

# CoNect Fest Flyer

May, 1994

Vol12, Ed. 4

*Longtime customers have probably noticed the 'cataletters' haven't been coming like they used to. But all winters come to an end eventually. If you used to get our publication, rehi! If we've never crossed paths, pleased to meet you.*

## About CoNect

*I use a CoCo, and I like it alot. I'd like to continue to use it, since folks are still writing great things for baby OS9. With megabytes of RAM and the snappier cpu, a tweaked CoCo is pretty decent as a level two engine.*

*The only problem with all of this is, the CoCo isn't available. Folks who bought their first machine at the fire sale found bare shelves when the time came to upgrade. Most vendors carry a fairly narrow line of wholly owned products- it can take a good rolodex and a roll of stamps to assemble a CoCo system.*

*CoNect attempts to fill this gap. Between new and used products, we usually have over 90% of Tandy's 1991 CoCo line in stock. We've got repair parts for almost anything, and will repair or purchase old hardware.*

*What we can't do is provide decent customer support via telephone. I've tried. I've failed. Between a day job and actually building / fixing this stuff, email (rickuland@delphi.com) or u smail are the only reliable forms of communication. Sorry about that.*

*Did I mention we build stuff? To wit:*

**Serial Developements:** *CoNect has been playing with fast serial ports for ages. The problem is, we never actually released any commercial product. Well, it's time to stop improving and start duplicating!*

**Mini232:** Our standard grade 9600bps serial port features the 65051 acia chip, a bug fixed version of the 6551a used by Tandy and many others. Readdressable via jumper, and still with the cd swap jumpers (*which are mainly used to unswap a swapped cable nowadays*) this unit is ideal for one or two port machines running OS9 or DECB. The special? We'll throw in a cable and the traditional free disk of software **\$45.00**

**Fast232:** For those fortunate enough to have a fast modem and a fast link (sorry, SprintNet users) this is a cheap way to get 56.7kbps into your compression engine. OS9 drivers by Randy Wilson. Sorry it didn't make the fest, but time and money conspired.....check the demo! Uses a whopping 8 bytes of i/o space (twice normal) but makes a nice single port OS9 CoCo.

*We're looking at \$80 or so when they ship mid June.*

**CoCo10:** This off again, on again project is temporarily back on. Let me warn you- we are looking at a clone of a vaporware chip that appears to work and allegedly is available in dozens.... it's basically wire wrap and headaches right now. Promises to offer 2 of the above Fast232 ports, and a more or less normal parallel printer port with ibmoid db25 connector (*from a single 68pin picc!*) Imagine a long disk controller with cables out every edge. Nifty port select hardware crams up to two of these into 8 bytes of system IO space, and ought to make one heck of a bbs. Randy's OS9 drivers round out the package, and \$140 or so should pay the toll when it comes due. *In the meantime, we'll be happy to sell you a Fast232, with the understanding that it can be later exchanged for it's full purchase price towards a CoCo10.*

**The Socket Series:** *Recognising that the CoCo's backpanel can use a little help, CoNect came up with the sockets. Each one is a little black box (about one by two inches) that plugs onto your CoCo and does something the CoCo ought to do anyway. Mix n Match- any combo works!*

**MouseSocket:**

Not an exact replacement for the Tandy unit, the Mouse Socket features switchable resolution, and the area the critter roams over is reduced about 40% - a great thing in this age of point and click. We may later add a knob to adjust the mouse swept area, but we certainly won't keep selling them this cheaply. **\$25.00**

# About CoNect

**Ordering Info:** Despite the old ad copy, our mailing address is

**CoNect**  
449 South 90th Street  
Milwaukee, WI 53214

*You can try calling (414) 258-2989 weekends. Those who have tried this can testify nobodies near the phone very often. Mail or EMail on Delphi (RICKULAND) or Internet (rickuland@delphi.com) is more reliable.*

**Club Discounts-** If you are a member of any of the organizations on this list, take off 10%. Belong to several? Add another percent each for helping support our CoCo!

OS9Underground "Member Card" Glenside OS9 Users Group

We accept personal checks or money orders. Sorry, no plastic yet.  
**All orders please include shipping and handling charge of \$4.00(US), \$6.00(Canada), or \$10.00(World).** Offworld destinations please consult your postmaster

**Limited Warranty- CoNect Hardware**

CoNect products are warranted for a period of one year against defects in material or workmanship. Within this period, we will repair or replace it without charge for parts or labor. Warranty does not cover equipment subjected to misuse or accidental damage. This warranty gives you specific legal rights and you may have other rights which vary from state to state.

