Owners Group in Michigan has some interesting ideas. Terry Simons has more tips on his Home-Pac software package.

Irving Pereira has information of our annual Club Picnic, coming up in August. Although Irv has info about the coming Rainbowfest, word around the BBS is that, there won't be another Rainbowfest. But, don't despair....our friend, Dave Myers & CoCoPRO! has one planned in Atlanta, or there abouts. Dave has told me, the room rates are about 45 bucks a nite! Dave will keep us informed, and will update the date/place/time thru PC BBS.... so stay tuned!!

James McDaniel has come thru with the Minutes from our pass meetings. Like James, you can submit articles written on your word processor, and upload it to me via PC BBS. Just remember to save it as an ASCII text file...and gain upload credits as well. Irv, and Dave Myers has been doing that for some time... hope others will take advantage of this easy and simple way to obtain information from each other (doesn't have to be me all the time)....the "O" E-MAIL system.

This leads us to another item, I will be resigning my post as the Island CoCo News Editor. I'll stay on till the end of the year, which will give sufficient time to get another Editor, as well as "on the job training". Lack of time is one reason, with many other activities going on, with my family etc. Another is, that I haven't used the CoCo 3, in quite some time (more than a couple of years, outside of looking at some graphics, and checking a file or two from the board). My entire 512K CoCo 3 setup has been sold, and will find a good home. I've been using the IBM, at work (along with the laser printer), as well as the IBM AT at home for the Newsletter for some time now.
PC BBS will still support the CoCo, and WILL CONTINUE to support The Island CoCo Club for MANY MANY years to come. It's only because of the Members in this Club, that I have stayed with the CoCo for so long... and also obtained the RelayNet Conference system (as well as going to last year's Rainbowfest). My first home-built IBM Clone was five years ago, in case you wanted to know. Believe it or not, you won't find a better bunch of people, than in this Club.....Terry Simons & Dave Myers too!! The CoCo will always have a place in my heart. So, come on.....be the next Editor of the Island CoCo News....just inform Gerald or myself....and I'll get you started right away. The P.O. Box will remain in effect for the Club till it expires next year. After that, I'll keep it for PC BBS use.

D.K. Lee
Editor/ PC BBS Sysop

The Island CoCo Club

Minutes of the February 26th meeting....1990Ø

The February meeting of The Island CoCo Club came to order at 7:2Ø P.M. after a momentary delay. The first order of business was handing out the newsletter. With this done, our President gave opening remarks.

New Business: Opening a joint account for the club that will allow disbursement of funds if treasurer or president not at meeting. The Eckers were to give a report on tax-exempt status for the club, unfortunately they were not at the meeting.

There was also a discussion on a fund raising plan. We are now selling raffle tickets to increase the treasury. As it stands tickets will be sold until the price of the merchandise is reached, and the prize awarded. Members are asked to donate merchandise for the raffle. Raffle tickets are being sold at $2.ØØ each. The first prize : sophisticated surge protector, second prize : Fast dupe, copy program, (original copy), and third prize : CC III dump. So lets buy those tickets !!!!

D.K. Lee gave a discussion of the improvement to the BBS. We are now a part of network, meaning we can now communicate with other CoCoist throughout the country. This is done using the ECHO mode on the board. We still have our own section for club members, as well as new sections for other sigs. Members are urged to try out the new system. If this echo net grows,it will give us an alternate to Delphi and Compuserve, saving members money.

On another note, a new telecommunication program, which says it can do 19,2ØØ baud through the serial port, was brought up. It´s from 21th Century Software, and named Utili-Comm. The membership voted to purchase and try out the program.

The treasury report was given. A vote passed by the membership excludes balances written into the newsletter. It´s safe to say we are doing fine financially. Also, OFA membership cards were printed, soon to be distributed.

The club has started an OS-9 library. A volunteer was asked to be librarian. James Mc Daniel volunteered. Also, after regular club business and demonstrations are given, the membership breaks into SIGs. There are the OS-9, PCBBS, and CoCo 1 2 3 sigs. This way members can find the information and help they need without disrupting regular club business. The group heads are: OS-9, Gerald Angus; PCBBS, Irving Pereira; CoCo 1 2 3, Gian Polizzi.

Ronnie Pereira gave us a demonstration of her new synthesizer using Lyra. Well done, Ronnie !!! Dennis Zobel gave as a demonstration of a Gauntlet II editor. With this editor you can redraw and reconfigure any of the maps from the game. A nice way to make it easier or harder to play.

After the demos were given, the club divided into the sigs.

Minutes submitted by: James Mc Daniel

April 16, 1990

Minutes of April 16, 1990 The Island CoCo Club

Meeting called to order 7:20 P.M. by club president. There were approximately eighteen members in attendance.

We were in luck at this meeting, since two monitors were in use. Gerald again asked for members to try to bring in another monitor for next meeting. No one volunteered, so Gerald and Gian will bring theirs to the next meeting. It makes it much easier for members to give demos when there are two monitors present.

Club president, Gerald Angus, then gave opening remarks. The newsletter was given out. A copy of the proposed By-Laws was also handed out. The by-laws were drawn up in a meeting held by the present club administrators. This draft was inspired from an old Rainbow magazine issue and changed to meet our needs. Club members will be voting on the by-laws soon. Gian asked that members review the documents and write down any changes or comments they feel are necessary. They were then instructed to return copies to next meeting. The club officers are hoping the process of hammering out a solid document wont take long. It was proposed, at the officers meeting, that a discussion would not take place at the club meeting. Gerald explained to the members that no discussion of by-laws will take place at meeting. This was done to prevent debates taking up the meeting time. Members agreed to review and then return by-law copies. Gian promised the membership replies to all suggestions and comments offered. It is important that copies be return and the by-laws voted in, so that club would be "Official".

Notice of next club meeting: May 14, 1990 at same location. Levittown Public Library, 1 Bluegrass Lane. 7:00P.M. The president has to reapply at library to obtain the space for next six months.

The treasurer submitted her report to the club, and was accepted. A report of our raffle status was given. It seems the sale of tickets has slowed down. Gerald again asked members to purchase tickets. Remember your ticket dollars goes to the treasury. Let's make it strong!

Gerald discussed the growth of the OS-9 public domain library. He has about eighteen disk of software (PD) which came with his hard disk. He donated the software to the club. We have a new club officer, and office. OS-9 Librarian, Thomas McArthur. He's working hard at getting the OS-9 sig library up and running. Good going Tom.

The call went out again for members to demo programs. It has been brought to the attention of members that Dennis has been the member who has done the most demos. He also submits reams of items to the newsletter. So, come on people, let's get those demos to the meetings. All are welcomed. The same goes for submissions to the newsletter. Remember, we are the news letter. Thanks goes out to D.K. Lee for his fine work on the newsletter! All types of submissions can be accepted, which means it doesn't have to be computer related. Gerald mentioned he will give a demo on Dynacalc, a spreadsheet program.

Remember CLUB picnic. August 11, 199Ø rain date Aug. 18th at Belmont Lake State Park. Details to follow.
Gian told about a computer show to be held at Hofstra University on the 29th. Plenty of bargains to be had.

