TPUG Newsletter

Views and News of Toronto Pet Users Group, Inc.

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Volume 6, Number 2 **Spring 1998**

From the President -

Spring is finally here, but the snow still lies deep from our last big snow fall. Soon the white will yield to green and the fresh colours of spring will awake from the long slumber of winter. And what have we been doing while flowers snoozed and bears snored?

The C64/128 chapter meetings entertained and educated with presentations and demonstrations of home made projects and software. In November the topic was Joystick Port Interfacing, which included a special keypad and voice synthesizer to assist the handicapped. In February, the subject was User Port Interfacing where a voice synthesizer, moon rover, and a security system were demonstrated. The latter two demo's featured the VIC REL a.k.a. 64 REL, of which TPUG has a few for sale (original packaging). January, saw 25 members at the central meeting where Ron Anderson supplied us with video tapes pertaining to the old days of COMMODORE CANADA, and grab bags and door prizes were given out. Thank you Ron, for your generosity.

Meanwhile, at the AMIGA chapter meetings Donald Dalley demonstrated the stock analysis program, 'AmiBroker' and his Arexx script for formatting stock market data. Frances Clee at another meeting gave a tutorial on Amiga Logo and showed how she uses it for graphics. There was also a demonstration on programming in Arexx, and using zip drives.

John Buller, who prepares the Amiga meetings informs me that the Amiga meetings are trying to strike a balance between Amiga applications and Amiga internals. In the works for Amiga meetings are a video editing demonstration and a software exchange night with FRED FISH and AMINET programs available for browsing and copying. Show prices for copying may apply.

For the C64/128 meeting, up and coming events may include a GEOS and GEO Fax demo and a demonstration on how J.P. PBM Products By Mail's catalog was put together, from video images to coding of the program.

I would like to thank Bruce at VIDEO LINK for allowing TPUG to hold Amiga meetings there. Due to the Library charging us, TPUG needs to find a new central meeting place, preferably for free. This is where we need your help. If you can ask around churches, schools or other, and let the board know call (416) 253-9637.

TPUG is selling the surplus contents of its storage locker. Presently there are a large number of PETs and their printers and drives, we will strike a very good deal for a good home. There are a number of 1541s, 1702s, 1902As, a few C64s, C128, Amigas and their monitors. Some cables are available, call or write and make us a deal we cannot refuse.

Continued ... page 3

For users of all Commodore Computers :

- * PET/CBM
- * SuperPet
  - * B-128
- * VIC 20
- * Commodore 64
  - * PLUS-4
  - * C-16
- * Commodore C 128
- * AMIGA
- PC/MS-DOS

* Registered products of Commodore Business Machines, International and/or their assignees.

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e-mail : tpug@icomm.ca

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Newsletter

Editor John Easton (416) 251-1511
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Meeting Schedule

Amiga Central: Second Tuesday of the month.
Contact - George Cripps (416) 255-1436
C-64/128: Fourth Tuesday of the month.
Contact - Ernie Chorny (905) 279-2730
The above meetings commence at 7:30 p.m. in the York Public Library, 1745 Eglinton Ave. W. (just east of Dufferin), in the Auditorium or Story Hour Room.

Westside and Amiga West: Third Thursday of the month at Alderwood United Church, 44 Delma Drive. Delma Drive is just west of and parallel to Browns Line, south of the Queen Elizabeth Highway, north of Horner Avenue. From the west, exit QEW at Evans Avenue, east on Evans to 2nd stoplight, south on Gair to Delma Drive. From the north or east, follow signs from QEW or Hwy. 427 to Browns Line, exit right to Evans Avenue, turn south on Gair (first stoplight) to Delma.
Contact - Ernie Chorny - (905) 279-2730
or George Cripps (416) 255-1436

TPUG BBS — PunterNet Node 2

(905) 273-6300 14.400 (8N1)
24 hours a day, 7 days a week

Internet

http://www.icomm.ca/tpug
e-mail: *tpug@icomm.ca*

From y'r Editor:

Well, its sometimes a struggle, but we seem to be growing closer to our scheduled quarterly newsletter production. Matter of fact, we have enough articles to fill this issue to a full 16 pages, and the resulting double postage - and no, your Board doesn't want to go back to the reduced format that used to allow us that size. Could it be that in our maturing years our eyes can no longer take the strain of 8-point type?

Ah well, we have a good run at the June (Summer) issue already - and should the 'seasonal' designations confuse you, *this* issue is being published in April.

Next issue, look for 'All you ever wanted to know about Endians' plus more Internet pointers from our genial Webmaster - Ian McIntosh.