**Limited Warranty- Used Hardware**

Used hardware purchased from CoNect is warranted for a period of 90 days against defects in material or workmanship. Within this period, we will repair or replace at our option, without charge for parts or labor. Items permanently out of stock may be replaced with similar merchandise. Warranty does not cover equipment subjected to misuse or accidental damage. This warranty gives you specific legal rights and you may have other rights which vary from state to state.

## Wanted, Dead or Alive!

CoNect is interested in buying your old Color Computer or 'KMA' (TC70, MM/1, SystemIV) hardware or software, working or not. Software must include the original disk, even if it doesn't boot- We are after that original disk, manual, and license-  
We are also interested in your original software packages or hardware designs. CoNect can assist in production, and pays competitive royalties for each unit sold

speed trails between Nitro and PowerBoost, running on similar systems. To assist in the Nitro experimentation, Br. Jeremy sets up one of his 2meg CoCo systems, as a supplement to the in-house machines. This system promptly exhibited all the symptoms of that dread disease "The Traveling CoCo Blues", and refused to recognize the second floppy drive. Since this was the only CoCo available featuring two 5.25 floppies, it was no small loss, and Rick's a bit reluctant to play Bootlist tag on his hard drive. The picture of a Monk in full habit with a floppy drive held just so, while attempting a 2 drive copy, should have been taken.

Four or five questionable drive cables and uncountable 244 errors later, the experiment moves to the main machine anyway. With only a single working Nitro boot disk, some time is spent repairing damage caused by the recalcitrant floppy. After liberal applications of ezgen, the main machine is successfully Nitro'ed. A second boot promptly crashes! And will not restart in any known operating system or video mode?

The machine (*actually the prototype 3<sup>c</sup>*) has a few rough edges, and in the resulting prodding session a power connector found one of them, releasing some of the vital smoke. Off to the bedroom for mpi, floppy card, serial port. Pray for the burke&burke, which appears to survive.

Further difficulties in reproducing the one good boot disk. Cobbler won't and the CoCo's not staying up well. After noting the replacement MPI was neither strapped nor upgraded, the unit was retired for some quality shop time, and the planned speed trials postponed due to lack of hardware.

**Rumor** has it the XPad requires a CoCo2, so the (*tape based*) eprom burner is pressed into service as host. Short break to laugh at the pathetic TV display. *In defense of the CoCo2, there were 3 other systems running in the immediate vicinity, most without cases and some with hard drives- a terrible place for rf video.*

After determining the X Pad was, in technical terms, a deader, the project was postponed and transferred to the shop for repair. Final score- CoCo 5, ofnohoc 0. Estimated shop time= 20 hours or so..... generally a good meeting.

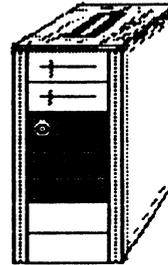
**To be continued.....**

### PrinterSocket:

This lump justifies it's 1x2" by providing two separate bitbanger ports, and a select switch. To prove how much I like those little plastic jumper blocks, one of the two ports can do the irq hack used by some OS9 software, (*like bitbang*) and also think nullmodem for a little lite networking. Or both at once. Or neither. Which ought to about cover it. *festing at \$25.00*

### CassSocket:

This gizmo plugs into the cassette port and provides either *a*= nothing (*in other words, just a cassette port again*) or *b*= a connection to another CassSocket within a few hundred feet, using modular phone extension cord. This is similar to the Tandy Network Controller scheme detailed in March 268'm, allowing one disk based CoCo to feed others through csave and cload, except this is a party line- Daisy chain several with telephone jack y adapters. *a pair and 50 feet of cable \$40.00*



## The Cube.

*So whats so special about the Cube anyhow?*

Looks sure aint it- shes got the style of a steamer trunk. At least we went for a stylish steamer- Oak top, leather straps and aluminum frame.... the ideal deskside assesory. Plus, you can set on it at fests.

Removeable, replaceable cpu trays mount your choice of board set, allow painless upgrade when that new machine comes along. Once unstrapped, both sides swing open- presumably one side shows a backpanel and the other reveals the oard cage. We'll have preformed trays for a variety of boards as well as blank versions for custom work.

A single user (or CoCo) Cube uses an 85 watt switching supply to power a pair of half height floppys and hard drives. Server Cube jumps to 270 watt and lets you take advantage of the oversize lower drive bays- 2 3.5hh hard drives per bay, mounted sideways. The kit (*4 drive bracket and cable set.*) avoids the obvious cabling problems

## CoCo 3<sup>c</sup>

Even if your work requires something a little meaner than baby OS9, a CoCo can still make a useful second system, but the CoCo3's unfortunate packaging isn't suited to such use. With OS9 CoCo systems bulging into megabytes of ram and stacks of drives, repacks are attractive, but the CoCo doesn't really fit in anything. Except the Cube.

