OS-9 Newsletter®

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Which CoCo-3 Do You Have?

Everybody picks on the GIME!

OK, the idea has merit, since it was never completely fixed, but it's not the only thing. Consider even a simple 'tfm' instructions that travels from RAM through the GIME through a buffer to the CPU through a buffer then the GIME back to RAM. And we are using 'wing and a prayer' design concepts here: commercial chips and lower grade discrete parts and apparently 4 different types of PCB material, an extra 50 caps to fudge timings here and there. It's just like the bumble bee, you can prove a CoCo can't fly at all.

The end result is a little vague. I spend perhaps 10 hours a month inside a strange CoCo, and they have personalities, which can be sorted into 5 basic types for resale purposes.

1) Old us models: Have good board quality, nice parts, and a crap GIME. With a new one, they run nicely even with triple y cables and oversized controllers. RAM is warm (not hot) at worst. This is the 'deluxe' first year version with riveted feet and extra rubbers under the keyboard.
2) Some Korean CoCo's, and late US CoCo's: Usually get away with 'Y' cables OK, have a good GIME, but often hot RAM, fixable by fudging the timing mod. Buss as stable as #1, small print Korean or Mexican GIME, both style feet.
3) Most CoCo's (Korean): RAM temps all over the place- no single mod works all the time. A dual 'Y' works but a 'tri-Y' crashes often. Start to see occasional blobs. No feet- they fell off.
4) Korean: CoCo's that usually run well but you have to clean the buss fingers a lot. Does not tolerate 'Y' cables much. Most have hot RAM that usually can't be fixed - Korean GIME with small print on it. OK on slotpak/mpi. Same style feet as 3:-)
5) Early? Korean CoCo's with 87 Korean GIME (large print): Well, you got a GIME anyway. Nothing works on these dang boards-the 2 meg upgrade blows up, loaded disto controllers might not go, MPI crashes....a real rompak machine. 512K is usually searing hot and may crash after a few hours, and the ground plane plastic insulator sheet may be blistered or brown near the power supply power transistor. Besides not having feet to stand on, the 128K badges fall off! (Does it really run that HOT?!) And there are lots of these, perhaps 10% at a guess. Some folks just THINK they have a spare!

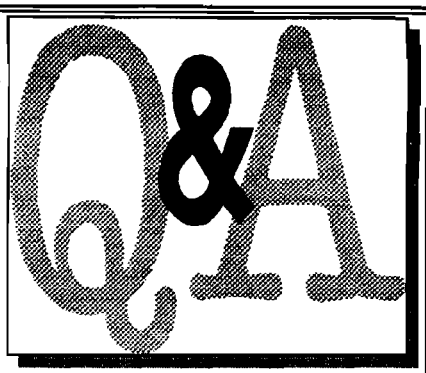
There is nothing scientific about these categories and they overlap. Not all early Korean CoCo's have been consumed by fire, but when I buy a used CoCo-3 it doesn't take to long to place it in one of the above categories, although they kind of hang together i.e.: a blistered ground sheet usually means it's a type 4 or worse, and it will not work well on a 'Y' cable. I expect minor variations in board capacitance and parts quality between the plants producing CoCo's account for this irregularity. There seems to be no way to predict what swapping a GIME is going to do. Exchanging them makes both machines worse as often as it improves one.

Anything runs on a disk controller at 512K, which kind of sounds like the Tandy spec if you think about it, but type 5 machines aren't really MPI'able. (But hmmm....it was discontinued about then, wasn't it?). Up to type 3, some things don't work all the time, depending.

My assassination theory is that Tandy expected to spend too much on the first run machines, but troubles with the early cheap CoCo-3 were more than anticipated, and the late run Korean CoCo's cost too much to make. The last US run was just to clear the parts shelves, as quality actually improved towards the end (stealing clone parts?). Now we attempt to group these very different machines into one set, and it doesn't work very well.

==Rick Uland==

*** IN THIS ISSUE ***



Q: I've been looking over the service manual on the interrupts (the only major thing left to implement on the CoCo3 Emulator), but I'm having a dilemma or two: First off, try as I might to test the keyboard interrupt, I always only succeed in locking up the computer. How is it supposed to work? Is it triggered when one of the low 7 bits of $FF00 goes low, or when they all go high, or both?

Secondly, the horizontal sync interrupt was too fast to be practical to implement in the CoCo 2 emulator, but now I find that it's the basis of the programmable countdown timer. And what's more, it also has a 14MHz input! What I need to know is, do any programs actually *use* the countdown timer (particularly in the 14Mz mode)? I don't quite see the sense of the 14MHz mode as its much too fine a scale when compared to the CPU clock.

Anyone know of any practical uses of any of these interrupts, or would they not be missed at all if omitted?

Some good news for those interested in the CoCo-3 Emulator: After several *very* late nights, I think I've got the full range of documented video modes implemented (as well as many undocumented ones). With that and the MMU accurately emulated, the interrupts are the only major remaining CoCo 3 feature to implement.

==Jeff Vavasour==

A: When you normally read the keyboard, you put a value into $FF00 (I think), indicating which columns you want to look at. You do the same thing for the keyboard IRQ, and wait for an interrupt. When a key in the column you've selected is pressed, the IRQ is generated. You then read one of the other keyboard registers to see which key it was.

The key-column value in $FF00 may have to be updated after every keypress, but I would have to try it to be sure. And I don't know how much de-bouncing is done by the GIME, either. If none, the keyboard IRQ is a lot more difficult to implement.

Nothing I've seen uses the 14MHz IRQ, but the 63us one is very useful. One of the schemes for doing 4-voice background sound on the Coco3 was to have the 60Hz IRQ change the tone, volume, etc. and the 63us timer would actually output the bytes from a table, at the appropriate frequency. The CPU overhead is a fe 10's of % at most.

Some DECB programs (i.e., stand-alone games) use the timer IRQ, but as far as I know, no OS-9 program does. Even the kernel has no use for it.

The keyboard interrupt may be useful, and may be implemented in the next version of NitrOS-9. The keyboard would no longer be polled, which should increase system response time.

The serial interrupt is also available in the Coco3, but generally not used. OS-9, at least, routes everything thru the IRQ, and uses only the vertical re-trace interrupt from the GIME. Other sources of interrupts are possible, but aren't accessed differently from the Coco2

==Alan Dekok==

OS-9 Newsletter

Editor: Rodger Alexander

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Follow the THREAD to the end of the Rainbow

INTRODUCTION: *The following is a series of postings known as a "THREAD" on the **CoCo List** forum hosted by Princeton University and carried on the Internet, . Alan DeKok describes his problem with the **BLOB (Boot List Order Bug)**. This is a situation in which the order of the boot modules merged into the **OS9Boot** file may result in the computer not booting up. Rearranging the order of the files in the **OS9Boot** eventually will produce a bootable disk. But why? Is it the fault of the Color Computer, the GIME chip, the floppy controller? Alan is joined by several "OS-9 Gerus" who offer their experience and theories. Solutions are suggested, tested and rejected. As all of the variables are accounted for, the problem narrows down to a specific area and a possible solution. . . . At the end of the "thread" is the pot of gold. The answer is found and a FIX is created..*

"HINT. . . . The BLOB does not affect the J & M floppy Controller. Only those controllers with the WD 1773 chip"

Check out "The BLOB is Dead" article on page 6 for the end of the Rainbow; the pot of gold; the solution.

