OS-9 Newsletter©

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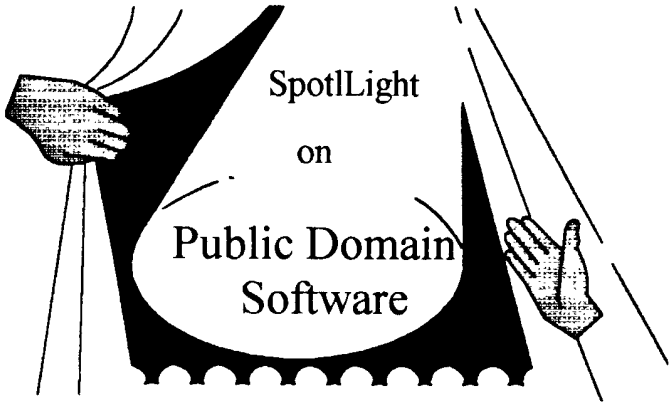

VDGInt Interface: Edition 2

One of the most common complaints about the stock VDGInt driver is that it is very large, and takes up too much memory in the system map. The reason for it's size is that it supports Coco2 compatible graphics commands. In the Coco3, the equivalent code (line draw, etc.) has been moved out of the system map, and into another module entirely (grfdrv).

If you never use the Coco2 graphics commands, they just sit there and take up precious room in your system map. With this archive, you can shrink VDGInt by taking out all of the code you never use. In fact, 2 versions of VDGInt are included here, a 'small' version (6809, 6309) and a 'tiny' version (6309 only). A 6809 version of 'tiny' is not included, sorry. If you really want to save that extra few bytes, I suggest you buy one of the 6309 native mode patches

What's Been Deleted:

The small version simply deletes the unneeded Coco2 graphics commands, while the tiny version also removes most of the VDG text screen cursor positioning codes. I know I've never used them, so it's nice to get that additional little bit of room by deleting that code, too.

==SMALL==

* DISPLAY CODES: $0F (display graphics), $10 (preset screen), $11 (set color), $12 (end graphics), $13 (erase graphics), $14 (home graphics cursor), $15 (set graphics cursor), $16 (draw line), $17 (erase line), $18 (set point), $19 (erase point), $1A (draw circle), $1C (erase circle), $1D (flood fill)
* SETSTT CALLS: SS.AAGBf (reserve an additional graphics buffer), SS.SLGBf (select a graphics buffer)

(Continued on page 2)

CoCo/OS-9 Clubs

Roy Chapman (Seattle), Chris Johnson (Tacoma) and Buzz Jones (Port Orchard)

Port Orchard CoCo Club is planning a special ***PIZZA PARTY*** meeting for their December 13 meeting at the Stock Market Store in Port Orchard at 7:30pm. Contact person is Donald Zimmerman (206) 871-0319.

*** IN THIS ISSUE ***

"TINY" VDGInt module for more System RAM **Pg. 1**
2 new VDGInt modules to replace the older stock module

Cover Picture **Pg. 1**
CoCo Computer Club members, "Hard at Word"

INTERNET Address to other Networks **Pg. 3**
Contact friends on other networks from Fido or Delphi or CIS

6309 GShell Enhancements **Pg. 6**
Multivue update proposals by Boisy Petrie

Step by Step Instructions to Install "Faster" Crystal **Pg. 8**
30% speed upgrade - 50% with BowerBoost or NitrOS

Club Activity Reports **Pg. 10**
Bellingham, Port Orchard, Seattle

(Continued from page 1)

==TINY==

(all that 'small' deleted, and more)

* DISPLAY CODES : $01 (home alpha cursor), $02 (position alpha cursor), $03 (erase line), $04 (erase to end of line), $05 (alter cursor), $09 (move cursor up), $0B (erase to end of screen). Bounds checking and error output on $1b $31 (set palette to color) has been removed, and only the applicable bits used
* SETSTT CALLS: SS.ComSt (switch between true/fake lowercase. Really!)
* GETSTT CALLS: SS.Alfas (return VDG alpha screen memory information), SS.Cursr (return VDG alpha screen cursor information)

Left in: all other display codes (not a lot)
* $1B $30 - set to default palette (Not in manual!)
* $1B $31 PRN COL - set palette PRN to color COL (Not in manual!)
* SETSTT CALLS: SS.(D/P/A/F)Scrn - CoCo3 graphics calls
* GETSTT CALLS: SS.ScSiz (get screen size), SS.Palet (return palette information)

What's been changed:

One bug that's been intentionally left in the small version has to do with changing the cursor colors. At offset $030E in the stock VDGInt there's a SUBB ($C0) where there should be a SUBA ($80). The net result of this is that when you change cursor colors, the table given on page-4 of my manual is incorrect. The colors are actually shifted down by 3 with respect to the table. i.e. display 5 23 gives you red ($26 from the table) instead of green.