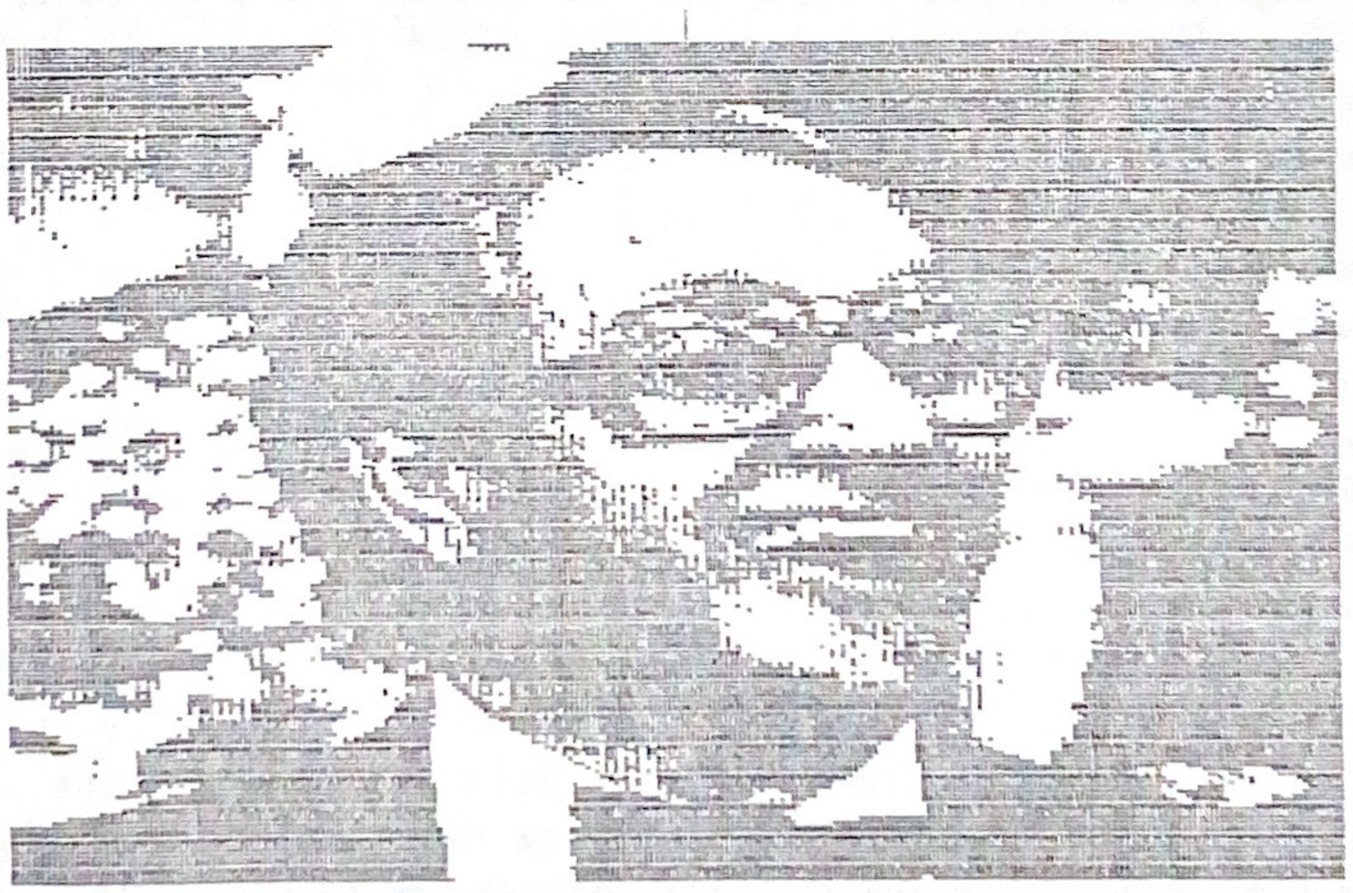
D.K. told about the BBS. The news going around concerning the new CoCos. KLE and Frank Hogg demoed their machines at the last Rainbow Fest. There is another company, but I don't have the info on them.

Gerald Angus donated a disk drive and loaned a disk controller to the club.

Steve Goldberg was present at the meeting. He gave a demo on some of his utilities. Mr. Goldberg works with OS-9. He demoed Append, a utility which works on files. He also did GREP, another util for files which Gets Regular Expression and Print.
The demo turned out fine after a few crashes. Steve pushes his drives to 42 tracks, which some of the member found very interesting.

After the main demo there was a discussion period with Mr. Goldberg. The meeting ended shortly thereafter.

James Mc Daniel; Club Secretary



CoCo-4 News

By Gerald Angus

While delving into the DELPHI data bases, I came accross this Rainbow Fest Report by Marty Goodman. Perhaps some of you have already received the latest price list from Frank Hogg on his CoCo-4 but here is a copy of what Marty saw at the Chicago Fest..... Here is his report : **FORUM)Reply, Add, Read, "?" or Exit)** READ 58999

I just now spent a few minutes talking to Kevin Pease and Frank Hogg about their respective new machines. Here's a VERY VERY quick (but hopefully mostly accurate) look at the two new OS9 / 68000 / 6809 machines introduced here:

Frank Hogg TOMCAT: For $300 Frank Hogg offers an OK board that is kinda whatwe all would have LIKED Tandy to have put in the CoCo 3:

Frank Hogg's TOMCAT 6809 board was designed by Bob Puppo, the chap who engineered the "Bob Puppo IBM Keyboard Interface" used by numerous OS9 CoCo 3 users, and sold by Frank Hogg and by Howard Medical. Bob's 6809 board for Frank Hogg's TOMCAT system looks like this: It has a GIME chip, two HARDWARE serial ports (6552 UART based), one parallel port (6BB21 based = bidirectional), one eight channel 8 bit A to D converter, one 8 Bit D to A converter, forty pin DUAL ROW HEADER type CoCo sytlebus, AND a 40 pin bus that goes directly to the 6809 chip. It also has a port to which one connects an AT-style keyboard.

There are sockets for EITHER a CoCo3-style 512K board (for those with 512K boards that have soldered in chips)and also on board 16 sockets for 256K by 1 chips. Note that the 40 pin 6809 bus socket is plug in compatible with Disto's 1 Meg upgrade for the CoCo 3. Video outputs are CoCo standard RGB, and composite video. There is a socket for a 28 pin EPROM. This unit requires a power supply, 16 256K by 1 DRAM chips, and a keyboard in order to be a working 6809 system. Of course, you DON'T get RS BASIC. You also have to add a COCO style floppy disk controller via a cable. The 6809 card is roughly 7 inches by 9 inches. This card fits onto the K bus 80 pin bus, and provides for acess TO THE MEMORY ON THIS CARD by other processors (such as the 68000 and 68020 offerred on Kbus mother board cards). Thus, folks can buy a Kbus and run OS9 on the 6809 card, then later add a 68000 card and use the 6809 card as a highly smart I/O card to service the serial, parallel, A to D, keyboard, and such like ports.

The Tomcat is a highly modular SYSTEM that folks can tailor very precisely to their 68XXX computing needs. As Frank Hogg noted in his recent posts here, his bus includes a video card (identical to that in the Kenneth Leigh machine, which I will get to later), and mother boards with 1 meg of memory that have either the 68000 or 68020 processors on them. As well as various I/O cards. The system is housed in a slim PC clone type case.

Kenneth Leigh is offering a rather different sort of system. On ONE RATHER SMALL (4 in by 7 1/2 in) CARD is packed a 68000-like processor from Signetics, a Signetics hi res video system, 2 serial ports, floppy disk drive controller, andl megabyte of memory. There is a single "add on backplane card" that offers a parallel port, 2 or 8 megabytes of extra memory, Tandy Joystick ports, Real Time Clock, two D to A 8 bit sound channels, and SCSI port for hard drive and other devices. This is a complete, tiny, but powerful OS9 68000 system. It is NOT modular like the Frank Hogg system. But is a lot smaller, and costs rather less. It is, however, compared to the Frank Hogg system, much less expandable and flexible. I do not have exact prices on either system at this moment.