I've run into the BLOB

I hacked my CoCo a few weeks ago, and installed a triple y-cable, and re-addressed the floppy controller (adding another gate delay). Since then, I've run into minor BLOB problems which can be fixed by the usual shims, but the coolest one was last night.

I was hacking REL to boot up on 32, 40, and 80 column screens, and had the same source code for all 3 versions. The difference between the versions was a conditional 'if' at assembly, which would change the GIME display graphics code (1-byte), and the position of the 'OS9Boot' and 'FAILED' text on the screen (a few more bytes).

So I had the 80 column REL working great, and assembled and tried the 40 column version. Only a few data bytes were different, and the executable code was in exactly the same place. On booting, it got as far as loading up OS9Boot, and then BBBLOOIE! My CoCo crashed most fantastically! Went back to the 80-column version of REL, and it booted fine.

Now THAT's a cool hardware bug! The SAME executable at the SAME location on-disk and in-memory, but the GIME is displaying different types of screens. One display mode causes the BLOB, and the other doesn't.

The cause of the blob cannot be anything other than changing display modes, as the executable in REL was unchanged, and in any case, Boot and OS9p1 were unchanged, and had worked previously. The Blob hit after REL had finished executing, so it couldn't even be caused by the changes in REL that I had made.

I didn't think I could fix the problem with shims, so I went back to the 80-column version of REL, and pretended everything was fine.

Anyone got any hardware explanations as to why this happens, other than 'The GIME was always screwed'? I would love to figure out why changing display modes causes the BLOB!

Alan DeKok.

This does not sound like a BLOB.

If this was truly a BLOB, then changing the location of the other modules in the boot would be required to cause the crash.

The word BLOB carries a lot of weight with it. I am of the firm belief that it does not exist (Kevin Darling was one of the first who stated this, actually!) I have actually never seen an example of this. I have seen hardware problems (drive controllers being too slow and causing flaky booting into OS-9 Level II for example), but they were never tied to a specific boot ordering.

How about we try to phase out the word BLOB unless we absolutely know it has to do with the ordering of system modules that SHOULD NOT be required for a certain ordering.

David Halko

You know what?

This is starting to make more sense! Here's why. I had two CoCo 3's:

CoCo 3 #1:

- Showed all 64 colors in CoCo Max III's Set Colors menu option, as the program was supposed to (they did a neat job "tweeking" the GIME to do that. This CoCo, runs under OS/9 Level II Unmodified, NEVER had a BLOB problem at all.

CoCo 3 #2:

- Would only show 16 colors in CoCo Max III's Set Colors menu option, and not the full 64 for some reason.
- This one, when run with the same OS/9 Level II setup, had compulsive BLOB problems.

OK, the mention of the CoCo Max III is because that program tweaks the GIME into showing all the CoCo Colors on screen at one time (where normally, you could only get a maximum of 16 to display at one time). This and the BLOB

(Continued on page 4)

(Continued from page 3)

relationship in OS/9 had me thinking that one CoCo had a "good" GIME and the other a bad one. They both had the "newer" date on the GIME and were supposedly the "updated" ones. Thus, I began to wonder if the BLOB problem wasn't GIME related.

Maybe we are stumbling onto something here??

Tika@GEnie

Flaky GIME's

otherwise known as Every CoCo-3 is unique, despite what you'd like to believe. I've heard of people who could run a 6 foot y-cable no problems, and others for whom 3 inches was too much.

On otherwise identical factory-produced machines, this sort of variation is incredible.

There was a demo program a while back, by someone named 'sock master', and the demo had different code for the old/new GIME's. The timing had been changed slightly, and would make the demo look funny. This is similar to what you're seeing in CocoMax III. The GIME is an incredibly buggy chip, that was well know. This sort of side effect wasn't.

Alan DeKok.

REL cannot cause the Blob

The Blob is caused by Disk I/O, which Boot does, too. Therefore REL as such CANNOT cause the Blob, but Boot can. And changing other things in your system may have secondary effects that cause the Blob when Boot hasn't been changed.

I made up two boot disks that were otherwise identical, but one had CC3Disk shifted down by one byte in memory. One disk booted, the other did not.... It's not boot ordering, but boot "placement", definitely.

Now this isn't technically the 'Boot List Order Bug', but I don't know what else to call it. It was originally called the Blob because people found that re-ordering your boot disk helped fix the boot problems. This reordering also had the effect of doing the 1-byte shim, but they didn't know that at the time.

So, what else should it be called? The bug which is fixed by a 1-byte shim? Flaky boot-up bug? Calling it the BLOB, while incorrect, properly communicates the problem to CoCo'ers.

And yes, it has nothing to do with module ordering, but rather address ordering. i.e. Usually a 1-byte shim will fix blob problems.

How about we keep the name, but redefine what it stands for:

Boot List Offset Bug

or

Boot Location Offset Bug

Alan DeKok.

Screen modes are at fault

My theory is that selecting different screen modes changes the rate and pattern at which the graphics part of the GIME accesses RAM addresses. This in turn affects how those address bits interleave in time with your boot code's execution.

I thought it was figured out a long time ago, by Marty Goodman and others, that the whole BLOB was a HARDWARE problem having to do with the low-order 2 or 3 bits of the Address bus not being able to change fast enough for certain RAM access patterns.

Given the long (but great reading) article about 5 classes of CoCo-3 hardware-wise, it's no surprise that some folks can hardly touch their machines without getting BLOBbed, while others think the BLOB was faked on the same Hollywood sound stage as the Holocaust and the Apollo moon landings and JFK's death etc.

While I still consider the BLOB a hardware problem, it is certainly conceivable that you have described a bug that could be lurking in OS9 somewhere, and even Kevin D and the Nitro-'Nucks haven't found it yet, hard to imagine.

Mike Knudsen

That one byte shim is a cute one!

I do not know of any instructions on the 6309 or 6809 that are required to be on even or do not work quite right on odd byte boundaries... so a one byte shim does not seem like it would make any difference at the machine level unless...

I know that most comparison instructions are duplicated for signed and unsigned numbers... what if there was a situation such as this...

grab an address...
add a number to it as an offset...
do a comparison on it...

But the comparison used was for signed numbers instead of unsigned? Depending on the address (one byte off, maybe a couple), it would change the result of the comparison... so, is this a possibility? Looking at the wrong condition code flag while not paying attention to signed/unsigned can do some really weird stuff, sometimes...

Dave Halko

Nope. It's a hardware problem

If instructions did depend on the program code (other than explicitly like bsr), the CPU would be mostly useless.

Alan DeKok.

RMA Bug Report

This may be old news here but its new to me. RMA the Relocating Mcro Assembler that comes with the OS-9 LevelII Development disk has a serious bug.

Contrary to most assemblers I have, RMA makes register offset addressing 5-8 bit offsets ("direct page") instead of 16 bit offsets. This would not be a problem if RMA knew when a 16 bit was required and switched. Here is an example off what happens when RMA does not switch.

```
psect
vsect
rmb $ad
bug rmb 10
endsect
start lda #10
leay bug,u
loop clr ,y+
deca
bne loop
etc.
endsect
```

The above snippet of code is supposed to clear the reserved bug bytes. With any propper assembler it would. RMA, however, produces the following code:

```
start lda #10
leay <-$53,u      this is disasterous
loop clr ,y+
deca
bne loop
```

The code that RMA should create is:

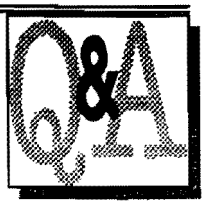
```
start lda #10
leay >$00ad,u
loop clr ,y+
deca
bne loop
```

to avoid the indexed addressing bug in RMA (and c.asm), force extend addressing as needed with > and "direct page" addressing with <.

