

# OS-9 Newsletter

Volume II No.1 <<< BELLINGHAM OS9 USERS GROUP >>> February 28,1991

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### SUBSCRIPTION INFORMATION:

The OS-9 Newsletter is compiled and printed monthly by the Bellingham OS 9 Users Group. Subscription rates are \$4 for 6 months or \$7 for 12 months. Mail Subscription Checks to:

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Bellingham, WA 98226

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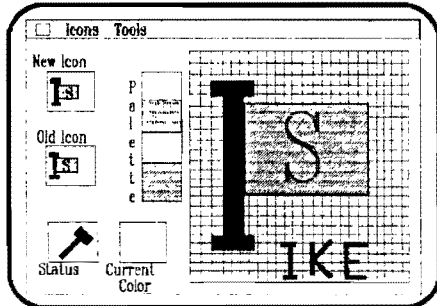
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6. FREE "HOW-TO" Video Library

## Review . . . .

### New Public Domain Files

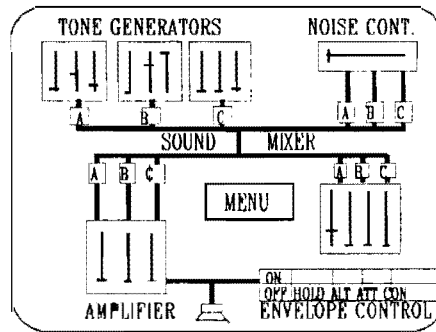
Each month I will briefly review new files added to our Bellingham OS-9 Users Group Public Domain Library.

1. SUPERIKE is another Icon Editor. This is the BEST I've seen. Special features include mouse or keyboard operation with an actual size image of the icon on screen while you are editing a greatly enlarged display. Graphics directory display of icons or standard (faster) directory options. You can "draw" your picture by dragging the mouse. Special effect tools (ROTATE, SHIFT, MIRROR and FILL). And, SUPERIKE will operate from any type term/ window (not VDG). Extremely easy and fast. No it does not create an AIF file. 512K required. The program is written



in Basic09 by Brian Paquette.

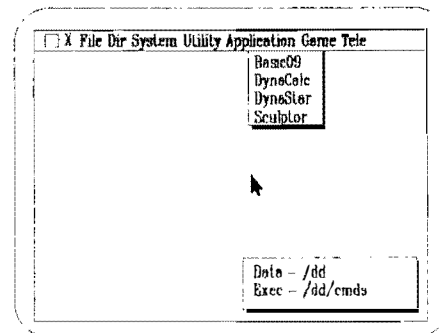
2. SOUNDMASTER is a graphics interface application that permits the user to manipulate the Radio Shack Speech Sound Pak to generate sounds other than speech. It requires 512K and a graphics screen. It was designed to work with multivue but does not support a mouse. The user "slides" control bars to vary 3 sound generators and 3 noise generators. The user can also control 3 amplifiers and a 3 mixers to create different sound effects. The archived package includes a new Speech Sound Pak driver (SSC.dr) and descriptor (SSC.dd) that do not conflict with Tandy's original driver and descriptor (SSP & SSPak). The resultant sounds can be saved with a second program included in the package and the saved code can be incorporated into your own programs for special



effects. The programs are written in Basic09 by Jim McDowell.

3. MENU is a text, not graphics, type menuing application. It is very similar to r3 system's "M" menuing program in that text format and commands are read and operated upon by an executable module in the commands directory. A sample startup menu is listed below. It's not fancy and the same effects can be accomplished with simple shell+ scripfiles. Program is written in 'C' by John Donaldson.

4. SMENU is a Multivue menuing application (although you do not have to run Multivue). It takes advantage of the Windnt module supplied with Multivue. You can create your own custom graphics menu with pull down icons. You write your own ascii data files to define menu selections and commands to be run from a mouse. The program is written in Basic09 by Jeff Blower and uses Multivue's "Control" and the Multivue "env.file" in your SYS directory. Documentation is excellent. Installation program is included as well

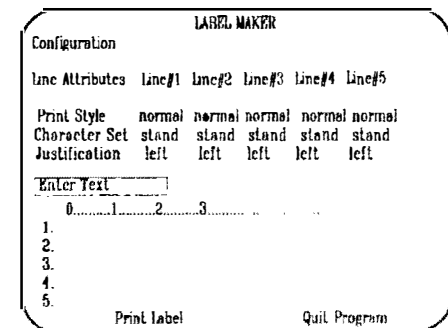


as Basic09 source code and executable I-Code files. Personally I prefer SMENU over Multivue. Although it lacks the "nifty" file icons, it is similar to the windowing environments of MS-Dos and

Macintosh applications.