I should note that AT PRESENT OS9 is not "negotiated" for the kenneth leigh machine, tho they are working on making it available. OS9 68K IS currently available for the Frank Hogg Tomcat system, priced at $250.

Where Frank Hogg offers to support OS9 (as opposed to OS68K) via his TOMCAT card, Kenneth Leigh supports OS9 via a "hardware bridge" to the CoCo 3, that allows a CoCo 3 to uitilize all of the I/O resources of the Kenneth Leigh machine.

CoCo-4 News

By Gerald Angus

The VIDEO on both the Frank Hogg full blown Tomcat system AND the Kenneth Leigh system is based around the same Signetics video chip. This outpus an analog RGB 15.75 KHz ONLY signal, compatible with the EXISTING COCO type of RGB monitor. Multisync capability is NOT required. What is interesting about this video chip is that if offers INTERLACE modes that support TWICE the vertical resolution of the CoCo's GIME chip. Thus, modes avaiable include: 640 by 210 with 16 colors, 640 by 520 with 16 colors, and 320 by 420 with 256 colors on screen at once. Regarding palette capability, for nowthe Kenneth Leigh machine offers ONLY 256 colors total to choose from. But optional add on palette circuitry (to be released soon) will permit selection of the 16 or 256 colors displayed from a palette of 16 MILLION colors. If you have a good quality RGB monitor, you can also use slightly higher res modes of 768 by 280 with 256 colors displayed or 768 by 560 with 16 colors displayed. Video on the Kenneth Leigh machine is limited to 1 meg out of a total supported 8 megs of processor memory. There is a similar limitation on the FHL machine.

There is yet a THIRD OS9 68K system here at the show. This is a 6800 only system, and is rather different from the other two. Ultrascience is presenting their 68000 card FOR PC BUS systems. This is a $1300 card (OS9 68K for it is another $650) that plugs into a PC clone and uses its floppy drive and hard drive and keyboard and video resources. On board it has a 12.5 Mhz 68000 and 1 meg of RAM, as well as 2 serial ports, one parallel port, real time clock, and battery backed up static RAM for parameters.

All three systems have in common the property of using IBM style keyboard, and typically will live inside PC clone - like cases. These three are VERY interesting, VERY powerful machines. This clearly is the dawn of a new era for CoCo OS9 users. I strongly urge folks to come by here, ifthey can, and check out these two new systems.

The Frank Hogg TOMCAT system will be clearly the most expensive of the three new 68000 systems introduced here when fully configured. However, it also is the ONLY one expandable in many directions, including upwards to both 68020 and 68030 CPU boards. There is a RUMOR that the Palette board for the Kenneth Leigh system will also feature Genlock. This is yet to be decided, as I understand it.

Kenneth Pease of Kenneth Leigh sytems was particularly anxious for me to let our members know that his system will include, in addition to the main board and I/O board, a third, optional, "backplane" board using a "VME-like" bus, that will permit a significant degree of future expandability. One bit of overview here: While both Frank Hogg and Kenneth Leigh had working machines to show, niether appeared ready quite yet to deliver units in any quantity. Kenneth has yet to produce (tho he has layed it out) his I/O board, and Frank Hogg will probably be putting some finishing touches on one or more of his boards. In contrast, the Ultra Sci people have been delivering and installing Ultra Sci 68000 boards for the last year and a half. Their prouct, a board that plugs into a PC clone, has an "entry price" ticket of $2000 for the board and professional OS9 68K software. A ten port serial add on board is extra. END OF MARTY's REPORT

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Some additional notes:

In the flyer I got from Frank Hogg (Last week), it said that " The TC9 Tomcat WILL have RSDOS aompatibility thru 3rd party vendors" . Although Frank is aiming at the OS9 world with his Tomcat, I think this means we may see applications like R.S.B by Burke & Burke (the use of RS Basic running inside OS9), and/or perhaps other things. Write to Frank Hogg for more information at: 204 Windemere Rd. Syracuse NY 13205 or Voice 315/469-7364.

Gerald Angus Pres. Island CoCo Club

As this article goes to print, the Club is in the third month of our eighth year. I would like to bring the membership up to date and report on some of the Clubs functions.

First a reminder, the Club picnic is coming in August. The date is Aug. 11, 1990 with a rain date of Aug. 18, 1990. It is to be held at Belmont Lake State Park, Exit #37, or #38 on the Southern State Pkwy. It's a BYO get together with the Bar-B-Que pits at the park and a play area for the little ones. Of course we all have to get into a traning regime (are you reading this Gerald). We are all well aware that our president, Angus not Bush, holds the International record on the 5 1/4" toss. The record stands at 175' using a standard disk complete.

Secondly, it may seem early but, Rainbowfest is just around the corner. It is four months away but let's make plans soon. For those of us that use D.K.'s bulletin board, we have "met" a lot of new people. Now is our chance to met them face to face. As in the past my family is planning to go for the weekend. We are offering our room as a hospitality area for the club to host a gathering. If there are any questions or if you think you may go, even for one day, call me at 516-868-4696 between 9:00 and 11:00 P.M. or at 516-223-3207 between 7:00 A.M. and 3:00 P.M.

The Club had the honor of having Stephen B. Goldberg at the March and April meetings. Stephen gave some interesting OS-9 demos at both meetings. He also demoed a Data-Base basic program that he wrote. If you haven't heard of Mr. Goldberg, just check some recent issues of Rainbow. He has had many columns published in the magazine. I would like to thank Mr. Goldberg for his effort and time.

The May meeting brought another OS-9 DEMO. This one was given by Steve Gilbert using Multi-Vue. He showed the true meaning of multitasking as there were 11 different functions going on at once. It proved very interesting to all and myself included. I am not an OS-9 user but it showed the real power of OS-9.

I would like to welcome aboard some new members, OFA and Full. Gabe DiLazzaro (OFA), Bret Hayman (Full), John Giordano (Full). Also recently joining the club are Robert Ehrenberg (Full) and John Gordon Reid (OFA). Recent OFA renewals are Roy W. Arnold from Conn and Helene M LaBonville from New Hampshire.