Notice to new owners of SuperPet and CBM 8296 machines

TPUG has copies of the Waterloo LANGUAGE DISKS (3 in 4040 format) as supplied with the SuperPet on original purchase.
TPUG has the EXECUDESK disk (8050 format) as supplied with the CBM 8296 on original purchase.
These disks are an integral part of the operating systems of the above machines and since Commodore insisted on referring owners of these machines to TPUG for service, we have added these somewhat proprietory (and also virtually unobtainable) disks to our library - all part of the TPUG mandate of service to our members.
We also will attempt to search out copies of original program disks to replace corrupted disks. In this category you will find such programs as VISICALC, WordPro, and PaperClip.

Classified

Another member-service!
For Sale:

2 - C64s, 2 - 1541 disk drives, colour monitors, joysticks, printers, and printer interfaces.
Call Tom Luff (416)503-0753.

Miscellaneous Commodore Hardware and Software is available from :
D.L. Johansen
Box 912, Troy, MT, 59935

COMMODORE GAZETTE
Magazine-on-Disk
Christopher Ryan
5296 Devonshire Rd.
Detroit, MI, 48224-3233
(313) 882-0811 (4thru 10 PM EST)
chris.ryan@metro-1.station-1.com
$25.00 for a one-year subscription.

TPUG News

January Central C64 Meeting — Ian McIntosh

The highlight of the January meeting was to have been a talk, with videos and slides, by **Ronald Anderson**, formerly of Commodore Canada and more recently *C64 Software Et Cetera, R. and D. Enterprises.*

The turnout was close to double normal, including many Amiga users. Unfortunately Ron couldn't attend himself, but did send videos. They included:

- A video about Commodore C64s and PETs in schools, narrated by Frank Winters.
- A slide show of scenes around Commodore at 3370 and 3470 Pharmacy Ave, narrated by Ronald Anderson.
- An Amiga video, en Francais.
- "Take Us Home For Christmas", teaching *Computer Innovations* staff about the new C128, Amiga, IBM PC Jr and Apple][c.
- A CDTV video, mostly about software for it (eg Groliers Encyclopedia, American Vista atlas, Shakespeare, The Bible, numerous games) but also about the hardware features and how to upgrade it to a full Amiga.
- "CompuTutor", an occasionally humourous video about the C128.

Other features of the meeting included unfolded un-Post-Officed V6 #1 newsletters for members and visitors, and numerous door prizes - nearly everyone left with 2 items.

From the President ... continued

Watch for TPUG at Computer Fest in April, at the Computer Flea Market and TPUG's Summer Swap 98 both in June. TPUG may possibly be at the International Amiga 98 Show in May.

Remember spring cleaning is not just windows and closets, cleaning your computer equipment is also a good idea.

Tom Luff

Summer Swap Meet
Tuesday, 23 June, 1998
at
York Public Library
1745 Eglinton Ave W.

The User Port And The VIC REL

In the last issue I discussed a different method of using the joystick ports. This issue lets discuss an easy way of controlling external devices. The user port can be used to control RS-232 devices and/or modems. IS THAT ALL? Here you have a computer. What can you do with it? Play games, write letters, paint pictures, and talk to other computers, is there no more? Most of us are confined to the limitations of our computer peripherals. We can print via printers, we can display on our monitors, and we can store information on our disk drives. But this is still not enough for people like me. I need more.

Just outside Toronto, I hear stories of a farmer who has a water line running from the house to the barn to supply water to the animals. In the winter to keep the water flowing, an electric heating wire is used in the pipe to prevent freezing. A very costly operation. His son came up with an idea to use his VIC-20 and a control circuit to turn on the heater for 5 minutes out of every 15 minutes. This resulted in a $500.00 a year reduction in the electric bill. Today in Clearwater, Florida an aviation company still uses several C64s to test parts in their planes. Ten years ago a large jet plane manufacturer closer to home also used C64s for their test beds. At COMPUTER FEST last fall I was talking with a man who claimed to use stepper motors from dead 1541 drives and a DREMEL tool to make a mini-milling machine. The stepper motors controlled the 4 directions of the bed and they were controlled by the user port of a C64.

All these stories have one thing in common, that is they all use the user port to control devices outside the computer. The user port is an input/output connector wired to one of the CIA chips. Available through the user port are 8 bits for data transfer, handshaking, reset, and a few specialty lines not necessary to mention for this article. For this article all we need to concern ourselves with is 1) the 8 bits for data transfer and the fact they can be changed from input to output or vice versa, together as a group or individually, 2) the two registers for control and access.

The first register we need is referred to as the Data Direction Register (DDR for short), it must be set up before we use the user port and can be changed as required later. In order to set up the direction of each bit a ONE for output or a ZERO for input must be assigned. If we express each bit as an exponent of 2, the bit zero is equal to 2**0 (2 raised to the exponent zero), and assign a 1 to this bit the value would equal one, the bit 1 is equal to 2**1, assign a 1 to this bit the value would equal 2, the bit 2 is equal to 2**2, a one to this bit would have a value of 4, bit 3, 2**3, a value of 8 and so on to bit 7 and a value of 128. So to cause bit zero, 4, and 6 to be outputs we need to poke the DDR with a value of 81 (2**0+2**4+2**6 or 1+16+64). The directional status would now be bits 1,2,3,5,7 are inputs and bits 0,4,6 are outputs. Poking a value of 255 into the DDR means all bits are outputs, and a value of zero all bits would be inputs. The address for the DDR in the C64 is 56579 (VIC-20 it's 37138).