5. SCC is a Small C Compiler that outputs proper source code that can then be compiled by Level One ASM Assembler or Level Two RMA Assembler. Better than paying \$99 for Microware's C-Compiler. The program is written by Philip Brown (THEFERRET).

6. LBLMKR is a deluxe labelmaker program that prints five lines on standard one inch high address labels. It allows printing on each line to have different print characteristics, such as bold, elongated, condensed, etc. It also allows you to use multi-wide labels. The Basic09 source code comes configured for Tandy DMP type printers which you can change before "pack"ing the source file, or you can change the printer codes on the fly within the



program. The program makes extensive use of menus which you step through with the arrow keys. The current selection is highlighted and when the enter key is pressed, that item will be selected. Great for simple address labels or fancy disk labels.

7. KFORMAT is a Basic09 interface for the standard FORMAT utility that permits you to format a slew of disks for the purpose of Hard Drive backup. It allows you to select a single name for all of the disks to be formatted and allows you to select all format options except interleave value. A cute feature of KFORMAT is its "whistle". When it's ready for the next disk it literally whistle at you. The "whistle" is provided by "whistle.mac" and is accessed by the public domain PLAY program that is merged (included) in the KFORMAT application.

# Windows

(part-3)

by Mike Pleas

This month we're going to explore some of the uses for the display command relating to windows. In the good old day, back when Level One reigned supreme, DISPLAY could be used to do simple screen codes. I like to call these "PRIMITIVE CODES". The "primitive codes" loosely emulate the old simple terminal codes (TTY, VT100, etc.). You could do stuff like ring the bell, home the cursor, turn on reverse video, erase a line, etc.

Then along came Level-2 and it's windowing capabilities and all of a sudden DISPLAY is a very extensive and versatile tool. We've moved up from the Model-T to the Ferrari!

I get very excited with the possibilities of this flexible command. In the next few months we'll explore some of the neat things we can do with DISPLAY especially when used with Basic09. But enough praise, already. Let's get busy!

To start we'll have to break DISPLAY's uses down into 3 categories:

**General Commands:** These are the window manipulation commands. We'll be touching on these commands in this article.

**Drawing Commands:** These are for the artists in us, that is, you can create boxes, lines, circles, colors, and all the other goodies for the graphics screens.

**Text Commands:** Remember the Model-T I mentioned? Yep, it's still there and still very useful. Miss the old CLS in Extended Basic? Try entering `display c`. Bingo! A cleared screen!

Last month, I discussed the differences between WCREATE and DISPLAY. Just to recap: With DISPLAY you must use hexadecimal for all your parameters.

GRFDRV must be in the commands directory, or better yet, in your bootfile. WCREATE, as the name implies, is good only for creating windows. DISPLAY not only can create but destroy or alter a window on the fly!

Let's try an exercise using DISPLAY:

```
iniz /w2
iniz /w3
iniz /w5
wcreate /w2 --s=2 00 00 80 24 02 00 00
    * 80 col.window
shell i=/w2&
    * fork shell lowindow
display 1b 21 >/w2
    * same as <CLEAR> key
display 1b 33 02
display 1b 32 00
    * switches colors
dir e
display 1b 22 01 05 05 30 13 02 00>/w2
    *overlay window
dir x
display 1b 22 01 0a 0a 40 08 01 02>/w2
    *another overlay
list startup
display 1b 23
    * destroy this window
display 1b 23
    * destory next window
display 1b 24
    * end first window
```

OK. That's how the overlay windows work. Next month we'll put this stuff to practical use. In the next few months we're going to create hot keys and short commands to implement windows and information flow and even zooming images.

Mike Pleas is a fencing contractor in Bellingham. He loves reading spec sheets and manuals. His hobbies are astronomy and electronics.

## Classifieds

FOR SALE: Complete CoCo-3/OS9 Level Two setup for only \$600.

Coco 3 with 512 upgrade, 2 Disk drives, CM8 Monitor, DS-69b Digasector, Speech Sound Cart., Coco mouse, Joystick, Gorilla Banana Dot Matrix Printer, Multipack, DCM-6 Modem, Model 101 serial to parallel printer interface/converter, OS9 Level 2. Plus software and games

Call David Tilman at (206) 840-2782

FOR SALE: I have several computers available for sale.