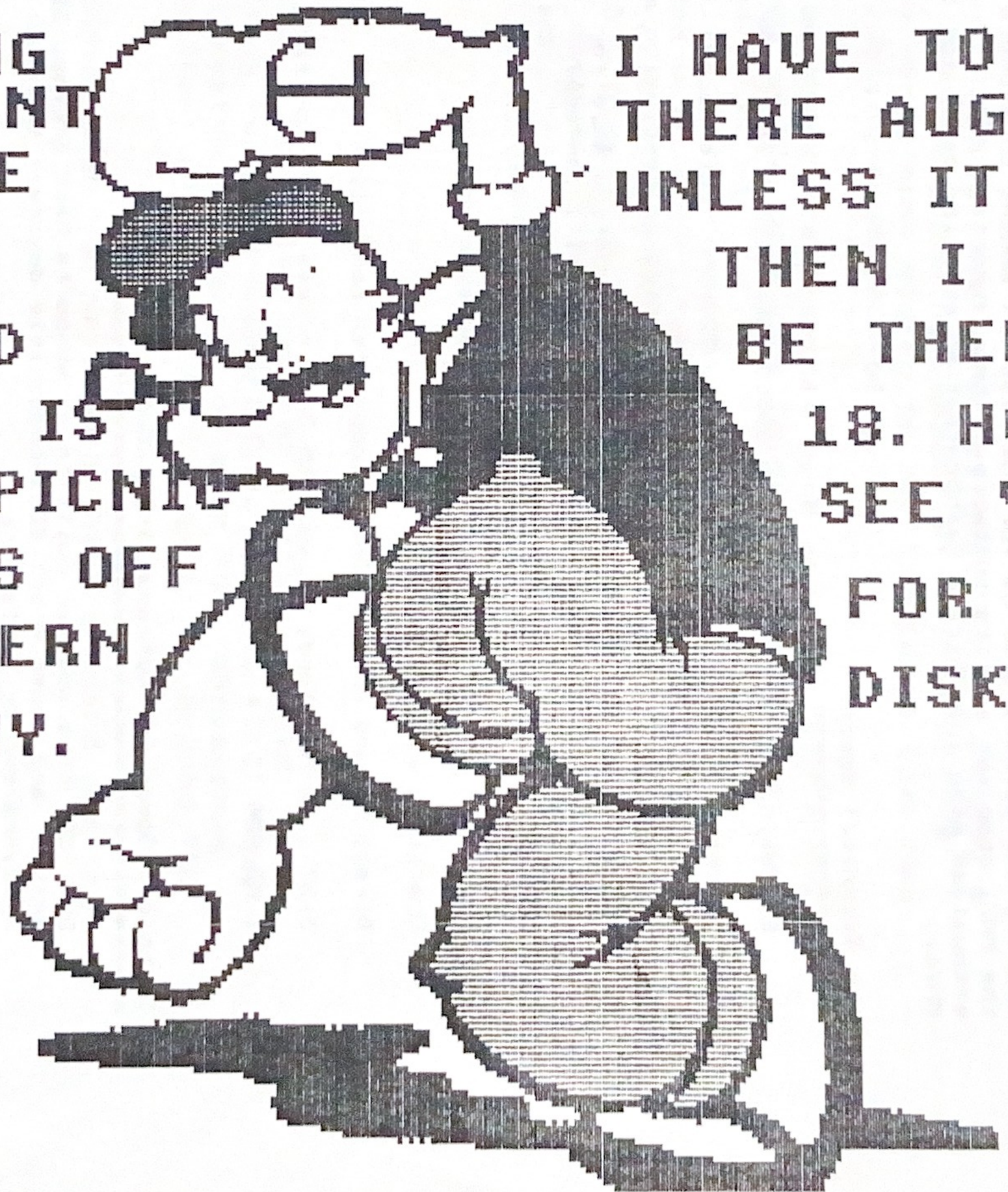
Recent Full member renewals include Ray Steger, Joel Greene, Dennis Zobel, Gerald Angus, William Rosenfeld, Gian Polizzi, and Robert Terrano. Robert Terrano is a member with his son and holds the Family status.

While I'm on renewals etc. Remember that visitors are welcome at our meetings. Bring a friend to the meeting and maybe start them onto a path that leads to the CoCo-nut farm.

Irv. Pereira

I'M LOOKING FOR BELMONT LAKE STATE PARK.

THE ISLAND COCO CLUB IS HAVING A PICNIC THERE. IT'S OFF THE SOUTHERN STATE PKWY.



I HAVE TO BE THERE AUG. 11 UNLESS IT RAINS.

THEN I HAVE TO BE THERE AUG. 18. HOPE TO SEE YOU ALL FOR THE DISK TOSS.

****** ANNOUNCEMENT ******

Submitted by Steve Gilbert

Kenneth-Leigh Enterprises in association with Interactive Media Systems, Inc. is pleased to announce the MM/1(tm), the next computer of choice for Color Computer users.

The MM/1 is a stand-alone system that can also be used with a customer's existing Color Computer 3 for complete OS-9 Level 2 compatibility. It accepts existing RGB Analog monitors such as the Magnavox and Tandy models popular with CoCo users. Most Tandy drives and the Tandy Hi-Res mouse are also useable.

Several solutions are being weighed that offer a level of RS-DOS (Disk Extended Color Basic) compatibility as well.

Four fully-functional prototypes of the MM/1 were demonstrated at the Chicago RainbowFest April 6 - 8, 1990. Units are being shipped to developers in April in order to assure prompt availability of top-quality software. Planned software projects will make popular Color Computer(tm), Amiga(tm), and MS-DOS(tm) programs available to you on the MM/1.

Kenneth-Leigh Enterprises and Interactive Media Systems, Inc. would like to thank the vendors and developers who have worked closely and quietly with us for the last six months to produce the MM/1 computer and its software. Their expertise and enthusiasm made the Chicago Rainbowfest an exciting debut for the MM/1.

The Technical Specs
==========

Signetics 68070 CPU (Motorola 68000 compatible) at 15 MHz

Graphics resolution from 320x200 to 720x540 (interlaced)

From 16 to 256 colors on-screen, depending on resolution mode

Two serial ports: DB-9 and DB-25 (DB-25 configurable for MIDI -- the Musical Instrument Digital Interface)

PC keyboard port for 101-key XT-style keyboard

RGB-Analog output for your CM-8 or Magnavox monitor

Operating system included

Direct Memory Access (DMA) floppy disk controller

3.5" 1.44 MB floppy drive with 3 ms access track-to-track

1 MB RAM

Technical Specs for Optional Input/Output Board
==========

DMA SCSI host adapter built in -- supports hard drives, CD-ROM drives, and other 8-bit SCSI-compatible devices; transfer at 2 MBytes/sec or faster

Memory upgradeable to 2 or 8 MB with SIMM memory

Stereo 8-bit DMA port for sound sampling and playback

Two parallel ports for parallel printer and OS/Gateway support

CoCo joystick port with 8-bit resolution

Hi-res Tandy mouse port

Real-time clock, battery-backed with 56 bytes of non-volatile memory

Technical Notes:
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Graphics

The MM/1 can display up to 256 colors on screen simultaneously in each of two resolutions -- 320x200 and 320x400.

It can also display 16 colors in each of the higher resolutions -- 640x200, 640x400, and 720x540.

On the first board is a header for a palette controller that extends the palette of available colors to 16 million.

Much of the graphics is controlled by a special graphics chip specifically designed to work with the MM/1's CPU. This chip executes graphics logic extremely fast and includes a pixel accelerator that substantially reduces CPU overhead.

Both the CPU and the graphics chip were designed by Signetics, a Philips subsidiary, for the upcoming Compact Disk-Interactive devices. This is the first home system to our knowledge that has been based on this cutting-edge technology.

The higher resolution modes are possible with an interlace mode. Unlike interlace mode on the Commodore Amiga, the MM/1 interlace mode displays virtually no flicker.

In interlace mode and with a montitor that supports overscan (such as the multisynchronizing monitors from NEC), a customer can view up to 720x540 pixels on one screen. This is an ideal mode for previewing documents in desktop publishing applications or CAD. For comparison, this mode has three times the number of pixels as the Color Computer hi-res mode. It can show up to 60 lines of text.

CPU

The Signetics 68070 is a Motorola compatible CPU in a quad flat-pack design. Extra features support DMA. It runs at 15 MHz, providing an optimal system throughput of over 1000 Dhrystones (for comparison, the Atari ST running OS-9 logs in at around 750 Dhrystones).

Optimal speed is reached when you have both the CPU board and the I/O board working together.

The CPU is proving to be a very popular chip for embedded applications.