As per my earlier message, when data locations exceed $80 on the direct page, u-relative addressing will require the >. If you don't know where that is, just assemble the code with the "list" option to find out.

BTW I have not encountered this bug withASM the LevelI assembler.

==Robert Gault=
Internet: ab282@detroit.freenet.org



Q: I use the PUPPO keyboard adaptor with B&B XT-ROM and also have problem with the "O" to select AltBoot. I do get around this by doing a normal boot at powerup, and then a reset. Hold down the "O" key immediately after the reset. Even this does not work every time, but the few times I need the AltBoot I get by.

==Gordon Bentzen==
Australian. OS9 Usergroup
Internet: gordon@splat.paxnet.com.au

A: I just found something out yesterday... And quite by accident (I had given up on AltBoot). If you hold down the spacebar at bootup (to release the Keyboard ROM), then let go of it, hold down the O key, wait for the drives to go online, and then hit the spacebar again, the alternate will be selected!

== Aron Hsiao==|
Internet: aghsiao@eng.utah.edu

Atlanta CoCoFEST Update

Here's the vendor listing so far for the Atlanta Fest: KALA, Delmar, Adventure Survivors, Sub-Etha, JOTA, M.I.&C.C., Rick's Computers, Hawksoft, Daltrug, Bill Wittman, Glenside, S-BUG, OS9UG, FARNA, Northern Xposure, StrongWare, A.R.Dages, R.C. Smith, Roy Shoaf, and Gene Adams.

We only have a few seminar speakers scheduled, so if anyone would like to volunteer we would like to hear from you ! Oh yes, apologies if I missed a vendor.

==Newton White==
Internet: nrwhite@netcom.com

FOR SALE

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Includes: CM-8 Monitor, Disk Drive, Tape Drive, Mouse, Etc. All manuals and many issues of *The Rainbow Magazine*. 20 Games (including Color Max 3 & Max 10 Word Processor. Will include "chicklet keys" CoCo-I. Asking $700 OBO.

ALSO 512K King's Quest III (never opened) $20

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Elly Hildwein
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Seattle. WA 98146

The BLOB is Dead! Part I

What follows are the docs for the original CC3Disk version #11 patch which allows you to use the PCDOS and RSDOS utilities. The original date of this document was April 24, 1988. I am uncertain as to the name of the author(s) of the "PCDOS version 11" patch. I have updated this patch and document to include my BLOB fixes along with the version #11 patches to give CC3Disk the ability to read non OS9 format disks.....Reliably.

This document describes the operation of CC3Disk after installing my patch to the standard CC3Disk device driver as distributed with the OS9 Level II operating system for the Color Computer III.

The following functional changes have been made to the CC3Disk driver:

1. Allow access to non OS9 type diskettes.
2. Allow access to diskettes with 512 bytes per sector.
3. Allow access to diskettes that have sector numbers in a track that start with 0 as well as 1.
4. Move the motor control timer to a single constant directly after the driver dispatch table. The rationale behind this change is that a single pair of bytes in a position that will not change in future revisions is easier to manipulate than several locations that most definitely will change. The new location is the constant word at offset $0028 and is initially set to the value $00F0 (about 4 seconds).

   Note: The 12c version increases this value to $010A to give you about 7 seconds before the drive motor times out. This prevents unneeded cycling of the motor when using the Level Two Tools ***wcopy*** *and* ***bak*** *utilities. It will also give you more time to enter the next command before the floppies stop.*

In order to allow these extra capabilities, the type field of the device/path descriptor has been extended. This version of CC3Disk defines new bits as follows:

$02 Base sector flag (0=1, 1=0) When set, the first sector in a track is 0. When clear, the first sector in a track is 1.

$04 Bytes/sector (0=256, 1=512) When set, the sectors are 512 bytes long. When clear, the sectors are 256 bytes long.

$40 Not in OS9 format Previous versions of CC3Disk ignored this MicroWare defined bit. This version supports it.

Verify issues: With 512 bytes/sector, having the verify flag on (set to 0) will result in very long times to do transfers. The driver receives the halves of the sector to be written in successive calls. The driver must maintain an internal buffer for the 512 bytes of data and read the target sector prior to writing either half supplied by the caller. A cache type buffer is not supported.

Some known floppy diskette formats (in DMode terms):
Atari ST GEM Diskette (single sided): typ=44 dns=03 cyl=0050 sid=01 vfy=01 sct=0009 tos=0009
Atari ST GEM Diskette (double sided): typ=44 dns=03 cyl=0050 sid=02 vfy=01 sct=0009 tos=0009
IBM PC Diskette (double sided): typ=44 dns=01 cyl=0028 sid=02 vfy=01 sct=0009 tos=0009
Atari ST OS9-68K Diskette (double sided): typ=22 dns=03 cyl=0050 sid=02 sct=0010 tos=0010

Note: The PCDos and RSDos utilities automatically set the parameters for the DOS diskette being accessed.

Application Notes: The type NON-OS9 feature of this version of CC3Disk is of special consideration. Normally, CC3Disk handles the OS9 type diskettes by setting up operation parameters using the logical sector zero information created by the Format utility. The number of sectors per track, sectors per track zero and number of cylinders are set in this way.

Diskettes that are NON-OS9 do not have this information in the same format (if at all), therefore this version of CC3Disk has the provision for getting this necessary information from the path descriptor. In order for this to work properly, an application program, such as PCDos, needs to set up the path descriptor in a way that will allow it to read the necessary information from the disk or know the exact specifications already.

If the exact specification are already known, just set up the path descriptor and read sector zero. Reading sector zero forces the driver to acquire the information from the path descriptor if the NON-OS9 bit is set.

If the diskette size format specifications are on the disk, such as a PC-DOS diskette, the application sets the NON-OS9 bit in the path descriptor and reads sector zero. The PC-DOS diskettes happen to contain a BIOS ID in sector zero, so no further reading is necessary. The diskette format is extracted from the BIOS ID and the path descriptor is reset with the track, sector and cylinder values. Another read of sector zero is necessary for the new specifications to take effect.

If the format information is elsewhere on the diskette, things get a little tough. It is necessary to give CC3Disk enough information to be able to read the desired sector.

Remember, after setting the path descriptor, it is necessary to read sector zero to force CC3Disk to use the new values.

Version #11 bug fix: This version of CC3Disk fixes a bug in NON-OS9 diskette access that made the total number of sectors available on the media too short and access past that point was inhibited. This has been fixed.

Version #12b bug fix: This version of CC3Disk stops Boot Order Bug related problems.

This document along with the following patches are available currently on Internet via ***ftp. chestnut.cs.wisc.edu*** *The IPatch files included in the archive are: cc3disk_pcdos_12b.ipc and cc3disk_pcdos_12c.ipc, cc3disk_pcdos_12c.ipc cc3disk.dr cc3disk12.dr.*

NEXT MONTH: The theory behind the BLOB FIX. Why it happens and why the fix works!

