



# THE PUG PERIPHERAL



THE MONTHLY NEWSLETTER OF THE  
PITTSBURGH USERS GROUP  
JANUARY 1988

## CLUB NEWS BY GARY TAYLOR

JANUARY IS A GOOD MONTH TO REVIEW WHERE OUR CLUB HAS BEEN AND WHERE WE ARE GOING FOR THE NEW YEAR. WE HAVE BEEN BLESSED WITH A STEADY MEMBERSHIP AND A GREAT GROUP OF VOLUNTEERS. SOME OF OUR ACCOMPLISHMENTS DURING THE PAST YEAR ARE THE PURCHASE OF A NEW COLOR MONITOR THAT IS USED FOR THE DEMONSTRATIONS AT THE MEETINGS, A LOANER STANDALONE RS232 INTERFACE AND 300 BPS MODEM WITH A TEII CARTRIDGE, A RIBBON RE-INKER, A DISK LIBRARY OF OVER 500 DISKETTES, A LOANER PRINTER, SPECIAL PURCHASES THROUGHOUT THE YEAR OF COMMERCIAL SOFTWARE AT REDUCED RATES, A NEW BBS PROGRAM THAT UTILIZES OUR 2400 BPS MODEM, AND 11 NEWSLETTERS. WE HAVE STARTED A CARTRIDGE LIBRARY THAT HAS GROWN TO OVER 70 CARTRIDGES. WE HAVE HAD HARDWARE CLASSES WHERE WE BUILT SUPERCARTS, INSTALLED DIODES TO PREVENT THE ALPHA LOCK KEY FROM INTERFERING WITH THE JOYSTICKS AND INSTALLED RESISTERS TO IMPROVE THE VIDEO PICTURE FOR THOSE THAT USE A TV SET INSTEAD OF A MONITOR.

AS FOR CLASSES I HAVE TAUGHT OR AT LEAST SHOWN YOU TI-WRITER, PLATO, TELCO, FUNNELWEB, TI-ARTIST, PICASSO, AND CHARACTER SETS AND GRAPHIC DESIGNS I, II, AND III. AUDREY HAS BEEN GIVING A YEAR LONG CLASS ON MULTIPLAN AND JOHN WILFORTH HAS BEEN PROVIDING US WITH HARDWARE HINTS, TIPS, AND IDEAS FOR THE SAME PERIOD OF TIME. WE HAVE HAD CLASSES ON MOST OF THE GRAPHIC PACKAGES AVAILABLE FOR THE TI AND PROVIDED REDUCED PRICING FOR THOSE INTERESTED IN BUYING MANY OF THEM.

1988 HAS TREATED THE TI COMMUNITY WITH NEW SOFTWARE THAT WAS UNTHINKABLE JUST A FEW YEARS AGO. WE HAVE EVEN HAD THREE NEW PRODUCTS FROM WITHIN OUR OWN CLUB! MARTY KROLL RELEASED THE CATLIB COMPANION PROGRAM AS FAIRWARE EARLY IN THE YEAR. NORM ROKKE RELEASED 1000 WORDS AS FAIRWARE IN MAY AND MICKY SCHMITT AND LYNN GARDNER RELEASED OLIVER'S TWIST THROUGH ASGARD SOFTWARE IN OCTOBER. FUNNELWEB CONTINUES TO BE SUPPORTED BY THE MCGOVERNS OF AUSTRALIA WITH THE LATEST RELEASE, 4.12. CHARLES EARL OF OTTAWA INTRODUCED THE TELCO TERMINAL EMULATOR IN JANUARY AND HAS CONTINUED TO SUPPORT IT WITH THE LATEST VERSION BEING 2.3. JOHN BIRDWELL WAS ALSO BUSY SUPPORTING HIS DISK UTILITIES PROGRAM CALLED DISU WITH RELEASE 4.12. BARRY BOONE HAS DELIVERED A SINGLE PASS ARCHIVER CALLED ARCHIVER 3.0. BUT THERE HAVE BEEN OTHERS LIKE GRAPHIX LABEL MAKER, CFS(CREATIVE FILING SYSTEM), PRINT-IT,

PLUS!, SCREEN DUMP VER 3.0, PARADIGM BBS, MAXFLIX, TI-BASE, TURBO PASCAL, AND OTHER GREAT PROGRAMS TOO NUMEROUS TO MENTION. NEW HARDWARE CONTINUES TO BE MADE AVAILABLE. THE GENEVE 9640 CONTINUES TO BE A VIABLE UPGRADE. THE NEW HARD AND FLOPPY DISK CONTROLLER(HFDC) IS OUTSTANDING. BOTH OF THESE PRODUCTS ARE MANUFACTURED AND SUPPORTED BY MYARC INC. JOHN GUTON OF DALLAS, TEXAS HAS DEVELOPED TWO UPGRADE KITS. ONE WILL UPGRADE YOUR TI DISK CONTROLLER SO THAT IT WILL SUPPORT FOUR DISK DRIVES INSTEAD OF THE NORMAL THREE AND ALSO ALLOWS YOU TO DECREASE THE HEAD STEP RATE FROM 20 TO 12 MSEC. THE SECOND KIT UPGRADES THE RS232 TO PROVIDE SUPPORT FOR TP, TI'S THERMAL PRINTER AND ALSO THE ABILITY TO ADDRESS THE SERIAL PRINTER PORT WITH THE COMMAND "SIO". HE HAS ALSO COLLABORATED WITH ROBERT JONES OF DALLAS TO PRODUCE THE P-GRAM CARD. THIS CARD IS A GROM EMULATION DEVICE, MUCH LIKE THE GRAM KRACKER EXCEPT IT FITS INTO THE P-BOX. RAM DISKS ARE STILL A POPULAR ITEM AND HAVE GROWN FROM 90K TO A FULL 1 MEG OF STORAGE. AND IF YOU HAVE READ THE NEWSLETTERS COMING FROM THE OTHER CLUB YOU ARE AWARE OF THE CONSTANT STEAM OF HARDWARE MODIFICATIONS THAT ARE BEING MADE SUCH AS THE 32K IN THE CONSOLE, THE SPEECH SYNTHESIZER IN THE P-BOX AND THE CLOCK CIRCUIT ON THE PROTO-BOARD.

## WHERE WE ARE GOING.

THERE ARE SEVERAL ITEMS ON THE 1989 AGENDA FOR OUR CLUB. THE FIRST IS TO HIGHLIGHT EDUCATIONAL SOFTWARE. THE TI-99/4A WAS MARKETED AS A HOME COMPUTER WITH EMPHASIS ON EDUCATIONAL SOFTWARE. I HAVE NEVER EXPLORED ALL THE OFFERINGS IN THIS AREA AND WILL TRY TO PRESENT MATERIAL IN THIS AREA DURING THE FIRST PART ON 1989.

