

# the MONITOR

March, 1992

Commodore Users Group of Saskatchewan

Vol. 7, No. 3

## Obligatory Stuff

### CUGS

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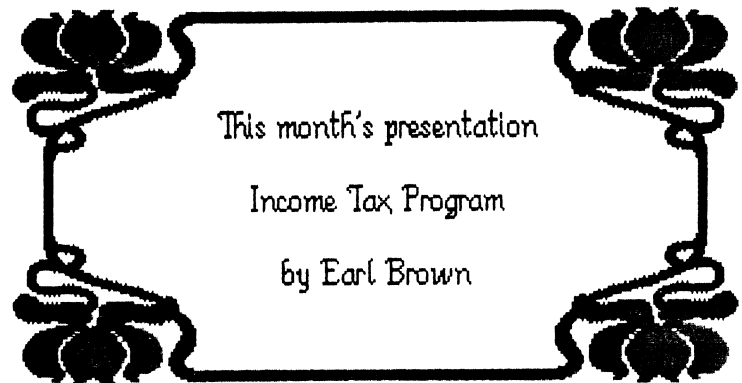
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If you have any questions about CUGS please feel free to contact any of the above executive members.

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: **April 1, 1992 from 7:30 - 9:30 p.m.**

CUGS is a non-profit organization comprised of 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.



## Editorial

by Jarrett Currie

Recently, I have been made aware of a problem concerning the use of the club's BBS for uploading Monitor articles. It seems that I have missed some articles for past issues of the Monitor. As you might guess, this has been a simple oversight, but certainly one that I do not care to repeat. Therefore, I spoke to Barry Bircher, our club's Sysop, and he made a great suggestion, which he has already implemented. He has set up a special upload area, called the Monitor, that is to be used exclusively for articles destined for the Monitor. To ensure that the contents of the newsletter are not revealed before the meeting, downloading of the articles has been restricted. If you wish to upload your articles, please use this area only, however, because of the restrictions in this area, do not be alarmed if you cannot later download it. To verify that the uploading worked correctly, you may still list the files in the Monitor area.

This month's Monitor is an editor's dream! In addition to the articles regularly published, we have had several articles submitted with a variety of topics. Tristan Miller continues tracing the evolution of the BASIC language, as well as submitting a number of special symbols that can be used on BBSs to convey special feelings not easily put into mere words. Also, Tristan has written an article describing a method of program protection using undocumented BASIC features.

Security must also have been on the mind of Ross Parker,

our Assistant Vice President. Ross has submitted an article describing another method of protecting BASIC programs from prying eyes.

I am sure that it is a mere coincidence that both our President and Assistant Vice President have recently had sparks flying from their computers. Barry has submitted an article describing the frustrating problems he has had with the club's C128, and what he did to help resolve them. And to prevent problems, Ken Danyczuk, our C128 Librarian, has submitted Part One of his tutorial on cleaning our computers. I look forward to seeing Ken demonstrating his cleaning techniques at an upcoming meeting. This month, Ken has also given us some programming tidbits for the C128, and while he claims them to be well known, I have been using my 128 for many years, and they are new to me!

And if you find that you would like to increase your scores in any arcade game you might have, take a look at what was recently found on one of the BBs! These exercises should help even the most frustrated joystick jockey at least look like they're having fun.

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**The deadline for article submissions  
for the April issue  
of the Monitor is  
March 20, 1992**

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## *Executive Meeting Minutes*

February 10, 1992

by Dave Coleman  
Secretary/Treasurer

- ✎ ComputerFest: the Apple group is looking at May. Barry will attend an organizational meeting and take our suggestions to it.
- ✎ March meeting: Earl will present his income tax program.
- ✎ Barry will buy a new SID chip for the club's C128.
- ✎ Discussion re: buying a RAM expander. Decided against it at this time.

## President's Message

by Barry Bircher

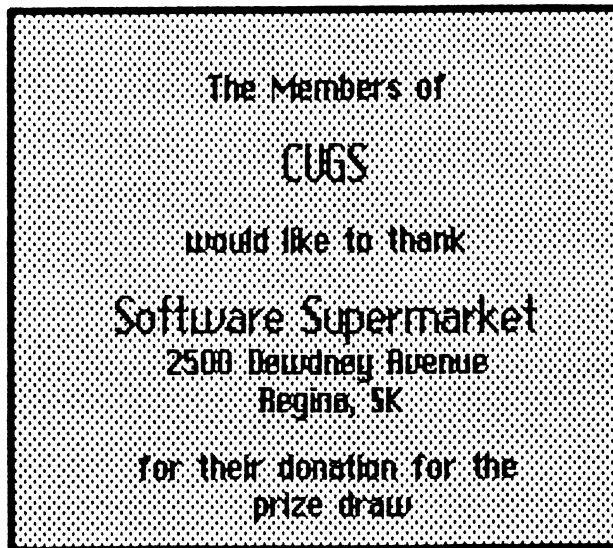
Hello all, and welcome to another issue of the Monitor. The executive members have just completed another meeting of brainstorming ideas for presentations and things for the club to do. The main topic of the meeting was Computer Fest that the Apple user group is thinking about setting up. They had asked me to ask the members of our club for ideas and input on things about the 'Fest. If you have some concerns about the 'Fest, please let them be known to one of the Executive officers. If you had been to one in the past, you may have some good ideas for improvement. The past C'Fests have been very successful for the user groups as a whole and having another will be welcomed by our club and we will participate in it. One of the main concerns that was brought up at the Executive meeting (most of who have been to one C'Fest in the past) was the problem of space or a lack of it.

The last Computer Fest was in '90 at the Travelodge on Albert street. This was the third (or was it the forth?) C'Fest there and the main problem then was the fact that the Commercial displays (Software SuperMarket, TTL, Computer Way, Duncans etc, etc) had all taken up the space we had the year before. The user groups were then placed in rooms down a hall. The space we had was good as far as our table setup was concerned, but access to it was limited as the hallways seemed too small with dozens of people walking to and fro'. The Flea Market was in a separate room and run by the Apple group, and was a success. However, as I understand it now, the Apple Group is considering letting the individual groups look after the Flea Market concerning their own make of computer. I can understand the Apple group's problems and their decision to have it this way, however, I would like to see the Flea Market in one place collectively as in the past and have one or two members in each club lending a hand in running it. I sincerely hope the 'Fest gets off the ground and organized as I loved the show and concentration of computer users, and I'm sure you will, too.