NO REASONABLE OFFER REFUSED

1. QT Computer from Frank Hogg Labs.
2. QT+ Computer w/512K Upgrade
3. QT 20x w/ 2meg upgrade (2.5Meg)
4. GMX SS50 UniFlex System 1 Meg Static Ram. No Hard Disk
5. Compaq386/20 Laptop w/100MegHD and 2 Meg. Ram.

If you are interested in any of this please call 506-633-5053 AST 9-5 Ask for Steve Kincaid

FOR SALE: I have a Color Computer 3 with a multipack interface, CM-8 monitor, dual double sided drive, DMP-110 printer, Speech cartridge, Digitizer. \$1000.00 or best offer.

If interested, leave me a message on Delphi: RON9

FOR SALE:

- 1 WD1002-SHD Hard Drive Controller-Defective-\$9.00
  - 1 Tandy Home Controller-New-\$10.00
  - 1 Mitsubishi 4853 80Tr 5.25inch drive-needs alignment-\$20.00
  - 40+ Hot Coco and Color Computer Mags-\$35 each (no choice)
  - 1 Rainbow Guide to OS9 Level One-\$5
  - 1 Multi Pak interface-coco 3 modified-\$20.00
  - 1 Bob Puppo IBM Keyboard adapter NEW-\$65.00
  - 2 CMI 10 meg hard drives-\$40.00 each
- SURPRISE PACKS-\$3.00 Each (various

*Classifieds Continued.....*

items worth many times more)

1 Tandy RS232 pak-6551A installed-  
\$25.00

2 COCO 1's-64K-Real Keyboards- \$25 ea

1 Metric Industries Model 101 serial to  
Parallel Conv-\$20.00

Leave message on Delphi to GSYSTEMS if  
interested

FOR SALE: (1) Hayes 1200 baud external  
mode & docs Used little, runs perfect!  
Asking a mere \$65. They dont make  
'em any better.

Leave message on Delphi to DAVEBEAN if  
interested.

FOR SALE: Seagate ST-225 20 Meg Hard  
Drive with Tandy external hard drive  
case and power supply - \$150.00.

Still under Tandy's warranty. Call Craig  
DuBois (in Bellingham) (206) 398-1834

## Computer Swap Meet

The Port O' CoCo group is again representing the Tandy Color Computer at the Kent Computer Swap Meet on March 9th (Sat) at the Kent Commons on the corner of 4th and James. We are looking for volunteers to take a couple hours at the table so we all can have a chance to wander around and buy those things "we can't live without." The Meet is open from 9 A.M. to 5 P.M. with set up occurring at 8 A.M. Everyone who has been involved in the past has had a good time.

An added feature this year is a friend of mine who has rented space to sell. He is willing to take on any of our CoCo stuff and sell it for only 10% of what you get for it. We cannot do any selling at our table--that's why we get it free. So now we can have our cake and eat it too. If you are interested in either manning the booth and/or selling something, call me during the day at

# QUESTIONS AND ANSWERS

Q: Does anyone know if OS9 is available for 386/486 machines. With OS9 being a 68K kernel, it sure takes less memory than UNIX and beats the pants off of DOS. Running applications under windows are up to four times slower than normal. The windowing should be built into the operating system instead of the applications. It's a real pain at work when I have to use one of the MSDos machines after using OS9, VMS and UNIX.

---HERMAN;Delphi---

A: Contact Microware. They have a version of OS-9 called OS-9000 for the 386/486 machines. It ain't cheap though! Somewhere in the neighborhood of \$600, I think... but that was when first announced about a year ago. May be lower now.

---DSRTFOX;Delphi---

Q: About every 3 months my PBJ 512k upgrade board comes loose from its socket. I suspect it is the contraction and expansion brought about by use of the CoCo. Is there anything that can be done to better secure the upgrade in its socket? I have pressed as firmly as I can!

---Ted Jaeger;Delphi---

A: When I installed my 512k upgrade, I found, in a matter of days that it would just fall right back out. Whenever I put it in I pressed as hard as I could (and dared). I found if I pressed TOO hard I would BEND the hookups in the computer. The upgrade board came packaged in a foam pad, so I took that foam pad, laid it on top of the upgrade and put ALL my weight on it... It snapped in place \*VERY\* securely. I haven't had any more problems, except for the fact that this upgrade will be very difficult to remove. After snapping it in like that I took a small screddriver and pried it up just a little to give it some room to breath. ---Andy DePue;Delphi---

Q: What can we do to end the corrosion problems on the edgcard connectors on the MPI?

