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The Monitor is published monthly by the Commodore User's Group of Saskatchewan (CUGS). Meetings are held on the first Wednesday of every month in ROOM 173 Miller High School unless otherwise noted. The next meetings will be held on October 5 and November 2, 1994 from 7:30 to 9:30 P.M.

CUGS is a nonprofit organization comprised of 64 and 128 users interested in sharing ideas, programs, knowledge, problems, and solutions with each other. Membership dues (\$15) are prorated, based on a January to December year.

Anyone interested in computing is welcome to attend any meeting. Members are encouraged to submit **public domain** and **shareware** software for inclusion in the **CUGS Disk Library**. These programs are made available to members at \$3.00 each (discounted prices when buying bulk). Since some programs on the disks are from magazines, individual members are responsible for deleting any program that they are not entitled to by law (you must be the owner of the magazine in which the original program was printed). To the best of our knowledge, all such programs are identified in their listings.

Other benefits of club membership include access to our disk copying service to make backups of copy-protected software, and any members who own a modem and wish to call our BBS will receive increased access. The board operates 300-2400 baud, 24 hours a day.

Note the new BBS number: 565-8562.

Editorial

Welcome back, everyone. It seems everyone was keeping busy over the summer — so busy, in fact, that it seems many members were not informed about the September meeting. This October issue of the Monitor, though, will be published *before* the meeting date of **October 5**, **1994**. If time does not restrain me in the future, the Monitor will continue to go out before the actual date of the meeting so as to notify members of the meeting dates, and will be available in stores such as the Regina Computer Exchange.

Over the past few months, there has been much talk about Commodore Business Machines going bankrupt. Our sources at the Commodore Hawaii Users Group assure us that this is strictly an American problem; Commodore International is still operational in Europe and may even be planning to begin manufacture Commodore computers in India. Commodore USA has relocated to 1200 Wilson Drive, Westchester, PA 19380, their previous address. No one at CBM USA (610-431-9536) is authorized to make any statements regarding the company except Chairman Irving Gould or President Mehdi Ali.

At any rate, Commodore has long since abandoned their 8-bit lines, but user groups such as CUGS continue to provide help and support for these computers.



OVER 100 QUALITY 64/128 PACKAGES AVAILABLE AT NEXT MEETING

SEE INSIDE FOR LIST OF TITLES AND ADDITIONAL INFORMATION



Commodore 65

The networks are buzzing with news and new discoveries of Commodore's Alpha Unit 65. The Commodore 65 was first reported by COMPUTE'S Gazette and RUN magazine back in 1989. Back then, it was a fantastic idea; the ultimate Commodore 64, if you will. But, alas, our dreams were put to rest when the project was scrapped, with Commodore's engineers dubbing it "Son of Plus/4". Years later, while cleaning out its warehouses, Commodore sold a large amount of stock to Grapevine, and buried in these piles were, yes, the Commodore 65 development machines! After sorting, an ad was discovered from Grapevine in an Amiga magazine: C65, \$99.95. And people ordered.

Now, these development machines happen to be PAL standard only, which, if you're not aware, means that they are made for European use. Fortunately for us American collectors, they do indeed work with the appliance voltage converters you can buy at Radio Shack, and they function perfectly on 1084 monitors with no conversion. Grapevine did try to convert these machines over to NTSC (our standard), but supposedly couldn't obtain the proper components. It would appear to me that if they couldn't, none of us home hackers can either, so C65 NTSC mods probably won't happen.

So, now that people have received these machines and have them set up, the real adventure begins. With no knowledge and no manuals, programmers are working hard to unlock the mysteries of these fantastic (but unfinished) units. This report comes from TPUG, and has some of the first real "dirt" on the C65.

First, let's begin with the C65's built-in machine language monitor:

Mike Naberezny, TCCUG Newsletter

pc sr ac xr yr ZR sp; 000000 00 00 00 00 00 00 00

That's right, machine language programmers — a new register! And opcodes to match: LDZ \$0000, LDZ \$000,x, etc. The whole family is there, complete with branches, compares, transfers (INZ, DEZ), etc. What's missing is the zero page stuff. No LDZ \$aa: STZ \$aa, etc. Assembling this in the monitor nets the absolute version; LDZ \$00aa.