THE SECOND IS TO EXPLORE THE SUPERCART. MANY OF US BUILT SUPERCARTS LAST YEAR AND SOFTWARE IS IN OUR LIBRARY. YET I HAVE NEVER EXPLORED ALL THE BENEFITS OF THE DEVICE.

WE HAVE RECIEVED FAVORABLE COMMENTS FROM LOCAL LIBRARIES AND BOY SCOUT TROUPS ON OUR EFFORTS TO GET THE TI "OUT OF THE CLOSET" AND INTO THE HANDS OF STUDENTS OR OTHERS WHO COULD BE INTRUCTED IN THERE USE. SO WE WILL BE CHALLENGED IN THIS AREA IN THE NEAR FUTURE.

WE WILL BE SUPPORTING THE TI FAIRE SPONSORED BY THE CENTRAL PENNSYLVANIA USER'S GROUP THIS YEAR BY PURCHASING AND MANNING A TABLE. I WOULD LIKE TO SEE US HAVE A HARDWARE CLASS TO GIVE OUR CONSOLES A THROUGH CLEANING.

THIS IS SOMETHING ALL OUR MACHINES NEED FROM TIME TO TIME. A DEMONSTRATION OF THE PROPER TECHNIQUES AND HANDS ON SUPPORT FROM SOME OF THE HARDWARE GURUS WOULD BE WELCOMED. OF ALL THE THINGS THAT ASSOCIATION WITH THIS CLUB SHOULD BRING TO YOU, THE FORMOST IS FUN! IF IT'S NOT FUN THAN "WHY DO IT!" IS MY MOTTO. I BELIEVE THAT ONE OF THESE DAYS I MAY EVEN BE AN ACCOMPLISHED MAGICIAN! WELL, WOULD YOU BELIEVE I MIGHT WIN THE LOTTERY? OK OK HOW ABOUT THE BINGO GAME?

AT THE CHICAGO FAIRE, I BROUGHT BACK A FAIREWARE DISK CREATED BY JAN KNAPP OF ST. LOUIS, MO. CALLED "THE STUDENT ORGANIZER". THE PURPOSE OF THE DISK IS TO ORGANIZE YOUR CHILDREN. HOW'S THAT FOR A CHALLENGE? THE DISK CONTAINS 18 DV80 FILES THAT ARE TEMPLATES AND REFERENCE CHARTS WHICH YOU CAN MODIFY WITH TI-WRITER. EACH OF THESE WAS DEVELOPED BY JAN WITH THE AID OF HER CHILDREN AFTER THEY REQUESTED HELP WITH THEIR SCHOOLWORK. I WILL BE SHOWING THESE DURING MY CLASS AT 3:30PM.

I RECEIVED A NICE LETTER AND A FAIRWARE DISK FROM DALE KLOES OF GIBSONIA, PA. DALE HAS WRITTEN A NICE EXTENDED BASIC GAME CALLED DREADNOUGHT. I WILL BE DEMONSTRATING IT AT THE NEXT MEETING. COPIES WILL NOT BE AVAILABLE UNTIL SUSAN HAS HAD A CHANCE TO PUT IT IN THE LIBRARY SO YOU WILL HAVE TO WRITE HIM FOR A COPY IF YOU WANT ONE BEFORE THEN. HE IS ASKING \$4 FOR THE DISK WHICH ALSO CONTAINS SEVERAL PUBLIC DOMAIN PROGRAM TOO. YOU CAN WRITE HIM AT R.D. #1 BOX 414 PATSEY DRIVE, GIBSONIA, PA 15044.

I WAS IN CALIFORNIA A FEW WEEKS AGO AND HAD A CHANCE TO STOP IN AND VISIT WITH THE PRESIDENT OF THE SAN FRANCISCO 99'ERS. BILL ANDERSON. I TOOK SEVERAL COPIES OF OUR NEWSLETTER AND A FEW PUBLIC DOMAIN AND FAIRWARE DISKS WITH ME THAT I THOUGHT THEY MIGHT BE INTERESTED IN. WE HAD AN ENJOYABLE EVENING AND BILL GAVE ME FOUR DISKETTES THAT HE RECIEVED FROM PAOLO BAGNARESI OF ITALY. HE HAS BEEN CORRESPONDING WITH HIM OVER THE YEARS AND HAD RECENTLY RECEIVED THESE DISKS. BABUILDER CONVERTS DV80 FILES TO EXTENDED BASIC PROGRAM FILES AND COMES ON TWO DISKS. ONE IS DOCUMENTATION. ANOTHER IS GDEBUB, WHICH IS THE TI DEBUGGER REWRITTEN TO PROVIDE 80 COLUMNS AND LOAD SIGNAL SUPPORT FOR THE GENEVE. THE LAST ONE IS CALLED BEAXS AND IS THE LATEST EXTENDED BASIC AND ASSEMBLY LOADER ALSO CONTAINING BA-WRITER WORD PROCESSOR, IT

DOES NOT RUN ON THE GENEVE SO I HAVE NOT TRIED THIS DISK OUT YET. I WILL BE GIVING THESE TO SUSAN TO ADD TO THE LIBRARY AT THE MEETING ON JANUARY 15TH. THANKS BILL!

IF YOU MISSED MY DEMONSTRATION OF THE NEW HARD AND FLOPPY DISK CONTROLLER (HFDC) WITH A 15MEG WINCHESTER DISK DRIVE AT THE LAST MEETING OF THE PUG I WILL BE DEMONSTRATING IT AGAIN AT THE WEST PENN 99'ER MEETING IN IRWIN ON JANUARY 17TH. DON'T MISS IT. I DO NOT PARTICULARLY LIKE DISASSEMBLING MY SYSTEM AND TOTING IT AROUND SO THIS IS THE LAST TIME I WILL BE SHOWING THE HFDC WITH A HARD DISK.

CONGRATULATIONS TO MICKY SCHMITT WHO WAS ELECTED PRESIDENT OF THE WEST PENN 99ER'S. SHE WILL BE TAKING THE HELM THIS MONTH AND WE WISH HER AND THE WEST PENN 99ER'S A GREAT 1989.

THE DEMONSTRATION OF "FORM SHOP" WAS A MISERABLE FAILURE LAST MONTH. I DO NOT KNOW WHAT THE PROBLEM WAS AS IT WORKED FINE WHEN I GOT HOME. I WILL TRY TO DEMO IT AGAIN AT THE JANUARY MEETING. IT IS A GREAT PROGRAM AND FILLS A NEED THAT HAS NOT BEEN ADDRESSED BEFORE. THE PROGRAM ALLOWS YOU TO CREATE FORMS USING A MODIFIED TI-WRITER FORMAT. YOU CAN MAKE BUSINESS FORMS, CALENDARS, ORGANIZATIONAL CHARTS, AND ANY OTHER FORM YOU CAN IMAGINE. IF THE DEMO OF FORM SHOP IS SUCCESSFUL IT WILL BECOME THE BINGO PRIZE THIS MONTH. YOU CAN PURCHASE THE PROGRAM FROM COMPRODINE C/O RODGER MERRITT, 1949 EVERGREEN AVE. FULLERTON, CA 92635. IT SELLS FOR 15.00 + 1.00 POSTAGE.