The data register is address 56577 for the C64 and 37136 for the VIC-20. At this address you POKE information to output it, and PEEK the address to read the inputed data. The same math applies here as mentioned above when accessing data to one bit or a few bits. When poking to the data register caution should be observed not to change the values of the other bits prematurely.

There is a product on the market to be used in the user port as a controller, it is the VIC REL a.k.a. REL 64. It was made by HANDIC SOFTWARE AB in Sweden. The cartridge is about 5 1/2" side to side, 4" back to front and 3/4" tall, on the top face there are 6 red LEDs marked 1 to 6 which represents bits zero to five respectively and 2 green LEDs marked 1 & 2. For some reason the green LED marked 1 represents bit 7 and LED 2 represents bit 6, this is backwards to what I was expecting. Across the back is a 20 pin terminal block. Inside there is six relays, one for each output, represented by a red LED, and two optocouplers, for the input bits, represented by green LEDs. The relays and optocouplers are safeguards to protect your computer in case something goes wrong with your external circuit. Each relay has a pair of pins on the terminal block and so do the optocouplers. There is also a pin for +5v DC and another for ground (-0v DC).

A relay is basically made up of two parts, the coil and the switch. The coil is wired to the computer so that when a 1 is sent out to the coil, the coil becomes energized and causes the switch to close which turns on your exterior circuit. The red LED is wired so to light up when the coil is energized. The switch is a simple open/close type switch referred to as a SPST (single-pole, single-throw) and because of the small size these relay switches can only handle a maximum 24 volts at 10 watts. To control house current you will require another relay between the VIC REL and the appliance (check with a qualified electrician).

The optocoupler is a box with an LED (Light Emitting Diode) and phototransistor inside. The box is to keep light from getting in. The LED is wired to your circuit so watch the polarity when hooking it up, and it requires 5 to 12 volts DC for it to light up (not that u will see this light). When a one (or high bit) is received across the pins of the LED, the LED is turned on casting a light. The light strikes the phototransistor allowing current to pass through it which the computer interprets as a one (or high bit). A zero (or low bit) means no light, no light means no current, with no current the computer reads this as a Zero. As the phototransistor conducts current it also turns on the green LED so you can see what is happening.

Programming the VIC REL is simple. At the beginning of a program I will setup a couple of variables and set the DDR :

10 DDR=56579: REG=56577: POKE DDR,63:rem the VIC REL cannot use any other value but 63, for 6 outputs, 2 inputs

For the outputs only I use "N" to refer to the LED marked on the VIC REL and "(N-1)" represents the bit. (ie, the red LED marked #3, is N=3, the corresponding bit in register 56577 is the bit #2, or (N-1)). So to turn on an output relay :

100 POKE REG,(2(N-1)) : rem ** = exponent, 2**

If N=3 then the red LED marked #3 will light up and the rest will turn off. Now if you need to turn on #3 and keep the status of the others the same try :

100 POKE REG, PEEK(REG) OR (2(N-1)) : rem the OR is necessary to the program**

Line 100 peeks the value of REG and ORs it to the peeked value. To understand it easier you could write it as :

80 A=PEEK(REG) : rem get present value
90 B=A+(2(N-1)) : rem add present value with the value you want turned on**
100 POKE REG,B : rem poke new value into REG

Now the other relays will be in the same status as before and the relay you wanted on will also be on.

The OR mentioned above deals with Boolean arithmetic, which says that two inputs merge and become one output. In the case of OR'ing the rule is: if either or both inputs are 1 then the output will be one (an output of zero happens only when both inputs are zero). If input A is one OR if input B is one then output C will be one.

AND is another condition, it states that both inputs must be one for the output to be one (a zero output occurs when a zero is present on either input or both). Input A AND input B must both be one for output C to be a one.

Now that we know how to turn on the relays it might be nice to be able to turn them off. Poking the data REGister with zero works:

200 POKE REG, 0 : rem all relays are turned off and the input lines set to zero

To turn off just relay #3 you will need to check the current status AND the current status minus relay #3. :

200 A=PEEK (REG) AND 63 : rem current status of just the relays.
210 B=2(N-1) : rem B is the value that represents relay #3, B=4.**
220 V= A-B : rem the new value that leaves the other relays as they were but turns off relay #3.
230 POKE REG, V : rem execute.

The other method is :

200 POKE REG, PEEK (REG) AND (63-(2(N-1)))**

To control more then one relay at a time replace 2**(N-1) with 2**(N-1)+ 2**(N-1)+ 2**(N-1)+..... Each "N" will be a different value representing the relays you wish to control. Now you know how to turn on and off the relays it might be a good time to learn how to read the input lines.