The meeting tonight will be on the income Tax program written by our Tax Guru, Earl Brown. He will familiarize you with the "how to's" of running the program and short cuts to save keystrokes. His program worked well in the past with very few problems and if there was one, he fixed it as soon as he was notified of it and issued a fixed program to purchasers, free of charge.

The following meeting in April has tentatively been slated for Ken Danyczuk's keyboard cleanup. Do you have a key or two that refuses to respond or responds TOO well with multiple characters? (Sound familiar Garth?) He has done this presentation a few years back and was both entertaining and informative. This year, with a twist, we plan on video taping him showing how to take it apart and how to clean it. The video in VHS format, will be then available to the

members in case you need to do what Ken is doing a few months or years down the road. We also hope to do a video of cleaning or repairing your disk drive. Some important things that were brought up in the past presentations were on how to change the drive device number either permanently or by installing a simple switch or two to change the number at any time (quite a convenience to multi drive users, believe me).

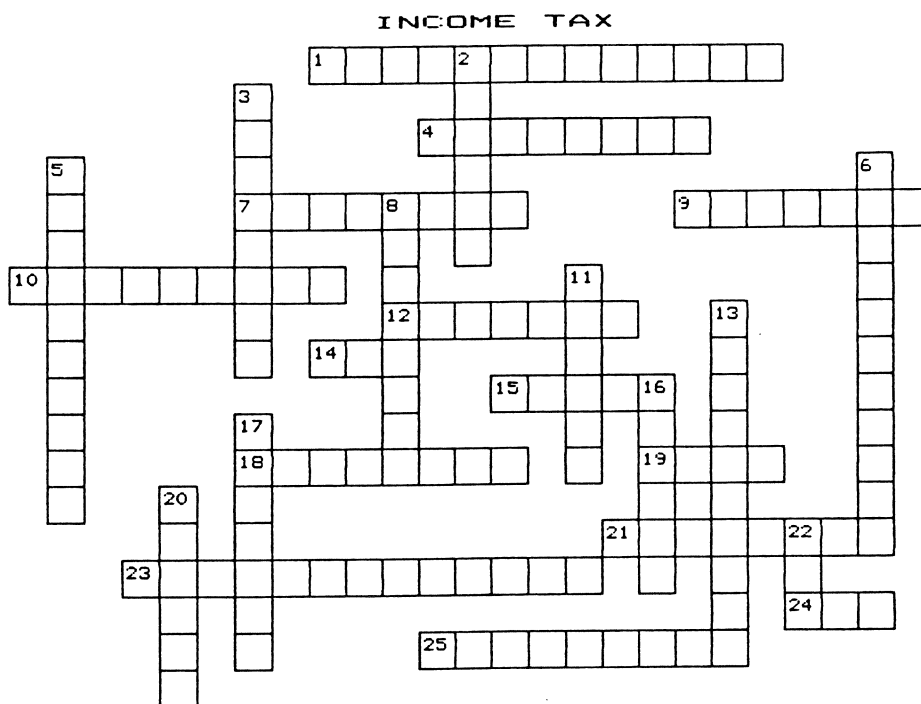


an even more elaborate routine and so on. Each of these could again be used by others. The end result are a series of preprogrammed maneuvers that can be used to draw neat graphics layouts on the screen using only a few commands.

Just before this article was to be submitted for the newsletter, some late breaking news had to be added. The a couple of the members of the Saskatoon Users Group have been in contact with me. One was on the Clubs BBS and the other was done in person. Dave Gudjonson had called and we had discussed a few things about our respective clubs and I believe we

The meeting in May has tentatively been slated for Tristan Miller to do a presentation on Turtle Graphics (no relation to the T.M.N.T. series). As I understand it, you can program or tell the turtle to do a simple maneuver, as he moves, he leaves a trail behind him (in the color you specify, of course). This maneuver can be saved and used within larger maneuvers as a subroutine which again could be called by

both got something out of the resulting coffee meeting. There are several things I would like to employ into our club that I discovered that SCUGs has been doing. I would like to thank Dave for contacting us as I feel we both can benefit by being mutual Honorary members. They have several disks of GEOS stuff that I know we don't have. I had given him a copy of our library's catalogue and have been told that we can expect a copy of theirs. I believe this is the beginning of a beautiful friendship.



**ACROSS**

- 1 MAKING A PAYMENT TO CHARITABLE PLACE
- 4 PENALTY FOR LATE PAYMENT
- 7 WHAT SOME TAX TABLES ARE CALLED
- 9 INCOME WHEN RETIRED
- 10 FAMILY- ?
- 12 INCOME FROM EX-SPOUSE
- 14 GOODS AND SERVICES TAX
- 15 TOTAL INCOME
- 18 MONEY THAT HAS BEEN PAID OUT
- 19 REGISTERED RETIREMENT SAVINGS PLAN
- 21 WHAT IS PAID EACH MONTH
- 23 CANNOT GET BACK
- 24 THE DREADED 3 LETTER WORD
- 25 WHAT CHILDREN ARE TO THE BREADWINNER

**DOWN**

- 2 A TYPE OF INCOME FROM AN INVESTMENT
- 3 YOU YOURSELF
- 5 PLACE OF WORK
- 6 MONEY MADE BY SELLING
- 8 MONEY THAT IS GIVEN
- 11 MONEY THAT IS MADE IS CALLED?
- 13 TO PUT INTO STOCKS AND BONDS
- 16 LITERALLY A TAX ON A TAX
- 17 NATION WIDE GOVERNMENT
- 20 YOUR MARRIED PARTNER
- 22 TOTAL INCOME AFTER DEDUCTIONS

# BASIC Evolution Part II

by Tristan Miller

After the success of the PET, Commodore's Jack Tramiel decided to try to make a computer that would sell for under \$300: the VIC-20. Needless to say he succeeded immensely. Millions and millions of VICs were sold at about \$500 apiece, including accessories such as memory expansion and cassette drives. Commodore predicted few VIC owners would consider buying disk drives, and they were right, fortunately; the VIC was not equipped with the extra disk commands of BASIC 4.0; only BASIC 2.0 was installed.