(Cont')

I/O Support

The MM/1 has unprecedented support for peripherals and sound. A fully-configured system has three serial ports, two parallel ports, PC keyboard port, RGB-A port, DMA sound (data acquisition port).

Many of the ports are expressly designed to support your existing investment in hardware including MIDI and Tandy Hi-Res mouse support. You can also use a Logitech serial mouse on this system. It is trivial to use a terminal on the DB9 port, making a multiuser system both low cost and simple.

On the first board, you will see two serial ports, one a DB9 and one a DB25. The DB25 can be modified (either at the factory or by the customer) to be a MIDI port with optional low-cost MIDI hardware.

As mentioned, the DB9 can be used for a terminal.

The PC keyboard port is designed for standard XT-style keyboards. Customers can take advantage of pricing competition in the PC market, where excellent keyboards are extremely affordable.

Floppy disk controller is included at no extra charge. Also, a 1.4 Megabyte floppy drive is included. These drives are the popular 3.5" variety that provide fast and reliable performance. One disk contains as much data as nine (9) standard Tandy format disks, or four (4) double-sided disks.

The MM/1 floppy controller uses DMA to access memory. This improves system performance and makes for smoother multitasking. DMA permits applications to play back sound while accessing large data or graphics files.

The header for the daughterboard allows the factory or customer to easily add a palette chip that lets one choose any 256 colors from a palette of 16 million. (Graphics in the 320x400 mode are breathtaking with 256 colors.)

The RGB-A port allows the use of your existing Tandy CM-8 or Magnavox 8515 monitor. RGB-A to composite converters are already available from Color Computer vendors if you wish to use an inexpensive monochrome composite monitor on the MM/1.

DMA port

The DMA port on the MM/1 is a multifunction port that samples at line levels at 350 KHz or faster. This allows the sampling of sound from cassette decks or synthesizers for playback on cue. The DMA port uses dual (stereo) AD/DA converters. Sampling rate is variable so that the customer can select the optimum rate (faster rates use more memory but record and playback higher frequency sound).

The DMA port can also be used for data acquisition. The MM/1 is already considered a viable platform for medical and industrial data acq applications.

(Cont')

Joystick/mouse ports

The second board contains a CoCo joystick port with 8-bit resolution. This makes for smooth game playing. A port is provide for the Tandy Hi-res mouse, too. A powered DB-9 port allows the use of a professional Logitech serial mouse. These mice come in a wide variety of packaging and features, and are competitively priced.

Miscellaneous

The MM/1's second board contains a real-time clock that is battery backed and contains some memory for variable storage. This is included at the express request of the majority of respondents to the Kenneth-Leigh Enterprises/Interactive Media Systems, Inc. survey taken last October.

The MM/1 comes with 1 Megabyte of RAM (256x4). The second board accepts modern, inexpensive SIMMs (1 Megabyte x 8) that can expand the system up to nine Megabytes total.

The first Megabyte is used for video memory once the second board has been added. Otherwise, the system and video share the first Megabyte.

Software support

Interactive Media Systems, Inc. is implementing a developers program. Titled The MM/1 Early Developers Program, it provides full MM/1s to developers, with operating system and languages, at about 20% off of list prices. Members in the program receive system software updates, information about the hardware that may be required, on-line and telephone support, and advance notice of many new products. At the end of the development, Interactive Media Systems, Inc. guarantees a purchase of finished units for reselling. This encourages developers to produce salable products and reduces the ultimate cost of the computer to them. For more information, please contact the address below.

In addition to work that current developers are planning, Interactive Media Systems, Inc. is working with software engineers from the Color Computer, IBM, and Amiga markets. Planned projects include DOS emulation, versatile windowing system with a mainstream Graphical User Interface (GUI), hypertext, and multimedia support. Other plans include porting major DOS development environments over to the MM/1, allowing key players in the DOS world to simply recompile their source code on the MM/1.

Interactive Media Systems, Inc. is aggressively supporting the MM/1 in order to provide an irresistable value to Color Computer owners who are ready to move up into the 680x0 world. (Cont')

Expandibility

While the two-board MM/1 system does not require a bus, one will be available in 1990. Designed as a single-master 96-pin 32-bit bus, it will provide performance and flexibility unmatched in home computers -- and in many office computers as well.

When the customer wishes to purchase the bus, he or she can easily install it into the case, adding the two-board system on the bus card.

The specification for the bus will be published to encourage third-party developers to create interesting and useful add-on boards. Possible boards may include digitizers, tape backup to streaming tape units or VCRs, networking support, additional I/O for more involved setups (more users, more printers, and so on), and even other processing units.

When a customer wishes to upgrade to another CPU and graphics board, the two-board MM/1 can be removed from the case, inserted in another with its own power supply, and used as a graphics terminal.

Graphics terminals such as this can be created at low cost to construct a multiuser/networking environment ideal for small offices and education.

Pricing

In this price-sensitive market, Interactive Media Systems, Inc. is offering a low-cost machine with high functionality. To keep the price as low as possible, IMS is negotiating favorable contracts with software vendors to ensure the best value for our customers. As a result, all prices are preliminary.

The preliminary list price is $899 for the base system, $1199 for the full system with more memory.

Street prices in the Color Computer market will be much lower, with anticipated discounts of twenty percent off of list price.

Availability

The MM/1 and all other home computer systems must be FCC approved to be sold legally. (Many products are sold illegally without FCC approval. Interactive Media Systems, Inc. will not sell illegal products.)

As a result, the MM/1 may not be generally available until late summer, with an anticipated debut date of August 1, 1990.

Plans for debuting the MM/1 include VIP parties in North Carolina, Chicago, New York, Quebec, and Washington, DC. Interested potential customers should be sure to send in their name and address to Kenneth-Leigh Enterprises to be invited to these celebrations. Kenneth-Leigh Enterprises is handling the marketing for Interactive Media Systems, Inc.

For more information contact:

Kenneth-Leigh Enterprises
1840 Biltmore Avenue NW
Suite 10
Washington, DC 20009

Interested parties can subscribe to The Insider(c), a publication of Interactive Media Systems, covering the MM/1 and other multimedia topics. Cost is $9.95 for four quarterly issues.

Stay tuned for the video of the MM/1!

Welcome to your next computer.

When Color Computer users like you started asking us for a "CoCo 4", we weren't surprised to learn that your dream computer was firmly in the tradition of the Color Computer 3™ but more powerful, even easier to use -- and still affordable.

Listening -- the first step to a successful system

When answering our surveys, you told us, "Keep the new computer's cost low, but give us more power!" The vast majority of you insisted on a Motorola 680x0-style chip as the muscle for your next computer. Most respondents wanted a **680x0** to fuel the kind of sophisticated, colorful software made famous by Macintosh™, Amiga™, and Atari™ computers. You also said, "Give us **multitasking**, and **windows**! Give us great **sound and graphics**, and get rid of that MultiPak!™"

We've delivered. Our "New Computer" has features that *outstrip the Apple Macintosh, Atari ST, and Amiga 2000.* Developed around the **same technology** as Sony and Philips' Compact Disk-Interactive™ devices, now you can acquire a system with the **latest advances** in computing -- friendly, **multimedia** access to sheer power. Move up to a familiar, affordable system today whose cutting edge technology will keep you happy into the next century!

Power You Can Afford

This is a fast (15MHz) computer whose sleek PC-style case makes it a logical choice for the office and for home entertainment. With an optional 101-key PC compatible keyboard and RGB-Analog monitor, you have **a full system**, ready to go. **Expand** by adding optional boards easily, invisibly -- without the cumbersome MultiPak.

