

the MONITOR

April, 1992

Commodore Users Group of Saskatchewan

Vol. 7, No. 4

Obligatory Stuff

CUGS

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If you have any questions about CUGS please feel free to contact any of the above executive members.

The Monitor is published monthly by the COMMODORE USERS' GROUP OF SASKATCHEWAN (CUGS), Regina, Sask. CUGS meetings are held the FIRST WEDNESDAY of every month (unless otherwise noted) at Miller High School. The next meeting will be held: **May 6, 1992 from 7:30 - 9:30 p.m.**

CUGS is a non-profit organization comprised of PET, UIC-20, C64, 64C, C128, and 128D users interested in sharing ideas, programs, knowledge, problems and solutions with each other. Membership dues are pro-rated, based on a January to December year.

Anyone interested in computing is welcome to attend any meeting. Out of town members are also welcome, but may be charged a small (\$5.00) mailing fee for newsletters. Members are encouraged to submit public domain software for inclusion in the CUGS DISK LIBRARY. These programs are made available to members. Any member is entitled to purchase DISKS from our public domain library for a nominal fee. Programs are 'freeware', from computer magazines, or the public domain. Individual members are responsible for deleting any program that he/she is not entitled to by law (you must be the owner of the magazine in which a particular program was printed). To the best of our knowledge, all such programs are identified in their listings. Please let us know if you find otherwise.

The Month's Presentation

Keyboard Cleaning
by Ken Danylczuk

Editorial

by Jarrett Currie

I would like to express my thanks to those of you who submitted articles for the Monitor, and who used the new area of the club's BBS. It certainly saved me a great deal of time in finding the submissions for the newsletter, and in the publishing biz, every little bit helps. For those of you who missed the recent changes to the club's BBS, Barry, our President and Sysop, has created a special upload area on our BBS called appropriately enough, Monitor. When you upload articles for the Monitor, you are strongly encouraged to use this area.

Most of you know that the Monitor is now photocopied at SGI. Part of the agreement we have with SGI is that we give them 1 full week's notice before we expect the photocopies to be returned. Except for the December, 1990 issue, we have been late every month. The duplicating staff at SGI have been gracious enough to have the copies ready on time anyway, but it is only a matter of time before their patience wears thin, and their other commitments prevent them from finishing the copying before the general membership meeting. So, to prevent this from happening, I humbly ask that the article deadlines be adhered to. You can find the deadline date in each issue of the Monitor.

More and more we, the Commodore users of the world, are losing people to the Big Blue arena. Has anyone found out why? I would love to have anyone who has converted to an IBM computer, to write a letter explaining why. To be completely truthful, I have considered it myself, especially

recently when it was announced at my place of work that we would be able to do some of our work at home if we were able to access the company's mainframe. The thought of being able to smoke while I worked was indeed a strong motivation to buy an IBM, but then I tried my C128 using the Desterm terminal program. Lo and behold, I was online! A co-worker has a C64, and after I passed along a suitable program that uses an 80-column display, she is now accessing the mainframe with her C64. Using my Commodore for this "advanced" procedure was truly a thrill, and was shared by my co-worker.

So, for all of you who are thinking of changing computers, please leave a message for the Monitor on the club's BBS describing why. And for those of you who have bought a new computer, and are still using your Commodore, please let us know what benefits you have realized.

President's Message by Barry Bircher

Hello again and welcome to the CUGS Monitor newsletter. As I have mentioned in my earlier ramblings, we have been in contact with the Saskatoon Commodore User Group (SCUG). I have just received a letter from Dave Gudjunson, the Chairman of the group. We have agreed to become Honourary members of our respective group. Dave had sent a disk full of odds and ends of programs we talked about in passing including Geos Graphics clip art on one side of a disk. On it was a 3 pass driver that he had raved about and I have tried it out on my MPS 1000 printer and I have to agree with him in the quality printout that it produces. The quality of it is better in my opinion than the current 6 pass drive I am currently using with the added benefit of being twice as fast. The print quality is N.L.Q. (Near Laser Quality), much better than N.L.Q. (near letter quality). I will be giving a copy of the disk to our GEOS Librarian Ken Danylczuk with credits to SCUGS. In return we will be getting a disk or two filled up for SCUGS in return. As soon as we receive a copy of their library listings, we will be swapping, sharing or purchasing programs that appear in theirs but not our library.