After the success of yet another computer, Commodore again decided to release another: the 64. Among the features of this powerful new computer were ones such as 64K of RAM (38K of which was available for BASIC programming), a 40 column screen, and more advanced sound and graphics chips. But among those not on the list was a higher version of BASIC. It seems the designers of the 64 have never bothered to install BASIC 4.0 (or for that matter a completely new version). Again they had predicted the still expensive disk drives would not sell, but this time they were proven wrong. Evidently BASIC 4.0 would have better suited the C64 system, but what was done could not be reversed. However, the machine still sold, eventually becoming the best-selling computer of all time.

Again, the success of yet another computer, and again, a new release: the Plus/4 (so named because of its four built-in software packages: a word processor, a database, a spreadsheet, and a graphics generator), and its little brother, the C-16. With the huge success of the 64, the people at Commodore had almost no doubt in their minds that the Plus/4 and 16 would be very popular machines. However, they never caught on; apparently because of the incompatibility of most Commodore hardware and software: they lacked compatible joystick ports, a SID chip, sprites, and a cassette port.

However, there was one great boon: BASIC 3.5. There were several disk commands similar to the ones found in the PET's BASIC 4.0: RENAME, BACKUP, COLLECT, DLOAD, DSAVE, COPY, SCRATCH, HEADER, and DIRECTORY. High-resolution graphics commands such as BOX, CIRCLE, PAINT, COLOR, DRAW, GRAPHIC, LOCATE, CHAR, GSHAPE, SSHAPE, SCNCLR, SCALE, RDOT, RGR, RLUM, and RDOT. AUTO, DELETE, ERR\$, HELP, KEY, MONITOR, HEX\$, ELSE, PRINT USING, PUDEF, GETKEY, JOY, DO-LOOP, EXIT, WHILE, UNTIL, INSTR, RENUMBER, RESUME, TRON, TROFF, SOUND, VOL, and TRAP made programming alot easier. It really was a shame the computers never became popular; both have an excellent BASIC.

In 1985 Commodore released their fourth major computer, the 128. It offered new hardware, such as 128K of memory, an 80-column chip, a disk drive interface with burst mode, a Z80 chip for CP/M, and BASIC 7.0, which has over two times as many commands as BASIC 2.0. It contains all of the commands found in BASIC 3.5 plus about 40 new commands.

Disk commands are the same as those found in BASIC 3.5 and 4.0, with the addition of BLOAD, BSAVE, DCLEAR, DVERIFY, and BOOT. BANK, FETCH, STASH, and SWAP allow one to control the 128's memory. WINDOW and RWINDOW, as their names suggest, create screen windows. To adjust the CPU speed, FAST and SLOW. SLEEP, POT, PEN, POINTER, XOR, BEGIN/BEND, and RREG are various other programming commands.

The 128 also has some graphic and sound specific commands. FILTER, ENVELOPE, PLAY, and TEMPO control sound while BUMP, COLLISION, WIDTH, SPRDEF, SPRITE, RSPRITE, SPRCOLOR, SPRSAV, RSPCOLOR, and RSPPOS are used with graphics. These new commands greatly reduce the amount of PEEKing and POKEing one would normally have to do in BASIC 2.0. There's no doubt that BASIC 7.0 is the best programming language available to BASIC programmers of Commodore 8-bit computers, because of its versatility, speed, and ease of use.



For Sale  
Commodore VIC-20s  
\$10 each - includes power supply  
Phone Tristan Miller: 586-2036

## Hardware Amnesia

by Barry Bircher

I had the unfortunate accident of blowing my computer up one day. Well, not really blow up as in explosion, bang, boom, crash. But my mind was thinking my wallet was going to do that when I heard that sickening pop sound coming from my trusty Commodore 128. What happened? Heck, I don't know, I just plugged in my RS232 interface into the user port like I always have done...OOPS, but this time, I had forgotten in my rush to get things done, to SHUT THE POWER OFF. Darn, I'm not sure if the popping noise was in my head or in the computer at first, but one look at the screen showed that the thing did not like what I did. I may as well have taken a two by four and whacked it across all it's chips. The screen was blank and didn't look at all well, sort of a yucky dirty gray color with all the video lines out of step.

Darn, (put more colourful adjectives here if you like) I must

have done a no no. Oh well, these things can take alot of crap and still come out ticking. All I have to do is reset it, right? Well yes and no, reset yes but would it,.... NO.

Ah, I'll shut the thing right off and restart from scratch. Powered it off and back on after a second or two and I got the familiar READY prompt!. Whew, I thought, the thing's still going. Well, OK, let's get back to what I was doing: first get a directory of the disk and reload the progr... oh, oh, what's this, garbage directory? What's with all the colours and graphic characters doing in the places where the filenames should be? Well, maybe I didn't allow enough time to elapse when I last shut the power off. Let's shut the computer off for several minutes and see if that clears it up. Nope, still no go, get the READY prompt, and everything appears normal, but the disk directory of any of the previously working disks could not be read in. Hmmm, maybe I fried something. I even tried to type in a simple 2 line BASIC program eg:

```
10 print "HELLO"  
20 goto 10
```

Tried "LIST"ing it. No go, garbage again. Yet, by using the built in MONITOR on the 128 (yes it was still working OK), I could see that the program was accepted, tokenized and stored in memory. Typing RUN, showed the computer attempting to execute the program just entered, but never was there anything resembling "HELLO" printed to the screen. There would be garbage characters printed and changes in color and what not. The point here is that the computer tried to run the program and would for a short time before everything locked up.

To make a long story short, I studied the hardware aspect of the 128 computer 'till I was blue in the face (using the official Commodore 128 Programmers' Reference Guide and schematics). I used the shop's O'scope, D.V.M., logic probes etc. in an attempt to find out what the problem was. Looking back at the trouble shooting method I used to find the problem, I really could have located the problem without any fancy equipment. Using the built in ML monitor, I discovered that bank one memory high order bits (4 most significant bits out of the 8) were scrambled and constantly changing in value. When I plugged in the RS232 interface, I caused a surge in the 5 Volt power supply and literally fried the memory chip in bank one. Replacing the chip solved the problem. Extensive testing using utility programs included with the RAM expander and Maverick Video RAM checkers showed no other chips seemed to be adversely affected by the surge.