=Michael Shell=

RBF *Alert!*

Attention CoCo hard drive users:

Date: Wed, 28 Sep 1994 22:59:40
If you use Kevin Darlings' ***RBF30.mn*** (ident 30 $D1 $4B1153) RBF which accompanies the ***UNDEL*** command you should read this.

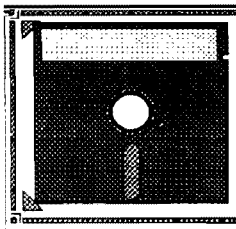
RBF30.mn does not deallocate the cluster that contains the file descriptor when a file is deleted. The disk's allocation map slowly fills up with no longer used file descriptors. It may take months or even years, but it is a very slow time bomb as far as the disk is concerned. On most disks each delete only eats up one sector per deleted file. However, since my 309MB hard drive uses 4 sectors/cluster, mine eats 4 sectors per delete. Consequently, I was losing 1K bytes of storage for each file I deleted. I had lost 501K bytes of storage over the past four months.

I have recovered that lost space using ***DED*** but it was quite time consuming to do so. I have also reverted back to the original ***RBF.mn*** and given up the ***UNDEL*** command rather than spend the time to remedy this problem.

=James Cross=
CoCoList @pucc.Princeton.EDU

TERMINATION NOTICE

The ***OS-9 Newsletter*** will publish it's last issue at the end of this year, 1994. Renewal will only be honored for the remaining three issues. Customers who have already renewed their subscription into the next year will be reimbursed for the balance of their subscription or may choose to trade the balance of their subscription for OS-9 products available from the ***OS-9 Users Forum***. Direct your questions to *Rodger Alexander, OS-9 Newsletter, 3404 Illinois Lane, Bellingham, WA. 98226 (206) 734-5806*



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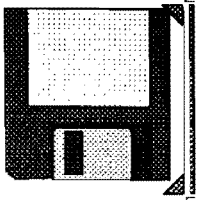

Applications Public Domain Disk:

AR: Aarchive/UnArchive file Utility
JERRYBENCH: 10 x 10 matrix multiply benchmark
SIEVE: Self-timeing benchmark
SAVAGE: Bench mark
PILOT: Pilot language processor
FILER: Miscellaneous Scratch Pad and DataBase
ADRLABEL: Simple Address Label Maker program in Basic09
INVENTORY: Home inventory program
EXAM: Basic09 Multiple Choice Quiz Program
CATALOG: Catalogs disk files for easy reference
CLYDE_v2: Animated graphics display for use as a screen saver
JTFM: Very advanct File Manager utility
JTMENU: Very colorful menuing utility
PT: Periodic Table database.(name, weight, symbol)

Graphics Public Domain Disk 1:

GROUP1-20: Clip-Art graphic files for Tandy's Home Publisher
GROUPTXT: Documentation file for Group1-20 dip-art files
VEFPRT: VEF graphic format print-out program
VIEW: VEF, MGE, CM3, 640 format viewer utility with window
MANDEL: Mandelbrock Graphic generator (Basic09)
C
VIEWGIF2: GIF format viewer with color "flickering"
AIF_MGR: Basic09 utility to create AIF files for Multivue
SUPERIKE: Icon editor Mouse control & drag palette colors
PSHELL Mouse controlled Graphics User Interface for those who don't like Multivue
PUBFONTS: Fonts for Tandy's Home Publisher

Graphics Public Domain Disk 2:

CLOCK1: Graphics clock time display
ICON EDIT: Creates icon graphics for Multivue
PAK: File management Archive utility Pak/unPak into/from
PRTPIX: Prints DESKMATE pictures to Gemini NX-10 printer
ICONS: Library of Multi-vue AIF and Icon files.
PIXLOADER: Loads and displays VEF format graphic files
OTHELLO: Packed basic09 othello game
PIX VEF pix viewer, Atari ST>VEF converter and docs file
FLTBRG VEF pix from Flight Simulator II
MGEPIX View MGE format pics like VEF files
PGCHARTS: VEF pix of charts
SHUTTLE VEF pix of NASA Space Shuttle
BITBUCKET: VEF pix of bits running around circuit board
BALLS. VEF pix of Universal Balls
MAXPIX VEF pix of CoCo Max screen
OLIVER MGE pix of Bloom County's Oliver viewing computer
GOOFY MGE pix of Walt Disney's Goofy
MACPICT1. Updated version of *macshow* program (4 times faster)

Graphics Public Domain Disk 3:

PUBFONTS More Home Publisher fonts converted from Graphicom-Pt III. Basic font converter included in package.
SCREEN 3 screen savers. "motion", "circle", "lines"
FONT Font driver and editor for OS9 graphics screen. Includes an italic font file
VEFNUDES 3 VEF pix of nudes
WATERFALL. VEF pix of a waterfall
ANSIFONT. Full IBM ANSI
DJ500BW Program to dump graphics screens to HP Desk Jet
DEFINITIONS Text that defines all of the graphic formats
VEF2GIF Converts OS-9 standard VEF format to GIF (IBM) format

Miscellaneous Public Domain Disk:

WIND Basic09 program that prompts for window parameters
FUNDOW. Basic09 windows demonstration program
INTFIX IRQ fix required when using the RS-232 PAK. Hack is done to the CoCo not the Mulitpak. VEF picture included
X
Controller (req. RS-232 Pak)
PPRINT Device descriptor and driver for a parallel port for OS-9. Construction article and schematics available in the Nov/Dec 87 "Rainbow" by Tony Di Stefano.
COCOAID Printout listing of OS9 display and window codes for handy reference.
FASTCOCO Text file of instructions for changing the crystal in a CoCo to a faster (higher frequency) crystal to obtain increased speed operation. From stock 28MHz crystal to 38Mhz crystal. Text also describes necessary adjustments to monitors.
M4PKYBRD Text file with 4 GIF pictures describing modifications to the Tandy Model 4 Computer Keyboard for use with a CoCo. No interface required. Simply cut traces on the keyboard as indicated in the GIF pictures and plug into coco.
PPIA. Hardware project to build double parallel I/O board

Multivue Public Domain Disk:

TETRIS: UNIX version (non graphics) with color and sound added
CMDGEN. Creates modules that executes other module(s)
GRADEMASTER: Grade tracking program for students
GINDEX: Rolodex application for Multivue
GSORT: Version 12 of Gsort (No Bugs!)
GCAL1.1: New, fancier replacement for Multivue Calendar
GSHELL32: Includes all of patches to update your original GShell. Includes a *MakeShell* Installation Program.
ICONS: Collections of standard ICON files
WINDFIX: Patch to WindInt to fix a bothersome bug to menu bar.
AIF_MGR: Basic09 AIF files management tool
AIF: Collection of AIF files to go along with ICONS files

Patches and Memory Modules Public Domain Disk 1:

CC3DISK.V11: Allows disk I/O under different formats (PC, Atari)
CC3GO.SSYS: Required when using Speech Systems Real time clock
CLOCK.SSYS: Required to access Speech Systems Real Time clock
FSTGRF: Kevin Darling's High speed patch for Level-II GRFDRV
ULTRAACIA: Creates larger buffer area for faster RS-232 access
TSEDIT: Patch to enable TSEdit to display 80 column Level-II
ACIA.PAT: Another patch by Peter Lyall to enlarge buffer area
DYNAPAT: Patches Dynacalc to permit 100 column display
BOOT80COL: Permit blue/white 80 column text screen on boot-up.
GRFDRV2: Patches Keven Darlings patched GRFDRV for 25 lines.
GSHELL24A: Patches Gshell+ version 1.24a for faster operation
GSHELL: This is the GSHELL+ upgrade patches package.
GSHELLPA: Enhancement patches for GSHELL+ vers. 1.24 or 1.24a
GRFPATCH: Patches GRFDRV for 25, 27 or 28 line screens
SSPAK: OS9 Level Two river&Descriptor for Speech Sound Pak Includes instructions modify the PAK for Level II.
GFX2PAT: Patch to correct misalignment of the "Fill" name in the enhanced gfx2 (GFX2.AR) file on Utility Disk 3.
KRNL: Patch to Kernal to give it OsK (OS9-68000) compatible filenames. "A" "Z" "a" "z" "0" "9" "." "-" "$"
DEDPLUS: Patch to auto-recognize the Bit Allocation map sect.
WINDFIX: Patch to prevent Multivue menu-bar "rollover"
MV2PAT: 4 IPatch files: WindInt; CC3IO; CC3IO.org; Gport.ipc
PARTGEN: Patches Burke&Burke BBFHDisk and provides new /H0 & /H1 descriptors to allow partitioning of the hard drive.
CACHE IPatch to CC3Disk to permit cache capability to 1000 sectors
CC3DIS: IPatch to CC3Disk to permit high density (1.2/1.4Meg)
SCREDPATCH: Patches ALT key crash bug
CC2PATCH: Fixes bugs in CC2 and patches to RLINK & RMA
DELDIR.PAT. Bug fix to *deldir* command
WINDFIX: Patch to WindInt to fix a bothersome bug to menu bar.

Patches and Memory Modules Public Domain Disk 2:

DESK3.SCR: Modpatch to modify the DESK module to use hi-res joystick
DMHELP: Patches to add linefeeds to Xmodem and cause DESK to read /DD
MULTID Modifies each Deskmate application to run as independent applications from Multivue. ICONS included.
SERMIDI: Semi device driver module to provide midi output from the "bit-banger" port
SIMON PATCH: One byte patch to enable Level One *Simon* utility to operate correctly under Level Two.
RENAME: IPatch to the RENAME command to allow full pathname in second descriptor
OS9P3 Boot Module that will PRINTERR# messages when errors occur.
RAMMER_PAT IPatch to increase Kevin Darling's RAMMER Ram Disk to 720K
CLOCK_UPDATE: Clock modules that eliminate the IRQ problems when using the RS-232 PAK. No hardware "hacks" required.
RPKFIX. Burke&Burke REPACK patch to fix bug in OS9P1 module
RBF30 IPatch to RBF to permit the UNDELETE command included.
SMARTWTC Clock modules for use with the "smartwatch" installed on your disk controller under the Disk ROM Chip.
VEMAC: IPatch and macro files for improving VED's Help options
SCFED2: Kevin Darling's Patch to SCF system module to enhance the keyboard buffer.
BOOTROM: IPatch to REL module and Extended Basic program to create a ROM boot routine that can be burned into an EPROM to accomplish true Boot ROM capability
VDGINT: CoCo-3 update to original stock VDGInt. Eliminates CoCo-2 compatibility codes reducing the size considerably. Two patches included. One eliminates bug and is 6309 native mode.
VRN. The VRN driver and it's associated FTDD, Nil and VI descriptors are not only intended to replace subLOGIC's FT+FTDD and Sierra's AGIVIRQDr+VI, but also intended to provide a general user interface to VIRQs and MMU RAM blocks. See "read.me" text in archive.
RMA6309: Purpose: Ipatch to add 6309 commands to the Relocattable Macro Assembler for OS-9 Level II found in the OS-9 Development Pak.
BIGDISK. Purpose: Ipatch file modifies stock sc3disk so that the 8" drive bit in the drive descriptor is detected. Thus can be used to switch data transfer rate on a "hacked" original (12 volt) Radio ShackController. Two new drive descriptors are included

Patches Public Domain Disk 2 (Cont'd):
(5" 1.2meg and 3.5" 1.4meg).
DYNCAL: Bug fix patches to *Dynacalc, Dynastar,* and *Data Bank*
PARALLEL: Driver and Descriptor for hardware parallel port
DSET: Clockset module for users of DISTO SC II with "3in1" or "4in1" and NitrOS
MIDIMOD: Midi port descriptor (SCF device)
MYRAM: A rewrite of the RAM driver. Permits dmode utility up to 1.7Megs
SHELLPAT: Ipatch file to ShellPlus2.1 to change program and data buffer size
CC3DISK.6309: Patches stock Disto SC II to use 6309 block transfer
BLOBSTOP_10: Patches *Boot, CC3Disk* and Disto *CC3Disk* for BLOB free 512byte I/O

Programming Public Domain Disk 1:
CC2: Lev-2 C Compiler double pass execution module
ALIB: RMA (Relocatable Macro Assembler) Library files
C_TUTORIAL: 14 Chapter text with example source codes for learning "C".
DEVPAK_C_UPDATE: Instructional text on how to apply updates to the "C" Library from from the OS9 Development System disk.

Programming Public Domain Disk 2:
CC2RAM: C Compiler execution module for compiling 'c' files in RAM
CLIBTI. Kreider "C" Library
CLIB.I Kreider "C" Library
CGFX.I: "C" Graphics Library
STDLIB2.C: Kreider's standard "C" Library files
PASCALDEFS: Pascal Library files for Level Two
AUSTRALIAN_SCULPTOR: Sculptor source codes for creating/demonstrating Sculptor database system
DEVSYS22: C-Compiler menu driven Interface Program. Will also work with Pascal and ASM or RMA assemblers.
CSTART: Direct replacement for Microware's cstart.r LIBrary File.
MINILINT: Utility to precheck C source files for construc/syntax errors
SIGMON: OS-9 Level-II Debugger (better than Microware's DEBUG).
BLIST: Prints basic09 programs with pagination and breaks long lines.

Programming Public Domaind Disk 3:
GUILIB10: Graphical User Interface C library by James Delaney & Daniel Hauck
C_ENV: Mouse driven front end for the microware C-Compiler
GFX3: Enhanced graphics module for Basic09
CARRAY: Corrects C-Compiler bug in which multidimension arrays are partitioned
CC5: Replaces stock CC executive. Makes running JMLSOFT's "c-Prep" faster
FINDSTR: Replacement for the "'findstr" C standard library call. 63% faster
CPREP19: Standard ANSI C pre-processor for level 2 C compiler. Version 1.9

Sound-Music Public Domain Disk 1:
PLAY5: "Plays" digitized Mac audio files (Play 5 is newest version)
ULTIMUSE: Lets you write and edit sheet music on a graphics screen, and play on any MIDI-equipped synethesizer
LYRA: OS9 Demonstration of Lyra (Similar to UltiMusE)
SERMIDI New /T1 descriptor that outputs bytes at the MIDI rate of 31,250 baud
MIDIMOD: Midi port descriptor (SCF device)

Sound-Music Public Domain Disk 2:
"PLAY" FILES

Jfk.mac	aye.mac	back.mac	beame.mac	bimbos.mac	damrat.mac
davel.mac	doot.mac	genqtrs.pla	mrscott.mac	power.mac	vulcan.mac
Landing.pla	Liftoff1.pla	disrupt.pla			

Telecom PublicDomain Disk 1:
ACIA_MapIn: Filter to change control strings from a terminal into corresponding ansi strings.
ACIA_MapOut: Appendage from the ACIA Driver; gets control of Init, Read, and Write and passes them thru ACIA to the physical device.
DNLOAD: Copies input from specified device to Stdout.
UPLOAD: Copies Stdin to specified device.
BBS: Basic09 Bulletin Board Modules
BIGT Smart Terminal with xmodem, ascii protocols
TUBE.C. Copies characters to/from device.
DTERM: Dumb terminal with xmodem protocol.
KERMIT Download/Upload protocol between terminal systems
USER. BBS Sysop utility to view user files.
TELSTAR2.3: Excellent smart terminal program (40k) for level-II.
XCOM9: Another excellent full function terminal program.
AUTOBAUD_TSMON: Detects incoming baud rate.