The reason that the bug is left in is for backwards compatibility. The tiny version side-steps this problem completely by not allowing you to change the cursor colors.

One other bug that I've never heard of people running into is an out of memory error when opening another VDG text screen. This is because there is NO error checking on the F$SRqMem (system request memory) call. In my opinion, no error checking in such a critical point is a VERY BAD BUG. If you have only 2 pages (or less) left in your system memory, opening another VDG text screen will probably crash the machine!

To combat this bug, I've added error checking in all versions of VDGInt to the code in question. It is 2 bytes long, so it doesn't take up much room, even in the tiny version.

The code in the tiny version has been optimized for size, and sacrifices speed and some error checking to squeeze out those extra few bytes. Quite frankly, you'll never notice the speed decrease (a few 1/1000's of a percent). When you run it on a native mode system, the net effect is still to speed things up. The error checking that has been shrunk will not affect programs in any way, and illegal calls to VDGInt will still result in the correct error codes.

Hopefully you will not notice any difference in functionality between the small and the tiny versions. If you find that you need something that is not in the tiny version, simply use the small or original versions.

Installation

To install the patches, you'll need the IPATCH program from Bruce Isted (Available from any Public Domain Library source.). The command syntax is:

_____:ipatch VDGInt_xxx.ipc VDGInt VDGInt_new

Replace the 'xxx' in the .ipc filename with the name of the version you want. Then build an OS9Boot with the new VDGInt included, reboot, and you'll have at least 1.5K (6 pages) more in your system map if you use the small version, or 2K (8 pages) if you use the tiny version !! Of course, you should remember to keep a copy of your

(Continued on page 3)

OS-9 Newsletter

Editor: Rodger Alexander

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Submissions **are welcomed in any format and can be mailed to the above address or sent via electronic mail to the editor: Rodger Alexander, on Delphi (UserID: SALZARD) or FidoNET (1:301/3401@fidonet.org) or Internet (ralexander@bones.nwrdc.wednet.edu). Unfortunately, we do not have funds to reimburse authors of selected articles. However, a complimentary copy of the *OS-9 Newsletter* containing your article will be mailed to you, PLUS the satisfaction that you will have the admiration and appreciation of all of our readers.**

The *Bellingham OS-9 Users Forum* is a hobbyist club, organized for the purpose of providing information, services, products and events that support the OS-9 operating system for 6809/68xxx based computers. Our efforts are not intended to earn or generate any profit for the club or any of it's members.

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(Continued from page 2)

original VDGInt around. too.

All of the versions have been tested with the Carmen Sandiego game. as it's the only VDG style game I have. They work. and I don't see any reason why other VDG games should have problems.

That being said. however. the usual disclaimer applies: I make NO GUARANTEE as to whether or not these programs will work or behave in a friendly manner. Reasonable caution applies when using the new VDGInts. I hope this update makes your system RAM woes go away! If not. well. there's only so much I can do. 8-)

Oct. 13. 1993
Alan DeKok.
(FIDO: Alan DeKok)
(Internet: aland@physics.carleton.ca)

***VDGINT.AR** is available from most OS-9 Public Domain sources (CIS, Delphi, Data Warehouse BBS, Tacoma OS-9 BBS) Also available on our own OS-9 Users Forum PD Library Update Disk for $1. Send your order to 3404 Illinois Lane, Bellingham, WA 98226 (206) 734-5806.*

Terry Laraway's
CoCo Etcetera
Parts
Hardware
Hard to find items

Hitachi 6309 chip & socket	$12
Kel Am custom 'Y' Cables	(Call)
512K Ram Chips/Kits	(Call)
2400 Baud hayes compatible ext.modems	$40
Serial to Parallel Interface with 64K buffer (Cable incl.)	$50

Phone (206) 692-5374
41 N.W. Doncee Drive, Bremerton. WA 98310

INTER - NET ADDRESSING

INTRODUCTION

This file describes how to send mail from InterNet to other networks around the world, and from other networks to InterNet.