The moral of the story is that when you see the instructions to plug and unplug things to and from your computer with the power off, they mean it. I got too complacent and didn't follow my usual practice of shutting the power off when connecting and disconnecting peripherals.

I would like to thank Bart and Len at Software SuperMarket for stocking the proper chips required. Without their presence in the Commodore community, we 64/128 users would be missing out on some real local support. The chips replaced

worked as good as or better than the original. I could have ordered the chips through mail order (cheaper at first glance) but with the time delay, costs in postage and handling, customs forms, duties and exchange rates, it was a good feeling to know that someone here in Regina had the parts at reasonable rates. Thanks for your support, Software SuperMarket.

## BUGS DISK OFFER

Want to expand your software collection but the recession got you down?

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# of disks	price per disk
1-4	\$3.00
5-9	\$2.50
10-19	\$2.00
20-49	\$1.50
50+	\$.100

## TeleExercise

Submitted by Barry Bircher

To: Barry Bircher  
From: Shaun Hase - 11  
Subj: Gaming Tips  
Date: 05 Feb 92 Time: 4:28 pm

The Joystick Lunatic Home Gamer Workout  
by Steve Finkel,  
February/March 1985 PowerPlay magazine

People are often born to be great artists. Picasso was. Van Gogh was. Rembrandt was born to be two great artists, which possibly explains his rather impressive girth.

Even with their natural gifts, these men had to undergo rigorous training to fulfill their destinies. It's the same with great athletes, great chiefs, great actors and actresses (except for those who write workout books), great musicians and even great gamers. It's dedicated practice -

working out every day - that transforms a simply talented person into an outstanding achiever in his or her field.

Look at your hands...notice the palms, the fingers (five) and the way you can manipulate them. It's as if your hand were created to hold a joystick. Your eyes...stare straight ahead, look left, then right...perfect for following aliens around the screen. Reflexes are important also...walk out into traffic from between two parked cars...see what quick and sure reactions you have! It's obvious that you were intended to be a gamer, and you have the potential to be a great one. All you need to do is hone and strengthen those natural abilities with the exercises in this guide.

### Exercise #1: Loosening Up

Turn your head slightly to the left. Then turn your head slightly to the right. Now turn your head even further to the left, then even further to the right. Now turn your head in a 360-degree rotation. You are now sufficiently loose.

Benefits of this exercise:

- ☛ You can make sure no one is sneaking up on you while you play.
- ☛ If you chew tobacco, you can place a spittoon behind you so you won't have to worry about getting tobacco juice on your monitor screen.

### Exercise #2: Ear Closing

Stare straight ahead. Ignore all sound. Ignore the sound with your left ear. Ignore the sound with your right ear. Ignore with both ears. If you can read lips, close your eyes as well.

Benefits of this exercise:

- ☛ Allows you to focus your concentration solely on the game at hand.
- ☛ Helps you completely ignore everything that's going on around you, such as noise from your competitor, children crying, dogs barking, munitions factories exploding, etc.

### Exercise #3: Forehead Slap

Extend your fingers, holding them rigidly together. Hold your arm away from your body at a 90-degree angle. Swiftly bring your hand to your forehead. Accentuate this exercise by shouting an expression of dismay or disappointment.

Benefits of this exercise:

- ☛ People will know that you take your gaming seriously.
- ☛ Any flies that are buzzing around your forehead will fall victim to your well practiced motion. (Be sure to wash your forehead well after this application.)

### Exercise #4: Forearm Swing

Cup your four fingers together and touch your thumb to your middle finger, forming a ring with your hand. Keeping your elbow at your side, move your forearm left and right, front and back, while maintaining the same hand position.

Benefits of this exercise:

- ☛ Improves flexibility and control of joystick.
- ☛ When practiced in movie theaters, you won't have to worry about people (particularly mothers with young children) crowding you.

### Exercise #5: Breathing

Inhale deeply. Then exhale. Take another breath. Now let it out, making a slightly "whoosh" sound. Repeat indefinitely.

Benefits of this exercise:

- ☛ Provides interesting sound effects on tougher rounds.
- ☛ Keeps them from hooking you up to a respirator.

### Exercise #6: Thumb Press

Tape a penny onto your thumbnail. Lift you thumb into a straight-up position, then lower your thumb. Repeat this ten times. Remove the penny and replace it with a nickel and repeat the ten up-and-down thumb-lifts. Progress to heavier objects: quarter, half dollar, silver dollar, Volkswagen.

Benefits of this exercise:

- ☛ Bulging thumb muscles.
- ☛ Good preparation for hitch-hiking.

### Exercise #7: Eye-Building

Solution to Last Month's Crossword

**TELECOMMUNICATIONS**

Shift both eyes to the left. Shift them both to the right. Look up. Look down. Cross your eyes. Look left with one eye and right with the other. Narrow your eyes. Raise the left eyebrow, then the right. Now raise them both. Open your eyes as wide as you can. Stare straight ahead. Maintain a "glassy-eyed" look. Stay in this position for several hours.

Benefits of this exercise:

- ☛ Strengthens the necessary muscles for hours of hard staring at monitor screens.
- ☛ Discourages unwanted social interaction, since people will tend to leave you alone.

### Exercise #8: Elbow Endurance

Plant your right elbow on the right armrest of your chair. Make a fist with your right hand. Hold your left hand slightly cupped about two inches beneath your right hand. Practice moving both hands in any direction while keeping your elbow firmly planted. Turn on a fan that blows air directly into your face; keep your elbow firmly planted. Put ice cubes down the back of your shirt; keep your elbow firmly planted. Have someone hit you upside your head with a croquet mallet and lose consciousness; keep your elbow firmly planted.

Benefits of this exercise:

- ☛ Contributes to a rock-solid play concentration.
- ☛ Improves your ability to hold poses for portraits painted by extremely slow artists.

### Exercise #9: Teeth Gritting

Close your mouth. Keep your upper and lower jaw shut, so that your teeth are tightly closed. Curl your upper and lower lips to expose your teeth. Winkle your nose menacingly and grimace. Uncurl your lips. Curl. Uncurl. Continue until you feel your chin falling off.