Telecom Public Domain Disk 2:
WIZPRO: Basic09 - OS-9 Level 2 Terminal program

Telecom Public Domain Disk 3:
JTERM: Telecommunications package. Requires RS-232_PAK.
BBTERM: Telecommunications package. Requires RS-232_PAK.
OSTERM208: Telecommunications package. Version 2.08 Requires RS-232 PAK.
NEWXCOM9: Telecommunications package. Bells and Whistles added to orig.
SCRIBE23 Offline message reader and auto posting utility
BITBANG A device driver for the internal serial port permitting 1200 baud
MAXQWK10: Offline message reader
SUPERCOM22. Level Two full function terminal program with xmodem
ABQWK30: Offline message reader
HI_SPEED: Ipatch files to correct problems and improve performance between SACIA and the 6551 serial chip

Telecom Public Domain Disk 4:
SACIA: Replacement modules for ACIAPAK. Two modules included: Sacia.dr for use with RS-232 pak plugged directly into computer or in any slot of "hacked" Multipak; Sacia.mpi is for use with an un-"hacked" Multipak with the RS-232 pak in slot-1 only. Also a copy of Bruce Isted's "xmode" replacement for stock utilitiy. Setup the same as K.Darling's "Dmode".
INTADR: Text file listing all of the networks available from Internet and the proper addressing to send mail to them. Also proper addressing from the other networks to Internet.
RZSZCOCO: ZMODEM protocol file transfer modules. One for receive, other for transmit. Permits bi-directional error checking of data transfer via an RS-232 port.
STERM: 6809 and OSK terminal program. C source code included for both platforms. Uses termcap files for download protocols including Zmodem, Xmodem, Ymodem and CompuservB+.
HISPEED Patches for SACIA to give more reliable performance at 9600 baud.
ACIADRV Compatible replacement for ACIAPAK for use with RiBBS BBS software

Utility Public Domain Disk 1:
ARCHIVE: Creates destination directory and copies files to new dir.
MODUTIL: Collection of enhanced standard OS9 utilities: mbackup, mdate, mdump, mformat, mmakdir, mmfree, pmode, rep, split, tmuse, verm, mxmode
RSDOS: File transfer utility from Radio shack Dos format to OS9
SDIR: Super Directory to enhance/replace standard DIR utility
AMPUTATE: Forces the term call of the cache device driver returning memory to the system and delete all files on the device.
PALETTE: Change scree/window palette (color) on the fly
AR: OS9 Archiving utility (version 1.3)
DLS: Directory utility
PCDOS: File transfer utility from PC format to OS9
WCONFIG: Window configuration utility
BCO OR: Change background color: Bcolor <color>
FCOLOR: Change foreground color: Fcolor <color>
BORDER: Change border color: Border <color>
EATLF: Deletes Line Feeds from downloaded files
PRINTHELP: Prints SYS/helpmsg to screen/printer
QTIP: Disk zap utility (self prompting) Text or Graphics screen
RESET: Keyboard "cold start"
CALL. Calls commands repeatedly. Command list with lines on stdin.
IPATCH. Creates a new file from an Original_file and a Patch_file
SORTDIR: Sorts directory entries in ASCII order
WMODE: Returns status of current window
CLEARD: Deletes all files from directory
LABEL: Renames the Disk Name/Label (self prompting)
STRIP: Strip or Add Character (line feed, carriage returns)
ZAP: Disk zap utility. Must be in 80 column mode
LS: Unix type Directory Utility
SYSINFO: Complete status report of current window/terminal including current palette colors.
CONVERT: Converts decimal to hexidecimal equivalent numbers(visa versa) but limited to only 65000.
MAKPATCH: Created patch file for use with IPATCH
TREE: Directory utility. List hierchical listing of all directories, files, subdirectories, files.
PAK File Archive utility
UTIL3. Merged utilities file:
PROC. Enhanced "PROCS" utility showing I/O of each process
PMAP: Memory map of each process location
PATHS: I/O path of each process
DDI: Device Directory
IDIR: IRQ Directory
DIRM: Dir -e equivalent of MDIR
MMAP: Memory map of used and unused 8K blocks
SMAP: Memory of pages in RAM
DMEM: Memory dump by location instead of file name
COPY: Updated PD version of standard Copy utility
DIR: Updated PD version of standard Dir utility
PURGE. Deletes file(s) from a directory
DASM. Disassembler for Level-I ASM and Level-II RMA files
DISKOPT: Graphics DCHECK Utility (SelfPrompting)
CUTS: Coder/Decoder for transferring binary or ascii files on systems that do not support error checking protacols.
DAM: Gives a graphic display of disk sector allocation map
NEWCRC: Replaces the VERIFY command. Doesn't require new filename.
DPOKE: "Poke" hex code to the offset address of a file

Utility Public Domain Disk 2:
DUPEFILE: Duplicates any file on the same disk.
MORSE. Reads data from std-in and converts to Morse Code audio tones.
SDIR. Unix "LS" type 'Super Directory' utility
SHELL21: OS9User Group's expanded "shell+" module for OS9
SCRIPT Script files for use with Shell+
ULDIR: Converts files and directory names to proper case(Upper/Lower)
CRC: Turns off the CRC check routine in OS9p1
HDKIT. Peter Lyall's Hard Drive Backup/Restore Utility
BOOTSPLIT Separates merged modules into individual files
D: Single column (non-alphabetized) directory utility
DEMODE. DEviceMODE utility to change disk drive parameters
DMODE: DeviceMODE utility to change disk drive parameters
DIRCOPY. Copies files from one directory to another
PRINT: Formated I/O listing to printer device
PRINTERR. Level-II version of microware's PRINTERR.
PRINTHELP: Utility to print help message file to screen/printer
SEPARATE. Separates merged modules into individual files
DIR. Enhanced Directory Utility with Sort and Search options.
DISKCAT. Directory cataloging utility with graphics overlays.
DISASM: Disassembler of machine code files (ASM and RMA)

Utility Public Domain Disk 2 (Cont'd):

DED: Disk ZAP utility. Must be in 80 column mode.
ULDIR: Converts Directory names and files to proper Upper/Lower Case (Directories=UPPERCASE, Files=Lowercase)
COMPARE: CMP utility that compares 2 files (one in memory, other in ram
RSFORMAT: "DSKINI" standard 35 track RS-Dos format
RSRENAME: Renames a file on a standard 35 track RS-Dos format
REBACK: Basic09 enhancements for Peter Lyall's HDKit Utility
MAIL: Multiuser login MAIL (scan/read/post) program/utility
DIRUTIL: Graphics enhanced Directory utility with overlay windows
SBACK: Re-write of REBACK for use with a mouse and Multivue.