---DWHILL;Delphi---

A: For all of you who have had problems in general with electric contacts, but especially with the crummy tin-plated contacts on our beloved (ahem!) Tandy products...I got a solution.

It's called Cramolin. It's actually a lubricant, but contains something that pretty effectively removes surface oxidation from connectors and inhibits future oxidation. It's available in several forms, including aerosol cans; what I have are a couple of rather tiny bottles of red and blue liquid with brush applicators.

For the most part, applying the red liquid, cleaning (rubbing thoroughly) with a qtip and applying the blue liquid has just about cleared up general strangeness and crashes on my Coco. It's also made several flashlights and my camera's electronic flash more reliable (cleaning the batteries and contacts).

Can't find it locally? Write: Caig Laboratories, PO Box 1, Escondido, CA 92033-3679. Their K-100A kit (what I have) costs about \$20 with postage; the K-100C kit (aerosol) is about \$14.00

-- Damon;DWHILL;Delphi --

Q: Can I run Sub Battle from a double sided floppy?

-- TONYCAPP;Delphi --

A: I've done it. Heres what you need to do. The Sub Battle disk is a 'floppy' and it has a CMDS directory on both sides. In BOTH of these CMDS directories is a module called 'sub'. BUT, their different from each other. SO, you need to re-

name the first sub (the one on the boot side) with dEd or preferably EZGEN to sub0. You want to use a utility to rename the file that actually renames the 'internal' name, since that's what you see when you do an MDIR.

Once you've done this, you simply type OS9[TERM]:sub0 (enter) and off you go. Sub Battle can also be run in any other term type window including the vdg descriptors available in the databases.

So here's a blow-by-blow:

- #1) MAKDIR /dd/games/sub
- #2) MAKDIR /dd/games/sub/cmds
- #3) MAKDIR /dd/games/sub/sub
- #4) copy all the files from side one of the disk to the proper directories.
- #5) rename sub to sub0
- #6) Flip disk, and copy all the other files over
- #7) CHD /dd/games/sub/cmds
- #8) Ezgen -d sub0
- #9) ezgen:-l sub
- #10)ezgen:-r sub0
- #11)ezgen:-v (this verifys CRC)
- #12)ezgen: q (this ends session)
- #13)CHD ..
- #14)xmode /w9 type=l;display c:/w9  
 \*\*\*\*/w9 can be any other available  
 UNUSED window\*\*\*\*
- #15) ex sub0 /w9

VOILA! Now use the clear key to select the new window, then you tell it composite or RGB, then it says flip disk (simply hit enter), and the game screen pops up. When you decide to quit, it should terminate the window, but if it doesn't, you can type EX to do that. \*\*\*\* You might want to change execution directories to /dd/games/sub/cmds and use sub0:\*\*\*w9 instead, since the initial ex will kill the shell in the window you start in.

Well, if I haven't totally confused you, and myself, you should be set.

-- EMTWO,Delphi --

Q: Is there any convenient way to modify the B&B IID interface to change its addressing to \$FF58-5F and patch the driver to allow the use of two B&B hard drive interfaces in the same multipak? Or is this the hard way? I

tried it by setting the descriptors each to their own slot and had no success. Maybe I just did something wrong. Can you help?

-- WESGALE,DELPHI --

A: I've done just what you are trying to do, long ago. Ya almost had it with the two descriptors set to different slots. What is also needed, is two copies of BB IID in memory. Can you use dEd? If so, make a copy of the driver of your choice, and change the name of it internally. Then use this driver for your second set of descriptors, putting the right name in the descriptor, of course. If you are not familiar with dEd, tell me which driver (name and CRC) you wish to use, and I'll make you a patch file to make the changes.

-- MINIFREAK,DELPHI --



WARNING: Your Hard Drive may seem to CRASH if you are using Burke and Burke's XT-RTC interface board. Mine did, and you can imagine how frustrating it was trying to figure out what was wrong. I finally gave Chris Burke a call in Maple Valley, WA. The major symptom was that my startup when it came time to turn access over to the hard drive. When I tried to access the Hard Drive with a disk that uses /IID as a descriptor for the Hard drive instead of /H0 or /DD it would lock up the system.

The problem was the clock chip. The test for checking the clock chip is to set the system time with "setime" command, then set the clock with "clockset" command, then use "clockget:date U" and see if the date and time are the same as what you set. If you get a bunch of "165"s then you have a bad clock chip. Replace the clock chip for about \$10 and you're back in business.