The New Computer **includes a high-density 3.5" floppy drive at no extra cost.** Our drive rapidly transfers data to and from a 1.4 Megabyte capacity floppy disk -- like having four double-sided CoCo drives on line at the same time! **Save money**, too, by using your existing CoCo disk drives and RGB-A monitor -- even your joystick and hi-res Tandy mouse!

If you bought a Tandy 1000™, Atari, or Amiga, getting your existing monitor and drives to work would either be a nightmare or simply impossible. But when you upgrade to our New Computer, **you keep everything!**

You get plenty of **free software**: a text editor, a friendly windowing interface, and games. We save you headaches and money by giving you **a fully-featured system that won't require expensive add-on boards.** Advanced sound, built-in support for hard disk and floppy disk and hi-res mice, super hi-res graphics, factory-configurable MIDI music port -- you'll save hundreds or thousands of dollars!

Wait! Don't throw your CoCo away!

We've delivered CoCo compatibility, too -- with a twist. Your existing software runs because you use your own CoCo to run it! We call our solution **The OS/Gateway.** Simply unplug your MultiPak and insert The OS/Gateway to connect your CoCo to our New Computer. Your OS-9 CoCo and the New Computer use the same monitor, giving you access to two comfortable, powerful environments at once. Run OS-9 games like Flight Simulator™ and Koronis Rift™ even while using the New Computer -- just touch a button to move back and forth between computers -- **no need to throw away the CoCo or buy another 6809-based computer!**

The technical specs

The basic system includes case, power supply, operating system, cables, and one CPU board. The CPU board contains everything you need to start enjoying this computer right away, with high-powered, simple-to-use professional features:

- Signetics 68070 CPU (Motorola 68000 compatible) running at a blistering 12.5 or 15 MHz -- this CPU is designed expressly for multimedia computing
- Graphics resolution from 320 x 200 to 720 x 480 (interlaced) with intermediate modes
- From 16 to 256 colors on-screen, depending on resolution mode
- Two serial ports (one DB-9, one DB-25), for your mouse, joystick, printer -- one is factory-configurable for MIDI
- PC keyboard port for 101-key XT-style keyboard
- RGB-Analog output for your CM-8™ or Magnavox™ monitor
- Operating system included
- Direct Memory Access (DMA) floppy disk controller for smooth multitasking
- 3.5" 1.4 Megabyte floppy drive @ 3 ms access track-to-track, 250 Kbit/sec transfer
- One Megabyte of RAM
- Optional daughterboard expands palette to 16 million colors

Our second board attaches simply to a header on the first board. It supports up to eight (8) Megabytes of RAM, gives you outstanding sound, and provides extra I/O ports, including support for the OS/Gateway, transferring data at 50 Kbytes/second between computers.

- DMA SCSI host adapter built in -- supports hard drives, CD-ROM drives, and other 8-bit SCSI-compatible devices; transfer at 2 MBytes/second or faster
- Memory upgradable to 2 or 8 Megabytes with SIMM memory
- Stereo 8-bit DMA port for sound sampling and stereo playback (samples at up to 350 KHz, sampling rate is software selectable)
- One powered DB-9 serial port for Logitech™-style serial mouse, modem, or terminal
- Two parallel ports for parallel printer and OS/Gateway support
- One CoCo joystick port with 8-bit resolution
- One Hi-res Tandy™ mouse port
- Real-time clock, battery-backed with 56 bytes of non-volatile memory

With DMA sound, you can play music from your computer without the need for an expensive music synthesizer. (Samples available in 1990.) Our New Computer benchmarks at over 1000 Dhrystones -- faster than an XT, AT, Amiga, Atari, Macintosh, and some workstations. For the price and name of the computer, please contact KLE in late April.

Subscribe to our quarterly newsletter for the latest *insider* news on multimedia and New Computer support! Send a check for $9.95 to address below. First issue appears July 1, 1990.

Kenneth-Leigh Enterprises
1840 Biltmore Street NW Suite 10
Washington DC 20009

Name_____
Street_____
City_____
State/ZIP_____

Δ The Insider

EDITOR'S NOTE: Reprinted from C.C.O.G., newsletter of Color Computer Owners Group, Michigan.

Hardware Hacker : Adding a 3 1/2" disk drive

I recently added one of the small, 720k 3 1/2" disk drives to my CoCo-3. I thought you might like to know how I did it. These small drives are sold by many vendors, and are made by most of the floppy drive manufactures. The one I have is made by Tandon, the FD-35 model. I have also found that not all of these small drives are made alike. My unit with the correct cable can be put in place of a 5 1/4" drive. But, some can't do this as they are setup to receive there +5 and +12 volt supplies thru the ribbon cable. Tandy's 1000 series addon drive is just this way. In this case a hardware adapter can be made to connect the proper pins to the drive. More on this later.

This drive has 80 tracks, and is double-sided. Used with standard RS disk basic will only use 35 tracks on one side, but if an alternate dos is used such as ADOS all 80 tracks can be used under basic. Don't confuse this drive with the special 1.44 meg drive that are used on IBM types. They need a special controller we don't have ! I mainly use this drive under OS9. All that I needed to do was load the descripter for an 80 track double-sided drive in for /D2 and I was ready. After formatting I had 2880 sectors to uses. With a standerd RS OS9 disk having only 630, this increase is more than welcome. My newly cobbled bvoot disk now has an 80 track /D2 in it. I might add that ALL of 'Kings Quest III' will fit on it !!!

The cable connector for this drive differs from the one on our 5 1/4" drives. The 3 1/2" drive uses a dual-header type of connector, but uses the same 34 conductor ribbon cable to the controller. The only real problem is seperating those connections for the drives that recieve power thru the cable, hence the need for an adapter. Take a few minutes and study the diagram I've drawn up showning what is required to connect a 3 1/2 to a 5 1/4 system. The trouble pins are clearly spelled out. Notice that only the 'ODD' numbered pins at the 3 1/2" drive need changing. Pins 1, 3, 5, 7, 9 and 11 need to be removed from the dual-header along with 29, 31 and 33 to isolate the +5 and +12 volt power.

Many of you have seen my 'XT'-CoCo conversion. It has 4 - 1/2 height drive bays. This drive nicely fits in my 4th bay. The drive is also small enough that you could mount it inside an experimentors box and tap power from your current floppy supply with no problems. I have mine mounted with a mounting adapter to place it in the space made for a 5 1/4" drive. This adapter comes with many 'add-on' 3 1/2" drives. As your vendor if/when you purchase.

The cable adapter I built uses a prototype board with a card edge connector on it. Radio Shack sells a board that will do nicely.
Be sure the contacts are on .100 inch centers to fit the cable connector. Just cut the card edge connector down to 34 total contacts so an additional floppy connector can plug onto it. This cable adapter mounts on the mounting adapter, making a very neat package.

With the diagram I have included, anyone with a little hardware building experience should be able to add one of these 3 1/2" drives in no time at all.