On the VIC REL there are only two input bits so chances are you will want to read one or the other bit or both bits together. Keep in mind that bit #6 is green LED #2 and bit #7 is green LED #1. To read these bits try :

300 PEEK (REG) AND 64 : rem for reading LED #2
310 PEEK (REG) AND 128 : rem for reading LED #1
320 PEEK (REG) AND 192 : rem for reading both

If a one is present then a valve 64, 128 or 192 respectfully will be returned to the computer. In software you can show a change in position on a screen, generate a siren sound or what ever you wish including changing the status of one or more of the relays. Its your imagination let it run wild.

Even if you do not wire the VIC REL to anything it is a good tool to experiment with, it allows you to test your program and see what is or is not happening as you try to debug it.

TPUG has a limited number of VIC RELs for sale, at $5.00 each. Order soon before they are gone.

Using Zip Drives on the Amiga - Part Three

John Buller

This is the final installment in the article about Zip drives. I had to learn about this before I could write about it, and there are still things that puzzle me. However, if you follow the instructions you should be able to read and write PC-formatted Zip disks with your Amiga, even if you don't understand how it works. If you have Workbench 1.3 or earlier, none of this will work.

If you want to use disks that have a PC format instead of an Amiga format, you will need the proper mount file in the drawer Devs/DOSDrivers of your system disk. Every file in this drawer (except the .info files for the icons) is used at boot time to mount a device. Read about MOUNT in your Amiga DOS manual for more information.

Each mount file specifies the characteristics of a device such as a disk drive. Mount files that are *not* used at boot time are stored in the storage/DOSDrivers directory of the system disk. Take some time to check this out if it's new to you. Some people find it confusing. Double-click on your system disk icon to open the main drawer. Among the drawers inside, you will find one called Devs and one called Storage. Open both these drawers and notice that inside each is a set of drawers with identical names. In particular notice that each of the drawers you just opened contains a drawer called DOSDrivers. The operating system doesn't confuse them because they have different pathnames. On my computer, one drawer is System2:Devs/DOSDrivers and the other is System2:Storage/DOSDrivers. Files that are contained in the Storage drawer or its sub-drawers are in storage, not in use. The files in Devs or its sub-drawers are used by the operating system when it boots up.

If you want to have the system mount another device when it boots up, drag the device's mount file from Storage/DOSDrivers to Devs/DOSDrivers.

Find the mount file PC0. This lets you mount a PC-formatted floppy device on the same physical disk drive that is used for DF0:. Some of you already know about this. Those who don't should experiment with it. Drag PC0 into Devs/DOSDrivers and reboot. Then insert an Amiga floppy disk into the DF0: drive. In addition to the normal disk icon, you will get another disk icon with the label 'PC0:????'.

Now remove the Amiga disk from DF0: and replace it with a double-density PC-formatted disk. Two disk icons will appear again, but now the Amiga-format icon has the label 'DF0:????', while the PC0: icon has acquired a label that turns out to be the volume label of the PC disk. If you have WB3.1, the icon itself is a bit spiffier, and has the word 'CrossDOS' as part of the graphic.

Now back to the mount files. Each icon you see in either DOSDriver drawer is associated with a mount file. Mount files are just text files, so you can TYPE them or use an editor to read and modify them. If you look at the text inside the mount file PC0, you will find a line that reads 'FileSystem = L:CrossDOSFileSystem'.

Aha! This sounds familiar. This device will use CrossDOS, which is what you would expect from something that's going to read and write PC files. There is also a line that reads 'Device = mfm.device'. According to the Amiga OS 3.1 DOS manual, mfm.device controls access to MS-DOS disks with CrossDOS (page B-3).

I wasn't sure how to set up a mount file to read PC-formatted disks, so I found some information on the Internet. Someone named Alberto M. Ordóñez was kind enough to have uploaded mount files for Zip drives in Mac and PC formats to the Aminet collection. He also wrote some notes on the subject which were very interesting. As it turned out, I couldn't get the PC mount file supplied by Mr. Ordóñez to work. However, he mentioned some other ways of setting up a mount file that he didn't like. Perversely, one of these worked when I tried it.