Benefits of this exercise:

- ☛ Helps you bear down and play tough.
- ☛ Scares small children.

### Exercise #10: Thumb-Ups

Make a fist by curling your four fingers, but extend your thumb straight up. Then touch the tip of your nose with your thumb. Now extend your fingers. Repeat facing different people and objects in the room.

Benefits of this exercise:

- ☛ Strengthens your nose-scratching efficiency, since this practice will eventually enable you to touch your nose without looking.
- ☛ Satisfying gesture toward monitor screen when you fail or opponent when you lose.

This ten-step workout improves the necessary skills to make you into a first-rate, top-notch, head-and-shoulders-above-the-crowd (and - any - other - term - with - a - lot-of-hyphens) gamer. A true dedication to this workout is required to become a truly great gamer; if you commit yourself to this workout regimen with a real heart-felt vigor and you fail to improve your gaming ability, then you probably had no potential in the first place. In that case,

you can console yourself with the fact that you gave it your best shot. Loser.

But if you do have the right stuff, you can indeed become a great one, with a lot of work. Remember, nobody ever said that videogaming was supposed to be fun!

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## Secret Code Subroutine

by Ross Parker

Occasionally, we need to "protect" programs so that they cannot be copied or LISTed. If you have a program (or message) that you want only certain people to use, you can share a secret code word with them. Without this word, the program will NEW itself, and not allow the unauthorized person access.

First, you should choose a secret code word. I'll be using 'MONKEY'. Don't use your name, or the word 'secret' - these are too easy for people to guess.

Second, LOAD in a program, or type in the short TEST program below. We will be NEWing this program on purpose, so make sure you SAVE a copy of it.

### Test Program:

```
100 REM MAIN PROGRAM
110 PRINT "THIS IS A TEST PROGRAM"
120 PRINT "NOW TRY TO USE THE"
130 PRINT "RUN/STOP-RESTORE KEYS"
140 FOR T=1 TO 5000:NEXT:REM
    WAITING LOOP
150 PRINT "PRESS ANY KEY TO END"
160 GET A$: IF A$ = "" THEN 160
170 END
```

Third, type in our SECRET CODE subroutine:

```
0 REM <shift-L>
1 POKE 808,225
2 PRINT "<clr/home>"
3 PRINT "TYPE IN OUR SECRET CODE
  WORD": INPUTSC$
4 IF SC$ <> CHR$(77)+CHR$(79)+CHR$(78)
  +CHR$(75)+CHR$(69)+CHR$(89) THEN?
  "YOU LOSE": NEW
```

To enter line 4, you must use the "?" instead of 'PRINT' or it won't fit. And don't put a space after the line number.

### Program Explanation

- Line 0 will not allow the program to be LISTed.

\*Line 1 will disable the RUN/STOP - RESTORE keys, so someone can't BREAK the program in the middle and attempt to LIST it.

\*Line 2 will clear the screen.

\*Line 3 asks the user to INPUT the code word.

\*Line 4: if the code word is not 'MONKEY' (which is what these CHR\$ codes are), then you will get the 'YOU LOSE' message, and the program will self-destruct (NEW itself). We are using CHR\$ codes to further protect the program: if someone manages to LIST the program, they still may not be able to find the code if it is written in this way.

If the code word is correct (MONKEY), the program proceeds to the main body of the program.

If you choose a different code word, you must change the CHR\$ codes in line 4. You can look these up in pages 135-137 of the Commodore 64 User's Guide that came with your computer. If you want to use a secret word longer than 'MONKEY', you will have to abbreviate the commands as follows:

**CHR\$ = C <shift>H**

**POKE = P <shift>O**

**THEN = T <shift>H**

Now, find the line where your program ENDS. This may be a line with the END command, or it may not. Sometimes, it will be found where a program asks you if you want to "PLAY AGAIN (Y/N)". In our TEST program it is line 170. Replace the command END (or add a line) with:

**<line number> NEW**

For example, in our TEST program, line 170 will become:

**170 NEW**

This will NEW the program, so it can't be LISTed.

Now let's try it! After you have made the additions and changes listed above, SAVE your new program. I'LL REPEAT THAT: SAVE YOUR PROGRAM NOW. Now RUN it. When prompted for the secret code word, enter a WRONG word. You will now see the 'YOU LOSE' message, and if you try LIST, there will be nothing in the computer's memory.

Now re-LOAD the program and RUN it again. This time, enter the correct code word. The program will RUN!, but you won't be able to STOP it with the RUN/STOP - RESTORE keys. When the program ends, it will NEW itself and disappear.

When you are finished, you can enter POKE 808,237 for the C-64 in the direct mode to reset the RUN/STOP - RESTORE keys.

**WARNING! Always SAVE your program with the secret code subroutine before you RUN it - it will NEW itself whether you type in the correct codeword or not!!** (And don't say I didn't warn you).

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## BBS Commentary

by Ross Parker

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I will be discussing what makes a better bulletin board.

There are a lot of bulletin board systems out there. They've come a long way since the first one appeared in the mid-late '70s. The first systems ran using floppy drives. Now, most systems have hard drives; a few with over 1000Mb. BBS's run on faster, more powerful computers now. We have BBS's running at 19.2Kb and higher. Multi-user systems are becoming common place.

One of the main reasons for these improvements is so that users can upload and download more files; high baud rates aren't much use for reading things online. Most users can't read faster than 1200bps.

Originally, bulletin boards were designed to be an electronic meeting place for computer users. Transferring files was just a frill. Now, the message areas have to compete with not only download areas, but online games and other doors as well.

Is this good? Possibly.

Yes, progress has been made. BBS's are a lot easier to use. The first BBS, CBBS, was difficult to use for the novice. It wasn't designed to be easy. Only computer users were expected to use it. Now, anybody can use a bulletin board without knowing anything about computers. Whereas before, all BBS systems were technically orientated, now there are systems with many non-computer related topics, including medical, law, aviation, astronomy, religion, business, and writing.

Of course, for every serious board, there are 10 or more "kiddie" boards. It's very easy to set a BBS up. It's hard to maintain it and make it grow and mature.