Talking about libraries, I have just finished copying 55 double sided disks full of programs that Gilles Archer picked up from a BBS in Florida. There are several programs in it that I know are in our library but also just as many that aren't. I want to start getting these programs into the library as soon as possible. Given the huge number of files in it that have to be unarced, unzipped, delynxed etc and then loaded, run, categorized and copied to the final library master, it will take some time to do. To speed this process up somewhat, I will be giving Ken a copy of the library so he can pull off the GEOS and 128 specific files for his use as 128/GEOS Librarian. There are literally hundreds and hundreds of SID music files

and that section alone could use a librarian in itself. You should see many new disks of programs coming out VERY soon to feed your 64/128 system.

This meeting presentation will be a bit on the unusual side as the club has decided to video tape the presentation that Ken will be doing on cleaning your keyboard. We hope to edit this tape and put on titles and graphics and make a good "HOW TO" video on doing a keyboard cleaning. I will not dwell on the subject as Ken will show you the how to's and not's of cleaning that stubborn key that does not work or works too well.

The next meeting in May will see Tristan Miller doing a skit on Turtle graphics and what it does. This is more than a computer graphic program as it is programmable. Come to that meeting and I'm sure you will be pleasantly surprised about an old computer language.

The meeting in June has been tentatively slated for Perry Grodzinski to do a presentation on making an RS232 interface. This is a simple electronic hardware project that he has made and wants to share it with you. An RS232 interface is a small device that, as the name implies, interfaces (hooks up to) a standard modem connector to your 64/128. This opens up the doors to a vast array of non-Commodore specific 2400 baud and up modems. If you ever decide to change computers (ARGH) you can simply disconnect the modem and put it onto the other one.

This will complete the first half of the presentations and meetings for 1992 and we will then break for the summer months and return in September.

Till then, have a good one.

The deadline for article submissions
for the May issue of the Monitor

is April 24, 1992

(I really mean it!)

List Enhancement with REM

by Tristan Miller

As you may recall, in the last issue of the Monitor I described an interesting, undocumented use of REM to protect your program listings. In this article I will detail more uses of that remarkable REM statement.

The first thing we must do to utilize the power of the REM statement is to fool the computer into thinking it is in quote mode. We accomplish this by typing `10REM"` (no spaces) and deleting the second quote. Then press `CTRL-9` for reverse on and a `SHIFTed M` to indicate a short return. Altogether, your screen should now display `10REM"` and a reversed backslash. You may now enter any quote mode codes to enhance your listing. Here's a list of some sample codes you may wish to use:

B	underline on (128 80-columns only)
E	white
G	bell (128 only)
I	tab (128 only)
N	switch to lowercase
O	flash on (128 80-columns only)
Q	cursor down
R	reverse on
S	home
T	delete
X	set/clear tab (128 only)
[escape (128 only)
\	red
]	cursor right
^	green
←	blue
SHIFT A	orange
SHIFT B	underline off (128 80-columns only)
SHIFT M	shifted return
SHIFT N	switch to uppercase
SHIFT O	flash off (128 80-columns only)
SHIFT P	black
SHIFT Q	cursor up
SHIFT R	reverse off
SHIFT S	clear screen
SHIFT T	insert
SHIFT U	brown
SHIFT V	pink
SHIFT W	dark grey
SHIFT X	medium grey
SHIFT Y	light green
SHIFT ^	yellow
SHIFT +	light grey
SHIFT -	cursor left
◻ Z	light blue
◻ *	cyan
◻ -	purple