THE NEXT TI FAITE WILL BE THE TI-WEST FEST TO BE HELD IN SAN DIEGO, CA ON FEBRUARY 18 AND 19. FOR INFORMATION GIVE ME A CALL AND I'LL GIVE YOU THE DETAILS. IT IS BEING SPONSORED BY THE SOUTHERN CALIFORNIA COMPUTER GROUP WITH SUPPORT FROM THE LOS ANGELES 99ER USER GROUP AND THE TUCSON 99ER USER GROUP.

CHARLES GOOD OF THE LIMA AREA 99/4A USER GROUP (OHIO) REPORTS THAT TONY MCGOVERN HAS WRITTEN AN 80 COLUMN VERSION OF FUNNELWEB SPECIFICALLY FOR THE DIJIT AVPC 80 COL CARD. THIS VERSION MAY OR MAY NOT WORK WITH THE GENEVE OR THE MECHATRONICS 80 COL CARD. THEY ALL USE THE SAME VIDEO CHIP.

## LETTER FROM THE EDITOR..

First of all, I would like to thank the many people who sent me get well wishes during my recent bout with pneumonia. A special thanks goes to Gary Taylor and Susan Harper for completing the newsletter and seeing that it was mailed. They really did a super job.

Gary was kind enough to bring me a HUGE stack of newsletters from all over the world to keep me in reading material while I was in the hospital, so my thoughts were never far from the TI World. My sincere apologies for this newsletter being late but just coming home in time to get the house decorated for Christmas and for the arrival of my daughter and her family from Tennessee for the holidays. I sort of had to put the newsletter on the back burner for awhile. Now that the New Year is here, I'm beginning to feel more like myself and have actually found most of the papers that seemed to be hiding in all the mess.

I received two disks in the mail this past week that I will give to Susan for the Library. The first is Quad Lister by Herman J. Nieuwendaal. It was written as Fairware for distribution by the Greater Tampa Bay Users Group. It is an Extended Basic Utility that will print up to four disk catalogs side-by-side. It catalogs disks at assembly speed and is compatible with the Disk Date and File Comment features found in John Birdwell's Disk Utilities. Normal catalogs are formatted to standard height characters and 8 lines per inch. The program is also capable of printing Small and Tiny catalogs at 12 and 16 lines per inch respectively to allow longer catalogs to be printed in a shorter space. You may also customize the length of your catalog. The docs are on the disk, so check it out and don't forget to send the requested \$10 to the author if you use the program.

The second disk was sent to me by our friends at the Johnston Space Center. It is called Cue Cards. The Cue Cards on this disk were designed to save you a lot of time that you might otherwise use referring to the TI Writer Word Processor Manual. A quick review of these Cue Cards before you start entering text after a period of "TI Writer abstinence" might save you a lot of frustration!

You can copy these Cue Cards, mount them on cardboard, and keep them handy to your console to use with TI-Writer and especially the Funnelweb version of the Editor and Formatter. A better way to use them is to put the files on your working copy of the Funnelweb Disk. There is plenty of room on a single sided disk if you omit the FWOCS and other files not needed for word processing. The Cue Cards can then be called up with the "SD" (Show Directory) command without exiting the text file you are working on. The VIEW capability puts HELP SCREENS right at your fingertips!!

Last but not least, I'd like your HELP. I'd really like to run a series of articles on the many graphic programs available for the TI. I'm sure many of you use these programs regularly. How about sharing some of your knowledge with the rest of the group. You don't have to be an author. Simply write down the steps you take to create something with one of the programs. You can submit it on disk or hard copy and I will format it for the newsletter. You may be surprised at what you learn by doing this. When I was asked to do some articles on Multiplan, I never thought I would pound out more than a dozen. I learned much about MP just from sitting down and writing the articles because I really studied that particular aspect in depth. It was a rewarding experience. WHY NOT GIVE IT A TRY???

If you liked..  
**THE WRITERS**  
You're gonna love..



PURE PUBLISHING IS NOT A MANUAL ON HOW TO PROGRAM THE TI COMPUTER. IT'S A MANUAL ON HOW TO USE THE PROGRAMS WE HAVE FOR THE CREATION OF BEAUTIFUL BANNERS, PICTURES, AND CREATIVE TEXT. IT WILL SHOW IN DETAIL WHAT CLIPS AND INSTANCES ARE AND HOW TO USE THEM. IT ALSO CATALOGUES OVER 100 FONTS AND SHOWS HOW THEY MAY BE USED. PURE PUBLISHING TALKS ABOUT THE MANY GRAPHIC PROGRAMS, JUST HOW THEY RELATE TO EACH OTHER, OR HOW TO PUT THEM TOGETHER TO WORK FOR YOU.

BUT IT DOESN'T STOP THERE. THE MANUAL YOU GET IS EIGHTY PAGES LONG... AND IT JUST WASH'T ENOUGH. FOR THE COST OF THE ORIGINAL MANUAL YOU WILL ALSO RECEIVE TWO TWENTY PAGE SUPPLEMENT ISSUES DURING THE SPRING YEAR. THIS IS SO YOUR MANUAL WILL ALWAYS BE UP TO DATE WITH INFORMATION ON THE LATEST IN GRAPHICS SOFTWARE.

YOU WILL ALSO RECEIVE A DISK OF PROGRAMS TO HELP YOU MAKE YOUR DOCUMENTS LOOK THEIR BEST. THE PROGRAMS INCLUDE A TI-ARTIST INSTANCE PRINTER THAT WILL NOT LEAVE ANY SKIP LINES IN THE PRINTOUT, A PROGRAM TO ORGANIZE YOUR FONTS AND GRAPHICS, AND THE WORLDS BEST COLUMNIZER.

THE TOTAL COST FOR THE COMPLETE PACKAGE WILL BE \$15.00. THIS WILL INCLUDE ALL POSTAGE AND HANDLING. FOR GROUP PURCHASING OF A MINIMUM TEN COPIES, THE COST WILL BE \$12.00 EACH INCLUDING POSTAGE.

MAKE CHECKS PAYABLE TO: WESTERN NEW YORK USERS  
c/o HARRY T. BRASHEAR  
8700 MAIN STREET  
NEWFAIR NY, 14108

THANK YOU! THIS PAGE WAS MADE USING THE PUBLISHING PUBLISHER

## DISK DRIVES (#5) by John F. Willforth

Last month I left you up in the air with several items. The code dic on the lower right of the page can be used with both 60-HZ and 50-HZ powered drives. The only difference is that you look at the outer band when adjusting 60-HZ units, and at the inner band for 50-HZ drives.

The other item left to your imagination was on what happens when an error does occur while reading or writing. This is of course the responsibility of the DSR stored on the disk controller card but switched into the CPU memory space. The errors can be found described in your disk controller manual and are indicated by either a BASIC error code, or an error encountered while using the Disk manager. So be careful which code you are really dealing with when one occurs.