The address formats to reach other networks from Internet includes 4 (or 5) fields:

To Network: The network we want to send to.
Address: The address format for addresses in that network.
Send To: What address to use when sending mail.
Help: The person to contact in case of difficulty
Source: Credit to the person who sent me the entry.

LIST OF NETWORKS

These are the currently known networks with abbreviated names:

alanet	American Library Association Network
applelink	AppleLink (Apple Computer, Inc.'s in-house network)
attmail	AT&T Mail, AT&T's commercial e-mail service.
bitnet	international academic network
bix	Byte Information eXchange: Byte magazine's commercial BBS
bmug	Berkeley Macintosh Users Group
cgnet	CGNET Services, international network of researchers in Agri.
compuserve	commercial time-sharing service
connect	Connect Professional Information Network (commercial)
easynet	Easynet (DEC's in-house mail system)
EcoNet	Similar to PeaceNet
envoy	Envoy-100 (Canadian commercial mail service)
fidonet	PC-based BBS network
geonet	GeoNet Mailbox Systems (commercial)

(Continued on page 4)

(Continued from page 3)

GSFCmail	NASA Goddard Space Flight Center mail system
internet	the Internet
mci	MCI's commercial electronic mail service
mfenet	Magnetic Fusion Energy Network
nasamail	NASA internal electronic mail
omnet	aka SCIENCEnet, a network of researchers operated by SprintMail
peacenet	non-profit mail service
SIGNet	?
sinet	Schlumberger Information NETwork
span	Space Physics Analysis Network (includes HEPnet)
sprintmail	Sprint's commercial mail service (formerly Telemail)
thenet	Texas Higher Education Network
undpnet	United Nations Development Program's network.
UNINet	A network in South Africa

Sending mail FROM The Internet

Editor's NOTE: I have not included all of the Network's as listed above, but tried limited the listing to those of most interest to our subscribers in order to save space.

To Network: applelink Address: user
Send To: "user@applelink.apple.com"

To Network: bitnet Address: user@site
Send To: "user%site.bitnet@gateway" where "gateway" is a gateway host that is on internet as well as bitnet. Some of the gateways are: cunyvm.cuny.edu mitvma.mit.edu.

To Network: cgnet Address: user
Send To: "user%CGNET@Intermail.ISI.edu"
Help: intermail-request@Intermail.ISI.edu
Source: Craig E. Ward <cew@isi.edu>

To Network: compuserve Address: 71234,567
Send To: "71234.567@compuserve.com"
Note: Compuserve account IDs are pairs of octal numbers.
Ordinary consumer CIS user IDs begin with a `7' as shown.

To Network: connect Address: NAME
Send To: "NAME@dcjcon.das.net"

To Network: fidonet Address: john smith at 1:2/3.4
Send To: "john.smith@p4.f3.n2.z1.fidonet.org"

To Network: geonet Address: user at host
Send To: "user:host@map.das.net"
Note: American host is geo4, European host is geo1.

To Network: mci Address: John Smith (123-4567)
Send To: "1234567@mcimail.com"
OR
Send To: "JSMITH@mcimail.com" if "JSMITH" is unique
OR
Send To: "John_Smith@mcimail.com" if "John Smith" is unique; note the "_" ! OR
Send To: "John_Smith/1234567@mcimail.com" if "John Smith" is NOT unique

(Continued on page 5)

(Continued from page 4)

To Network: nasamail Address: user
Send To: "user@nasamail.nasa.gov"
Help: <postmaster@ames.arc.nasa.gov>

To Network: signet (through FidoNet) Address: John Smith at 27:2/3.4 Send To: John.Smith@f527.n2.z2.fidonet.org
(FidoNet to SigNet gateway)
The first line of the message should be:
@DOMAIN SIGNet 27:2/3.4 FidoNet 2:2/527
Help: andreas.levenitschnig@f527.n2.z2.fidonet.org
Source: Erik Proper <erikp@cs.kun.nl>

Sending mail TO someone on the Internet from other networks

In the examples below, the internet address is assumed to be of the form "user@domain" .

From: applelink
Send To: "user@domain@internet#"
domain can be be of the form "site.bitnet", address must be <35 characters

From: bitnet
Note: This varies from site to site, and depends on what Mail software
you are running. Usually, "user%domain@gateway" works, where "gateway" is the regional Bitnet-Internet gateway (like CUNYVM or MITVMA). If it doesn't, ask your local POSTMASTER.