To use these codes, merely press the correct combination of keys and the corresponding character will appear in reverse

video on your television/monitor. Here is a sample of how these REM codes can be used within a program:

```
10REM"TTTTTT[SHIFT-M][SHIFT-S]E]]]]][CTRL-0]THE GREAT
PROGRAM
20REM"TTTTTT[SHIFT-M][SHIFT-P]]]]][CTRL-0]BY
[CTRL-9][CTRL-0]YOUR NAME
30REM[SHIFT L]
40 YOUR PROGRAM GOES HERE!
```

Everything in bold should appear in reverse video on your monitor. The first line deletes the line number and REM statement, clears the screen, turns the cursor white and prints "THE GREAT PROGRAM" at the top of your display. The next line similarly deletes the line number and statement but changed the cursor color to black and displays your name in reverse video. Finally, line 30 stops the program from listing further.

Well, I hope you have fun with these codes!



Hi, daring young (at heart?) pennypinchers! We began major surgery on your beloved 64/128 last month. This month we'll finish, sew 'er up and enjoy the fruits of our labors! But first, let's recap for all the "closet" CUGS members who forgot to pick up last month's mag at Software Supermarket.

* gather appropriate equipment - minimum: blade and Phillips (cross-shaped) screwdrivers, work area, small plastic dishes or bowls, Q-tips or equivalent, denatured alcohol, hobby knife or razor blade. First time out you'll need to get or borrow some stranded wire, solder and a low-watt solder tool.

* use Philips screwdriver to remove three case screws; open the "hood".

* mark orientation and remove plugs; cut two switch wires that connect the phenol board to one of the keys.

* if you were brave (and bored) you may have already begun removing the dozen or so screws that hold the trace board against the actual keys.

That's where we stopped and there we'll begin.

Once you've found and removed each screw that held the board to the bottom of the computer keys, CAREFULLY lift the board free of the computer. Turn it over and you'll see the first object of our attention. On the "backside" of the board are the electronic "traces" with which the keys make contact to create the electrical signals that the computer recognizes as the keys of the keyboard. Most (not all) keystroke problems can be solved with a little care here.

With a Q-Tip (or equiv.) dip into the denatured alcohol and begin to rub the round little "double islands" that litter the board. Don't just take a swipe with the wet 'tip, put a little heft into the rub. Work on two or three of these "island" key connections at one time (the alcohol WILL evaporate gradually). Note the condition of the 'tip; it will probably get oily gray as you work - replace the 'tip when it's obviously dirty. Use a DRY tip to give one final polish. If you invested in a CONTACT CLEANER, a light spray spread over the board will clear any alcohol residue.