I'm not sure why this stuff works, but here are the instructions for making a Zip PC mount file from a copy of the floppy mount file PC0. First, use workbench to duplicate PC0 (and its icon) by using Icons | Copy. Rename the copy something useful, such as ZIP-PC. Then use an editor to open the file ZIP-PC and make the changes listed below. What follows is the contents of PC0. My instructions for changes appear in parentheses. Be sure you don't actually change PC0. Change the copy named ZIP-PC.

```
Beginning of PC0

(NOTE: The 10 lines following this paragraph are a comment. Comments begin with /* and end with */. The comment doesn't do anything except explain what the file does. You should change it to reflect the new use of the file so you aren't confused when you read it a year from now.)

/* $VER: PC0 40.1 (31.8.93)
*
* CrossDOS file system entry
*
* This file enables CrossDOS on the built-in floppy drive normally
* referred to as DF0:. PC1 does the same for DF1:. By creating new versions
* of this file and changing the Unit line to use other numbers, you can
* make CrossDOS available on other devices. For example,changing the value
* of Unit to 2 would create a mount file that would enable CrossDOS on DF2.
*/

(End of comment. You could change it to something like this:)

/* Mounts a PC-formatted ZIP disk
*/
File System    = L:CrossDOSFileSystem (OK)
Device     = mfm.device (Delete this line)
Flags:     = 1 (change to 0)
Surfaces  = 2 (change to 1)
SectorsPerTrack     = 9 (change to 68)
SectorSize     = 512 (OK)
Reserved  = 1 (change to 0)
Interleave     = 0 (OK)
LowCyl         = 0 (OK)
HighCyl        = 79 (change to 2890)
Buffers        = 5 (change to 30)
BufMemType     = 0 (OK)
StackSize = 600 (change to 4000)
Priority  = 10 (OK)
GlobVec        = -1 (OK)
DosType        = 0x4D534800 (OK)

(NOTE: The following is a comment. It doesn't do anything, but you should change it to reflect the new use of the file.)

/* The Unit field is controlled by tooltypes in the PC0 icon.
 * Unit       = 0
 */

(Change it to something like the following:)

/* These parameters are controlled by tooltypes in the ZIP-PC icon.
 *
 * Unit = 5 (or 6, whatever the Zip SCSI ID is set to)
 * Device = scsi.device
 */
End of PC0.
```

Save the changes and close the file. Now you're almost finished. Using the Workbench, click once on the ZIP-PC icon and use the menu Icons | Information to open the icon project window. Click on the line DEVICE=0 in the tooltypes box. A copy of this line will appear in the box below the tooltypes box. Change the line to read DEVICE=5 or DEVICE=6, depending on the SCSI unit number you have set on your Zip drive. Press return. Click the 'New' button and type the new line DEVICE=scsi.device. Press return. Click the 'Save' button, which closes the window.

This mount file works for my PC formatted Zip disks if I have it in Devs/DOSDrivers when I boot up. I should also be able to mount a volume without rebooting just by inserting a Zip disk and double-clicking on the icon, even if it's in storage. For some reason this doesn't work with the ZIP-PC icon, nor does it work with the ZIP-Amiga icon. Maybe somebody can tell me what I'm doing wrong.

There you have it. The third and final part of this article. If anyone has a question, I probably don't know the answer, but write anyway in care of TPUG, or e-mail me at the TPUG address. If you find mistakes, or want to add something, please let me know as well. We'll publish suitable replies in the next newsletter.

Instant 1581 Disk Drive

Joseph Palumbo

You may have read in a past article by Tom Luff earlier this year about TPUG receiving a COMMODORE banner and flag. Both can be seen by anyone who comes out to the local Computerfest shows here on Toronto. Just stop by the TPUG booth where they are proudly displayed. TPUG acquired these flags in a winning bid through a 'going-out-of-business auction' on the 'net held by Computer House in Chatham Ontario.

Shortly thereafter I (as the owner of JP PBM Products By Mail) was asked by Computer House, if I was interested in buying out the remains of the Computer House's inventory. A deal was struck and that following weekend Tom Luff, Jeff Kolasser, and John Byrne along with myself, piled into a full size van. With a rented U-haul trailer in tow, we made our 300+ kilometer trek out to Chatham Ontario. $100 worth of gas later, we return with TPUG's winnings from the earlier auction. (Which Tom took care of distributing.) And now at my place we began to unload and SQUEEZE the equivalent of four skids of hardware and software in here till it could be sorted and checked. Over half of it was the still unassembled 1581 disk drives ... a lot of them. I mean A LOT! there was a pile of instruction sheets which Computer House had made up to go with each of them. The sheets read, 'Instant 1581 DISK DRIVE - Just add a standard PC 3.5 inch floppy drive'.

Now this I had to see for myself! My past attempts at this before only had limited success due to what I called the 720K barrier. (the drive would say it formatted 800K but if you tried to write anything beyond 720K, the drive would choke.) But now I have the instructions showing a few minor alterations to follow! Could this be it?! I called up a few used IBM computer dealers who were only too happy to sell me any LOW DENSITY 3.5 inch floppies they had. The low density (720K) drive mechanisms seemed to be selling for about $15-20 each.

I went and picked up 2 Panasonic 720K drives for $30. I got two because I wanted to see if these could copy diskettes back and forth, and with my own personal Commodore Factory built disk drives. When I got home,I cleared off my work table and started the hunt through the towering cases upon cases of unassembled 1581 drive parts. I found the top outer shell,the bottom shell and logic board,the front face plate, a serial cable and a power supply. I read over the step by step instructions once, taking note of the things I didn't know to do in my past attempts. I was now confident that I could easily do this job with only some side-cutting pliers, electrical tape, and a small screw driver to seal it shut when I was done.