From: cgnet
Send To: "intermail"
The body of the message must have an additional header of the form:
Forward: Internet
To: user@domain
followed by a blank line.
Help: K.NOVAK
Source: Craig E. Ward <cew@isi.edu>

From: compuserve
Send To: ">INTERNET:user@domain"

From: connect
Send To: CONNECT id "DASNET"
first line of message: "\"user@domain\"@DASNET"

From: fidonet
Send To: "uucp" at nearest gateway site
first line of message: "To: user@domain"

From: nasamail
at the "To:" prompt type "POSTMAN"
at the "Subject:" prompt enter the subject of your message
as the first line of your message, enter "To: user@domain"

ACKNOWLEDGMENT
This Guide owes it's origin to John Chew's "Internetworking Guide".

==Ajay Shekhawat, Dept. of Computer Science, State University of NY at Buffalo==

Enhancing GShell A Proposal by Boisy G. Pitre

With the advent of the speed and power of the 6309, Multi-Vue is once gain being considered for use as a GUI. Several enhancements have been made to GShell over the years, making it much more bearable under the 6809. However, it could still stand for improvement in several areas, including extensions and linking to 6309 optimized libraries.

Currently GShell+ is up to version 1.25 (by Kent Meyers and others). Any changes would be based on that version of GShell. The resulting release, because of the significance of the changes, would (and should) probably be dubbed 2.00.

The thrust of this document is to offer some ideas for changing GShell for the better. While reading this, keep in mind that nothing stated in this proposal is set in concrete -- I am open to, and looking for, practical suggestions to improving GShell's usability from a user's point of view.

ENV.FILE EXTENSIONS

The env.file in the /DD/SYS directory currently has the following format:

Field	Explanation
RBFDEV=/DD,/D0,/D1,/R0	RBF devices
SCFDEV=/P,/T2	SCF devices
MONTYPE=1	monitor type (0=Composite,1=RGB,2=Mono)
RAM=512	RAM size (128, 512)
EXEC=/DD/CMDS	initial execution directory
*PROGRAM=Shell	program to start
*PARAM=i=/term	parameters for program
REPSTR=3	key repeat start
REPSPD=5	key repeat speed
PTRRES=1	pointer resolution (0=lo, 1=hi)
PTRSID=1	pointer side (0=left, 1=right)
LFTMRGN=8	left margin
LNLEN=64	line length
PGWDTH=80	page width
HDRSIZ=5	header size (in lines)
TRLSIZ=5	trail (footer) size (in lines)
PGLEN=66	page length
TABSIZ=4	tab size
PGPAUS=0	page pause
PRPORT=/p	printer port
PRNAME=STAR NX-1000	printer name
PALET0=3,3,3	palette 0
PALET1=0,0,2	palette 1
PALET2=0,0,0	palette 2
PALET3=0,3,0	palette 3
PALET4=3,0,0	palette 4
PALET5=0,3,3	palette 5
PALET6=2,0,3	palette 6
PALET7=3,2,0	palette 7
PALET8=3,3,3	palette 8
PALET9=0,0,3	palette 9
PALET10=0,0,0	palette 10
PALET11=0,3,0	palette 11
PALET12=3,0,0	palette 12
PALET13=0,3,3	palette 13
PALET14=2,0,3	palette 14
PALET15=3,2,0	palette 15

(Continued on page 7)

(Continued from page 6)

Immediate extensions that come to mind:
PTRRES 0=lo, 1=hi, 3=microsoft, 4=logitech
RAM 128, 256, 512, 1024, 2048

One of the things that has always bothered me was Multi-Vue's insistence of having all programs that it forked use the default palettes in the env.file file. This is not a problem if you keep the first 4 colors the same as OS-9's default palette. However, customizing GShell's own menu colors will result in an across-the-board change in the default palette registers for all programs forked under GShell.

This, to say the least, is annoying. To get around this problem, several things could be done. First, we could add 16 more palette fields which would be set to the default palettes of all programs being forked by GShell.

Secondly, we could add only four more palette fields, specifically for the first four palettes, and just for GShell's color customization. With this, we could set the 16 palettes to whatever we want by default, and have GShell use the palettes from the new fields for its own color:

GSHPAL0=3,2,0
GSHPAL1=2,0,3
GSHPAL2=0,3,3
GSHPAL3=1,1,0

Since GShell only uses the first four palettes for itself, this would keep the env.file file from being cluttered with 12 extra palette fields that don't get used anyway.