The CoCo3<sup>c</sup> consists of a Cube, and a modified CC3 motherboard. CoNect adds 6309 CPU, remote keyboard & rgb connectors, even the power/clock tap needed for 2 meg upgrades. The problematic onboard power supply is long gone, and the motherboard is bolted to the cubes aluminum CPU tray. MultiPak/whatever bolts to this same cpu tray and requires minor hack to eliminate onboard power supply- unless it's sent with order. Then it comes back installed.

Besides the MultiPak mounts, the tray already has standoffs and panel cutout for your Puppo adapter, and includes an interesting card cage system designed to keep things plugged together.

**CoCo 3<sup>c</sup>** CoCo3 motherbd, with socketed Hitachi CPU. 85 watt per, four 5.25inch drive slots. 'Buss bender' allows MPI use.

**CoCo 3<sup>CM</sup>** Adds MultiPak with card cage. Availability depends on MultiPak supply.

**CoCo 3<sup>CH</sup>** available soon-XPander adds 2 internal slots, ROMPak slot! and 65c51 based serial port.

	CoCo 3 <sup>c</sup>	CoCo 3 <sup>CH</sup>	CoCo 3 <sup>CM</sup>
128K RAM	\$224.95	Soon	\$349.95
512K RAM	\$274.95	Soon	\$389.95
2M RAM	\$429.95	Soon	\$544.95

## The Journal of the Occasional Friday Night OS9 Hanging Out Club

*Edible but tasteless.*

*Special Third Last Edition*

*This first official publication of the Milwaukee Chapter of OFNOHOC will begin with a bit of history. The seeds of ofnohoc were planted three years ago, when Rick Ulland (owner/operator, CoNect) and Dr. Jeremy (OS9 User's Group? Treasurer and Chifest chaplain), found themselves carpooling to the last non-last Chifest. Currently, the Friday meetings consist of these two, the odd visitor and perhaps a half dozen via telcom. You'll find us lurking Delphi most Fridays.*

*A typical meeting is divided into three parts. First everybody shows off their newest hardware. This varies from the latest and greatest prototype of some hot new product to the truly inscrutable- like 10 year old house branded terminals with no documentation. Only after every available outlet strip, wall receptacle, and cube tap are filled does the night move on.*

*After the show and tell, hardware is divided into two groups, the stuff that works and the stuff that doesn't. Much of this segments entertainment is provided by Dr. Jeremy's skill in locating unlikely hardware interesting enough to attempt resuscitation- where does he get this stuff? The working hardware is sort of boring after demo, so it gets shoved to one side as the serious business of adapting the rest to operate under OS9 (or indeed operate at all) is undertaken. This segment often expands considerably beyond expectations, as formerly stable systems begin to shed parts after an ill-advised hookup to questionable devices. Sometimes, an evenings success is measured by the number of trips to CoNect's parts shelves for replacement hardware.*

*Provided there are a few systems left operating, the rest of the evening consists of seriously playing with the latest software. After a typical 3 hours, the evening concludes with a mass exodus- we are considering purchase of an Official Wheelbarrow.*

### March, 1994

*Dr. Jeremy maintains his usual level of contribution by coming up with an XPad and docs, while Rick demos the recently arrived PT68K2. Everyone marvels at the difficulty of using a single drive under SK&DOS. Further kudos for the unbelievably complex method of driver loading needed to run even simple text whackers and terminal programs.*

*After playing with the above hardware, plans include a head to head*

## Disk Service:

*No modem? No problem!*

*The list below is only the beginning of what will eventually be available- over time we expect to accumulate quite a list! Contents always subject to change as new versions of old solutions become available.*

### Disk Formats:

DECB: 5.25 inch. Choice of 158Kss or 316Ks+s

OS9: 5.25 inch 158Kss, 180Kss or 360Kds, 3.5 inch 720K "CoCo format"

## C

6809K

*ANSIfront accepts ANSI style declarations etc. At last, the examples in the books work on CoCo! Replacement cc defaults to RAMdisk for speed. A compiler is only as good as the code it links.... replacement libraries include Carl Kreiders stdlib, stdlibt, and Mike Sweet's cgfx- do stuff MicroWare never intended. Tutorai covers K&R style used by stock compiler.*

## cc3fix

2909K

There's not a single thing on this disk you can't live without. Who knows where the future leads? Patches to repair most Tandy software for proper operation on a CoCo3. Includes DeskMate3, Dynacalc, Pascal, Profile, RMA, SpeechPak, TSEdit/Word/Spell. Also includes a DECB program (you'll have to rsdos it over) to do the rgb Color fix on about 2 dozen old games. Another DECB program slaps a few band-aids on DECB and launches Hitachi 6309 native mode. Good Luck!