This month I'd like to talk about a little troubleshooting of some of the basic type drives that TI used. They were Single Sided/Single Density (SS/SD) full height (3-3/8") thick, full power (about 1 to 1.3 Amp.) on +12 Volt DC. The drive was slow, noisy, expensive, and only held 360 sectors (90-K Bytes) of memory. But, hey, try to find anything as fast, smooth, cheap and with that much capacity in the personal/home computer market. You couldn't! So that makes it the BEST! There are thousands of these still running as good as the day they were first put into use 9 years ago.

They are mechanical, and today I'd like to talk about some of the mechanical failures in the SHUGART, TANDON, and MPI drive, the most common of TI drives. I must assume you can get your drive out of your PEB or Stand-alone box. We will assume that the drive is sitting in front of you for this discussion. It is either a Shugart 400L, a Tandon TM-100, or the MPI model 51, however, the double sided versions of these drives can also be referenced here. The main difference being two heads and two head wires going to the drive logic board (the board attached to the top of the drive. Let's also slide the TI Shield (aluminum cover) off the drive. Next disconnect the HEAD WIRE Connector(s) from the right front of the logic board (even though these are keyed, and marked, you mark them so you will know where to put them). Next all three of these drives have the logic board held in place by two screws. Remove them, and slide the board to the rear slightly out of a slotted channel and lift on the front of the board. This will expose the main mechanical parts of these three drives. You will have to remove a 2-1/2" X 3" snap on cover rear center of the MPI drives to see the HEAD(S). Be careful not to dislodge the cables attached to the rear of the logic board as it is lifted.

Common problem #1, gummy residue on the two shafts that guide the HEAD assembly. This causes difficulty writing/reading from a localized area of the disk, such as track 32 to 38. This can also be a broken HEAD wire, but cleaning these shafts will be easier, and less costly. A clean cloth with a little alcohol, and dry the area afterward. DO NOT LUBRICATE.

Common problem #2, dirty HEAD(S), cautiously lifting the pressure pad assy. on a single HEAD drive, or the upper HEAD on a two HEADED drive, clean the HEAD(S) with a clean cloth just dampened with alcohol (remember the water in alcohol can cause new problems).

Common problem #3, drive speed incorrect or erratic. Use the disc from last month's article, or the one that may already be on your disk drive, and either the DISK EXERCISER I showed you how to build in articles #2 and #3, or the PEB power connector and short pin 16 (the eighth edge-card pin from the right, going over the key-slot, all even numbered pins are on top of the board) to ground. The ground will be any of the odd numbered pins on the bottom of the board. Now with the drive running, adjust the Motor speed Pot. on the logic board of the Shugart R53 (marked Speed Adj.), and on the MPI R38 (left center), and on the Tandon the Pot. is on a small board attached to the back of the drive, and is labeled R4. Adjust the POTentiometer (variable resistor) until the bars on the outer ring of the disc appear to stand still. The drive should be at 300 RPM. It may pay to watch for awhile to see if it stays steady. You could have a dirty pulley or stretched belt, or dry or dirty spindle parts. Examine these parts to see if they are free. At least clean them, again with a modest amount of alcohol on a clean cloth. You may have to put a very small amount of oil on the spindle shaft or the hub bearing that lowers toward the disk as the door closes. Be very careful! A drop is enough and could be too much! As for the stretched belt, you will have to get one, since this cannot be replaced by a rubber band. A local computer repair center may be able to help you with a used one for your drive, if just to help you troubleshoot a problem. They may help you just to get your business after you destroy the drive trying to fix it yourself.

Common problem #4, in step #2, I mentioned a PRESSURE PAD. This applies to a single-sided drive, and is on the underside of the arm you lifted to clean the HEAD. They have fallen off, and thus cannot keep the diskette media against the HEAD on the otherside, resulting in a lot of read/write errors. This is common because the diskette can hit it on insertion, and tear it loose. A round 1/8" felt pad is glued into a recess opposite the HEAD. You decide how you want to repair this. If you don't use FLIPPIES, you might try your own felt repair.

Common problem #5, transparent, or opaque write protect tabs, result in a disk being over written even though protected. Some old drives use a micro-switch to sense the tab, but most use an optical sensor, which can see right through some write protect tabs. In another similar but opposite problem exists on the older drives with micro-switches, they get out of adjustment and do not always sense the tab. You may either have to replace the micro switch, or adjust it so that it is reliable.

Well that does it for this month. I'll continue in this vein next month.....

## THE MYARC HARD AND FLOPPY DISK CONTROLLER (my experience - Gary Taylor)

I am so pleased with the HFDC that I feel compelled to write this article so others can find out about this marvelous device. The HFDC is a card that replaces the disk controller card in the P-box. It allows you to have up to 4 floppy disk drives and 3 hard disk drives. It will support the old 90k sssd floppy drives clear up to the new 1.44m dsdd floppy drives. It will format hard drives up to 134 megabytes each.

### WHAT YOU GET

The carton it comes in contains a circuit card that fits into the peripheral expansion box, a 70 page manual in a loose leaf three ring binder, two cables neatly tucked into the protective carton, several diskettes containing software for the Geneve 9640 and Myarc's Disk Manager V (MDMS), and a warranty card.

### SETTING THE SWITCHES

There are two sets of switches on the HFDC that must be set correctly for it to work, a set of 4 and a set of 8. The set of 4 switches is for setting the CRU address of the card. Mine is set at >1100. The manual hints at the setting but does not come right out and tell you what to set it at because of conflicts that may exist with other cards in your P-box. The various ram disks that can occupy the slots in the P-box have the greatest potential for interfering with its operation. They assume that if you have one of these devices you must know about CRU addresses. I was aware that there were addresses to set but I had no idea what the values were of the devices that I had to contend with. I found that my TI disk controller is set at >1100 so I merely set the 4 dip switches to match. If I set the HFDC to >1000, I can leave the TI controller in the P-box and control up to 8 floppy disk drives.

The set of 8 switches is to identify the type of floppy disks that you have installed. The HFDC can control up to 4 floppy disk drives. Each set of two switches can be set to 4 different values and tell the HFDC if you have 360k, 720k, or 1.44m floppy drives. Additionally, you can set the head step rate on the 360k drives to either 16 or 8 usec. The TI controller is set to 20 usec as a comparison. You have to remove the clam shell covering from the HFDC to set these switches but it is a simple task.

### INSTALLATION

Once I set the switches I merely removed the TI disk controller card and replaced it with the HFDC. I did not have a hard disk drive when I first installed the HFDC in the P-box. The HFDC looks for a hard disk drive when you first power up using extended basic. It took the HFDC about 45 seconds to time-out looking for the non-existent hard disk before it looked for the floppy drive. The 45

second wait is unbearable and if you are not aware of this situation you may think there is something wrong with the HFDC. But once it found the floppy disk drive I was able to format my diskettes as dsdd for a total of 1440 sectors on each diskette. I later obtained a 15 meg Hard disk drive and, using the two cables provided with the HFDC, I was able to format the hard disk immediately using the MDMS program supplied in the carton.