Obviously, changes to the env.file file would require updating of some programs like *control*, *gport*, etc. While I cannot assure that they will be updated, I will make every effort to try.

Can anyone think of any other GShell related configuration information that could be conveniently in the env.file file?

AIF EXTENSIONS

The AIF file format could be expanded to make for a much more customizable Multi-Vue environment. Below is what I propose. Again, I'm open to any suggestions on this format:

CURRENT AIF FORMAT

Field	Line	Explanation
Shell	1:	Name of program to run
	2:	Parameters (or ? for prompt)
ICONS/icon.shell	3:	path to icon, execution directory relative
0	4:	additional memory (in pages)
2	5:	window type
80	6:	X size
24	7:	Y size
2	8:	foreground palette
0	9:	background palette

AIF EXTENSION (If extension lines aren't existent, old style is used.)

Field	Line	Explanation
Shell Plus	10:	icon title (to appear instead of prog. name)
/H0/CMDS/TEST:/H1	11:	execution path to search along for prog.
/H0	12:	data directory to change upon forking
/H0/CMDS/TEST	13:	execution directory to change upon forking

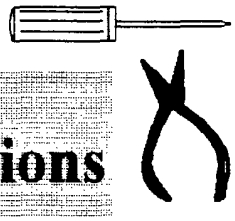
IN CONCLUSION

If you ever wanted to see a feature added to GShell, now is the time to express it. Any ideas, cosmetic or otherwise, will be accepted and reviewed. Please direct all ideas and suggestions through the following channels ONLY:

Internet: boisy@os9er.waukee.ia.us (preferred)

Note: You may also US. Mail your comments to Boisy Pitre by addressing your replies to: OS-9 Newsletter, 3404 Illinois Ln., Bellingham, WA 98226. Your comments will be E-Mailed to the above Internet address.

Replace CRYSTAL for HIGHER SPEED



Step by Step Instructions

I created this file in order to explain how I (not necessarily you) got my CoCo 3 running with a 38 MHz crystal, effectively boosting the clock speed of my machine from 1.78 MHz to 2.375 MHz (a noticeable improvement!)

Following is the information in "instructions" format. PLEASE don't do this if you're not experienced at least a little bit with a soldering iron and electronic circuitry, for a) it requires opening both your CoCo-3 and your monitor, and b) there's no guarantee it will work so you may have to reverse the process.

BENEFITS OF A FASTER CRYSTAL

The faster crystal in a CoCo-3 will noticeably improve speed, not only under OS9, but under RS-DOS as well. The speed increase will be relative in everything, not just math, text scrolling, or disk access.

While at first the increase from 1.78 to 2.375 (with a 38 MHz crystal) sounds small in number, when you calculate it, it comes to a 33.5% speed increase, twice the increase boasted by PowerBoost or NitrOS9. When coupled WITH NitrOS9 or PowerBoost (as I have done), your CoCo will be approximately 50% faster than a stock Color Computer 3.

DRAWBACKS OF A FASTER CRYSTAL

1: You are using the computer and monitor at speeds for which they were not originally designed. While I've been using the 38 MHz crystal for some time now, things run a little hotter, and the GIME obviously struggles sometimes (i.e. it momentarily stops generating sync every once in a while, and runs very warm).
2: Software's timing will be off. Software that uses the fixed rate of the original crystal for internal workings will either not work at all, or will function differently. While there isn't much of this software, it does exist. (OS9 is one of these, but there's a fix which will be described later).
3: You will have to replace your 150 or 120 nanosecond DRAMs with 100 nanosecond or better. Users of the Tandy 512K upgrade are shut out from using crystals over 32 MHz, because the board is mounted face down and generates so much heat at higher speeds that the machine crashes very quickly.
4: You may not be able to get a display. Monitors are designed to sync at specific rates. When you alter your crystal value, your monitor will be expecting a different rate, and thus, will display data incorrectly. Thus, you will in most cases be required to open up the actual monitor and adjust internal workings.

WHAT YOU WILL NEED

* A crystal of known value
* Soldering Iron, Solder Sucker, and Solder
* OS9 Users: The Eddie Kuns CLOCK module (edition #9). This is needed because it allows you to easily change the value of the clock rate. (also, it's just a much better clock module than the OS9 clock.)
* The guts to open up your CoCo and monitor and modify them!