This is just a few comments from a sysop that has been running a BBS for a couple of years and using modems for much longer. Where are BBS systems heading? What can we expect in the future? Maybe you can post your comments on your friendly neighborhood BBS. Talk to you there!



# The Keyboard, Kids and Krud

by Ken Danylczuk

No matter how careful you are, no matter how fastidious (look THAT one up!), eventually the dreaded "key-krud failure" will strike! It begins as a simple "occasional" mistype - a letter dropped here or there as you program or word process or do the spreadsheet. Mostly you blame yourself for "trying to type too fast" and being careless about pressing every key properly, but soon it becomes obvious that YOU and your beloved C64/128 have a problem! The problem develops anywhere from 6 months to 4 years down the ownership road, and is inversely proportional to the number of non-adult hands using the machine.

Eventually - a key or two on your machine will begin to "miss" or fail to produce the character it should unless you literally POUND on the key or hold it down HARD for a LONG TIME. Finally, it seems to quit - hardly ever printing when struck even with stronger than normal force. Just as an aside - I've noticed that it's NEVER the "pound sign" or the "up arrow" key - it's usually a vital alphabet letter - the "s" key (try asking the machine to "SAVE" without THAT key!), or the number "8" (try LOADING or SAVING without THAT one!).

Your keyboard needs service - probably a thorough cleaning. If you're fortunate, you'll have a service depot near you, and you'll have enough in the bank to pay the service person to open up your favourite toy and work his wonders. You COULD try to put up with it a bit longer, but that missing "R" drives you CAZY! I'm here to suggest you take the less expensive alternative - try your own keyboard cleaning! Why not? There's almost NO electronic skill required - inexpensive materials to buy - and little risk if you take some common-sense precautions.

I'll be demonstrating the techniques involved at a coming CUGS meeting, but I'm going to get you started here and now, and will finish the procedure next issue. As our 8-bit machines move relentlessly towards manufacturing oblivion, home maintenance and servicing becomes the only alternative to the scrap-heap. And it's a lot easier on the pocketbook, too.

OK, let's get started.

Find a safe space to work, one with good lighting and one that can be left safely undisturbed for a day or two (don't panic - most jobs won't take that long - but you MIGHT get interrupted). If you're into hobby electronics (small scale) you've probably got a suitable area and most or all the necessary tools. If not, you might want to invest in a few tools that will make the job easier. Most of the list that follows are useful in a variety of ways around the house, so any cash outlay will have multiple returns on the investment. Most of my fiddling inside my 128 takes place with a variety of "found" tools from around the house. The only un-substitutable tool is a low-wattage soldering iron -

many things inside your machine are connected with conductive metal solder which has to be loosened, repaired or replaced so... the iron. Low wattage because most soldered parts end up connected to delicate Integrated Circuits (ICs) which are VERY susceptible to heat and/or electrical shock. This is the most expensive requirement with a tag of about \$15.00 at your local R\*\*\*\*o S\*\*\*\*k! You'll need a little electrical solder to have at hand for repairs occasionally - certainly for the first time you clean your keyboard - same source!

Gather a few different small screw drivers - especially a "blade" ("normal") type and a "Phillips" (cross-shaped end). A sharp knife, small scissors or pocket razor knife often comes in handy. You'll need some good quality "Q-tips" or absorbent felt pads, some toothpicks, denatured alcohol (NOT rubbing alcohol - I use spirit master duplicating fluid) or a "contact cleaner" liquid from the source mentioned above. A couple of small bowls or cups to hold loose pieces come in handy about half-way through most work. A lint-free rag or two will also find good use, sometimes just to catch pieces that might fall.

Once you've arranged your space, and gathered, bought or borrowed the necessary tools you're moments away from the "moment of truth". Using any means (including deception) to get the keyboard - C64 or 128 - away from your family, gently lay it out upside down in front of you on one of the lint-free cloths, locate the three recessed screw holes at the front edge of the keyboard, take a deep breath and a Phillips screw-driver and remove all three screws. If this is the first time your machine's been opened the screws will have become quite set; you may need a LITTLE muscle to loosen them the first time. With the screws removed, carefully return the keyboard upright. Grip the front of the keyboard and raise it like a box-lid or car hood. Careful! There'll be three separate groups of wires still attached, holding the two halves from separating completely. On the 64 you may be able to completely open the key part and lay it wing-like beside the lower part without disconnecting any wires. Take a pen (felt ones work well) and mark the orientation of the plugs that are at the end of the wires, then detach the wiring at the plugs. This leaves one small problem with a first-time keyboard. There are two short wires that connect the keyboard to one of the keys. They're soldered at both ends - I recommend you simply (carefully) cut them both - we'll fix them back up later when we re-assemble!

Just to leave you with something to do 'til next time - to remove the keyboard printed circuit you need a small Phillips head screw-driver and a lot of patience - there are about 16 screws - look carefully - a couple may be hidden below taped wires on the board - but all have to be removed and stored using the cups or bowls.

Once the circuit board is separated from the keys we can begin cleaning. If you're nervous about this, don't start until next issue when the cleaning and reassembly are described. Otherwise, a little daring and common sense will tell you what needs doing - so do it!

# The Taxman Cometh

by Earl Brown

Once again it is that time of year we all come to dread and even hate. I'm speaking of course of filling out your Personal Income Tax Return. As a member of CUGS, I have managed to provide a reasonably comprehensive C128/128D/C64/64C computer program capable of handling most of our returns since the 1982 return. This year's program is almost a duplicate of last year's. There has been only minor changes in the 1991 version: basic exemptions, Federal and Provincial taxes, are up only slightly. The FST deduction has been replaced with the Goods and Service Tax rebate.

The amount of RRSP you are able to buy is around 18% of your earned income from last year. If the tax department failed to supply a slip indicating just how much RRSP you are entitled to purchase, read line 288 in your 1991 guide book for instructions in calculating your own maximum value. There has been a rumor circulating that some of these Government calculations were erred by a computer so you may just want to calculate your own maximum RRSP value to avoid the doubt. Or wait for the Government to send to you a corrected value. If there is nothing wrong with your supplied RRSP value, you may be waiting in vain.