Following the step by step instructions I marked the front of the connecting ribbon and located the three wires that had to be cut. I then cross-spliced them back together as instructed. Next, I located a couple of jumpers on the Panasonic drive mechanism and set them as per the instructions. Then plugged one end of the connecting ribbon to the 1581 logic board, the other end to the 720K drive mechanism, screwed the drive to the mounts in the 1581 case and then plugged everything into the wall and computer. I turned on the drive and ... IT PASSED POWER UP! I stuck a disk in and gave the format command. That seemed okay (but a little slow - there was no JiffyDOS in this drive, I've gotten used to the increased speed it provides in my own personal drives). I checked the directory and all seemed fine. I started to copy a full disk (800K) and this worked! I had done it! I was all proud and ready to sell these drives. Only one thing left to do ... to attach the front face plate and screw the top cover on. PROBLEM!

The Panasonic drive's button doesn't line up with the 1581'S face plate. Sure enough, the instructions say this could happen with some manufacturer's drives. And that the face plate need not be used, or it could be mitered to fit. I looked at the button and face plate again and saw that it was off by only a quarter of an inch to the left. I personally have left the face plate hanging so that I may try and catalogue other manufacturer's drive mechanisms to see which ones will have the button line up straight or not, but that's for another article ...

These 1581 DRIVE KITS may now be ordered as follows:

INSTANT 1581 DRIVE KIT $49.95
Includes Upper & lower Shell with logic board & faceplate, a serial cord and power supply box.

POWER SUPPLY ONLY (1581/41-II) $24.95
UPPER CASE ONLY $9.95
LOWER CASE ONLY $9.95
1581 LOGIC BOARD ONLY $14.95
SERIAL CABLE ONLY. $8.95
-OPTIONAL:
1581 JIFFYDOS ROM....add $32.95

10% shipping and taxes are extra for Ontario and Canada residents (PST/GST)

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Downsview Ontario, M3L 1B0

Note: Dealers and User Groups Welcome!

Amigas Can Do Stocks

Donald Dalley

TPUG members who attended the Amiga meeting last January were given another taste of what can be done with the Amiga, good software and some effort. The presentation was of a set of programs I made to import free US or Canadian stock data from the Internet into AmiBroker, the Amiga's most advanced technical analysis program. In the past, anyone who attempted to import local data would have run up against a wall, since no daily data could be accessed directly. Those who attended saw how this can now be done with ease and efficiency.

A pre-release version of the Dalley Suite was posted on my webpage at the end of March. The main purpose of doing this is to receive feedback from anyone interested in controlling their own stock purchases using their Amiga. Since 1 in 3 Americans directly own stocks now, some are bound to also own Amigas. Hopefully enough people will attempt to test the demo and respond with suggestions so that improvements can be made before an Aminet release later this year. Experience with stocks on your part is not necessary, but if you have traded stocks, your insight could be helpful to me.

This release coincides with a recent update to AmiBroker itself,version 2.62. This update now allows saving separate data-sets, fixes some bugs and adds new ARexx commands, among other things. Any further improvements will be posted first on Tomasz Janeczko's support page, as he too prepares for a later Aminet release. Paying AmiBroker's negligible registration fee is recommended so that you can permanently save your data, otherwise you will have to deal with some fairly awkward import features of my Suite 2E.

My own Suite has received improvements which increase its ease of use and the number of features, including support for more data sources. The demo of the Dalley Suite works *'as is'* with all of the AmiBroker 2.50 features, and I have found no conflicts, sofar, with the latest version. Only Canadian data is imported by the demo, but that should give you an idea if you really are interested in technical analysis, or want to assume the risks.Included is a way for you to use quote data even if you do not use an Amiga on the Internet. The full Suite will also import single US quotes, histories, portfolios of 20 quotes and any complete Canadian exchange and all 3 major US exchanges! See the full features list and some screen shots at my site, *'The World of AmiBroker Support'*.

All of my efforts will now be directed to take full advantage of any changes to AmiBroker and to getting ready for the registered version's release.

Please visit these sites for accessing the programs, contacting the authors, feedback, hot links, the latest Toronto Star contest data and more:
http://webhome.idirect.com/~ddalley
and **www.polbox.com/a/amibrok**

International Amiga 98 - May 29 & 30

Ian McIntosh

The **International Amiga 98** show and developer's conference will be held in Toronto May 29 and 30.

Confirmed exhibitors include Amiga International, phase5 Digital Products, Micronik, Asimware Innovations, NewTek, VideoLink Canada, NovaDesign, Visual Inspirations, Legacy, National Amiga, and toysoft software development, with many others likely.