STEP 1: THE CRYSTAL

Crystals come in almost an infinite number of values, from less than 1 MHz to almost a hundred. The idea is to choose the highest value of crystal that your system will function with. Here are the experiments from my system. It should be noted that I have a 2 MHz rated 6309 (63B09) installed in my system, I have not attempted this with a 2 MHz 6809 (68B09).

Also note that while this is the way my system responded, yours may be entirely different, as CoCo hardware is noted for inconsistency.

Value	CPU	MHz	MultiSync	CM-8	VM-5
28.636*	Normal	1.8	Display	Display	Display
30.000	Normal	1.9	Display	Adjust	Adjust
31.117	Normal	1.9	Display	Adjust	Adjust
33.880	Normal	2.1	Display	Adjust	Adjust
38.000	Normal	2.4	Adjust	Adjust	No Sync
40.000	No function	2.5	--	--	--

(Continued on page 9)

(Continued from page 8)

NOTES:

**(28.636) This is the speed of the standard CoCo-3 crystal, and was included for reference.*

***CM8** here refers to the Tandy CM8 Monitor.*

***MultiSync** refers to a Sony MultiSync monitor.*

***VM5** refers to the Tandy VM5 monochrome monitor.*

STEP 2: INSTALLATION

Installing the crystal is very simple.

1: Open your CoCo-3 case and locate the crystal. It is a silver cylinder under the keyboard at the edge of the motherboard and is marked **"KDS 28.63636"** (or a similar value for PAL machines).
2: With your soldering iron and solder sucker, desolder the crystal and remove it.
3: Insert the new crystal and solder it in.

STEP 3: MOMENT OF TRUTH

Hook up your CoCo and monitor for *the* test.

Turn on the monitor first, and give it a few moments to warm up. This is so that you can see what happens immediately after you turn your machine on and can turn it off again quickly if it's bad! <grin>

After you've given the monitor 10 or 15 seconds, turn the CoCo on. If all appears to be working fine, then your hardware will require no further adjustment, and you can go pour yourself a cup of Coffee and stare at your faster CoCo!

OTHERWISE, check the following:

1: If the screen flashes garbage and then goes blank, chances are your CPU is not generating a video signal, and your crystal is either too fast or too slow for the CPU to function right.
2: If the screen is just blank and flashes nothing, then your crystal is probably bad, and you should try another one.
3: If the screen displays a permanent barrage of "garbage", then your CPU is probably functioning right, and the monitor is not displaying. Try the following: (Assuming you've gone into RS-DOS.)

Type CLS1 and press ENTER. The "garbage" should change it's general color. Try it again with CLS2 or CLS3. If the garbage is changing colors then you have a working CPU and a monitor not displaying properly. If CLSX does NOT work, then shut your CoCo off, this crystal is either too fast or too slow for your CPU.

STEP 4: MONITOR ADJUSTMENTS There are a number of monitors popular with CoCo users. I will only list two here specifically, along with some general instructions.

CM-8

Open up the CM-8 monitor case. This entails removing six screws: Two at the top rear, two at the bottom rear, and two in the rear panel which the cables come out of.

Once open, you will see lots of stuff, most of which should be ignored. What you are looking for is a small "pot" that is (looking from the top front) located on the left edge of the circuit board, and will be exposed without requiring you to pull the circuit board all the way out. There should be three pots located here, and the one that you will want to play with is labeled **"H. Hold"**. With the CoCo on, take a small screwdriver and adjust this pot in either direction until the "garbage" turns into a spinning display (the kind that requires V-Hold adjustment).

After getting the spinning display, adjust your **V-Hold knob** on the front panel until the display locks into place. At this point, you may want to play around with the pot next to it called **V.Size** until you get the vertical size up to a normal level (easiest done in Width 80). Once this is done, you can close up your monitor, and you're done for the hardware!

SONY (MultiSync)--

The Sony monitor had an interesting display problem. At higher crystal values, the display would be readable, but hourglass-shaped when the CoCo was turned on. This was rectified as follows:

Open up the Sony monitor. The back cover is held on by four screws, two on top and two on the bottom. Once the screws are loosened, take the cover completely off. With the CoCo on, locate a hole on the image board (the most complex and largest one), marked **"H.Sync"**. It is near the front, and about halfway up. Insert a small, straight-edged screwdriver into the hole and rotate until the hourglass suddenly pops out to a normal display. V.Sync, as you will see, automatically adjusts (it's a MultiSync monitor... <grin>). Close the monitor, and you're done with the hardware.