### USING MDMS

The Myarc Disk Manager 5 (MDMS) program packed with the HFDC must be used to format the hard disk. It loads from option 5 of the editor assembler cartridge and when first executed will prompt you to enter the date and time. The HFDC has its own clock and will time stamp your files with creation date. The clock is not battery backed up and therefore will lose the time as soon as power is shut off to the P-box. The program will then perform all the operations you come to expect from a disk manager i.e. format a disk, move, copy and delete files etc. However this one will allow you to create a directory on your disks.

### CREATING AND USING DIRECTORIES

When diskettes were formatted for 360 sectors it was not very difficult to keep track of what was on the disk. The disk directory would support up to 127 files and that limit was rarely in jeopardy of being used. The increased storage capability of hard disk drives and the quad density drives could not be used however if only 127 files could be addressed. My hard disk formatted to over 59,000 sectors. To solve this problem the MDMS allows you to create subdirectories.

The top level, also known as the root directory, can hold up to 114 subdirectories in addition to the 127 files. Each subdirectory in turn can hold another 114 subdirectories and 127 files. To address these files within the subdirectories you must enter the PATHNAME of the files so that the disk controller can find it. The pathname is made by stringing the the device name, WDS1, with the directory or subdirectory name. For example I have placed my assembly language games into a directory called AG. The pathname for MASH is WDS1.AG.MASH. Each component of the pathname is separated by a period(.). I have found that care must be taken when assigning the directory name as some programs will only allow you to enter file names up to 10 characters in length. So I deliberately use short subdirectory names. Since 1.4 meg diskettes are now possible the disk controller will allow up to 3 subdirectories on floppy diskettes.

There appears to be no limit to how deep the subdirectories can go. Although there is usually a limitation on the length of the path name that can be entered in some programs. Programs that let you enter the drive number but not the DSK designation are taken care of in a couple of ways. The easiest is a special subdirectory called DSK1. The disk controller will search this directory, if it exists, first and then the

physical DSK1 drive for the file. For those programs that require the disk name to be designated, like Multiplan which requires the diskette to be named T1MP, a special subdirectory called DSK is created with a subdirectory under it called T1MP which contains my Multiplan files.

One of the nicest features of the disk manager MDMS is the find command. It will search all your subdirectories looking for the file name you want and display the pathname of all files with that name. This is great when you know that there is a file out there but you forgot into which subdirectory you put it.

#### MYARC HAS A HIT

Myarc has hit on their hands with the HFDC. It is simple to use and works with the TI-99/4A and the Geneve 9640. Installation is a snap and it seems to work with just about any hard disk drive you can your hands on. I have a 15 meg Winchester. I have heard, but not confirmed, that it will even work with the TTL drives that were discouraged before. A call to Myarc can confirm this so if you have one of these drives it just might work after all. The eeprom in my card is H10 and I have been using version 1.27 of MDMS.

#### FORTH TUTORIAL

By Lutz Winkler

#### FORTH TO YOU, TOO! SESSION 5

When we set up our autobooting system disk I stated that I always include -DUMP. This utility provides a lot more than what I am going to cover here since I want to keep things as simple and understandable as possible. As you may have gathered by now, Forth is a 'stack-oriented' language. There are several 'stacks' but whenever there is reference made to 'the stack' it means the PARAMETER stack. (Parameter = argument.) The stack's main function is for temporary storage of arguments, i.e., numbers. Every time you enter anything from the keyboard (or a word is encountered in a program) Forth first looks for it in the dictionary. If it is not there, it is converted to a number and put on the stack. (If found in the dictionary it is executed.) By now you know the stack concept: What went on the stack last will be taken off first. Because there is a limit to your computer's memory capacity, there is also a limit as to what the stack can hold. Good programmers make sure that the stack holds only what is needed and don't let 'garbage' accumulate there. If by chance you define words which leave junk on the stack, it will eventually reach its limit and the program will stop with a ?FULL STACK message on your display. Conversely, if a word needs to fetch a parameter from the stack and nothing is there, you'll get a ?EMPTY STACK error message.

Bring on .S (dot-S). It lets you look at the stack content without touching it otherwise, i.e., it neither adds nor removes anything. For example, let's enter 15 and then 22. Now enter .S and see what you get on the display. It should show | 15 22. The | symbolizes the bottom of the stack. In other words, if we use . (dot) then 22 should be printed to the display because it is the top (first-out) item on the stack. Now use Another . (dot) will fetch it and if you use . once more Forth will respond with ?EMPTY STACK. (Usually preceded by a number.) In order to program in Forth you must understand the whys and hows of the stack.

Speaking of stacks, there is another one, though it is never called a stack. It goes by the name of DICTIONARY, but just like nearly everything in Forth it is also a stack. Every time you define a new word it ends up on top of the dictionary (stack). On the bottom reside - you guessed it - the Forth resident words. Our autoboot then piles the words from the load options on top and finally you add your words (or your program's words). Large programs can use up almost all of the memory. Say you have loaded the AAA SUPER-DUPER XY CALCULATOR and there are now 1,500 bytes free. You are through calculating and wish to install the PARAGON XY PLOTTER. You may not be aware of the fact that it takes 4,000 bytes, so as it boots there comes the point where your TI has reached its limit. ?DICTIONARY FULL will be the message to let you know that there is no way you can run the XY PLOTTER with SUPER-DUPER CALCULATOR still in memory. Well, there's always COLD to start over. Not necessary. FORGET is easier and faster. FORGET cccc (as it is stated in the manual) wipes everything out of memory starting with cccc and every word which was added after it.

One way to always know what to FORGET to get rid of a program, but not the autoboot, is to include on the WELCOME screen a do-nothing word. It should be added as the last word just before the R->BASE word. It can be anything you like, most people use their initials to help them remember to FORGET. (How is that for logic?) Every word compiled prior to my : LW ; remains in the dictionary, every word added afterward is dropped by FORGET LW (ENTER). In the case of very short routines which I may load on top of another one I usually include a : XX ; or similar do-nothing and display a prompt upon exiting to remind me what to forget. In this fashion I leave the underlying program in memory.

#### RECAP:

The .S word displays the parameter stack's content without adding or removing anything. '|' denotes the bottom of the stack.

FORGET cccc lets you clear from the dictionary entries beginning with cccc and every word added since cccc was compiled.

Placing a do-nothing word on screen 3 makes forgetting easy.

SUGGESTION: Study Chapter 7 of STARTING FORTH.