## MultiVue

3609K

Mark Griffith and others really spruce up gshell. Patches to run many vdg screen programs (DeskMate, Carmen Sandiego, etc) from MultiVue. Icon Editor and 'template' AIFs simplify user program installation. Pile of icons.

## PatchOS9

5809K

The general system message set. A roundtable of patches to os9boot modules, related files, docs- backup your printer ribbon! Shell+,GShell1.24a,sacia,cc3disk,rbf,scf, clock, name it. New commands/utilities ded dmode gsort mfree pcdos rammer rsdos save sdump unde wmode.... With a generous dollop of luck, the installer will do all the ipatching and module renaming for you.

## Vaporware:

The telecom, word, data, & graphics disks aren't finished yet, but look for them soon. Most will be ready before the next catalog.

## Options:

### 2 Floppy System

helt type controller with three drive cable and two new drives- any combination of 5.25 360K and 3.5 720K/1.44M floppies **Add \$150**

### Hard Drive System

3cx or 3cm required for plug and go. BurkeBurke controller. 20 Meg mfm drive, cabled for second drive. **Add \$325**

Hard drive systems not only come with a reasonable directory structure, but a few megs of PD apps and utils installed in the right places in addition, any software bought at the same time will come installed and ready to go!

### CoCoKeys

Since we don't have Puppo's, we came up with this recased stock keyboard with 6 foot cable to db connector. Matching adaptor for Cube back panel.

*Ready to run Add \$45 Less keyboard Add \$35*

### Serial Port

Internal version of our Mini82 Just for the 3c **Add \$42**

### OS9 System

To make your hard or floppy based CoCo 3c truly ready to run, get this! A 'modern' fully patched version of OS9 running 6309 'Native Mode' comes preinstalled on the hard disk or on floppies. Basic09 and MultiVue are included. Completely set up with two boots- Windnt and V08game5.-have the framework of a functional OS9 system as fast as you can plug in the cables. Manuals- OS9+MultiVue(Tandy), Basic09(Tandy), and System(CoNect and others)

**Add \$100**

# CoNect Direct

May, 1994

Vol3, Ed3

If you were on our mail list (back when we mailed things), you'll recognize this as the start of the normal catalog. The following pages are not fest prices, and we are liable to run out of a few things.....but this is the general drift. We didn't re-list products already mentioned..

## Remote Fest

It's a healthy cruise to Chicago for many folks, and we hate to hold one's geographical disability against them. So any fest specials listed in this thing apply until the end of June, when Ed.4 comes out.

## What is a CoCo?

The answer depends on just who is doing the asking. Since the vast majority of computer owners own Intel or clone, lets start there. IBM hoped Intel's new "16 bit" chips would separate their PC from the crowd. The chip they chose (the 8088) is close to the 6x09 in physical structure, with 16 bit guts and 8 bit databus. CoCo's (+Disto's) mmu pushes the address buss just beyond the 808x supplied 20 bits, so in some respects, the CoCo fits here. But, the 808x was renowned for it's inefficiency. So much so, the cleaned up 8018x was released (Tandy 2000, DMP105). It helped, but a 6x09 is as good as the 8088 was bad. We must look further.

Besides, there was no provision for running multiple programs. With the 286, Intel came up with 'protected mode', allowing a sort of multitasking (Windows). Programs have to be written to use this mode, and it's almost impossible to share code- each window has it's own copy of every byte of code it's running. With a 24 bit address buss, the 286 can access more RAM (16Meg), but it has to. It does feature a 16bit data buss, which *should* make a 286 quite a bit faster than a CoCo.

Moving on to the 386 and greater, we find one familiar feature- the 386 'virtual' mode allows multiple copies of programs not specifically written for protected mode. We can make no other comparisons- there is a vast difference in speed and precision.

This is about as far as a direct comparison can go- Intel and Motorola do things differently. Simple numbers like clock speed are meaningless, since each uses the clock for it's own purpose- there are significant changes in the way registers are used and even in the way numbers are recorded internally.

So we'll end up comparing to a 286. This is more than just an academic comparison- most 286 machines around today are budget boxes. They usually dont have screaming drives and rarely support more than 4 megs of RAM. It's not uncommon to see CoCo's in similar states of trim, and system prices (thats hardware *and* software) are also similar.