OTHER MONITORS --

Generally, there are two values you will need to adjust. On both MultiSync and other monitors, you will need to adjust the Horizontal sync rate, commonly labeled as **H.Sync"**, **"H.Hold"**, or **"Horiz. S."**. On NON-MultiSync monitors ONLY, you will also need to adjust **"V.Sync"**, **"V.Hold"**, or **"Vert. S."**, otherwise known as the Vertical sync rate.

STEP 5: SOFTWARE INSTALLATION At this point, exclusive RS-DOS users can stop.

OS9 users, however, will experience a little bit of trouble. Because OS9 derives its CLOCK timing from the crystal oscillator's fixed rate, the system clock, with a faster crystal, will run fast (the 38 MHz crystal causes about a 2 minute gain every five real minutes!). The remedy for this is the **CLOCK module by Eddie Kuns, edition #9**. This is a full-fledged GIME toggle clock, faster than the stock OS9 clock, and with versions for Disto and Burke and Burke RTC's, so have no fear.

First thing you will need to do is go through the standard procedure for creating and OS9 bootfile (refer to the OS9 manual, and to the millions of documents telling you how to do so), replacing the standard *Clock.60Hz* with your appropriate version of the *Clock #9* module (depending on whether you're using a B&B, Disto, or software clock).

Boot with this new clock, and then, using modpatch (or for us Burke and Burke people, EZGen), you will need to change the clock module as follows:

1: Divide the value of the original crystal (28.63636) by 60.

(Continued on page 10)

(Continued from page 9)

2: Then, divide the value of your new crystal with this value.
3: Round it off to the nearest decimal number, and, using a calculator or computerese friend, convert it to hex.
4: Change the value at location $7B from $3C to the new value.
5: Do the cobbler thing, or for EZGeners or KWIKGeners, save the new Clock to your bootfile (or write the bootfile).

YOU ARE DONE! Enjoy.

==Aron Hsiao==
(- A. Hsiao, JZR@onlybbs.via.mind.org, also available on the OS9 Echo)

Club Activities Report

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

Bellingham OS-9 Users Forum

The November meeting was not held officially, however telephone conversations and Sunday afternoon lunches at the local Red Robin Restaurant provided progress on several projects. **Rodger Alexander** completed another tower case installation, this time using the PBJ 6-slot Multipak and a special 10 pin chassi mount double header provided by **Terry Laraway** from the Port Orchard Club.

Wes Payne is assigned the duties of making up a null modem cable to use for data transfer between IBM, GIMIX and CoCo machines. A demonstration of using null modem cables along with a wireless null modem will be demonstrated at the Seattle meeting in January.

Mike Pleas has been working on a software interrupt or enabling pulse available from IC 9 on the CoCo-3 (74LS138), generated by the GIMME chip. This would eliminate the need for a 7404 inverter chip in the Parallel Printer Port circuit presented in the May issue of the *OS-9 Newsletter*. However, Rodger found another way to replace the inverter chip IF you have the "Correct ALL Fix" modification, published in the July '93 issue of the *OS-9 Newsletter*. The hardware project uses a 7402 NOR Chip that can be wired to produce an inverter output, which Rodger used in his latest tower case installation to provide the inverter output for the parallel port.

Mike is also working to write a new driver for the parallel port to permit bi-directional operation. This would allow hard wire transfer (null-modem) between two computers at the processor speed....Very, very fast....(19Kbaud +).

Wes Payne and Mike were not available for the regularly scheduled meeting at Fairhaven Middle School, the 4th Wednesday of the month, so the official meeting was canceled.

==Rodger and Barbara Alexander==

Port O'CoCo Club

The buzz of activity for our November meeting was dealing and solving people's individual problems and questions. We had three systems up and running and were able to tutor, demonstrate and duplicate whatever the topic at hand. The room was aglow with bright eyes and smiles as challenges and obstacles were eliminated by understanding or corrections. We had excellent attendance at our November meeting. Mailing personal invitations to everyone on our mailing list sure paid off.

We received a couple of letters during the month. Raymond Sami lives in Holland. The essence of his letter is: " . . . with help of a lot of pen pals I get a lot of programs while I was in Canada and Egypt. Because of my contract with the US Army Peace Keeping Force on the Egyptian/Israeli border taking 2 years of my time I have lost my pen pals and my source of programs and support. I am interested in TV studio work, soundtrack programs & graphics. I enjoy the pak programs. I am also looking for hardware, especially the multi pak interface and the interface for the PC AT keyboard." The address is Raymond Sami, Vleistroom 225, Alphen a/d Ryn, 2401 VE, HOLLAND.