TIPS FROM THE TIGERCUB

#47

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\*\*\*\*\*
\$ NOW READY \$
\$ TIPS FROM TIGERCUB VOL.5 \$
\$ Another 49 programs and \$
\$ files from issues No. 42 \$
\$ through 50. Also \$10 ppd \$
\*\*\*\*\*

TIGERCUB CARE DISKS #1, #2, #3 and #4. Full disks of text files (printer required). No. 1 contains the Tips newsletters #42 thru #45, etc. Nos. 2 and 3 have articles mostly on Extended Basic

programming. No. 4 contains Tips newsletters Nos. 46-52. These were prepared for user group newsletter editors but are available to anyone else for \$5 each postpaid.

If you bought my C11 disk, Kid's Games, please check line 100 of the Butterfly and Flowers program and, if necessary, change it to - 1000 CALL CLEAR :: CALL SCREEN(4).

If you bought my C12 disk, More Games, and have trouble loading Lost Plane and Andromedan Invasion, please go to line 1000 of the LOAD program and change \$TC-18\$ to \$TC-18 and \$TC-23\$ to \$TC-23. Or, return the disks to me and I will fix them.

Thanks to Ollie Hebert for this fix to the Gordian Knot in Tips #36. This will keep it from running off the edge and crashing in the automatic mode.

```
270 GOSUB 480 :: R=R-24*(R<1)+24*(R>24):: C=C-28*(C<3)+28*(C>30):: CH=128-(D=1)-(D=3):: CALL GCHAR(R,C,G):: IF G<>32 THEN IF INT(2*RAND+1)<>1 THEN CH=G
```

The trouble with me is that, before I finish one program I've thought of another that I want to try writing - and so I don't take time to test completed programs as well as I should. The Decompactor in Tips #35 was one that should have been tested more thoroughly. I think this version will work. It will break an XBasic program into single-statement lines to make it easier to modify.

Then, John Dow's Compactor or a similar program will put it back together.

```
100 !DECOMPACTOR V.1.1 by Jim Peterson fixed 12/87
110 DISPLAY AT(3,1)ERASE ALL
```

```
:"TIGERCUB DECOMPACTOR V.1.1
": " Program must first be
-": "RESequenced to greater
in-": "crements than the number"
```

```
120 DISPLAY AT(9,1)"of statements in any one!"line.":
:"SAVED by:" SAVE DSK(file name),MERGE"
130 DISPLAY AT(16,1)"INPUT FILENAME?":"DSK" :: ACCEPT AT(17,4):IF$
140 DISPLAY AT(16,1)ERASE ALL:"OUTPUT FILENAME?":"DSK" :
: ACCEPT AT(17,4):OF$
150 OPEN #1:"DSK"&IF$,INPUT VARIABLE 163 :: OPEN #2:"DSK"&OF$,OUTPUT,VARIABLE 163
160 LINPUT #1:M$ :: LN=ASC(SEE$(M$,1,1))*256+ASC(SEE$(M$,2,1)): IF LN>LN2 THEN 180
170 DISPLAY AT(12,1)ERASE ALL BEEP:"ERROR! RESEQUENCE PROGRAM TO":"GREATER INCREMENTS AND TRY":"AGAIN." :: CLOSE #1 :: CLOSE #2 :: STOP
```

```
180 LN2=LN
190 P=POS(M$,CHR$(130),3):: IF P=0 THEN PRINT #2:M$ :: GOTO 260
200 A$=SEE$(M$,1,P-1):: R=POSI(A$,CHR$(132),3):: S=POS(A$,CHR$(201),3)
210 IF R=0 THEN PRINT #2:A$&CHR$(0):: GOTO 250
220 IF S=0 AND R<>0 THEN PRINT #2:M$ :: GOTO 260
230 IF S<>0 THEN IF S-R<3 THEN PRINT #2:A$&CHR$(0):: GOTO 250
240 PRINT #2:M$ :: GOTO 260
250 LN=LN+1 :: LN2=LN :: GOSUB 270 :: M$=LN$&SEE$(M$,P+1,255):: GOTO 190
260 IF EOF(1)<>1 THEN 160 ELSE CLOSE #1 :: CLOSE #2 :: DISPLAY AT(12,1)ERASE ALL:"Enter NEW": "Then Enter:" MERGE DSK*&OF$ :: END
270 LN$=CHR$(INT(LN/256))&CHR$(LN-256*INT(LN/256)): RETURN
```

If you have my BXB routine from Tips #40 (corrected in Tips #42) or from my TIPS disk Vol. 4 or NUTS & BOLTS #3, or Genial Traveller Vol. 1 No. 6, here is a neat improvement that Barry Traver

```

thought of. Key this in, run
it to create a merge file on
a disk. Then clear memory
with NEW, merge in BXB, then
MERGE DSK1.LINEZERO, and now
save BXB again in merge for-
mat and it will CALL itself
from line zero (and do some-
thing else that I'm not
going to tell you about!
100 OPEN #1:"DSK1.LINEZERO",
VARIABLE 163,OUTPUT
110 M$=CHR$(0)&CHR$(0)&CHR$(
157)&CHR$(200)&CHR$(3)&"BxB"
&CHR$(130)&CHR$(157)&CHR$(20
0)&CHR$(4)&"CHAR"&CHR$(183)&
CHR$(200)&CHR$(2)&"30"
120 M$=M$&CHR$(179)&CHR$(199
)&CHR$(16)&"81037EA58199663C
"&CHR$(182)&CHR$(0):: PRINT
#1:M$ :: PRINT #1:CHR$(255)&
CHR$(255)

```

And if you have merged in BXB, the edge character (ASCII 31) can be reidentified and colored (set 0) to give the screen an ornamental border.

```

100 CALL CHAR(31,"0"):: CALL
CLEAR :: FOR J=1 TO 24 :: P
RINT :: NEXT J :: CALL CHAR(
31,"182442999942241B"):: CAL
L COLOR(0,5,16)

```

Here is an improved version of the CATWRITER program to create the Tigercub QUICKLOADER, which is intended for disks of programs which you have filled and do not plan to change. It will read the directory, display each filename, and ask you for the complete program name of each one. Then it prepares a program which displays one or more menu screens of complete program names, and auto-loads whichever one you select.