The show and conference will be at the International Plaza Hotel and Conference Centre, 655 Dixon Road near the airport.

The admission price is $15 *for both days* if paid at the door. Admission is payable at the door, but with on-line registration, the cost is $10 and User Group members can pre-register for $8 (for both days). Pre-register via:

http://www.irisreg.com/randomize

The developer's conference will focus on AmigaOS and phase5's PowerUp. Keynote speakers are Jeff Schindler and Petro Tyschschenko. Seminars will be presented by Amiga International, phase5, Nova Design, Randomize and others.

For more information:
Randomize
(905) 939-8371
http://randomize.com/ia98.html

Our Readers Write ...

from member Ken M, Bath, Ontario:

Is it possible to have repairs made to a C64?

- Yes, and should you wish to utilise the expertise of our members, you could do worse than check out J.P.PBM Products by Mail - (hereafter called J.P.) attention Joe Palumbo (see box on page 3). Most repairs are $15 plus parts (plus taxes and shipping). The most expensive chip, by the way, is $14.95; least is $2.00.

Is there a program to operate GEOS for the 1581?

- 'Geo-Make-Boot' or 'Maverick' (for red/green light 1581s) - available from J.P.

I purchased a 1571 in good operating condition but have no operating manuals.

- TPUG has a limited supply of old manuals, but most manuals are available from J.P. ($9.00).

Would Bill Cumberland have any Educational programs for grades 1 to 4?

- Yes indeed - and TPUG currently has a yet-to-be totally catalogued series numbering in the neighbourhood of 50 disks. An Educational Catalogue is on its way to Ken.

Light Pens

Tom Haslehurst

Light Pens, another alternative input device for the Commodore 64/128. Light pens, however, only become a serious contender to the input device contest when they are being used with graphics programs.

All light pens work on the same basic principles, but you will find that not all light pens are created equal. Light pens send out a electron beam which hits the phosphor coating (the coating on the inside surface of the monitor) which then sends the signal back to the computer through the joystick port. Now depending on how sensitive the light pen is, will determine how well the computer recognizes the signal.

I had three different light pens to compare, and each of them was activated in a different manner. The Madison Computer 'McPen' was attached through a pen stand which had a sensitivity control dial on the stand. There was also the Tech Sketch Inc. light pen which used a button attached to the pen itself which had to be depressed to activate the light pen. Last there was the Inkwell Systems 'Flexidraw' light pen which uses a pressure sensitive pen tip that compresses when pushed against the monitor screen to activate the light pen. Each of the light pens come with some form of graphics program and demo software.

McPen: The McPen light pen looks very impressive with its stand and pen holder to place the pen into when not in use. The software for the pen is the major letdown. The graphics drawing program is very simple and unsophisticated in design. This program would be useful for young children to use but would not be beneficial to an adult beyond the very basic level of drawing. Anyone with a talent for good computer graphics, would be disappoint with this program.

Even for a child the program may be somewhat difficult to use. The pen has to be placed to the screen before an operation of the program can be selected. Also the pen was a little to sensitive and would begin the screen manipulations as soon as the pen started to move. This would create imaging where it was not wanted. The sensitivity dial on the stand did not seem able to control this problem.

The McPen's demo programs such as Hangman and Tic Tac Toe worked quite well with the light pen. Again the children found hangman fun and easy to play. The tic tac toe was good as well but the children got bored with it very quickly because playing against the computer was less of a challenge that if they had of been able to play against each other.

The other major drawback with this light pen is with its inability to function with GEOS. This will probably be the biggest deterrent to anyone wishing to use this light pen.

Tech Sketch Inc.: The Tech Sketch light pen work differently than the McPen. The Tech Sketch pen uses a button on the pen to activate and deactivate it. As with all light pens this one also comes with a graphics program. This program is similar in design to the Koala Pad drawing program. The menu is separate from the drawing screen. The light pen even with the button control seems to be a bit to sensitive when using on the screen, which makes it difficult to control. The drawing program is more functional than the McPen program, but is still rather limited in its usefulness. There are some good demo pics with the program but I believe that it would take a fair bit of experience to achieve this level of work on this software. For printing purpose the software supports the Commodore 1525 printer. This is obviously not going to be sufficient for most people especially if you have a colour printer. I might recommend a Super Snapshot cartridge, so you can do a screen dump and then print your graphic out in colour.

The Tech Sketch pen has some other drawbacks as well. For example the program will not work with JiffyDos activated. This is not necessarily a problem but it is an inconvenience. Also the light pen cannot be recognized by GEOS. Again this may not be a prime deterrent to anyone wishing to use this program for its limited graphics software only.