Also notice that the program counter has 3 bytes/6 digits, and disassembling will *wrap* into the next bank!

```
d f0fffe
.f0fffe b1 fa    lda ($fa),y
.f10000 ff ff 02 bbs7
$ff,$0005
```

There are also some opcodes we always wanted! For example: PHA: PLA, PHX: PLX, PHY: PLY, PHZ: PLZ, BRA: BRanch Always, TYS: Transfer Y to Stack, TSY: Stack to Y, TSX: Stack to X, TXS: X to Stack, and there are quite a few more. The most baffling one I have seen is MAP! Usually preceded with a loading of a, x, y, and z. Then MAP. Could this be connected directly to the Frankenstein MMU? Might be nice, or possible the DAT (Direct Address Translator)? And how about TRB, TSB, NEG, SEE, DEW, ROW, ASW, CLE, PHW, CLV.

BBS7 \$00,0000 BBR7 \$00,0000 SMB2 \$00 RMB5 \$00

This value ranges from 0 to 7, probably branching on bits ON/OFF. We're



going to need Fred [Bowen] for this stuff!

Now, let's explore the C65's BASIC, version 10. Let's start with the shortest stereo tune around:

5 VOL8:PLAY"V101":REM Volume
 close to CTRL-G, voice
and octave to 1
10 PLAY"C":PRINT";CTRL G";
 :GOTO 10

The sound from PLAY and CTRL-G go to different channels on the RCA jacks/stereo, but mono on a monitor with 9 pin separate video cable!

There are 16 function keys, and they can be programmed with the C128's KEY command! Some that are not obvious are F5/F7, forward/backward by word or command. A space or colour are delimiters! (CTRL-P/V equivalent). HELP (F15) highlights error between quotes — in RED!

Attributes: flash and underline are still with us, and characters can be both, just like on the Commodore 128. There is also an added Flash Underline Only. I haven't figured out just which CTRL code... yet.

All of the C128 ESC sequences seem to be present on the C65. (ESC I/D: insert/delete blank line. ESC A/C: insert mode on/off).

BASIC load address is 8193/\$2001. SYS8192 won't mess up your function keys or screen colours.

C64 cartridge type code is loaded in C65 mode with "8,1", then hit reset. C64 cartridge auto-start.

The built-in 1581 disk drive DOS is NOT fully debugged. LOAD and SAVE work fine, a little faster than the "1541 mode", but seem slower than the Super Snapshot v5 Turbo or JiffyDOS. DLOAD/DSAVE and the monitor L and S seem to work fine also, but you can forget SCRATCH, VALIDATE, COLLECT, Various BAM corrupt type errors reported. Any drive error will increment the screen border colour in C65 mode, and always increments the border colour in C64 mode for any drive access. These are probably "development system" indicators, I'd imagine. They are really annoying. At reset with a disk in the drive, file autoboot, c65* is loaded and run.

C64 mode tape device is gone. C64 BASIC ROM is 100% except for the fill bytes in the \$BF50 area. \$FF vs \$AA. The main KERNAL ROM is quite a bit different, due mostly to the deleted tape stuff. It is too bad they



didn't go the rest of the way and change it to LDX \$ba instead of LDX #08. Minor point — in C65 mode, this would have been great! Band 020000 has the drive DOS, C64 BASIC is at \$02A000 to \$02BFFF, there is some odd code right at \$02C000, some C65 code at \$02C800, character set is located at \$02D000 to \$02DFFF, and the Kernal is \$02E000 and up. Bank 03xxxx has C65 code, and bank F0xxxx has I/O stuff.

Well, I suppose that's enough excitement for one article. Thanks go out to TPUG for their discoveries, even though the report needed massive rewriting/editing. This is really valuable information. Look for future articles about this mysterious supercomputer from our favourite company.

FOR SALE

Hardware/Firmware:

COMVoice Speech Cart. (C64) 1541 II/1571/1581 Power Supply Amiga 500 w/512K exp., power supply, mouse, manuals, software

Software:

Dragon Wars (C64) COMPUTE!'s Sid Editor (64/128)

Books:

Troubleshooting & Repairing Your Commodore 64 Time-Life *Understanding Computers* Four-Book Set Commodore 64 Programmer's Reference Guide

Open to offers — call Tristan at 584-1736 after 17:00.