Jim Snider Sysop - J&L's CoCo Corner

(313)292-4713

5 1/4" To 3 1/2" Floppy Disk Drive Adapter

	Controller	3 1/2" Drive
	1	1
	2 ----------	2
	3	3 => +5 Volts
	4 ----------	4
	5	5 => +5 Volts
Drive 3 Select (normally?)	6 ----------	6
	7	7 => +5 Volts
Index Pulse from drive	8 ----------	8
	9	9 => +5 Volts
Drive 0 Select	10 ----------	10
	11	11 > +5 Volts
Drive 1 Select	12 ----------	12
	13 ----------	13
Drive 2 Select	14 ----------	14
	15 ----------	15
Motor Control	16 ----------	16
	17 ----------	17
Direction	18 ----------	18
	19 ----------	19
Step	20 ----------	20
	21 ----------	21
Write Data	22 ----------	22
	23 ----------	23
Write Gate	24 ----------	24
	25 ----------	25
Track Zero <TRK 00>	26 ----------	26
	27 ----------	27
Write Protect	28 ----------	28
	29	29 => +12 Volts
Read Data	30 ----------	30
	31	31 => +12 Volts
<Side Select> RS Drive 3 select	32 ----------	32
	33	33 => +12 Volts
Ready	34 ----------	34

(All 'ODD' #'s Grounded at Disk Controller)

****
>> Not ALL 3 1/2" drives <<
>> have power inputs thru <<
>> the cable connector. <<
>> Leave open if in question <<
****

Jim Snider Sysop - J&L's CoCo Corner

Looking for the ***BEST SERVICE, BEST SELECTION,***
and ***BEST PRICES*** *on your CoCo shopping needs?*

COCO PRO!

At CoCoPRO!, we bring you the best **VALUE** for your CoCo shopping dollar. We carry a wide variety of **NEW** hardware products at prices *too low* to advertise, **gently USED** hardware products (with full 30-day warranty), as well as something you will find ***nowhere*** else. . . **gently USED *SOFTWARE*** at **INCREDIBLE** savings (30-80%) over full retail (easy on the *wallet*, easy on the *conscience*)!! Our inventory changes **daily,** and contains at least 120 of your favorite CoCo software titles at all times!! All legitimate copies, with full documentation!!

HOW can you find out what bargains await you in our current inventory?

Send $3 (refundable with $20 purchase) for our **Catalog on Disk,** or $10 for 12 monthly issues.

*** OR ***

If you have a modem, call our BBS for the latest listing of inventory, with **ONLINE ORDERING** via VISA/MC!! BBS no. is (313)663-6207 (5 lines, 7-E-1, 3-1200. Type "coco" at login prompt.).

Call or write TODAY. . . before someone else gets that item you've been looking for!!

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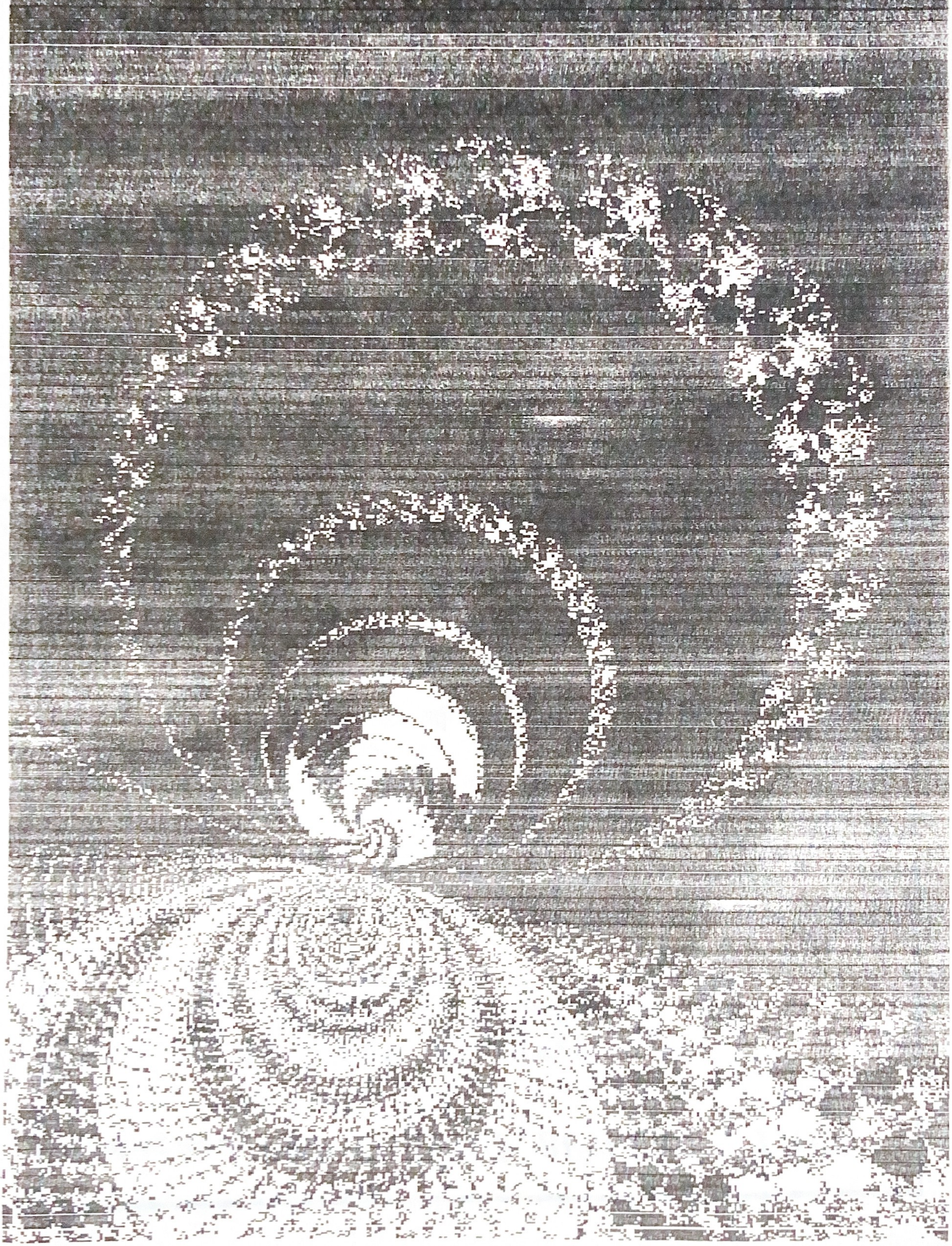


Editor's Note: Reprinted from.....

THE UPGRADE FROM:
MID IOWA COCO

Home-Pac Tips*

Number four in a series by *Terry Simons*

* Rights to reprint this page reserved

There are always a number of ways discovered, little tricks so to speak, that will enhance use of your HPac. This series is intended to share these tips with the many who've found Home-Pac makes your CoCo a very useful addittion to your home.

May I remind all CoCo Supporters, Home-Pac is available in a shareware form for only $2.00. The Shareware version 3.3 is fully functional; with nothing held back. Those who join the many, who find Home-Pac very worthwhile; are asked to pay the Shareware support price of $18.00. The 3.4 version will be given out to supporters (already paid) only for $5.00 and your original Home-Pac disk.

Also Home-Pac 3.3 has been updated. Anyone sending in their older 3.3 disk will recieve the updated V3.3 no charge.

Home Pac 3.4 is ready!

The initial improvements were small correcting incongruencies. Boot menu loaded Check with "1" all others loaded the Check with "A". No real change; just cleaning up. Second: all printouts now print totals and are more compete data wise. Third: I did add to the Check Name Macro's they now total 21. Last but not least! I got into adding some real PIZZAZ! Many of the sub-menu's are now done in a "window" in the main menu. Perhaps most importantly; there will be "no" need to reconfigure anything! All of these improvements have increased the upgrade price from $3.00 to $5.00

To recieve your upgrade bring (or mail) your original Pac disk to a meet with $5.00. Shipping free. OR mail To Terry Simons

NOTE: Home-pac 3.4 is "not Shareware". Please keep a Home-Pac 3.3 copy for passing to who ever would like one.