According to Chris Burke, you can also get better performance if you are using a combination of WD1004A-27x and the XT-RTC Hard Drive Interface board by using the 74F series support chips instead of the 74LS00 (quad input NAND gate) and the 74LS04 (hex inverter). The 74F series chips use 75% less power and are 30% faster. I replaced the support chips and still had poor access to the IID. What worked for me was to re-insert the 74LS04. That fixed my system so it worked perfectly again. Now have a completely different set of problems!!

Chris also reported that he and Keith Alfonso are writing an upgrade or patch to the C compiler so it will access whatever memory you have, up to 1Meg!!

I asked Chris about REPACK, currently running at about 1 hour per megabyte. Chris says this is because it makes all files contiguous and all free disk space contiguous. Unfortunately it uses no disk space and only a 64K memory block to process reading, packing, writing, etc. Upgrade plans are in the works to make REPACK use all available memory for processing so a 30Meg hard drive could complete it's repack within 3 hours.

Did you know that the latest version of EZGEN (version 1.09) permits inserting modules into your boot file from memory rather than only from disk? It is also faster than previous versions due to an improved method of finding contiguous sectors to write the new bootfile.

Burke & Burke is also involved in developing new support utilities for the new 68k machines such as the TomCat, PT68, and the MM/1

OSTERM:

I called up Vaughn Cato (1-104-971-0193) creator of OSTerm Telecommunications Terminal Package. I was having trouble getting the Remote Mode to answer the phone. Vaughn (only 21 years of age) told me the following

## Bernie's Bits cont....

To have OSterm operate properly in the REMOTE mode, you must set the remote strings to: AT AA SI -1 V1 X1 Q0

How do you do this? Simple: From the terminal screen, enter "ALT-/" to get to the options menu. From the options menu press "J" for strings, and then "R" for Remote initialization, then enter the remote initialization string "AT AA SI -1 V1 X1 Q0". Then enter "S" to save your new string entry.

### NEW & USED CoCo STUFF:

I just bought a Sardis "No Hault" Controller from CoCo Pro. They buy and sell new and used CoCo Hardware/Software. You can send them \$12 for 12 monthly issues of their "catalog-on-disk" or call their BBS number (313-663-6207) for a current listing of products.

### REMEMBER TELEWRITER?

Also, had a short phone conversation with Bob van der Poel of Telewriter 64/128 fame. He is also the author of VED, OS9 Text Editor. Bob presently has a development MM/1 machine in his possession. He's very impressed with the speed of the MM/1 and says that floppy disk access is faster on the MM/1 than Hard Drive access on the CoCo. Bob is finishing up a 68K version of VED with full PreView options, and Telewriter like screen menus. The benefits to Level Two users is that Bob realized some improvements that he has incorporated into Version 2.7 of VED. The upgrade has faster speed, the ALT+Y works more predictably, and it has quicker screen refresh.

### MM/1 INFO:

A complete MM/1 kit with 1.4Meg floppy, case & PS, 3 meg RAM, and bundled software can be purchased from I.M.S. for \$1150.00. If you need to send a check right now the address to send it is:

Interactive Media Systems  
238 Catawba Ave.  
Davidson, NC 28036.

Mine will be delivered in late March!!  
Full report to follow...

## TOM CAT Update

This week went slow. Not as much progress as I had hoped but we are still moving forward. Bruce and I were talking today and we related this week to a ride on a roller coaster. As you get near the top it slows down, but once you are over the top of the hill, what a ride! It has been a long climb up, but worth every second of it. (OK, so a little white lie, but I don't have an ulcer... yet!)

The progress we made last week was good. We cleaned up some details such as verifying that the 1 meg upgrade worked (it does) and that the K-Bus interface did not interfere with the TC9 (CoCo3) memory. (it doesn't) Now Bruce and Bob are working on the PAL equations to finish the interface. If all goes well we may have this done by Monday or Tuesday. At that point the TC9 will be FINISHED!!!

In the meantime we are working at FHL to get the hundreds of confirming order letters out to all of you who have your name on the waiting list.

After the confirming letters, (which will take most of next week to mail), we will be sending letters to CoCo Clubs who are listed in the Rainbow asking for their support and offering special deals for club members. If your club is not listed in the Rainbow then contact Nancy Rittenhouse for the "CoCo Club Packet".

We will also be sending out letters to dealers and VAR's asking for their support. If you qualify as one of these then contact Nancy for a "Tomcat Dealer Packet".

We will also be sending letters to developers of CoCo software with information about the Tomcats and how they can be of help. Again, if you are one of these please contact Nancy for the "Tomcat Developers Packet".