CUGS COMMERCIAL SOFTWARE SALE

Each new member at the next meeting will receive one title absolutely free, plus their name will be entered in a draw to win a C64 system courtesy Harvey Klyne. Members may also purchase any of the following titles at the next meeting for \$3.00 each.

AD&D DM Assistant I & II Archon II: Adept • Axe of Rage Bad Street Brawler Balakon Raider Ball Stix • Ballblazer Battle Droids

Bonus Package: Penetrator/Star Trooper

Captain Fizz ■ Captain Power Combat Zone ■ Crosscheck

Curse of Babylon • Dallas Quest

Double Pack: Choplifter/Midnight Magic

Dream Warrior ■ Eliminator

Fortress

Gauntlet: The Deeper Dungeons

Guerilla

Halftime Battlin' Bands

History Trivia ■ Into the Eagle's Nest

Kung-Fu II - Laser Squad

M.A.C.H. • Mainframe

Metrocross ■ Mind Roll

Murder on the Zinderneuf

Nether World ■ Ninja 2

One on One: Julius Erving and Larry Bird

Paradroid ■ Qix

RSVP ■ Spiderbot

Sports-a-roni

Star Wars ■ States and Traits

Street Sports Baseball

Takedown ■ The Eidolon

The Great Escape

The Serpent's Lair

Titan ■ Total Eclipse

Tower Toppler

Vegas Craps ■ Victory Road

Wiz Ball

Wizardry: Knight of Diamonds World Karate Championships

Yie Ar Kung-Fu II

Zoom!



Gems at the Library

Stan Mustatia

This is the first instalment of reviews of various disks in the CUGS library. This month I would like to review a personal favourite of mine from the GEOS world of programming: MULTI LABEL.

Do your disk labels look plain and uninspiring? Are your labels made out of masking tape, or just written on the jacket? Maybe you need to spice up your collection data storage. **MULTI LABEL** is just what the doctor ordered. Not only can you print labels in any size from 1" to 16½", but you can print a whole lot at one time, up to 127. The program isn't very big, but boy is it powerful and jammed with options.

Printing can be done in NLQ or draft mode. Fonts up to 18 pixels high can be imported from any disk or drive. **MULTI LABEL** will support all font styles including reverse printing. Text files can be saved to disk and viewed at any time. Load in any old file and you're ready to go.

The best feature by far has got to be the ability to import small scraps onto your labels. Converted **PrintShop** graphics work best. Our library has over 25 disks full of this format.

The biggest disappointment has to be the docs. They are just about useless to anyone. The author, Jim Ferguson, has created some great programs in the past, but he does not like to do docs and it shows. Good thing the program is so easy to learn. Just clear the opening label of Jim's name and address and create your labels one line at a time by clicking on each line. When you're done, click on **FONT** to choose the font of your choice. Load a graphics scrap off disk (we'll get into that a little later on). Click on the menu at **MOVE** and a submenu pops up onscreen. This is where the style is set and the font type and size is verified. Pretty simple so far,

right? Well trust me, it is. Click on **OK** and something that looks like an upside down L will appear at the bottom screen. By this time you'll probably figure out that the top screen is what is referred to as the *TEXT SCREEN* and the bottom screen is the *SCRAP SCREEN*.

Well, anyway, take the funny looking cursor and move it down behind the graphic you previously loaded and click to drop it. This is what your label will look like when printed out as a scrap.

Now comes the easiest part. Click on the **PRINT** icon. A new submenu will appear with even more options for you to consider. The most important option by far is whether to print a text or scrap label (remember what I said about the two screens). If you want that neat little graphic on your label, then pick the latter. Of course, at this time, you can also decide how many labels you want. If you decided to go with the text only label, then you can choose NLQ or draft mode.

If you don't like travelling all over the screen clicking those icons, or maybe you don't own a mouse or a joystick, then all those commands can be accessed by hot keys. Sometimes this is the easier of the two methods. Whichever way you go, this is a great program to really liven up those rather dull and messy disk labels. Mine have never looked better. As a matter of fact, all the disks that I have put together for our library have these exact labels. If compared to the older library, they are, in my opinion, superior. The best part is that they didn't take any longer to produce.