First, key in this part and save it to disk by SAVE DSK1.CAT1, MERGE. If you want, you can change the screen and character colors in line 10. Don't change the line numbers!

```

10 CALL CLEAR :: DIM M$(127)
:: CALL SCREEN(5):: FOR S=0
TO 14 :: CALL COLOR(S,16,1):
: NEXT S :: CALL PEEK(8198,A
):: IF A<>170 THEN CALL INIT
11 REM (leave this in!)
12 ON WARNING NEXT :: GOSUB
21
13 X=X+1 :: READ M$(X):: IF
M$(X)<>"END" THEN 13
14 R=3 :: FOR J=1 TO X-1 ::
READ X$ :: DISPLAY AT(R,1):S
TR$(J):TAB(4):X$ :: R=R+1 ::
IF R<23 THEN 17
15 DISPLAY AT(24,1):"Choice?
or 0 to continue 0" :: ACCE
PT AT(24,26)VALIDATE(DIGIT)S
IZE(1-3):N :: IF N>X-1 THEN 1
5
16 IF N<>0 THEN 19 :: R=3
17 NEXT J
18 DISPLAY AT(24,1):"Choice?
" :: ACCEPT AT(24,9)VALIDATE
(DIGIT):N :: IF N=0 OR N>X-1
THEN 18
19 CALL CHARSET :: CALL CLEA
R :: CALL SCREEN(8):: CALL P
EEK(-31952,A,B):: CALL PEEK(
A#256+B-65534,A,B):: C=A#256
+B-65534 :: A$="DSK1."&M$(N)
:: CALL LOAD(C,LEN(A$))
20 FOR J=1 TO LEN(A$):: CALL
LOAD(C+J,ASC(SEG$(A$,J,1)))
:: NEXT J :: CALL LOAD(C+J,0
): GOTO 10000
21 CALL LOAD(8196,63,248)
22 CALL LOAD(16376,67,85,82,
83,79,82,48,8)
23 CALL LOAD(12288,129,195,1
26,165,129,153,102,60)
24 CALL LOAD(12296,2,0,3,240
,2,1,48,0,2,2,0,8,4,32,32,36
,4,91)
25 CALL LINK("CURSOR"):: RET
URN
10000 RUN "DSK1.1234567890"

```

Next, key in this little routine and run it to create a file called CAT2.

```

100 OPEN #1:"DSK1.CAT1",VARI
ABLE 163,INPUT
110 OPEN #2:"DSK1.CAT2",VARI
ABLE 163,OUTPUT
120 FOR J=10 TO 26 :: LINPUT
#1:M$ :: PRINT #2:CHR$(0)&C
HR$(J)&CHR$(156)&CHR$(253)&C
HR$(200)&CHR$(1)&"2"&CHR$(18

```

```

1)&CHR$(199)&CHR$(LEN(M$))&M
$&CHR$(0):: NEXT J
130 PRINT #2:CHR$(255)&CHR$(
255):: CLOSE #1 :: CLOSE #2

```

Finally, key in CATMATRIX. Leave the line numbers as they are, we need that space after line 9.

Then MERGE in DSK1.CAT2 to combine the two, and SAVE.

```

1 CALL CLEAR :: CALL TITLE(1
6,"CATWRITER"):: CALL CHAR(1
24,"304299A1A199423C"):: DIS
PLAY AT(2,10):"Version 1.3"
::TAB(8):" Tigercub Softwar
e"
2 DISPLAY AT(15,1):"For free
":"distribution":"but no pri
ce or":"copying fee":"to be
charged." :: FOR D=1 TO 500
:: NEXT D :: CALL DELSPRITE(
ALL)
3 DISPLAY AT(2,3)ERASE ALL:"
TIGERCUB CATWRITER V.1.3"::
" Will read a disk directory
,":"request an actual progra
m":"name for each program-ty
pe"
4 DISPLAY AT(7,1):"filename,
and create a merg-":"able Q
uickloader which dis-":"play
s full program names and":"r
uns a selected program."
5 DISPLAY AT(12,1):" Place d
isk to be cataloged":"in dri
ve 1 and press any key" :: C
ALL KEY(0,K,S):: IF S=0 THEN
5
9 OPEN #2:"DSK1.CATMERGE",VA
RIABLE 163,OUTPUT
100 OPEN #1:"DSK1.",INPUT ,R
ELATIVE,INTERNAL :: INPUT #1
:N$,A,J,K :: LN=1000 :: FN=1
100
110 DISPLAY AT(12,1):"Disk n
ame?":N$ :: ACCEPT AT(14,1
)SIZE(-28):M$ :: LX$=STR$(14
-LEN(N$)/2):: LXLEN=LEN(LX$)
120 PR$=CHR$(0)&CHR$(11)&CHR
$(162)&CHR$(240)&CHR$(183)&C
HR$(200)&CHR$(1)&"1"&CHR$(17
9)&CHR$(200)&CHR$(LXLEN)&LX$
130 PR$=PR$&CHR$(182)&CHR$(1
81)&CHR$(199)&CHR$(LEN(N$))&
N$&CHR$(0):: PRINT #2:PR$
140 X=X+1 :: INPUT #1:P$,A,J
,B :: IF LEN(P$)=0 THEN 180
:: IF ABS(A)=5 OR ABS(A)=4 A

```

```

ND B=254 THEN 150 ELSE X=X-1
:: GOTO 140
150 DISPLAY AT(12,1):P$:"
PROGRAM NAME?" :: ACCEPT AT
(14,1)SIZE(25):F$
160 PRINT #2:CHR$(INT(FN/256
))&CHR$(FN-256*INT(FN/256))&
CHR$(147)&CHR$(200)&CHR$(LEN
(F$))&F$&CHR$(0):: FN=FN+1
170 M$=M$&CHR$(200)&CHR$(LEN
(P$))&P$&CHR$(179):: IF X<11
THEN 140
180 IF M$="" THEN 200
190 PRINT #2:CHR$(INT(LN/256
))&CHR$(LN-256*INT(LN/256))&
CHR$(147)&SEG$(M$,1,LEN(M$)-
1)&CHR$(0):: LN=LN+1 :: M$="
" :: X=0 :: IF LEN(P$)<>0 TH
EN 140
200 PRINT #2:CHR$(INT(LN/256
))&CHR$(LN-256*INT(LN/256))&
CHR$(147)&CHR$(200)&CHR$(3)&
"END"&CHR$(0)
210 PRINT #2:CHR$(255)&CHR$(
255):: CLOSE #1 :: CLOSE #2
220 DISPLAY AT(8,1)ERASE ALL
:"Enter -":N$:: ME
RGE DSK1.CATMERGE":: DELE
TE "DSK1.CATMERGE"":: S
AVE DSK1.LOAD"
230 SUB TITLE(S,T$)
240 CALL SCREEN(5):: L=LEN(T
$):: CALL MAGNIFY(2)
250 FOR J=1 TO L :: CALL SPR
ITE(#J,ASC(SEG$(T$,J,1)),J+1
-(J+1=S)+(J+1=S+13)+(J+14)S
3,J#(170/L),10+J#(200/L))::
NEXT J
260 SUBEND

```

Mike Stanfill and Ed Machonis and others have been publishing some neat little single-screen "tiny-program" programs, so here is my contribution. It's a one-screen one-liner!

```

1 RANDOMIZE :: PRINT : : :
: : : A=INT(RND*7):: B=INT(R
ND*9+1):: FOR X=1 TO 5 :: Y=
A#X^2-B#X+B :: PRINT Y:: NE
XT X :: Y=A#X^2-B#X+B :: PRI
NT : : : INPUT "GUESS NEXT
NUMBER":N :: IF N=Y THEN PRI
NT : "RIGHT" :: GOTO 1 ELSE P
RINT : "CORRECT IS":Y :: GOTO
1

```

MEMORY FULL! - Jim Peterson



T. I. WRITER (Part 12)  
Stan Katzman

The last dot command is the transliterate command (.TL [!],\_) with this command you can change any character to another character in the Formatter. In order to use this command we must first discuss the ASCII character codes which are listed on page 145 of the T. I. Writer manual, plus you need to know the control codes for your printer. The control codes are given in your printer manual.