Part of the confirming letter packet contains technical details for the TC9 and TC70 and all the various options available for the Tomcat from FHL. It includes details that are important to anyone considering any new machine. Because much of this is graphic (Board overlays etc) it is not easy to upload here. If you would like one of these packets contact Nancy and she will be glad to send you one.

That's it for now. WE'RE ALMOST THERE!!

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I will 'try' to be on DELPHI every Saturday night for a few hours to answer any questions or just chit chat. I get on CIS to read mail and other quick things weekly.

## System-4 PT68K Update. . .

### SYSTEM IV COMPUTER

THE SYSTEM IV is a high performance computer system based on the Motorola 68000 microprocessor operating at a clock speed of 16 MHz and has been designed to provide maximum flexibility and versatility. Microware's Professional OS9/68000 operating system is included with the SYSTEM IV providing an efficient multi-user and multi-tasking environment. This provides the user with a PC for home use, small business applications and a viable low-cost solution for many industrial control applications (embedded systems). Special requirements (such as midi, sound, A-D/D-A, net-working, etc.) are easily handled with readily available low-cost PC/XT boards which can plug into the SYSTEM IV expansion slots. And, as user requirements change or improved special function boards become

available. They may be added or replaced at the user's option. Thus, when software requiring multi-media or other new capability becomes a reality, the user will be able to add that capability easily and have the latest technology at his disposal.

TO ACCESS THE LARGEST SOFTWARE BASE available, an MS-DOS board, the ALT86, will be available shortly as a low-cost option. This board has a V30 (8086) microprocessor running at 10 MHz, includes 1 Meg of 0-wait state RAM, uses the Chips and Technology BIOS, has a socket for an 8087 math coprocessor and plugs into one of the SYSTEM IV expansion slots. Additionally, an OS9/6809 software emulator/interpreter will be available soon. The emulator/interpreter will permit running most COCO OS9/6809 software on the SYSTEM IV.

OTHER OPERATING SYSTEMS may be installed. These include CPM, UNIFLEX, MINIX, STARDOS, REXDOS and most any other operating system capable of running on the 68000 microprocessor chip.

THE DESIGN OF THE SYSTEM IV is derived from previously successful designs and uses components that have been tested and proven in other systems. SYSTEM IV's uniqueness stems from the ability of its designer and manufacturer, Peripheral Technology, to provide well designed, reliable hardware at a low cost. Further, only the functions necessary to the basic operation have been designed into the mother board. Seven PC/XT compatible expansion slots allow an unrestricted selection of standard PC/XT accessory boards by the user. The user is not locked into any preconceived notions of what is best.

THE MOTHER BOARD is a 4 layer XT size board which holds the micro processor, sockets for up to 4 MBytes of 0-wait state RAM, a battery backed-up clock, 4 serial ports, 2 parallel ports, a high density (37065) floppy disk controller, 7 PC/XT compatible expansion slots, a memory expansion connector to allow an additional 6 MBytes of 0-wait state DRAM, keyboard connector and the necessary system support chips.

THE TERMINAL SYSTEM includes the mother board with 1 MByte of on-board

DRAM, a high density floppy disk drive (3 1/2" or 5 1/4"), 4 serial port connectors, a parallel printer port connector, a 200 watt power supply, mini-PC style case capable of holding 5 half-height drives and Professional OS9/68000. This configuration requires the use of an external terminal(s). You may use your existing CoCo, along with a suitable terminal program, as a terminal.

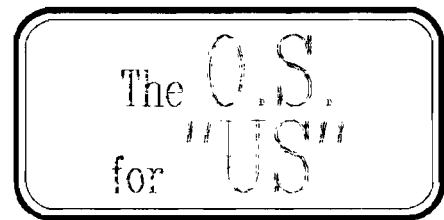
THE CONSOLE SYSTEM adds a VGA (800 x 600 x 16) graphics board and an AT style keyboard and provides full graphics capability at the console.

Terminals may be added.  
TERMINAL System . . . . . \$ 999.00  
CONSOLE System . . . . . \$ 1,149.00  
THE SYSTEM IV comes with a one year parts and labor warranty.