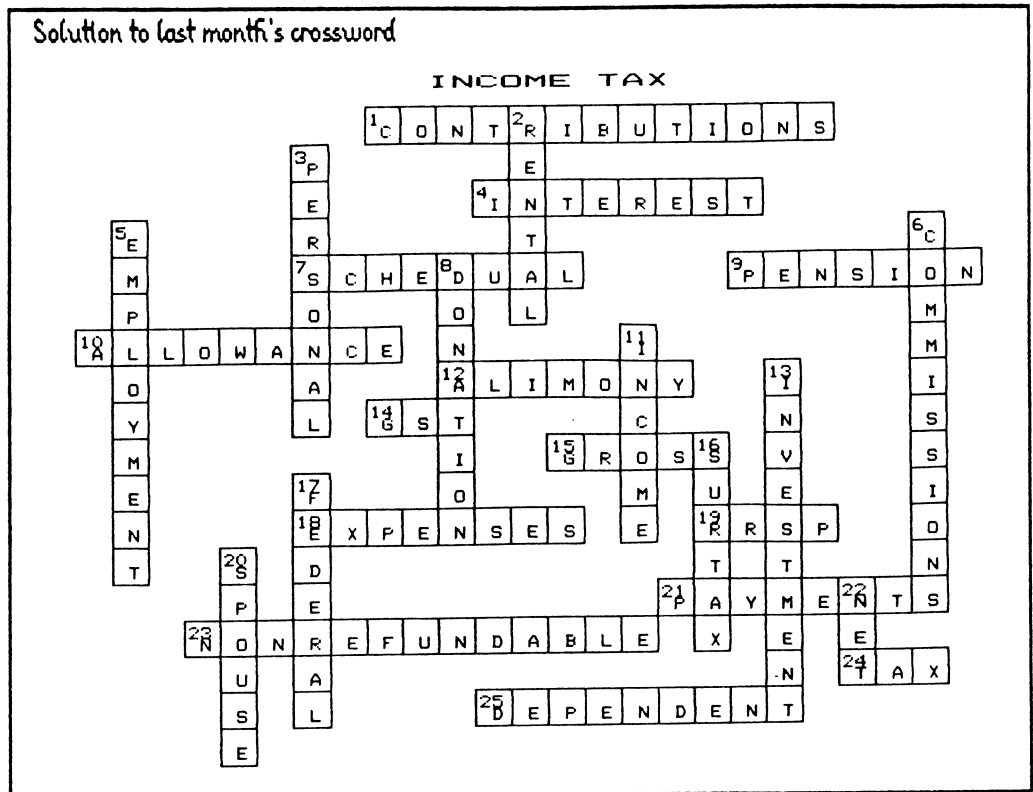
If you're a gambler, you'll re-assemble and hope the problem's fixed (most often it will be). However, you've really only done HALF a job. Set the keyboard matrix you've just cleaned aside, and direct

your attention to the key bottoms. They consist of rubbery projections (these give the keys their 'springy' feel) with what looks like a little magnet at the end (it's really just a small piece of highly conductive graphite - and part of the reason the keys can get gummy even in a sterile environment). To be sure all contact is optimum, these graphite tips and their surrounding rubber support should be cleaned. CAUTION: both denatured alcohol and CONTACT CLEANER will have a drying effect on the rubber, so they are better cleaned with a DRY 'tip. The graphite buttons may be cleaned with a 'tip soaked in either fluid (and dried or allowed to dry before assembly).

Well, now it's all over but the shouting (especially if you haven't been very careful with storing the screws you removed). CAREFULLY replace the circuit board (circuits down, of course) onto the key backs, correctly oriented; line up the holes where the small screws are to be replaced and begin replacing them around the perimeter, then into the middle. DON'T OVERTIGHTEN; slight pressure is quite sufficient.

Now, if this is the first time, this is the only 'technical' part - we have to re-attach the special key (the SHIFT/LOCK) to the circuit board. If using a soldering iron is 'kid stuff' for you, or you know a real pal who'll do it anytime, you can simply place the cut wires side by side and 'drop solder' the wires. If you want a 'once and for all time' fix, use about 1 foot of light 2-way speaker wire. Solder the wire into place as a bridge between the two cut wires. Then, next time you want to do a cleaning you can leave the wires attached and still have room to turn the circuit board over and clean it without cutting the wires again. NOTE: if you find a problem develop with your SHIFT/LOCK key, a poor solder job here is the probable culprit. Replace all the cables you removed using the marks you made earlier to orient the plugs properly.

Solution to last month's crossword



CAUTION: the one multisocket plug to the left CAN BE CONNECTED IMPROPERLY CAUSING ERRATIC KEYBOARD AND DISK DRIVE OPERATION. (Scared ya, huh?) Seriously, just don't be in a hurry; line the proper holes up with the pins on the board and press down firmly. No prob!