If you are one of the lucky people to only have to file the T1 SPECIAL, you will find this program on the CUGS INCOME TAX #91 disk very quick and easy to use. This version of the tax program does not save any of the variables to disk. I felt it just wasn't needed for so few entries. If for any reason, you want to save your variables for posterity, just run the long T1 GENERAL instead of the SPECIAL for your return. The disadvantage is the much longer time it takes to load and the many, many more variable you have to [RETURN] through to complete the program. Even this isn't too bad if you have to run the program only once, but if you wish to change variables, then you'll have to re-run the program again, and perhaps again, etc.

GOOD LUCK! May your results be better than you expected. WHAT A DREAM!

## The Best of Two (or Three) Worlds

by Ken Danylczuk

Well, it's time to start my journey - remember, I've just recently discovered the 128 part of my C128? Also, remember that I've invited all of you to journey with me as I discover what there is to discover in this marvelous three-way, split-personality machine.

First, let's set out some ground rules and some "givens" for this column. I know that over half our club membership own and operate C64's and have little or no concern for it's younger brother, the 128. I also know that the C64's in

general outnumber the 128 5 to 1! I also acknowledge that CP/M is a grungy somewhat forgotten forerunner of good ol' "blue" DOS, with a dwindling user base.

NONETHELESS...

I hope EVERYONE will find something herein to interest, amuse or inform. As C64's and C128 move into the realm of want-ad and garage sale items, you C64 nuts might be tempted to try a cheap 128. Following my "voyage of discovery" might give you enough information to decide if a 128 makes sense. Also, many hints, tricks and tips work on either machine, and I'll try to provide some of those as a part of my "journey".

About a third of you are 128 pro's - you cut your teeth on banked memory and BASIC 7 - I hope I can offer you the amateur's wonder and help you REDISCOVER things within the 128 you've known since forever, but forgotten. Remember the words of the sage who said, "THE PERSON WHO THINKS S/HE KNOWS EVERYTHING, DOESN'T!"

So, let's begin by... turning on the machine! The schizophrenic 128 can be turned on in any of 4 specific modes, most selectable from the keyboard. Want a 64? Hold down the COMMODORE key while you turn on the power switch - presto! Want a 40-column 128? Just turn it on! Want an 80-column 128 - toggle the 40/80 DISPLAY key before you turn on the machine. Want CP/M - have a boot disk in the 1571 drive!

Let's extend our knowledge of starting up a 128 just a little. When I kindled my interest in the 128 I began to read - anything I could find about the 128. The programmer's reference guide is a behemoth monster with as much readability as a phone book! Then came the back issues of magazines and books - and I have a fair library. Thanks to several old issues of RUN, AHOY, GAZETTE, COMMODORE MICROCOMPUTING (brings back memories) and COMPUTE! and even a few TRANSACTORs I learned a few "neatos" about starting up the 128!

If you intend to use the 64 side for a while for programming, type in the following on one screen line and you'll reset some pointers so that a RESET (button on the side) will return you to 64 mode until you turn off the machine:

```
BANK0: POKE 65528,77: POKE 65529,255: SYS 65357
```

One frustration of long-time C64 programmers is the absence of even a simple "on-board" ml monitor. 128 owners have one built into the 128 side, but IT CAN BE USED TO EXAMINE AND WORK WITH INFORMATION IN THE C64 SIDE! To see a C64 program in its "raw" state, load the program into the C64 side; RESET to 128 mode and type 'SYS 4'. You should now have the ':' prompt of the 128 ml monitor. Type a 'D' or 'M' followed by '0000 0000' and you should be shown the first 128 bytes of machine code. (D disassembles the code into mnemonic assembly language; M displays the HEXADECEIMAL code followed by the ASCII display of each line of HEX numbers. If the program is an ML routine useful

for the 64, you can return to the 64 side either by RESET with COMMODORE key or by the command "GO 64". Just one other gleaned extra - (on the 128 side) you can recover from a lockup or simply slip into the monitor without disturbing BASIC by the RESETing while HOLDING DOWN THE RUN/STOP KEY. Oh, yeah - type an "X" to exit the monitor.

By the way, if you turn on your 128 in the 128 mode, it automatically resets any attached 1571 drive into DOUBLE-SIDED mode. If you turn it on in 64 mode (with the COMMODORE key), it sets the drive to 1541 (single sided) mode. But if you GO 64 after a 128 start-up, the DRIVE WILL REMAIN IN DOUBLE-SIDED MODE! This could cause problems if you don't pay attention to your loads and saves - I speak from experience!

Well, the journey's begun - the machine's on. But, before I let you go for this month - how about a couple of "neatos" I discovered in my first readings of old tomes:

Try the "illegal" commands "QUIT" or "OFF" in direct mode - ever seen THIS error message before?

And an "oldie but a goodie" - in 128 mode, type SYS 32800, 123,45,6 and see a little Commodore history!

Chiao for now!

```

=====
★  =====
★  =====
★  =====
★  =====
★  =====
=====
The REM Protector
=====
by Tristan Miller
=====
★  =====
★  =====
★  =====
★  =====
★  =====
=====

```

The REMark statement was created so that the programmer could leave a note to whoever is reading the listing of a program. It usually explains subroutines, gives information on the program or author, or is used to separate parts of the program to make the listing more readable. In this article we're going to explore a totally new use for REMs: protecting the listing. Type in the following program:

```

10 INPUT"WHAT'S THE PASSWORD";A$
20 P$="BUGS"
30 IF A$ <> P$ THEN
   PRINT"SORRY!":END
40 PRINT"PROGRAM STARTS..."

```

A relatively simple form of password protection. But very, very bypassable. All anybody has to do is LIST the program and they'll get the password. This, however, can be avoided. We can add a REM statement at the end of line 20 to erase the line. Retype line 20 as follows but do not press return at the end:

```

20 P$="BUGS":REM""

```

Now press DEL once, then type CTRL-9 for RUS ON and type 18 T's and then press RETURN. Upon LISTing the program, you'll find line 20 to be missing, but if you RUN it, the program will work as if it was still there. And it IS still there.

What happened was when we deleted the second quote in the REM statement, we fooled the computer into thinking it was in quote mode. Thus when we typed 18 reversed T's, the computer interpreted them as deletes, and deleted the line as soon as it was LISTed.