Flexidraw: The Flexidraw 5.5 from Inkwell Systems is the only light pen for the Commodore still on the market today. It can be purchased from J P PBM Products by Mail in Toronto at (416) 240-8993 or from CMD Inc. in East Long Meadows MA. 01028. Luckily for anyone interested in a light pen the Flexidraw light pen is the most advanced of the 3 pens that were tested. The Flexidraw pen itself handles very well, and the pressure sensitive tip that collapses when pushed against the monitor screen works flawlessly. The pen comes with some good software as well. The demo programs have good graphics using colour and sound. For example the memory teaser game called Follow Me will hold your interest for quite some time, and the Piano Keyboard demo works very nicely.

The drawing program is also the best of the 3 tested. It will allow the use of other input devices such as the Koala Pad, the mouse or joystick as well as the light pen. The program allows the use of the function keys also, for rotating, flipping and disk operations.

The only drawback with the program may be in the fact that the colour must be added to the graphic after it has been drawn, but considering how good the program is, this is a very minor problem. The program also has a little larger learning curve than the other programs tested, and may be a bit more difficult for kids to use but it will benefit people with talent a great deal more.

Other pluses of the Flexidraw light pen are its ability to be fully functional with the GEOS programs. It works flawlessly with them, and in some ways actually excels over the mouse. With the light pen you just point to the function and click, instead of having to drag the cursor around with the mouse.

To summarize, I would like to say that all 3 pens worked well within their own individual limitations, but the Flexidraw light pen came out on the top of the heap. Most people may still find the mouse more convenient than the light pen because the light pen becomes tiresome to use. You have to continuously have to keep holding the light pen up to the screen, which starts to cause fatigue in the arm very quickly. As well other than the McPen, the light pens do not come with any type of holder. I would recommend making one by using a magic marker cap or some other device, and placing it in a convenient location close to the computer.

I will also add, for all you techies out there, that in the January 1987 issue of Commodore magazine there is an article on how to build your own light pen. They also included a couple of demo programs to type in also to test your pen. I will not go into the details on how to do it, but if anyone is interested, just contact TPUG at the address on the newsletter and we can probably supply the information. I am presuming that is without complicating any copyright issues.

Tom Haslehurst
<tomhas@idirect.com>

FAQ Encoding Decoding

The paragraphs below are the opening paragraphs to a very useful and understandable web page on encoding and decoding internet attachments.

The URL address is:
http://pages.prodigy.net/michael_santovec/decode.htm

If you have a local ISP account and a web browser go to the page above. This page covers the different encoding methods used with internet mail. The title of the web page is 'Decoding Internet Attachments.' The author is Michael Santovec.

Why Are Attachments Encoded?

Internet e-mail and Usenet news posts were designed for plain text messages. As such, many systems expect the messages to only contain printable characters from the 7-bit ASCII character set. That poses a problem for sending files, such as images, sound, video, spreadsheets and programs which can contain any combination of 8-bit binary data. This even poses a problem for formatted documents, since many word processors embed binary control fields in the files.

The way around this limitation is to encode the binary data (attachment) into ASCII characters before sending. To the mail and news systems that the messages travel through, the file is just so much text. At the receiving end, the message is decoded back into the original file, none-the-worse for the experience. Many mail and news programs automate the encoding and decoding. However, sometimes a separate program may be required.

'The nice thing about Standards is there are so many to choose from.' Encoding is no exception. Among the more popular are: Uuencode, MIME, Base64, Quoted-Printable and Binhex. There are other less common methods as well.

It should be noted that encoding is not the same as encryption. The purpose of encoding is to allow some information to be stored in, or pass through, a medium that can't handle the data directly. The purpose of encryption is prevent unauthorized persons from viewing or using some information. It is possible for a message to use both encoding and encryption.

Funstuff

from Hal Stockert, ECUNET

1. Before they invented drawing boards, what did they go back to?
2. Does the Little Mermaid wear an algebra?
3. Do infants enjoy infancy as much as adults enjoy adultery?
4. How do I set my laser printer on stun?
5. How is it possible to have a civil war?
6. If all the world is a stage, where is the audience sitting?
7. If God dropped acid, would he see people?
8. If love is blind, why is lingerie so popular?
9. If one synchronized swimmer drowns, do the rest have to drown too?
10. If the #2 pencil is the most popular, why is it still only #2?
11. If work is so terrific, how come they have to pay you to do it?
12. If you're born again, do you have two bellybuttons?
13. If you ate pasta and antipasto, would you still be hungry?
14. If you try to fail, and succeed, which have you done?
15. Is a castrated pig disgruntled?
16. Why are hemorrhoids called 'hemorrhoids' instead of 'asteroids'?
17. Why is it called tourist season if we can't shoot at them?
18. Why is the alphabet in that order? Is it because of that song?
19. What happens when none of your bees wax?
20. Where are we going? And what's with this handbasket?
21. If the black box flight recorder is never damaged during a plane crash, why isn't the whole airplane made out of the stuff?
22. Why is there an expiration date on sour cream?
23. If most car accidents occur within five miles of home, why doesn't everyone just move 10 miles away?

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