Bug in Pac 3.4 EDIT 80/BAS

Line 172 has a syntax error. Somehow I as I upgraded I added a (grin) little too much. But it is easy to correct. To correct it:

from a cold start

LOAD"EDIT 80 and type LIST 172

Line will read:

172 MID$(S2$,G.1)=N1$:MID$(F$(3),116,14)=LEFT$(S2$.1,14)

Either EDIT 172 or retype the line as exactly as follows

172 MID$(S2$,G,1)=N1$:MID$(F$(3),116,21)=LEFT$(S2$,21)

The changes are here & here

Type SAVE"EDIT 80

and you're done. Also save this to any or all Home-Pac "Ver 3.4" only. (It would only cause problems save to Shareware Ver 3.3)

Pac Question: Why did I eleminate the RAM Disk option in V3.4?
Answer: It's too impractical to spend the time required to first BACK two disks into a RAM memory. When that time nearly exceeds the time you'll actually spend using the PAC. Remember Home-Pac is written with the idea of getting it done,,, and off to something more interesting then book keeping.

I N F I N I T E

E X P A N S I O N

P O S S I B I L I T I E S

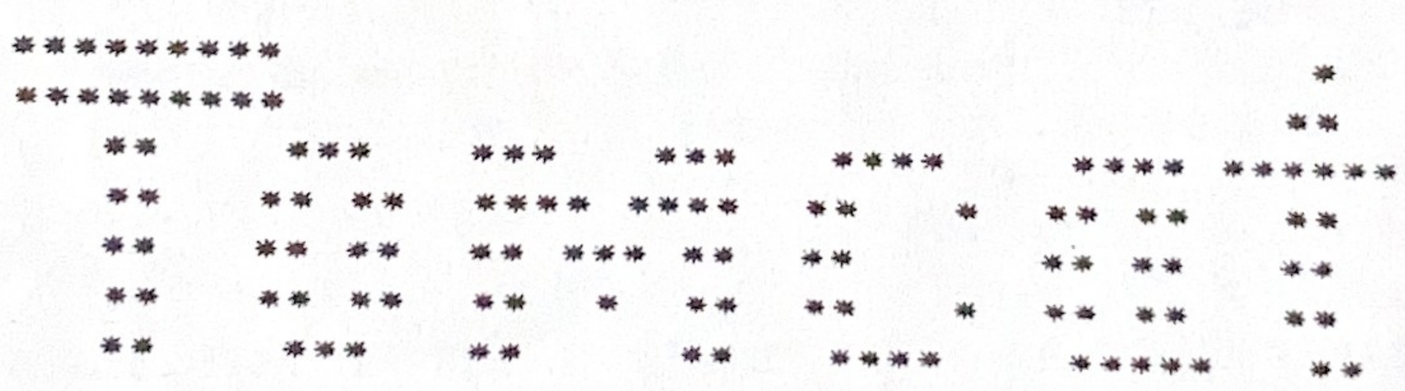
From 6809 to
60030 and
beyond,
with your
PRESENT
HARDWARE,
at your own
pace...

at Super Prices...

(About what the CoCo 3 was when it first came out.)

INTRODUCING....

THE...



TM

EDITOR'S NOTE: Tomcat information reprinted from "LLIST" newsletter of the Calgary Colour Computer Club.

The TC9 TOMCAT (TM) is a major improvement over the CoCo 3.

The TC9 is over 25% faster!

The TC9 uses a PC compatible keyboard.

The TC9 has two 'real' serial ports.

The TC9 supports a serial mouse.

The TC9 has a parallel printer port.

The TC9 has provision for 512K on board RAM or it can use a CoCo 3 512K memory upgrade.

The TC9 can be upgraded to 1 megabyte with the Disto 1 Meg upgrade with no soldering, just plug it in.

The TC9 has 8 bit D to A and A to D. 8 bit provides better sound and a higher resolution joystick, 256 vs 64.

The TC9 supports an internal speaker.

The TC9 has the standard CoCo bus so that CoCo cartridges can be used.

The TC9 board can be powered by any PC power supply. This also allows installing the board in most PC clone cases.

The TC9 will work with most, if not all OS9 software.

The TC9 will have RSDOS compatibility thru 3rd party vendors.

The TC9 is K-Bus compatible.

K-Bus capability is important because it allows interfacing the TC9 to he 68000 and even the 68030! By installing the TC9 in a K-Bus 68K system the Tomcat becomes a dual-processing system! When in OS9 Level II mode the 68000 becomes a co-processor to the TC9, like a accelerator to Level II. We can expect a 2 or 3 fold improvement in performance! When the 68000 is the master under OS9/68K, the TC9 acts as a co-processor to 68K. Switching back and forth between systems will be easy and will allow a smooth transition from OS9 to OSK. It is not necessary to jump to OSK to get the benefits of the 68000, but it provides a smooth transition when and if you decide to make the move. You go at your own pace, upgrading as you desire, and at each point you get a significant improvement in performance, for a very slight cost.

E X P A N S I O N

Once a K-Bus backplane is added, (It is not required for TC9 operation) the world of 68K is open to you. The logical first step is to add a 68000 CPU which will immediately speed up Level II operations by several factors and opens the door to running OSK. No other additions are needed to run OSK, as OSK will run in the TC9 memory and use TC9 I/O. For further performance increases additional boards, memory, I/O etc. can be added to the K-Bus. It is even possible to have several TC9's in the K-Bus for a multi-processing system! Memory limits are 16 Megabytes of which more than 14 Megabytes can be RAM!

They are backplane sizes from 4 to 16 slots and a 20 slot bus is under consideration. The backplane itself is inexpensive so that if you outgrew your first bus you could transfer all your cards to a bigger ackplane for little cost. Because of the bus concept upgrades to future CPUs only requires adding that CPU to accomplish it. For example, you could start with a 68000 and later replace that with a 68030 and still use ALL of your other cards.

When new cards such as the 68040 become available, you could add those too. Even capabilities, not thought of today can be added by just adding a card!

This is upgrading without having to throw anything away. Even if you eventually switched over to 68K completely the TC9 still functions as a multi-function graphics co-processor. Our Hi-Res graphics board, now in design, will have its own keyboard interface and video memory so that it can be used with the TC9 . Several of either cards can be used in the same system, making for the first multi-processor, multi-user, multi-graphics system for OS9 and OSK! Because of the wide variety of K-Bus boards available and those under development, the possibilities for the future are unlimited.

The TC9 Tomcat truly is the CoCo 4 that Tandy should have made, for that matter it could well be the CoCo 5, 6, 7, 8.....

SHOULD YOU GET ONE?

If you currently own a CoCo 3 and use it for both RSDOS and OS9 Level II the TC9 Tomcat is your road to the future. It will run your current oftware faster and give you powerful new features and performance at modest cost. You get the ability to expand at your own pace, at low cost, the way you want to do it, for your future.

THE FUTURE.

FHL, in business since 1976, has been manufacturing 680x0 based computers for over 6 years! The Tomcat is the computer for the 90's. We ave put all of our knowledge and experience into the creation of the Tomcat. We believe it is the best choice for you and for us. We create omputers because we like to use them, not because we like to sell them. very computer we've made has been one we've wanted for ourselves. The Tomcat is the best we've done... so far.

TOMCAT is a trademark of FHL

FHL
For more information and price/availability:
Call or write:
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204 WINDEMERE ROAD
SYRACUSE, NEW YORK 13205
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3/29/90

I take my children everywhere, but they always find their way back: home.