Keep in mind, though, that this method is not fool proof. The person attempting to get the password can get it by printing out the program listing as the printer cannot delete. There are, however, ways that make sure the program cannot be LISTed in the first place. They both employ the use of graphics characters in the REM statements, which, as you probably already know, translate into BASIC keywords upon LISTing. For example, 10 REM [SHIFT-Y] LISTS as 10 REM GOSUB. There is, however, one graphic that produces a totally unexpected result: SHIFT-L. Try this program:

```

10 REM [SHIFT-L]
20 PRINT "YOU'LL NOTICE THAT THIS
   PROGRAM WILL WORK EVEN THOUGH"
30 PRINT "YOU CANNOT LIST IT. TRY
   LISTING IT AND SEE WHAT
   HAPPENS."

```

As you will see, the program lists the first line and then a ?SYNTAX ERROR. What you have witnessed is one of the few bugs in Commodore 64 BASIC. Some of the newer 64s are not subject to this bug; and thus the program will LIST. But if you own an older 64 or 64C, this is another useful way to protect your programs, but once again, it is not totally fool-proof: though the listing cannot be printed, all one has to do is type LIST 20- and they will receive the rest of the listing.

For those of you feeling particularly nasty, an alternate method of REM protection is to employ the power of the 64's mysterious "strange lockup bug"\*. To witness this phenomenon, merely cursor down to the bottom of the screen, type anything to completely fill up two screen lines. When you type the last character, the screen should scroll down a line or two. Now press the DEL key. The computer will then display the following:

```

LOAD
?SYNTAX ERROR
READY.
RUN

```

If you have a program in the memory, it will run but the keyboard will be locked. If there is nothing in memory, the screen will display either PRESS PLAY ON TAPE or the READY. prompt but the computer will accept no input from the keyboard. In either instance, nothing short of turning off your 64 will reset the system.

We can use this in our REM statement by putting the computer in quote mode to cursor to the bottom of the screen, then we can use another REM to fill up two screen lines. The SHIFT-P's we will be using will translate into INPUT#'s and the reversed T's will delete the characters to produce the lockup bug. Here are the instructions:

Type in 10REM"" (no spaces) and delete the closing quotation mark. Then type CTRL-9 and 6 T's. After this is, type SHIFT-M (the computer interprets it as a carriage return). Now type 25 Q's and press RETURN. For the second line, type 20REM and seven SHIFT-P's. Then type the two quotes and delete the second one. Now enter CTRL-9, SHIFT-M, and 15 T's and press RETURN. Now enter the next line as 30REM and a SHIFted L.

If this was done correctly, when you LIST the program you should encounter the lockup bug. This can be used at the beginning or middle of any of your programs, but be aware that once again there is a way to get around the bug. Merely LISTING after the lockup lines will reveal the program, just as in the previous method. But this undoubtedly is the best way to scare off prying eyes from your programs. If you want to be sure your programs are protected, I would suggest a combination of all three methods at various spots in the program.

\* Note that again the newer 64's are not subject to this bug and thus the phenomenon cannot be made to happen.

## BBS Terms

By Stan Mustatin and Tristan Miller

I have assembled a list of some commonly used BBSing abbreviations, plus some ASCII faces assembled by Stan Mustatin and me. Here's the list:

<b>BBFN</b>	Bye Bye For Now
<b>BTW</b>	By The Way
<b>FYI</b>	For Your Information
<b>IMHO</b>	In my humble opinion
<b>ROFL</b>	Rolling On the Floor Laughing
<b>TTFN</b>	TaTa For Now
<b>TTYL</b>	Talk To You Later
<b>&lt;g&gt;</b>	Grin
<b>d : &gt;</b>	baseball player
<b>Q : &gt;</b>	Jaques Cousteau
<b>[ : &gt;</b>	crew cut
<b>%&lt;</b>	hung over
<b>( : - &gt;</b>	before Hairfax
<b>@ : - &gt;</b>	after hairfax
<b>*80</b>	cannibal
<b>+ : &gt;</b>	lobotomized
<b>: L . . . .</b>	drooling
<b>: O *</b>	upchuck

<b>: &lt; or : - &lt;</b>	frown (<B can be used for eyes, < [ [ can be used for mouth)
<b>: &gt; B &gt;</b>	woman swimming
<b>: &gt; : &gt;</b>	man swimming
<b>: &gt; or : - &gt;</b>	smile (<B can be used for eyes, > ] ] can be used for mouth)
<b>: -</b>	picking nose
<b>: /</b>	Jean Chretien
<b>; &gt; or ; - &gt;</b>	wink
<b>&lt; = - &lt;</b>	fish
<b>= B - &gt;</b>	cool dude
<b>= : x</b>	rabbit
<b>&gt; *</b>	seagull
<b>&gt; [ ]</b>	television
<b>? : &gt;</b>	Elvis Presly

## BBS Phone List

Aladin's Cave	789-9800
Alpha Colony II	545-8342
Beaker Box	569-3183
Bit Bucket	352-3236
Buccanner's Den	352-2477
Cellar Dweller	565-3454
Crystal Visions	586-6790
C.U.G.S.	543-7683
Data Force	585-1958
DATAEACH	1-995-3333
Edgeworks	545-9672
Extreme Outer Limits	545-8417
Fernando's Retreat	585-8298
Forgotten Realms	729-4185
Girk Dendly's Holostic	789-9909
Hobby Shack	789-1993
Ice Breakers LTD	789-5689
Impossible Missions	569-9705
Last Chance	569-8559
MEBBS ][	775-1437
Micro City	584-8747
Missing Link	775-1512
Narhex	545-8163
New Age	522-8327
Night Shift	586-8308
Pool Hall I	586-8922
Pool Hall II	586-8490
R.A.T. III	949-6185
Realm's of Krynn	781-4983
Regina FIDO I	777-4493
Regina FIDO II	569-8271
Regina Public Library	347-8463
Scout's Own	777-2998
Snake Pit	569-2886
SwitchBlade	949-2110
Tee Wun Kay	779-1237
TTL Computer Concepts	522-3233
Unibase	789-8709
Unibase	789-8715
Uni. of Regina	586-5550
Xerox Service Centre	789-8464