The most frustrating part is about to begin - closing the computer. Hook the "hinge-type" pieces at the back of the keyboard down into to slight indentations on the lower half. Close the computer (keeping the wires to the centre) until the seal seems correct (double check the back and look for signs of poor fit or pressure bending). If all seems correct replace the 3 main screws that started you on this adventure (you DID remember to store them somewhere carefully, didn't you?). Voila! Plug it in and you should feel like you got a new computer. Any poor response now must come from some other cause, YOU'VE made YOUR COMPUTER KEYBOARD KRUDLESS. (hooray!)

Any questions? Come watch the demo April 1, read the article(s), WATCH THE VIDEO! Yes, he DID say video! WHA? Catch ya at the meeting!



Next Month

LOGO/Turtle Graphics
by Tristan Miller

Door Prize

Qix, donated by
Tristan Miller

Of Things that Go Ring in the Night

Submitted by Tristan Miller

***** EVERYONE PLEASE TAKE NOTE *****

Our telecommunications tools have become pretty powerful. We have the ability to automate most everything now, including dialling and logging in to our favorite Bulletin Boards. Along with that goes the responsibility to ensure that we've got the phone numbers right before we turn our auto-dialer loose and leave it unattended. The following is a message from a SaskTel employee who has the responsibility to check out all complaints of nuisance calls and other weird occurrences reported by our customers. Please read and heed. Thank you.

Ken Ganshirt, Sysop, Regina Fido

Msg# : 119 Sat 17 Jun 89 10:02p Recvd: Mon 19 Jun 8:25a
From : Don Burlack
To : Ken Ganshirt
Subject : Auto-logins and Wrong Numbers

Greetings from the Great White North Ken! I would like to raise a point that was not a great priority to me until I moved into my present position.

We receive a good deal of calls from irate, confused and fearful customers complaining of "ring and hangup" harassment calls...the majority occurring during the wee hours of the morning.

Investigation proved that these calls were the result of BBSers inserting wrong numbers in their auto-logon communications software.

One customer received 32 such calls one night commencing at 3:00 am...doesn't make for a very sleepful night.

Anyways...I have been encouraging local SYSOPS in S'toon to raise the issue with their users and have had good results. The number of customer complaints have decreased substantially. For this reason I think it may be a good idea to do the same on the boards in Regina as well...could you pass on the good word to Regina Fido users? Let me know what you think.

(P.S. - it might not even hurt to include FAX numbers in this crusade as well...I've seen substantial complaints result from this area also.) Ciao for now!

Reuse Your Ribbons!

Be enviornmentally conscious,
and save money, too!
Don't throw away
those used ribbons.
Have them re-inked.

Call Barry Bircher at 543-8840
for details.

Lemonade

Hello! My name is Colin Phillips and I have just joined CUGS two months ago. This is a review of the public domain game, Lemonade.

You could call this game educational, but I wouldn't because it's not boring like your typical educational game. It's more of a simulation-oriented game where you run your own lemonade stand and have to purchase an adequate amount of the components required to maintain your stand.

The situation is as follows: you have borrowed ten dollars from your family and promised to pay them back after the summer. With the ten dollars, you have decided to set up a lemonade stand to make some money. You have ten weeks to run your stand. Over the course of the summer, the temperature and humidity changes and you must determine the appropriate amount to charge your customers. By charging little on a warm day, you will get more sales but you will not make as much money as you would if you had charged a price more suited to the weather. However, if you charge little on a milder day, you will make fewer sales but the pricing would be more suitable. In other words, charge an appropriate amount depending on the weather.

After the summer, you return the ten dollars to your family and the computer calculates your net profit, not including your surplus goods.

We enjoy this game because of the realistic business environment this game simulates. We think you should try this game it provides hours of enjoyment and it's remarkably playable.

The Commodore 64 version by Tristan Miller is available for downloading from the club's BBS, and the Commodore 64/PET version is available from the new PET/VIC/C16/Plus4 librarian, Tristan Miller. Also Colin Phillips has prepared a "cheat sheet" which he will make available to members at the club meetings.