OPTIONS:  
3 MByte additional DRAM . . . \$ 120.00  
Hard Disk Controller & driver \$ 69.00  
40 MByte Hard Disk . . . . . \$295.00  
20 MByte Hard Disk . . . . . \$240.00  
Additional Floppy Drive . . . . \$ 92.00  
AT Style keyboard and 800 x 600 x16  
VGA Card and driver . . . . . \$159.00  
For 1024 x 768 x256 VGA Card w/1  
Meg of Memory in place of standard  
VGA card add . . . . . \$170.00  
Mono Display Card in place of VGA card  
deduct . . . . . \$ 50.00  
Special monitor prices when ordered  
with the SYSTEM IV

(Prices subject to change without notice)

For kits, contact Peripheral Technology at 401-984-0742 ext. 101 delmar co \* Middletown Shopping Center - PO Box 78 - Middletown, DE 19709. 302-378-2555 FAX 302-378-2556



This high-tech operating system has such high performance, that Big Blue is using its fundamental principles; and we now have access to this power.

Purchasing an operating system will

not let you accomplish anything more than you can without one through Disk BASIC - it will simply allow you to do it in a much easier fashion. That is the main advantage of using an operating system over original built-in ROM BASICs.

The operating system wisely chosen for our microcomputer by TANDY is called "OS-9". This operating system is so powerful, that it can not be explained through this article, but must be experienced. The more that I use it, the more that I realize how far computers really have come in the last ten years.

I.B.M. even liked it. So much, in fact, that their new line of personal computers will soon be running an operating system very closely resembling our own OS-9.

OS-9 is special because of many reasons - it has the capability to do many processes (or programs) at once, many other users can use a system at the same time (this is to save the computer's time from being wasted on the speed of the typist), and the amazing automation available for the users. But the most important fact is that new hardware can be added to the system very easily. Simply plug it in, and write a short control program (called a device driver). You are then up and running with your new hardware in addition to all of the old.

One special feature of the disk-handling section of an OS-9 system is a thing called hierarchal directories. Instead of the one 68-file directory under Disk BASIC, an OS-9 disk can have many directories at one time - and even a directory within a directory. The number of directories and files on these directories is only limited by the amount of disk space available.

So what do you need to take advantage of this power? A system can be set up with your TV, Coco3, and a disk drive. However, you bought your new Color Computer to use it for all of the new things that it can do, right? So buy the CM-8 to make use of its high resolution, and buy the 512K memory upgrade board - you will find that (for all practical purposes) the meaning of the two words "memory limitation" will



soon be forgotten. Besides, much of the new software constantly arising will probably require the added memory.

But after setting up your system, you will begin to realize that the more hardware - the better. You might want to purchase more powerful drives, a printer, or even a modem. But that will be your own preference.

There is basically only one factor that has been resisting OS-9's success. This is the fact that with all of these new things that can be done, there is also more to learn above what you knew about Disk BASIC. The best way to go about this (from my experiences), is to just use trial-and-error by experimenting with all of the program utilities that came with the package. This obstacle will then very soon be overcome. In addition after learning what there is to learn from OS-9, everything you do will become more automated and much simpler than it was through Disk BASIC. Things that before required loading and running short programs, now can be accomplished with automatic built-in routines.

What would happen if you ever bought a more powerful computer for your growing business; or if TANDY made even another Color Computer? Well, under OS-9, all programs can be ported to other OS-9 systems. And your high-level language (BASIC, COBOL, PASCAL, etc.) programs can be ported to ANY system using that same language.

Anyone using a Cocom3 but not OS-9 would be wise to head for the nearest Radio Shack and spend the small amount that TANDY is asking for a very worthy product. It is truly affordable software for an affordable computer.

### Corrections . . .

I looked over the IRQ hack in January's Newsletter and it seems it would work but the article pointed to a wrong RFI bead. It said to locate FB-9 that was located next to the GIME chip but FB-5 was the only one near the GIME chip. I found FB-9 up with the joystick ports. When I install my 256k ram chips I will give the hack a try just to see if it will work.

-- Mark Johnson --

## OSTERM 2.08

## "Patches"

Previous files described patches to OSTERM Vr. 2.08 to allow the use of RS232 ports addressed at locations other than the \$FF68-\$FF6B range used by the Tandy RS232 pak. This file contains prior information plus patches which allow the use of OSTERM with other port descriptors (T3, T4, etc.)

OSTerm contains some hard-coded references to the ACIA status register which is addressed at \$FF69 on the RS232Pak.

These should be patched for hardware which is addressed at different locations. The patch information was provided by Mike Sweet (DODGECOLT) in the file: "Patch OSTerm for Non- RS232 Pak" in the Patches area of the DELPHI OS9 database. The information in that file is included here.

Robert Zaker (RZAKER) discovered that the TRANSFER module also addresses the ACIA status register directly. This can cause the file transfer routines to "hang" during up/download with some hardware combinations. The patch information is in the second Modpatch file below.