Very few applications and files are required to properly use **MULTI LABEL**. On my work disk, I have the following:

DUAL TOP MLABEL V2.5 SCRAPGRAB Printer driver.

The first program, **DUAL TOP**, is a very good alternative to the desktop. It can do everything and more and takes up a lot less room on a disk. Load **DUAL TOP** first before loading any other program. For more on **DUAL TOP** see the May 1994 *Monitor*.

Of course, you're going to need some way to get all those great scraps onto your labels. If you use **Photo Manager**, then you will also need to have photo albums on disk. With **SCRAPGRAB**, all that is not necessary. **SCRAPGRAB** will search all your photo albums no matter which disk they are on. You can just use the copy routine from the menu to drop the scrap right onto your work disk. Simple.

All of these programs together only take up 151 blocks of space on disk. Plenty of room to save any labels to disk.

DUAL TOP and **SCRAPGRAB** can be found in the GEOS library on the disk *CUGS GEOS 20*. **MLABEL V2.5** can be found on *CUGS GEOS 13*.

All in all, whether you like or use GEOS, this program is a delight. The results will make a believer out of you. Best of all is the ease with which great labels can be produced. Next month, I'll look at some more gems from the CUGS library of public domain software.

Zak McKracken and the Alien Mindbenders

by Lyndon Soerensen

I'm sure you've all stood at the checkout line of your local grocery store waiting with barely concealed impatience while the little old lady in front of you has bought at least \$200 of groceries and is paying for them with about 4 years of saved-up pennies that she keeps unrolled in a jar, and behind you are lined up 10 more people who are wishing that the person in front of them would suddenly drop dead so that they could steal their place in the line.

It's at these times that your eyes begin to rove around the checkout stand, searching for a way to distract you and make this seemingly infinite wait seem like just a few seconds. Your eye travels over the displays of chocolates and candy stands then suddenly is captured by the screaming headline of the latest issue of The National Inquisitor, the most successful experiment in lies and untruth that the term "yellow journalism" could ever produce. SPACE ALIENS TAKE OVER THE PHONE COMPANY!!! screams the headline. You give a mental snort and ask yourself, "Who'd ever take that seriously? What a crock!"

But what if it wasn't?

That's the situation you face as Zachary McKracken, tabloid reporter. Aliens have taken over the phone company and are sending mysterious radiation over the lines to turn the entire world into mindless idiots. It's up to you, armed with joke glasses and a stale loaf of french bread to end the alien menace and save the world



from the hideous fate of stupidity. Along the way, you'll get help from the Society of Ancient Wisdom, travel to the planet Mars, and solve an ancient mystery. You'll also travel to places like London, Seattle, and exotic locales like Nepal and Egypt.

Lucasfilm Games has produced another zany, off-the-wall role-playing game that is both incredibly funny and mind-bendingly difficult. Almost everything in the game that you can pick up or use in this game has a purpose and is used for something. All you have to do to select what you want to do is just use your joystick and point 'n' click. All commands are made up of sentences that you construct by building them from a list that appears on your screen. This means that there is no typing throughout the entire game. You just move the joystick and select what you want to do. This is a wonderful improvement over those games where you have to fight with the computer to try and do some sort of action.

The game world is 3D in nature, which means that you can go in front of, or behind, objects and only concern yourself with a portion of information. You also have help in the form of Annie, member of the Society of Ancient Wisdom, and Leslie and Melissa, 2 co-eds who travelled to Mars in a converted VW van.

Some of the puzzles you'll have to solve involve using 2 or more of these characters, and a few involve travelling back and forth from Mars to Earth. Therein lies probably the only problem with the game. On at least 2 occasions, you must use information gathered up by your characters and then switch to another set and solve a puzzle. Which means that whatever info you find on Mars, you can use on Earth. How did the characters on Earth

get the info from those on Mars? Telepathy? Aside from this small quibble, there is virtually nothing about the game that is poorly done or sloppy.

A big help in solving the many puzzles you'll encounter is included in your game package. It is an Issue of The National Inquisitor for March 29, 1997. Every page of this tabloid of dubious truth holds a vital clue that you must use in order to complete the game. The challenge is to separate the fact from the fiction. Along the way, it makes for some mighty funny reading, too.