The Best of Two or Three Worlds

by Ken Danylczuk

Last column we got the machine on! Whoopee! So what MODE is the machine ON in? For the remainder of today's column we'll stay in standard 40 column 128 mode, ugly grey 'n' green screen!

Well, what's new with this fat 64 (128) I see before me? There's all the keys I expect to see and ... whoah! ... about 27 more! And a new look to some old friends, the function keys. They've joined a bank of 12 other keys strung across the top of the keyboard. But they work the same... sort of...

As with the 64, they're fully programmable - I can get them to do anything I ask if I program them. But there's a real important difference - I can program these keys from direct BASIC commands - no need for messy programs to read the keys - the 128 reads them as part of its keyboard scan AND acts on the internal definitions! And there's several new BASIC commands which allow this versatility - By typing KEY followed by a number from 1 to 8, a comma (,) followed by a quote string of keystrokes (e.g. chr\$(13) = RETURN, etc.). Once they've been defined the full set of 8 definitions can be saved with BSAVE followed by a title (inside quotes): B0, P4096 TO 4352. You can save a variety of sets that help you use your machine in a variety of settings (a set for programming in BASIC, another for use with certain programs, etc.). Reload any saved set for use with the BLOAD command.

Some of the other new keys provide for interesting activities. The 'ALT' key is a readable key which can be programmed and read by a POKE command. In fact the same poke location can tell you which of the ALT, SHIFT, COMMODORE, CONTROL, and CAPS LOCK keys is being pressed. The necessary query is PEEK(211) AND <no.> and look for a zero value by replacing the <no.> with the following:

```
AND 1 -> SHIFT
AND 2 -> COMMODORE
AND 4 -> CONTROL
AND 8 -> ALT
AND 16 -> CAPS LOCK
```

The ESC key is a bit odd-ball - by itself it does little but (check out page 378 of the Programming Manual) if you press the ESC key followed by one of the 27 preset keys, it becomes a useful 2 stroke abbreviation for a number of useful functions. Example: type a few lines of something on the screen; move the cursor back halfway up the lines of typing; press ESC followed by '@' and watch what happens to the screen display. My particular favourite (I do a lot of programming) is ESC and 'O' (the letter not the number) to ESCape from a mistyped quotation mark that puts you into "quote mode" without jumping the cursor to the next line (as with SHIFT/RETURN).

There's a whole string of NEW BASIC commands that do things 64'ers only dream of, or have to program longhand to

achieve, but there's some interesting new twists to the "old" commands - some to be wary of, others that are improvements. More on that at a later time.

I've been thrilled lately with some of the more fundamental stuff that I remember from "old" PET BASIC 4.0 - in particular the PRINT DS\$ direct command that displays the disk error status and related message and clears the drive lines. The only way to achieve this on a C64 (non-commercially) is to type a 3-line basic program and run it. That means being careful to create the program with line numbers that won't interfere in your own program, and removing it when you're done. A note for the 64 readers - the program that duplicates this simple function is:

```
60000 OPEN15,8,15
60005 INPUT#15, A,B$,C,D
60010 PRINT A;B$,C,D;CLOSE15
```

And since we're on the topic of interesting little programs or nentos, I'll conclude with 2 or 3 for our 8 bit wonders.

Wanna scare a friend, or have a little fun on April 1? Either add this line to the beginning of a program being run, or run it as a one-liner.

```
type '1 C[shifted O]' <return>
```

Run the program and worry everybody. Bring sighs of relief by tapping the RUN/STOP key! (for C64/128)

Or, try loading a BASIC program and type POKE 22,35. Now LIST the program and see if you see anything different about the listing. Hmmmm? Type POKE 22,25 to return to normalcy. (C64)

And here's a grand finale (sorry, for 80 column 128's only)! It's a little long but does fit on one line:

```
BANK15:POKE54784,23;POKE54785,3;POKE54784,9;POKE54785,15;POKE
54784,23;POKE54785,15
```

RESET to return to normal. Chaiio!