Utility Public Domain Disk 3:

DOALL: Utility that supplies a directory listing in pipe format, designed to take advantage of shell+ wildcard features
EASYEDIT: Change device descriptors in your OS-9 Bootfile.
GFX2: Updated GFX for OS9 Level-II by Kevin Darling and Kent Meyers
INDEX: Contains three programs that create, maintain and read an index of disk files
KUTIL: To extract/modify/install the OS-9 Kernal
SDUMP: Screen dump to printer. Background tasking.
SMOUSE: Permits standard PC serial mouse usage from an RS-232 port
SWISE: Utility to produce side wise printouts from dynacalc
VDG: Generates VDG type screen for Level-I applications.
SCOPY: Single drive copy util. for copying to dissimilar formats
PARTGEN: Hard Drive Partitioning utility for Burke & Burke systems.
PS: This is a "Point & Shoot" Menuing utility/application
SPEEDISK: Disk repack/compression utility by Brian White. version 2.1a
KFORMAT: Disk Format utility that is self prompting.
SMENU: GShell graphics menuing environment/application.
MENU: Text windows menu utility/application.
CCTOOLS: Point & Click File Manager, Disk Manager, Util Manager and Program Launcher.

Utility Public Domain Disk 4:

DATES: Calculates the day of the year given the year, month, date.
DUALDOS: Puts an RS-DOS sector on an OS-9 formated disk
MDUMP: Dumps memory to printer or screen
CCUNZIP2: MS-DOS de-archiving utility (PKUNZIP) for use on OS-9
VU: Text viewer utility. Scrolls text vertically and horizontally
BRUIN: Unix like Backup/Restore Utility
FREE: 4 times faster then stock *free*. Reads out in kilobytes vs. sectors
BOB VAN DER POEL UTILITIES:
- INTLEAVE: Checks disk drive to find optimum interleave.
- DSETIME: Causes system clock to be reset by DISTO hardware clock.
- DIR: A more complete version of Super LS by Conejo Computer
- FFIX: Listing utility that eliminates TABS and CR/LF
- PHONE: Phone dialer and "auto login" to BBS's
- BLIST: Display a BASIC09 program that has been listed to a file with pagination and properly formats the break up of too long lines.
- HDIR: A TREE Directory
- VEFSAVE: Save an existing grphics screen to disk
- VEFPRINT: Print a VEF file to an Epson printer with a 640 dot mode.

VEFPRINT 23: VEFPRINT for printers that print 23/216 inch line spacing
VEFPRINT 25: VEFPRINT for printers that print 25/216 inch line spacing
MAKEFILE: Assembles VEFSAVE and VEFPRINT listed above
CCHDISK: Replacement for DISTO's hard drive adapter driver.

Utility Public Domain Disk 5:

DEARC: Dearcluves files that have been archived by MS-Dos/Unix ARC utility
DIVVY: Creates multiple windows (with shells) on the same screen (OVERLAYS)
GSORTC: Replacement for original MultiVue GSORT (Ver 12: All bugs fixed)
MAKDIR: Replacement for original Microware MAKDIR utility
OS9ARC: OS9 version 1.0 of MS-Dos/Unix ARC utility
REBOOT: Archive contains "cold" and "warm" reset
TCU: LF & CR stripper and TAB to SPACE convert
VIRUS: Maintains a file of specified files and their current CRC for comparison
WC: Counts characters, words and lines in a specified input file
WHEREIS: File finder utilities: *FF* and *WHEREIS*
ALIAS: Creates a file-name that will chain to a specified execution module
STEST: Test sectors of either floppy or hard drive
MELT: Fun screen displays: melts text to bottom and then builds it back up.
UNFRAG: Utility reports file fragmentation or will correct fragmentation
ZACK SESSIONS UTILITIES:
- BANNER: Banner printing program
- SDIR: Super Directory utility to replace the stock version
- LABEL: Change disk label volume name
- CVTPIC: Converts HSCREEN2 images in DECB to VEF format in OS9
- PRT: Printer utility to print several files, one after the other.
- ATTR: Replacement for stock ATTR. Accepts wildcard patterns
- GRDEMO: Creates a VEF demo boot disk for a continuous demonstration
- RSSAVE: Functions like DSAVE except from RSDos disk to /d0 in OS9
- LABELS: Address Labels and Free Format Labels print program
- FLBACKUP: Backup utility that uses a RAM Disk for faster copying
- PRSET: Sets Tandy's DMP-106 printer font characteristics
- SETUP: Sets up values for monitor and hi-res/right port during startup

Utility Public Domain Disk 6:

DISKCOPY: Copies files from one directory to another or from one media to another regardless of the format.
DSCAN2: Scans Hard or Floppy drives to locate bad sectors
SCAND: Scans Hard or Floppy drives to locate bad sectors (Faster then DSCAN)
POP_WIN: Creates windows on the fly
FSEDIT: Disk Editor
COMPRESS: UNIX/VMS data compression utility
AR14: Another version of the AR Archiving utility
CMPFIX: Changes a CMP command output to an IPatch format file
SETBIT: Used to set bits in allocation table representing bad sectors on disk
HEXDEC: Hexidicimal/Decimal Conversion program that goes beyond 65000
MD: ColorGraphics Display of *MDIR*. Identifies types by color code
MERGEMODS: Provides user with a selection of files for merging that will fit into an 8K memory block.

Utility Public Domain Disk 7:

CRONC: Background task manager that wakes up every minute to check data file to see if it should execut a specified process/application (CRON v.10).
CRONTOOL: Utilities for CRON
SCULPT_SCRN.PAINT: Self prompting utility to create custom input screen for Sculptor database
SS_MENU: Shell+ script file that allows you to run various OS-9 Level-2 screen savers
JTFM: File manager. Graphic display of directories and available commands. Mark file(s) for processing. All standard command processes available on screen
MORE: Text viewing utility
TAR: UNIX file compression utility
STREAM: Fast Hard Drive Backup Utility. 20 Meg Drive in 2 hours.
AR1.5b: Newest version of AR Archive utility
JUNK: Saves deleted files to a "JUNK" directory
TRSMON: Multi user security utilities: *TSMon, Password, Login, NewUser*
MDIR4: OSK type *mdir* with search and type options
DIRECT: Simple Directory Copy utility
CMDGEN: Creates executable module that calls up parameters and executable files in other directories. Useful with Multivue
FILES: Multiple utility: *Dir, View, Dump, Find String, Word Count, Count CTRL Characters, Fix file, Strip Characters, Delete File, Copy, Misc. Information, Ascii char. display, Ascii Control char. display*

Utility Public Domain Disk 8:

CLRMEM: UNLINK and DEINIZ utilities combined
FORMATS: Formats multiple disk using drive 0 and 1
UNLZH_7: LZH compression utility
LHA211B: Version 211 of LHA Archiver/DeArchive Utility for LZH extension files written by Haruyasu Yoshizaki. Includes complete original IBM executable file and docs as well as the OS-9 version by E.M. Krenciglowa (1993).
BSUBS1: Collection of 17 Basic09 subroutines inspired by the ANNEX Subroutine Archives in Micro Soft's QuickBasic. See documentation files for list of sub routines.
BSUB2: More Basic09 subroutines. See documentation files for list of sub routines.
BACKAR_4: Hard Drive Backup utility, similar to DOS backup utility. Ipatch file included to modify stock RBF manager.
IDIR2: Improved replacement for Kevin Darlings 'IDir' utility in his KUTIL package. Corrects a problem left in K.Darlings version.
XXMODE: To report or alter current option settings of SCF device descriptors in memory or on disk in single module files.
MKDIR: Creates directory with user defined allocated sectors
SCF14: Adds Kevin Darling's SCF patches and the ability for a device to be non-sharable.
PCMENU12: Graphics interface menuing environment for the PCDOS utility
LZH10: LHArc utility for OS9/6809
SOUND2: Similar to "display 7" except will accept parameters for repeated tones.
COLORC: File transfer utility between OS-9 and IBM. Runs on a PC not the CoCo.
MBACKUP: Backup utility that uses all available memory (512K ?) to speedup backup
PRINTER: Corrects a minor bug in the PRINTER driver so that an included utility called MOTOR can be used to turn the cassette relay of and on.
RCOPY: Graphics interface menuing environment for the RSDOS utility
UNARJ09: .ARJ archive/dearchive utility
UUENCODE: ASCII file transfer protacol simular to CUTS for transferring binary files in ASCII or ANSI
VFY11: Intelligent IDENT & VFY utility. Finds $87CD and calculates from that point
WEDGE_16: Utility to break up merged modules such as your OS9Boot file
MERGE5: Updated version. Provides OSK like options and command line parsing
FIXMOD: Like VFY9 above but can also save out merged modules
BOOTROM: Instructions and RSBasic Code for creating an EPROM to boot OS-9

Utility Public Domain Disk 9:

MCRON11: Multiuser CRON utility to control timed events
LS10: Version 10. The ultimate multi function directory listing utility
EYES: Screen Saver that activates after several minutes of no activity
AR2.0: Newest version of AR by Carl Kreider
NITROIo: Version 1.6 upgrade to NitrOS9
LHA211C: Version 2.11c of LZH archive/de-archive utility
DISKCAT: Shareware by Bob van der Poel. Floppy Disk catalog program
BSUBS3: 3rd in a collection of Basic09 utility routines
CAT_1_0: UNIX like directory utility that also strips, idents, merges, etc.
UU6809: Enhanced version of the UNIX uuencode/uudecode utilities.
JTREE: Color coded tree directory
SHELHIST: Keyboard buffer enhanced version of SHELL PLUS
BACKAR_4: Backup utility similar to the MS-DOS backup utility.

Word Processor Public Domain Disk 1:

UEMACS: "Micro E-Macs" Unix Text Editor.
MROFF: Text formatter using Word Star DOT"." formatting commands.
ED31: Graphics screen editor. Lates version replacement for SLED.
XLED: Complete all in one text editor. 30K buffer
WP: Complete word processor version of ED20 above
JTDICT: JT_Series: Dictionary (version 1.4)
VEMAC: Ipatch to modify Bob van der Poel's VED. HELP file to prevent VED returning to the text screen after each selection from the help menu.

Word Processor Public Domaind Disk 2:

TED10: Tiny Editor
PF23: Print Form (vers.23) program. Written in basic09 so that the user can easily modify the format for his own needs.

Club Activities Report

Bellingham OS9 Users Group - Longview/Kelso CoCo Club
Mt. Rainier CoCo Club - Port O'CoCo Club - Seattle 68xxx Mug

Port O'CoCo

September was a double header, contrary to national baseball. The Kitsap Computing Seniors' meeting during the morning was a blockbuster presentation. **Elizabeth Schellberg**, the manager of Applied Power Products drove from Portland, Oregon to talk about power irregularities and how they affect computer equipment. The excellent overview of the problem was summed up with the statement, *"In the 1970's, if the power surged a little or even dropped off for a second or two while you were at work, you would have no way of knowing when you came home. Today, if there is any significant irregularity, you walk into a home with flashing 12:00's all around you."* From there we learned what our chip-dependent equipment needs in the way of power and what taxes or kills it.

Applied Power Products is a contracted information and product supplier for many of the power companies in the Northwest. In our case, Puget Power is referring all questions and protection needs to them. they are available at 1-800-289-2689 to answer your questions and suggest surge protectors, as well as other protection equipment, that are more than just a glorified extension cord.

Their products will protect your equipment except in the most extreme cases and a lifetime insurance policy to cover your equipment if it is damaged. During the show and tell it was surprising to see how much junk there is out there that offers little or no protection.

Ms. Schellberg brought a small supply of units to sell at discounted prices. She left with empty boxes and a handful of checks! I plugged in my unit before I turned on my computer, VCR, TV and fax this morning! Whether you have protection or not, give them a call and discuss your situation. Mention this article. You may be a greater risk than you thought!

The evening meeting also was constructive. **Terry Laraway** brought us up on the development of the CoCo-3 emulator. Apparently, the work is well under way in Vancouver, BC. In the meantime, *Rick's Computer Friends* in Kentucky continues to collect funds to support the development of the emulator. Those present decided to send a contribution to the development fund. Terry also discussed the newest version of Nitros-9 which for all practical purposes is OS-9 Level Three

Gene Elliott pulled the rug out from under all of us again by stopping by St. Vincent's on his way to the meeting. He found another CoCo-3 there for a fraction of the going price. He's found several at this one location. I swear that I drop into this place the day after he's been there.

The rest of the evening was spent working on the club's tower. **Buzz Jones** brought in all the pieces and he and **Gene Elliott** started working on putting all the pieces together. The BIG SUCCESS of the night was the installation of the new LED for the front of the case. Instead of the display of some silly number, ours now proudly displays **"COCO".**

Our next meeting is October 17th. The topic will be *spreadsheets and what they can do.* Also, *starting a boot disk for OS-9; what's it's real purpose?*

==Donald Zimmerman==

Seattle 68xxxMug

The September meeting of the Seattle 68xxx Micro Users Group featured the installation of a Puppo IBM Keyboard Interface. Installation time was 30 seconds. The Puppo board was one purchased for $17 from Mark Schoenberger of Phoenix, Arizona. He came across 30 of these boards without EPROM's. Twenty five of the boards worked perfectly after EPROM'S were installed. Five of the units failed to function and are available for $5. If you would like to purchase one of these boards, contact Mark at 6925 W. Cypress St., Phoenix, AZ. 85035-3332.

After the installation, the group played around with the "Hot Key Functions". When you select Disk Extended Basic from the boot menu, Basic Commands are available by holding down the [F10] key and pressing "S" for "SAVE" or "L" for "LOAD", etc. When you select OS-9 from the boot menu, the "Hot Keys" are modified to represent Basic09 Commands.

Rodger Alexander shared a letter he received from Bob van der Poel thanking the group for pointing out the minor irregularities in his *DiskCat* program. He has since updated the program with modifications to correct the problems discussed at last month's meeting.

Scott Honaker presented an interactive discussion on setting up a hypothetical network. By evaluating the specific necessities required to communicate between a group of people, such as "air as a media to carry sound waves" we were able to make direct comparisons with hardware and software used in today's computer networks.

October's meeting will feature a presentation on telecommunications: *Using Bulletin Boards.*

==Barbara Alexander==

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RiBBS (FidoNET)
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-- Spokane --
RiBBS (FidoNET)
(509) 325-6787

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PC-Board (PC-Net) - CoCo Conference #5
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