The game disks are not copy-protected, which is also a bonus. No head-knocking or bad sectors here. However, in order to travel to some locations on the Earth, you must periodically enter a code (called an 'exit visa' in the game) listed on a separate sheet in order to arrive at your destination. Failure means that you are thrown in jail without bail or hope of escape, let alone trial. Fortunately, the game allows a generous 6 attempts at the right code before you are hauled off to the clink.

The documentation is well-written and contains some pointers to get you started on your way and some help just in case you are stuck for a solution to a puzzle.

All in all, this is a highly recommended game for those of you who enjoy solving puzzles and those of you who just want to spend a couple of hours being entertained.



President's Message

Tristan Miller

Hello and welcome to another edition of the *Monitor*. October will see a few new changes in the Commodore Users Group of Saskatchewan. The most important to take note of is the new meeting location — though we are still having our general membership meetings in Miller High School, we have been relocated to Room 173 as opposed to the cafeteria annex (turn left instead of right when you enter the school; take the first hallway south).

The second major change is that our bulletin board system is now under the care of Librarian/Assistant Editor Keith Kasha. Not only has the location changed — there is a new number, plus Keith has switched the system back to the old EBBS program. Despite some minor startup difficulties, we are working on getting the new version 4.7 running. Some networking is also being discussed. The board can be reached 24 hours a day at 300 to 2400 baud, using any ASCII, (Commodore ANSI, orPETSCII colour/graphics) terminal. The number is 565-8562.

Another thing fairly new at the meetings, though not an officially planned change, is the fact that our door prizes just keep getting better and better. Between now and the December meeting, every new member who signs up for the 1995 year will get the rest of 1994 free, plus his or her name will be entered in a draw for a Commodore 64 system that includes a C64 computer, a 1541 disk drive, and a 1525 printer, courtesy of Harvey Klyne. All new members receive a free peice of software, regardless when or for how long they sign up.

I feel it important to note at this time that the annual CUGS elections are coming up in November. No member should not consider running for one of the positions — they do not require much time (at most a few hours a month) nor great amount of knowledge or incomparable skill (the entire executive is comprised of ordinary members such as yourselves). The executive are what keeps the club flowing along, and it's always good to see some new faces every year. New ideas are always welcome. Nominations and volunteers will be taken during the October and November meetings and the elections themselves will commence at the November meeting. The positions available this year are President, Vice President, Editor, Assistant Editor, Secretary/Treasurer, 64 Librarian, 128 Librarian, and Member(s) at Large.

The president's duties include overseeing the meetings, making general announcements regarding the club, reading and replying to mail, and maintaining communication with organizations affiliated with the club.

The editor is responsible for organizing, printing, and mailing of the newsletters. This is perhaps the most time-consuming of the executive positions but, speaking from experience, is one of the most rewarding.

The secretary/treasurer keeps the club and the executive informed about CUGS's financial situation and handles the checks and accounts, while the librarians create, copy, store, sell, and promote club disks.

(...continued on page 10)



Artura or "A Boot in the Axe"

You are Artura, son of Pendragon and heir to the throne of ancient Britain. You'd already be king except that your evil half-sister Morgause has kidnapped the beautiful Nimue, apprentice to Merdyn the Mage and Keeper of the Sacred Runes.

Your goal in this game is to rescue Nimue and search for the Runes, which have been broken and scattered throughout Morgause's castle of evil. Also in the castle impeding your progress are warriors, ghouls, spiders, and giant rats. And if that isn't enough to make the stoutest hero's face blanche, there are also many traps hidden in the castle to hasten your death.

Arcadia (a member of the Virgin Mastertronic group) has released a game that can be played in two different ways. You can play it as a straight arcade-action joystick pounder, or you can play it as a strategy game, mapping the various levels of the castle and try to find the best and most effective way to find the runes and rescue Nimue while not worring to much about your score.

The graphics are done well, using sprites and smooth scrolling action. The music is also done very well, with a pounding theme that's the perfect accompaniment for axeing anything that gets in your way.

The documentation, however, has got some serious problems.