DAM BUSTERS

by
Colin Phillips
Tristan Miller

Dam Busters! is another one of those educational games which we don't find very educational. But you may. In this game you, an airplane pilot, try to burst a dam by bombing it while avoiding the anti-aircraft fire.

Though it is very, very, VERY simple, we still liked this game because of the many hours of fun it can provide for the little ones. This game is public domain and is available to all 64 and PET users from the club's BBS, section 6. So check it out.

The First Computer Bug:
A True Story...
HONEST!!!

By Tristan Miller

Back in the 1940's when a computer as powerful as a modern-day calculator filled up an entire room, Grace Murray Hopper, a computer mathematician, discovered the first computer bug.

It was a hot, humid day in the summer of 1945 when the Harvard Mark I supercomputer stopped working. No matter what the computer programmers and technicians tried, they could not get the electrical machine to start up again. Finally they



Relay #70 Panel F
(moth) in relay.

First actual case of bug being found.

decided to risk opening it up, and lo and behold: a dead moth was found wedged in an electromechanical relay inside the computer's dense circuitry.

The insect remains were extracted, whereupon the Harvard Mark I immediately restarted its duties. Programmer Grace Hopper, ever advertant to detail, took the moth and taped it into the computer's log book, labeling it "first actual case of bug being found".

Whenever somebody would come in and ask why the computer had been down, the staff responded that they had been "debugging" it. Since then the term has

stuck and whenever we mean to say that we are fixing the errors in a program, we use the term "debugging".

The Forgotten Realms

Commodore 16, Plus/4, VIC-20, & PET Library
By Tristan Miller

Well, here we go with a totally new library. I have recently volunteered to be the club's new C16/+4/VIC/PET Librarian. That's right, the forgotten realms of Commodore computing. Many of you probably don't even know what computers I'm talking about, so here are a few brief descriptions:

The Plus/4 is a computer developed shortly after the 64 but before the 128. It was named the Plus/4 because of its four built-in software programs: a word processor, a database, a spreadsheet, and a graphics generator. It was outfitted with BASIC 3.5 and a very stylish keyboard. However, it never sold much because of the incompatibility with other Commodore machines, and the built-in software was not as powerful as expected.

The Commodore 16 is basically a watered-down version of the Plus/4: same BASIC version and incompatibility, but lacking the built-in software.

Most of you should have heard at one point in your computing about the PET (Personal Electronic Translator) series of computers, the first CBMs. The four kinds of PET supported in the library are the standard BASIC 2.0 and 4.0 PETs, the CBM 8032, and the SuperPET. Think of the PET of the grandfather of

the 64, not a distant cousin; nearly all of the PET programs in the library will work on the 64 without any modifications.

I'm sure though that most of you have heard of the VIC-20, the most popular computer in its time (early eighties).

By the time you read this, the complete Plus/4 and C-16 library should consist of one disk which includes mainly games and a few business applications. The PET library should have over a dozen disks in 541-compatible format, which are again, mostly games and various business programs. And finally, the larger VIC library, which may or may not be complete by the time you read this. It should come out to be approximately two dozen disks. I would gladly accept contributions to either of the three libraries.

I called this column Forgotten Realms because of the lack of support for these machines, but hopefully together we can again revive some of the old spirit here. Our president, Barry Bircher, constantly refers to these computers as "orphan" machines, but I have to disagree with that; the PETs and VICs were both best-selling computers and those millions of computers are still around today (sorry I can't say the same for the Plus/4 and 16, though).

So get that ancient VIC-20 out of the very back of your closet, take a deep breath and blow off all that dust from your seemingly archaic PET, and flip on the power button on your C16 that hasn't been on for over three years: try a few programs from the new libraries.

The Orphan

by Colin Phillips

Once upon a time there was an orphan. His name was little orphan UICky Twenty. One day his friends came over to visit him in his closet, where Barry had put him. His friends' names were Plussy Four and Cecilia Sixteen and their PET.