Performance wise, each machine has it's strong points. A 286 will barely run

<b>Sands of Egypt</b>	Graphic adventure from DataSoft. Difficult for beginning mapmakers- expect to wander thought the desert a bit! B&W on rgb.	<b>Used</b> \$9.95
<b>Shamus</b>	A shoot the badguys maze game. RGB color patch.	<b>Used</b> \$6.95
<b>War Game Designer</b>	The name says it all! From Sportsware	<b>Used</b> \$9.95

## RomPaks

<b>Castle of Tharrogad</b>	Update of Dungeons of Daggorith game for CoCo3. Mouse control, saves game without cassette	<b>Used</b> \$4.9
<b>Color File 2</b>	Tape based CoCo filing system.	<b>New</b> \$3.95
<b>Color Scripsit 2</b>	Tape based word proc CoCo2 or 38x24 on CoCo3!	<b>New</b> \$4.9
<b>Downland</b>	Addictive vertical maze. CC2 and CC3 versions.	<b>New</b> \$6.95
<b>Dungeons of Daggorith</b>	A CoCo classic! Room maze with more, meanies and torches that keep going out. Save to tape.	<b>New</b> \$6.95
<b>GFL Football</b>	Single player football game. Unique players POV window, and the traditional overhead.	<b>New</b> \$4.95
<b>Mindroll</b>	Interesting 3-D maze game	<b>New</b> \$7.95
<b>Poltergeist</b>	"They're here."	<b>Used</b> \$3.9
<b>Preditor</b>	"If it bleeds.....we can kill it"	<b>New</b> \$6.9
<b>Rad Warrior</b>	Vertical maze with meanies. Nicer than most.	<b>New</b> \$6.9
<b>Rampage</b>	Vent your frustrations- demolish a city or twelve	<b>New</b> \$7.95
<b>Shanghai</b>	Mah Jongg on the CoCo3! Very addictive!	<b>New</b> \$6.9
<b>Springster</b>	A stacked blocks maze with bad guys and goodies.	<b>Used</b> \$6.9
<b>Super Pitfall</b>	Update of the old Pitfall2 disk game	<b>Used</b> \$6.9
<b>Tetris</b>	Everybody knows what Tetris is!	<b>Used</b> \$9.9
<b>Thender</b>	"Old fashioned" Nintendo style shoot 'em up.	<b>New</b> \$4.9

# Disk Extended Color Basic

## Applications

<b>Backup Lightning</b>	Turn your 512K CoCo into a disk duplicator. Formats/copys multiple drives on the fly.	<b>Used</b> \$7.95
<b>CoCo Checker</b>	For CoCo2, from Spectrum	<b>New</b> \$3.95
<b>Fast Dupe</b>	Disk duplicator from Spectrum.	<b>New</b> \$7.95
<b>RGBDos (b&amp;b)</b>	Hard disk for your DECB CoCo. Uses floppy sized partitions to maintain compatibility with machine lang. programs. EPROMable. Two in stock.	<b>Used</b> \$29.95
<b>Color Profile</b>	Disk based CoCo2 database program.	<b>Used</b> \$19.95
<b>Elite*File</b>	CoCo2 database	<b>Used</b> \$7.95
<b>Elite*Word</b>	CoCo2 word processor	<b>Used</b> \$7.95
<b>Investograph</b>	CoCo2 Investment analysis. Can download data directly from CompuServ or Dow Jones.	<b>Used</b> \$8.95
<b>Musica 2</b>	Enter the score, then play in 4 voices	<b>Used</b> \$12.95
<b>QuickPro+2</b>	Database generator.	<b>Used</b> \$9.95
<b>Telewriter 64</b>	Still the ultimate CoCo2 word processor.	<b>Used</b> \$12.95
<b>VIP Integrated Library</b>	Nice CoCo2 desktop. Word Proc, speller, data base, spreadsheet, and telecom. Nice docs.	<b>Used</b> \$49.95

## Games

<b>Dallas Quest</b>	J.R. and the gang still live in this disk based graphic adventure from DataSoft. No color RGB	<b>Used</b> \$9.95
<b>FlightSiml</b>	The ancient CoCo2 'night-flight' simulator.	<b>Used</b> \$3.95
<b>Ghanabwana</b>	Early Steve Bjork arcade game. RGB color patch.	<b>New</b> \$4.95
<b>One on One</b>	Who says Larry Bird is gone? Not a Bird fan? OK, meet Dr. J! 2 player or you vs. CoCo. RGB color.	<b>New</b> \$8.95
<b>Pitfall 2</b>	Fairly challenging dodge the meanies maze game from Activision. RGB color patch.	<b>Used</b> \$4.95

windows, while the heavily patched CoCo does a fair job with MultiVue- and although MultiVue itself is a little kludgy, OS9 applications are treated to the equivalent of a 386 virtual mode environment. Each shares a problematic 64K ram block limit, and gets around it in it's own way. The CoCo's reentrant OS9 code gives it the edge in capacity when multitasking, even with more than twice the RAM in the 286. There is no comparison when discussing interrupt handling or real time events- advantage CoCo.