The docs only run to five pages with two of those taken up with almost-full-page graphics. Three pages are used for the loading instructions for the Amiga, Atari and Commodore versions. These instructions are very bare, with only the absolute minimum directions for getting the game up and running on your machine. The instructions dodn't give

Lyndon Soerensen

you much information on how to use a Rune when you get it, only how to enter the mode for using them (to actually USE them, you must enter Rune mode by pressing 'R' and moving the joystick to select a Rune. Once a Rune is selected, you must then press the joystick button on the Rune. It will then spin and you must keep pressing the button until something happens. Including this in the instructions could have prevented some confusion when playing the game (luckily, the same mode allowing the use of the Runes also allows you to pause the game so you don't lose your life trying to figure out how to use their power).

Another problem is that you only have one life for the entire game. This means that if you die, you are booted back to the beginning of the game without everything you had previously gained. Assuming that you play this game as a straight arcade game, this can be a real annoyance because you must then go back and gather everything up again (although the second time around it may be easier because you know where the items are).

The game DOES include hints and locations for the Runes and other things which you need to regain health in your quest, so it is possible to get everything and win the game, but then there is another problem when you try to play the game this way: the map.

Along with the hints, the game also includes a poster-size map of four levels of the castle (The size of the map is probably



a copy-protection scheme). The map is marked off on a 6X8 grid and shows where all the stairs and ramparts and doors are. The only problem is that when you are playing the game, is is very difficult to compare your position in the game to the locations on the map. The doors seem to be indicated only by arrows (solid arrows indicating lower levels and outlined arrows indicating higher levels). Also, while the hints tell you where the Runes

are in the game, they are not marked on the map.

The game will work with a fast-loader, but if your system has a printer interface connected the game will not work. Once the game is loaded, there is no other disk access, which means that no scores are saved. With good graphics and sound, this game is very attractive. The only real major problems are the

rather amibiguous and incomplete documentation and the odd map.

(Thanks to Art Hamer for pointing out the problem with the printer interface).

President's Message

(continued from page 8)

Members at large have no particular duty on the executive but make general contributions to and aid the executive. Finally, the "Assistant" positions are taken with the assumption that they will eventually be stepping up to the parent position when that executive member steps down.



One final note — several new Commodore BBSs seem to have sprung up over the past month. Digital Underground can be reached at 525-6572. Sysops Dar-ryl Baskerville (Cyber Lord) and Rob Overholt (Striker) run their C*Base system 24 hours a day at 2400 baud. Mike and Shawn Yeo run their board, Arboria, as a part-time system from 1:00 A.M. to 12:00 P.M. on Saturday and Sunday mornings. The number is 545-3330, but it would be wise to check with CUGS or Digital Underground to see if the system is still up be-

fore calling. Their system runs C*Base at 2400 baud. Harvey Klyne, I understand, has also expressed an interest in setting up an EBBS BBS. If he follows through, that will bring the Commodore BBS number back up to four.

That's all for now.. until next time.



New CUGS Disks

Stan Mustatia

GRAPHICS GAMES GG01,09

Centripod This is the same as the classic centipede
Xfighter Fire quickly and dodge enemy planes
Flight patrol Defend your buildings against attack
Galaga Much like the classic arcade game

Gunfighter Face six bad dudes, each faster than the last Nermofbemer Eat the mushrooms and collect points

Wallwars Guide your ships through gates and battle hard

Spacefortress Destroy the enemy before they get you

Xeropus Much like Galaxian
Creeps Much like Space Invaders

Attack force Guide between barriers and shoot ships

TEXT GAMES TG01,01

Stellar.emp Battle for universal supremacy

Valterr An adventure game

Witness Testify in court to put away the bad guy
Medieval You are King Arthur in search of the Grail

Name that tune and win Scorpion.sol Solitaire game w/docs Spectrum.sol Solitaire game w/docs

Stonville Find treasure and collect inheritance

GEOS 23

Animals Paint document
Western Paint document

ItalicaFontFuture fontFontWho fontFontSpartan 14,16FontSpartan 10,12,18FontMideastFontFareastFont