They helped to sneak UICky out into the big wide computer world. While they were walking down Duncan's Drive, they were accosted by the big Mr. 128. He invited them over to his house to play with Keith, Garth, and Mr. Pitre.

While they were at Mr. 128's house, Mrs. 64 walked in and asked if anyone would like a disk drive. Mr. Pitre asked what kind of disk drive. Mrs. 64 explained to him that it was a 1581. Mr. Pitre was pleased to hear the news and asked if he could have one right away. Mrs. 64 was glad to give it to Mr. Pitre.

All of the sudden a flock of Iron Butterflies flew in and tried to insult the intelligence of Mrs. 64! Mr. 128 did not like this idea, and yelled for a help menu. Mr. 128 could not locate the help file and the Iron Butterflies continued to insult Mrs. 64.

UICky had a plan, but he would need the help of his friends and a very intelligent man named Barry. So they ran out of the house and found Barry in 182 Coldwell Road. They ran back to Mr. 128's house and put their plan to work.

Garth, Keith, Mr. Pitre and Barry all started to work on an enormous virus which would wipe out all IBMs on earth and change them into everyday ordinary calculators. UICky then warned the Iron Butterflies that a deadly virus was going to strike on March 29th. So the Iron Butterflies all set their computer clocks ahead to April 1st. But the virus was programmed to go off on April 1st! UICky had lied to them!

At that very moment, on all the Iron Butterflies' screens, flashed a message: "Ha ha! Fooled you!" and all the Iron Butterflies dropped to the floor and became normal pocket hand-held calculators.

Then Barry stormed in, mad as could be because when he went to get his bowling ball from his closet and found UICky to be missing, he immediately expected that he would be here partying. He went and grabbed UICky and said, "No more memory expansion for you!"

UICky started to cry. Mr. Pitre then explained what had happened during the day. Barry then forgave UICky and promised to use him every day.

THE END

Experts List

The following CUGS members have volunteered to be resident experts in some area of Commodore computing. If you have some expertise that may be of some assistance to other club members, please consider allowing your name to be listed here.

Wordprocessing

Paperclip (to version E)	Jarrett Currie	757 2391
Paperclip (any version)	Ken Danylczuk	545 0644
Pocket Writer	Barry Bircher	543 8840
Pocket Writer	Real Charron	586 1843
Fontmaster II	Michael Rodgers	728 2595
Pocket Writer V 1.20	Tristan Miller	586-2036

Spreadsheets

Pocket Planner	Barry Bircher	543 8840
Better Working SS	Ken Danylczuk	545 0644

Databases

Pocket Filer	Barry Bircher	543 8840
Oracle (Consultant)	Ken Danylczuk	545 0644

Communication

Desterm 2.0	Barry Bircher	543 8840
Desterm 2.0	Jarrett Currie	757 2391
Library files	Barry Bircher	543 8840
Novaterm 9.3	Tristan Miller	586-2036

Music/Sound

(Most)	Ken Danylczuk	545 0644
Stereo Sid Editor	Michael Rodgers	728 2595
Enhanced Sid Player	Michael Rodgers	728 2595

Languages

Forth	Ken Danylczuk	545 0644
Pascal	Ken Danylczuk	545 0644
ML (machine language)	Ken Danylczuk	545 0644
ML (machine language)	Barry Bircher	543 8840
BASIC (2.0-7.0, files)	Ken Danylczuk	545 0644
LOGO	Tristan Miller	586-2036

Graphics

Print Shop/Master	Ken Danylczuk	545 0644
Koala Painter/Printer	Ken Danylczuk	545 0644
Turtle Graphics	Tristan Miller	586-2036
Doodle!	Tristan Miller	586-2036

Hardware

Disk Drive Maintenance	Ken Danylczuk	545 0644
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GEOS

GEOS 64	Jarrett Currie	757 2391
GEOS 128	Barry Bircher	543 8840