If you aren't sure of the correct address for your hardware check the documentation for the address of the status register or examine the device descriptor - T2: (offset \$10). Replace <xx> in the Modpatch scripts below with a value equal to the LSB of your hardware port address plus one. (Value at offset \$10 plus one).

You can also change the port descriptor from T2 to T3 by changing the byte in OSTERM at offset \$13A3 from \$32 to \$33 (or to 34 for T4, <yy> etc.) AND the bytes in AUTOMODE at offsets \$15A3 and \$1782 from \$32 to <yy>. (You MUST patch both modules to the same port.)

load osterm  
modpatch

L osterm  
C 2041 69 xx  
C 3B01 69 xx  
C 69A7 69 xx  
C 13A3 32 yy  
V

load transfer  
modpatch

L transfer  
C 1113 69 xx  
C 11B6 69 xx  
V

load automode  
modpatch

L automode  
C 15A3 32 yy  
C 1782 32 yy  
V

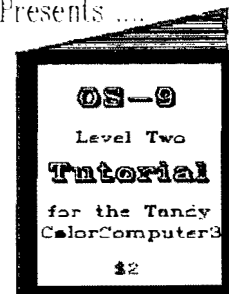
save osterm.new osterm  
save transfer.new transfer  
save automode.new automode

Of course, the patches for the ACIA Reg address change and the port descriptor change can be used independently of each other. Just make sure you cor-

you select. Thanks to Mike and Robert and Dustin for the previous patchfile uploads

-- DocBear/Delphi --

Bellingham OS-9 Users Group  
Presents . . .



Written by  
Scott Honaker & Rodger Alexander



## Washington State BBS Listing

The following BBS list will be of interest to CoCo and OS-9 users:

**FAR POINT BBS (Seattle)**  
(206) 285-8335 RIBBS (Fido NET)

**COLUMBIA HTS. BBS**  
(Longview/Kelso)  
(206) 425-5804 RIBBS (Fido NET)

**DATA WAREHOUSE BBS (Spokane)**  
(509) 325-6787 Level-II BBS

**TIME MACHINE BBS (Tri-City)**  
(509) 586-2559 CoBBS

**BARBEQUED RIBBS (Bellingham)**  
(206) 734-5806 PC-Board  
(CoCo/OS9 SIG on Conference 5)

HEY! I'm still waiting! When are you going to share with us your special knowledge about OS9? Like "Rocky" Kowalski's idea to call one of his hard drives "/d0" and the other "/dd" so that all of his software works without having to modify them for hard drive operation. Such an obvious idea! Yet none of us thought of it. Good for "Rocky". SO.... what's your brilliant idea? Care to share it with us? If you do, and we use it in the Newsletter, you get that month's issues of the Newsletter absolutely FREE!

Mail in your article to:  
OS-9 Newsletter  
3404 Illinois Lane  
Bellingham, WA 98226

OS-9 Newsletter  
--- BACK ISSUES ---  
available for 55 cents each

## Club Activities

Seattle 68xxxMUG meets the first Tuesday of each month at Gugenheim Hall on the University of Washington Campus at 7:30 p.m. The March meeting will feature a demonstration of Multivue by Jeff Brittan. Phil Johnson will demonstrate how to create Multivue ALF files using Icon Editors.

Bellingham OS-9 Users Group meets the second Thursday of each month at Fairhaven Middle School, 110 Park Ridge Rd., Bellingham. The March meeting will feature Craig DuBois installation of his CoCo-3 into a "mini-tower" and a lecture and "exercise" session with Mike Pleas on creating windows using the WCREATE and DISPLAY commands. See Mike Pleas' article in this issue to see an overview of what we will be covering.

Longview/Kelso: We don't have a name yet. I guess you could call us The Longview/Kelso CoCo Users Group.

The Longview/Kelso group meets the first Saturday of each month at 2:00. The March 2 meeting will be held at Steve DuValls and we'll have a demo of the OS-9 version of Kyun-Gai, to be ninja.

The group will also be helping a few users to install the IRQ hack for their Multi-pak interface as well as a 256k memory upgrade and we'll also be burning a few EPROM's.

--Mark Johnson--

### Port O'CoCo

NO REPORT AVAILABLE

Call Donald Zimmerman at 871-6535 for information about this month's meeting.

### ML Rainier CoCo Club

NO REPORT AVAILABLE

Call Erick Sweeney at 535-9733 for information about this month's meeting.

**OS-9 Newsletter**  
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Bellingham, WA 98226