Geoherbology Paint document of useful herbs

Cribsheet Paint document of desktop/geowrite commands

GEOS 24

Fancy borders

Use to jazz up letters and reports

Halloween art Creepy clip art for ghouls Geo holiday Year round holiday clip art

Potpourri Paint document

Pub Borders Clips of more fancy borders

Notions Humerous little clips

Zodiac All the signs

Animalia Paint image of all sorts of animals

System Name		Number	BPS	 Protocol	SW	CPU	Nets	Flags
Abyss	- - *	569-6029	14.4	3t,4b	 - Su	 	- W	-
-	"		14.4			P	w AFW	! —
Alpha Colony II		545-8342		3b,4b	Su	P	AFW	Q
Atmospheric Environ.	*	780-6049	9600	3	WC	! - !	_	\$
Beyond Reality	*	731-2539	2400	None	Su	P	F	1
Circle of Wisdom	^	781-4510	14.4	3b,4b	Mx	P	-	1
Crystal Visions		586-6790	14.4	3b,4b	RA	P	F	
C.U.G.S.		565-8562	2400	None	EB	C		
O. Underground (IBM)		585-6077	9600	3	WC	P	FL	BFQ
D. Underground (C64)	*	525-6572	2400	None	CB	C	_	
DLC-West		352-9378	2400	None		P	F	FL\$
Double Check		525-0807	16.8	H,3b,4b	Mx	P	F	Q1
Excalibur		949-8605	28.8	F,4b	Gh	W		
Extreme Outer Limits		545-0417	19.2	Z,3b,4b	WC	P	FBZ	Q
FACT (6 lines; 8770-6)		924-8776	2400	None	WC	P		LQ\$
Fernando's Retreat Fourth Floor		585-0298	14.4	3b,4b	Mx	P	F	FQ
		352-0472	14.4	3b,4b	Sy	P	F	Q2
Green Zone	*	789-7652	28.8	F,4b	Mx	0	FI	Q2F
Highway to Hell	"	781-4878	14.4	3b,4b	RA	W	FILS	B
Holistic		789-5070	14.4	3b,4b	Mx	0	F	BQ
EEE South Sask.		586-1939	9600	3	RA	P	F	B Q
Impossible Missions		569-9705	2400	None	Tr	P	FW	Q
Mageholm		522-9816	14.4	3b,4b	RB	0	F	
Micro City		791-3388	14.4	3b,4b	Ma	P	JR	\$
Micro City		757-0088	2400	None	Ma	P	JR	\$
MEBBS II		775-1437	14.4	3b,4b	TA	A	F	FQ
Missing Link (2 lines)	 *	775-1512	14.4	H,3,4b	PB	P	F F	L
MR Comtek		777-4493	9600	3,4b	TB	P	_	Q
No Quarter	r	584-7428	14.4	3b,4b	TR	P	FLW	Q
Pool Hall I	r	586-8490	9600	H,4b	PB	P		1
Pool Hall II		586-0922	14.4	H,4b	PB	P		1
Q-COMM Data Services		584-2916	9600	3b,4b	LN	P	-	 -
Ronchy's Pleasure Dome		949-8486 545-2943	28.8	H,34,4b	RA	0	F	F
Sage's Desk Shadowland			14.4	3b,4b	DL	A	F	Q F
Shadowiand Short Circuit		789-1899 751-0604		3b,4b	RA	P	F	r
	*		9600	3,4b	RA	P	L	İ
Sideline Skywatch	"	924-4105 569-0581	2400 14.4	None 3b,4b	QB TR	P	F	 E0
Snake Pit		924-0773	14.4	3b,4b 3b,4b		P P	r FRW	FQ B
Somewhere Out There	*	522-3438	14.4	3b,4b 3b,4b	Su TR	W	FKW	!
Superboard			1	3D,4D F,4b		P	F	Q2
Superboard Taylor'd Information	*	789-8690 543-0020	28.8 14.4	3b,4b	PB RA	P	F	F1
Tempest Town	~ 	751-0622	14.4	H,3,4b	Su	P	Tarian	1
Tower of High Sorcery	 	545-0801	14.4	3b,4b	Su Vi	P	FW FW	*
TTL Computer Concepts		522-3233	21.6	H,3t,4b	RA	P	T. AA	l B
Tumorhaus	*	522-3233 585-3973	2400	None	HM	P P		P
rumornaus Jnibase			9600	3,4b		U	TT	 ¿
JRIDASE JSS Galifrey		789-0709 949-6032	14.4	H,3b,4b	 RA	U P	U F	\$ B
/et's Perspective	*	789-9909	14.4	3b,4b	TB	P	r F	!
WeatherNow	*	789-9909 565-6162	14.4	3b,4b 3b,4b	Su	0	r ILS	QF QBF