The second letter was from Kitsap Computing Seniors. This is a well organized and large computer group throughout Kitsap County. I made a proposal to them a couple months ago about working together on PNW CoCoFEST IV. Their board agreed that the advantages of the event are worth the investment of allowing us to promote the event through their very nice monthly newsletter and to assist us in finding speakers on worthwhile topics.

Our December Meeting! We wanted to have some sort of a winter celebration. In the past, we have invited everyone and their significant others to bring in a little something for everyone to mingle and snack and play with the computers. **Tom Brooks** held up our zipping through this suggestion by mentioning that since we are in such a healthy financial situation the club should be the host and treat everyone to something special. That special is PIZZA!! The idea was received with enthusiasm. The exact food details are to be worked out, but it was agreed that the meeting location will be the same

(Continued on page 11)

(Continued from page 10)

as usual. **Donald Zimmerman** has the responsibility to set up the food arrangements. He will also attempt to get some contributions from some of the computer stores for a drawing. Wives and guests are more than welcome. Finally, so we can gauge the amount of food needed, RSVP is strongly requested! (871-6535 during the day and leave a message of who you are and how many in your party.)

It appears that December's meeting will be a mini swap meet as well as all the other fun things -- like eating! -- already planned. A couple people have contacted me that they are either liquidating their system or in the market for more CoCo equipment. So I have suggested to them, and you as well, bring your saleable equipment and software and
your check book (or there is a cash machine a few feet from our room in the store) and be prepared to bargain!

Speaking of Swap Meets, Port O' CoCo bought booth space at the Kent event in September and then the Kitsap event November 13th. It's hard to know how any of these are going to turn out. The Kitsap event wound up being one of our strongest showings. **Terry Laraway** was there with his full system cranking out color prints that blow the socks off everyone. **Tom Brooks** helped the religious right understand there was more than one computer in the universe. **Mark Kulien** offered support for awhile and then left due to illness. The crowd was very strong and we passed out about 500 lists of the various club in the county. Just so happened that the dates and contact number for the upcoming FEST IV were on each one.

==Donald Zimmerman==

Seattle 68xxxMUG

Donald Zonker presented a demonstration on configuring a 40 track boot disk using the stock Level Two System Disk and the Config/Basic09 Disk. After formatting a couple of 35 track disk, Donald started the *Configure* utility found on the CMDS Directory of the Config/Basic09 Disk.

Donald explained the criteria for selecting desired modules to include in your custom boot disk. Help options are available during the configuration process, providing basic descriptions of each module. At the end of the configuration process, the user is prompted....**"Do you want a complete CMDS directory, or Selected Command Modules, or None?"** Since only *GRFDRV* and *SHELL* are needed for a system using the WindINT module (only *SHELL* for a system using the GRFInt module), Donald chose to only select those two modules. Donald reminded us that *SHELL* contains several of the basic commands (*DIR, COPY, DEL, TMODE, LINK, MDIR, MERGE, DATE, DEINIZ, INIZ, MFREE, PROCS, RENAME, SETIME*), therefore including only *GRFDRV* and *SHELL* actually provided most of the needed command modules.

After booting up the newly configured boot disk with 40 track double sided disk descriptors, it was necessary to format a new disk and *COBBLER* the bootfile to it. This is because the newly configured boot disk was still only 35 tracks since it was formatted with the original system disk that came with 35 track single sided drive descriptors. The *COBBLER* command is: **cobbler /d1**. *OS9Gen* would also accomplish the same job: **OS9Gen /d1 <ENTER> /d0/os9boot <ENTER> <CTRL-ESC>**

DSAVE can also be used to copy the boot using the "-S" option: **dsave -s /d0 /d1 ! shell** This will also copy all of the other files from /d0 to /d1. If you choose to use either *cobbler* or *os9gen*, you will still have to use *DSAVE* to copy all of the remaining files over to the new 40 track disk: **dsave /d0 /d1 ! shell** Notice that no option switch was used.

When Donald booted the new 40 track double sided disk, it failed. An ident of the bootfile showed that there were two /d0 descriptor modules ??????

What happened?
Why two /d0 descriptors?
Is one descriptor 35 tracks, single sided and the other 40 tracks double sided?

TO BE CONTINUED IN DECEMBER

==Rodger and Barbara Alexander==

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Bellingham, WA 98226-4238