The 286 has more buss, and hard drive backup times reflect this. A potential large advantage in graphics speed is almost lost to the CoCo's weird 2 stage buss system, but the point still goes to the 286.

In general performance, neither machine is a mathematicians dream. The 286 is technically superior, via it's 287 math chip- in practice, either runs simple spreadsheet stuff reasonably well, at around 16 digits precision, and little more. Wordsmiths will find performance is not an issue, although the ease of running multiple windows gives OS9 an edge when computer based research methods are used.

So, the next time somebody asks you what a CoCo is, you know what to say. "It's just like an 8088 except when it's like a 286 or 386, but different. Generally, it's faster or slower than a 286 except when it's acting like a 386, then it's slower except for some real time responses, when it's faster. There's less RAM but it holds more, so the smaller drives are bigger, and the buss is 8 bits wide, except where it's 16 bits wide. The best cpu is 16 bits wide internally, except where it's 8 bits or 32 bits- and the clock speed is 2,8, or 12 MHz, depending how you look at it.

Simple.

## Mouse Tales

*Both Tandy mice use the same internal mechanism, and suffer from the same problems. If your mouse has become a bit jerky, it will have to be cleaned.*

Flip the critter over, and remove the three larger screws. The bottom can then be lifted off (*cable goes with bottom*). The ball itself is almost indestructible, and can be cleaned with anything. If you are an old arcade buff, you'll recognise this as a regulation pinball ball!

On to the working parts. These mice use two plastic wheels to pick up the balls movement, and a shaft transfers this through a pair of plastic gears to the potentiometers. These look like black plastic boxes with attached wires. Before doing anything to this assembly, push the top of each box gently away from the shaft mounted gear it mates to. It should pop up just enough to separate the two gears- this prevents any accidents to the delicate gearsets while working on the mouse.

Now the wheels can be cleaned with a thumbnail or toothpick. Never use anything harder- a flat spot on one of these wheels makes your mouse spare parts. If the small gears are visibly worn, use a small screwdriver to pry them slightly further out on the shaft- this isn't usually needed, but can improve older mice quite a bit.

Some mice are excessively jumpy- the two 'pots' (*the plastic boxes with gears*) also get dirty with age. Take a can of TV tuner cleaner and blast it straight in the gear openings. Push the pots back down, and carefully spin the pick up wheel stop to stop (3 turns) a few times to work the cleaner around inside.

There is a third plastic box, containing a spring loaded ball bearing. This bearing should be lightly oiled, especially if tuner cleaner has been used on the pots. Dip a toothpick in some light machine oil, or a little WD40 (*sprayed into the cap*). Touch this on the balls themselves- all that's needed is two barely visible spots on each side. Try not to get any oil on the outer race (*the part that touches the mouse ball*), since this will make the mouse get dirty faster.

And that's about it- sit the ball on the embossed circle in the top. The one button mouse should have a tiny spring mounted on the center post of it's button. If you haven't flipped the two pots back into place (*so the gears mate once more*) do so now. Sit the bottom on and replace the three screws, and you've got a new mouse!

*And that is about it. Until next month-*

*Ricku*

## Games

<b>Cave Walker</b>	Vertical maze game comes with Level1 boot, will run as is under your Level2!	<b>Used</b> \$9.95
<b>Flight Simulator 2</b>	Very impressive simulation from Sublogic. Same as older MicroSoft Flight Simulator for IBM- ... clouds, wind, radio navigation, even mechanical failures of the aircraft are emulated.	<b>Used</b> \$12.95
<b>Interbank Incident</b>	Mouse driven CoCo2 adventure even speaks (with S/S Pak) No color on RGB.	<b>New</b> \$12.95
<b>King's Quest 3</b>	The ultimate CoCo3 adventure! From Sierra. 512K required just to harness the graphics	<b>New</b> \$17.95
<b>Koronis Rift</b>	CoCo3 Arcade/Adventure. You'll need those lightning reflexes and a brain	<b>New</b> \$7.95
<b>Microscopic Mission</b>	Save the patient while battling the deadliest enemy of all, the human body!	<b>New</b> \$9.95
<b>Rescue on Fractalus</b>	Shoot the bad guys. Save the good guys. Enjoy the graphics.	<b>New</b> \$7.95
<b>Rogue</b>	Maze adventure has been around for ages! depends on interesting play, instead of flashy graphics.	<b>New</b> \$8.95
<b>Sub Battle Simulator</b>	American or German WW2 era submarines.	<b>New</b> \$10.95
<b>Zone Runner</b>	Adventure in interstellar commerce.	<b>New</b> \$6.95

# OS9

<b>Level One</b>	DOS and assembler for CoCol or CoCo2	<b>New</b> \$29.95
<b>Utilities+Disk Fix</b>	Computerwares Level One fixer.	<b>Used</b> \$12.95
<b>Level One v2.00</b>	Full Tandy release of v2.00.00	<b>New</b> \$19.95
<b>Level Two</b>	DOS and Basic09 for CoCo3	<b>New</b> \$34.95
<b>MultiVue</b>	GUI for Level2 includes Windint (replacement for stock grfint, required by some programs)	<b>New</b> \$22.95
<b>Development System</b>	RMA assembler, new commands and utilities Only one in stock!	<b>Used</b> \$49.95
<b>PatchOS9</b>	Many public domain patches and an auto-install program. (auto requires 2 ds disk drives)	<b>New</b> \$3.95
<b>Basic09</b>	Why did they leave Basic out of Level1?	<b>Used</b> \$14.95
<b>C Compiler</b>	Microwares K&R compiler for lv11 or lv12	<b>Used</b> \$59.95
<b>Pascal</b>	enhanced ISO Standard 7185.1 Level0 Compiler	<b>Used</b> \$39.95

## Applications

<b>Color Computer Artist</b>	This drawing program can output OS9 wind format files. Just merge with any window for instant graphics	<b>New</b> \$4.95
<b>DeskMate</b>	CoCo2 Calendar, Text Editor, Index cards, Paint Ledger, and telecom. No xmodem mode, however.	<b>New</b> \$12.95
<b>DeskMate 3</b>	Calendar, Text Editor, Index cards, Paint, Ledger and telecom, with xmodem. 80 col text/ledger	<b>New</b> \$34.95
<b>DynaCalc</b>	Best spreadsheet available for OS9 CoCo. 80col in Lv12. Many cell format options. Sorts.Windows. Sticky titles.Trig. Lookup tables. More!	<b>New</b> \$29.95
<b>Home Publisher</b>	Desktop publishing for CoCo. Could be faster.	<b>New</b> \$9.95
<b>PhantomGraph</b>	Excellent graphing for Lv12. Line, bar, pie, scatter plots! Explode, stack, color em! Import data from dynacalc or sylk files	<b>New</b> \$19.95
<b>Profile</b>	Good database from the makers of DynaCalc.	<b>Used</b> \$19.95
<b>Screen Dump Utility</b>	Dump Lv10ne screens to printer	<b>Used</b> \$4.95
<b>T/S Edit</b>	Full screen text editor.OS9 and DECB included	<b>Used</b> \$9.95
<b>T/S Word</b>	Print formatter for T/S Edit	<b>Used</b> \$9.95

# Color Computer Hardware

Check out our new warranties.....now including used hardware!

## Computers

<b>Color Computer Two</b>	Used 64K CoCo. Older VDG	\$19.95
<b>Color Computer Three</b>	All machines are tested at 512K, with a 'loaded' buss- keyboard replaced if needed. No surprises!	
<b>Base Unit</b>	128K used- 'just the box, Ma'am'	\$79.95
<b>New</b>	with manuals,etc. Rare find-call	Add\$20
<b>CoCo<sup>3</sup></b>	6309 and socket installed	Add\$25
<b>Mini CoCo<sup>3</sup></b>	2Meg, 6309, new keys	Add\$21
<b>CoCo3c and CoCo3ck</b>	five bay tower, 85watt ps, 6309cpu	See Ad
<b>Mouse Socket</b>	Hi/Low switchable resolution.	\$24.95
<b>MultiPak Interface</b>	Style varies. CC3 upgraded.	\$79.95
<b>XPander</b>	CoNect's CoCo buss extender. 2 internal slots, 1 ext. plus built in RS232. Board only- use as is with PC type case	\$89.95
<b>CoCo Kit for XPander</b>	keep the CoCo look but add real power supply. Taps for XPander, CoCo, and three disk drives.	\$29.95
<b>StickIt for XPander</b>	internal joystick hi/low adapter	\$19.95
<b>YPower</b>	for 12v devices on ycabl. +/-12v 400ma	\$9.95

## Upgrades

<b>CoCol/2 64k RAM upgrade</b>	8 or 2 chip with instructions	\$7.95
<b>CoCo3 512k RAM upgrade</b>	various makes	\$49.95
<b>CoCo3 2 Meg RAM upgrade</b>	<b>kit</b> (with SMM's)	\$225.95
	<b>installed</b> free with 6309 else add	\$23.95
<b>CoCo 6309 CPU upgrade</b>	<b>kit</b> (NO6309CP & socket)	\$12.95
	<b>installed</b> 90 day warranty	\$29.95
<b>DECB vl.1 ROM</b>	specify 24 or 28 pin ROM	\$12.95
<b>MultiPak CC3 upgrade</b>	satellite board for small mpi	<b>kit</b> \$9.95
	<b>installed</b> (grg strapping on request)	\$19.95

## Buss Mounted Devices

<b>Mini232</b> CoNects 6551 based port. Hardware flow ctrl, <i>jumperable</i> dcd swap and port address. (ycable use requires ypower)	\$49.95
<b>ModemPak</b> reworked 300 bps modem/s.port. cheap backup tcom.	\$24.95
<b>Orchestra90</b> 5 voice sterio synth with percussion	\$29.95

## Mass Storage

<b>Cassette Kit</b> CCR-81 recorder, AC supply, cable, 4 blank tapes	\$29.95
<b>Floppy Disk Kit</b> new 360k drive mounted in 2 bay case. Used halt type controller from various makers.	\$179.95
<b>Drive I: 360K</b> second 5.25 ds drive	Add\$50
<b>Drive I: 720K</b> 3.5 inch drive in top bay	Add\$60
<b>Third Floppy Kit</b> single bay case p/s with 360K or 720K drive (your choice). Y data cable daisychains from other floppy case.	\$109.95
<b>Floppy Disk Drive 360</b> new 5 1/4" 40 track half height	\$59.95
<b>Floppy Disk Drive 720/1.4m</b> new 3 1/2" 80 trk 1/3ht mitsumi with rails,face. mention CoCo for CoCo 720K jumpering	\$64.95

## Pointing/Keying

<b>Atari Joystick Adapter</b> for 'Nintendo style' games. From Zebra	\$5.95
<b>KoalaPad</b> two button touch pad	\$12.95
<b>RS Color Mouse</b> the little black mouse with the big red button	\$12.95
<b>RS Joysticks</b> a pair of cheap full floating joysticks	\$3.95
<b>Replacement CoCo3 keyboard</b> unused stock keys	\$19.95

## Cables

<b>Cassette</b> DIN to submini (RCA available on request)	\$4.95
<b>Comp. Video</b> Replacement TV' cable. Six feet	\$3.95
<b>Comp. Video Switch</b> with internal 70 to 300ohm balun	\$2.95
<b>Disk Power Converter</b> largeM to smallF or reverse	\$5.95
<b>Disk Data- 2 Floppies</b> four feet in length	\$14.95
<b>Disk Data- 3 Floppies</b> five feet	\$21.95
<b>Disk Data- Add-A-Drive</b> Y cable plugs into full drive case	\$14.95
<b>Printer- Centronics</b> db25 to c36	\$9.95
<b>Printer- Tandy serial</b> DIN4m to DIN4m	\$4.95
<b>IDE Power Cord</b> six feet	\$5.95
<b>RGB Monitor- Magnavox</b> six feet	\$14.95
<b>Other- Your Spec</b> supply pinthru, cable/connector type, length	\$Call
<b>Serial Cable- Custom</b> any combination of db25,db9,DIN4	\$9.95
<b>Serial Cable- Standard</b> length 12-20foot db25m to db25m	\$7.95
<b>Serial Cable- LAN</b> 150 foot shielded 8 conductor db25m	\$29.95

## Where did this stuff come from?

<b>Commodore 64 Keyboard</b> new stock keys	\$5.95
<b>DWP210 ribbons</b> got a dwp210? Get 3 ribbons for postage	\$free
<b>Enerlite Penlights</b> dual AAA and single AAA lites Tandy #61-2513	\$1.99
<b>Floating Gnd Adapter</b> add booster to any autosound Archer270053	\$4.95
<b>MC10 16k Ram upgrade</b> static RAM pak. new, in box	\$9.95
<b>Pocket Computer Cassette Interface</b> New, in box	\$14.95
<b>UCR Head Cleaner</b> 8mm wet type Tandy #44-1147	\$4.49
<b>Wall Box</b> 8 term 'pop box' for alarms, phones,etc Archer#279 341	\$8.99