The ASCII codes are a set of standard numbers which when sent to the printer cause the printer to print a certain character. For example if your computer sent the printer the code number 65 a capital "A" is printed. Some ASCII codes do not cause the printer to do anything, for example if number 27 is sent (this is called escape) it will be a signal to the printer to do something special.

The transliterate command works in conjunction with the ASCII codes and your printer control codes. Let's give a few examples of them. Let's say we want to make a superscript. The control code for the Epson LX-80 printer to make a superscript is 27,"S0". This is escape, capital "S" and zero. In Basic if we send the printer the following statement "Print @1:CHR\$(27);"S0", it will print all letters or numbers after this code in superscript mode, we must now turn off the superscript modes and this is done with the code 27,"T". So in Basic we would say Print @1: CHR\$(27);"T" and now everything will be printed normally in a Basic program. Well in T. I. Writer we have to tell the program first that we want to change one letter to something else (transliterate). We "tell" the program this by using a character that we will not be using in the rest of the document and then transliterate it. For example let us assume that we are not going to use the brackets ([ ]) in our document. The left bracket ([) has the ASCII code of 91. So let us use this as a signal to transliterate it in order to make superscripts, we would type at the start of our document ".TL 91:27,83,48". What this says is ASCII 91 a left brace ([) to transliterate into the following; 27 code to the printer to do what follows (escape), and now 83 which is a cap S and 48 for zero. The next character the printer sees will now be printed in superscript. We now have to turn off superscript and let's us the right brace (]). We would type at the head of the document ".TL 93:27,84". This transliterates thusly, ASCII 27 is escape to the printer and 84 is the cap T which tells the printer to turn off superscript (and subscript) modes. Let's see what this would look like;

.TL 93:27,84<enter> (Changes ] to turn off superscript).

.TL 91:27,83,48<enter> (Changes [ to transliterate to superscript.

In the making of a cake heat the oven to 300 ° F...

You see the braces turn the zero to a superscript and the next brace turns off the superscript. That is why we cannot use the braces anywhere else in the document.

Study your printer manual and you can make your printer do everything it is capable of using the transliterate mode.

Dec.18,1988 Meeting Minutes  
Pittsburgh Users Group

Meeting started at 6:15 by Gary Taylor. Minutes of last meeting were read by Frank Zic (Herb was off), they were approved and seconded.

Frank Shoemaker gave the treasurers report with a balance of \$373.26. Reminder to pay dues for 1989 as soon as possible. A list of the total membership was passed around for information update.

Susan Harper said that the library now has Student Organizer,Freddy,Picasso and many Adventure games. Sue is looking for an E/A chip to make up a Super-Cart.

Gene Kelly said the BBS will have V1.7 running as soon as he puts the the system back on line. All were asked to use caps and lower case when entering messages. Also when exiting the BBS use the standard method set up on the board. This will cause less lock-up problems.

Gary mentioned that Audrey was down with pneumonia but is coming along nicely. From each of us, we wish you a quick and complete recovery.

Susan Harper has found us a printer for our newsletter that is reasonably priced. Many thanks. A review of all newsletters sent out is to be conducted.

Old business. 3 re-inked printer ribbons remain to be picked up by their owner.

Mickey handed out the ordered copies of Home Publishing.

Frank passed the "4 Sale/Want" book around,let's keep it active.

The "Press" program by Asgard is still being debugged. "Press" will show on the screen in a formatted form.

Gary deaced his new Hard drive with huge storage space,fast response and a nice directory function.

May the good 4's be with you....Frank Zic

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DUES \$15 PER YEAR  
HAVE YOU PAID YOURS?

THE KIDDIE CORNER  
by Sue Harper

For kids of all ages - a series of articles on how to get started making your own programs.

Happy New Year y'all! Hope your Christmas break was long enough! Of course, we all know that it can NEVER be long enough! Well, anyway, we can still have some computer fun in the off time!

This month we are going to start looking at colors and how to get them on the screen. The first thing you need is a color monitor. If you are working with a black and white monitor, all you will get is black, white and shades of grey. So, you may want to go read a good book until next month unless you have a color monitor! (One good book to read is KID'S COMPUTER CAPERS by Sandra Markle, published by Lothrop, Lee & Shepard Books, New York.)

There are two commands that use color. One is CALL COLOR, and the other is CALL SCREEN. CALL SCREEN is the easiest to use, so we will start with that one.

In TI BASIC, there are sixteen colors available. You can get different colors to show up, but they are tricky, and we will start with these. Each color is assigned a number:

Transparent...1	Medium Red....9
Black.....2	Light Red....10
Medium Green..3	Dark Yellow...11
Light Green...4	Light Yellow..12
Dark Blue....5	Dark Green...13
Light Blue....6	Magenta.....14
Dark Red.....7	Gray.....15
Cyan.....8	White.....16

If you lose this list, don't worry, it is in the book that came with your computer, and in the book that comes with Extended BASIC. However, I will refer to it, and you will need to have a list somewhere.

Now, how to use CALL SCREEN:

Lets turn the screen Dark Red. First, we look up Dark Red in the chart, and find that it is number 7. So, our color command will be CALL SCREEN(7). To make a program, we have to give it a line number. I also want to erase any words on the screen, and make the color stay on the screen forever, or until I tell it to stop. Here's my program:

```
10 CALL CLEAR
20 CALL SCREEN(7)
30 GOTO 20
RUN
```

Very simple, really. To make the program stop, hold down the FCTN key and the number 4 at the same time. We will refer to this as FCTN 4 from now on. It is the command to break a program, or make it stop running.

The only problem with CALL SCREEN is that it colors the whole screen, and leaves the letters black. We use CALL COLOR to color only parts of the screen, or letters,

numbers and symbols, and that is what we will work on next month. Until then here are some challenges for you. The answers will be in next month's newsletter.

Write a program that will print HAPPY NEW YEAR and turn the screen magenta.

Figure out what cyan is.

Write a program that will make the screen blink black, white, black white.

See you next month!!!!



FROM THE LIBRARIAN...

I must thank Gary first of all for the month of December off...There was no article from the librarian. But then again, what was he going to do? Slaves have to be sold, right??? Just kidding, Gary!

We have had a great deal of new stuff put in the library lately, and there's more coming. In the last two months, we have added 34 disks to the Utilities section, including programs for the Horizon Ramdisk (source codes, tests, Myarc disk controller program), sector editors, a program to give you a 40 column screen in BASIC, a program called DISKCLEAN to use when you clean your disk heads, an update disk for TI WRITER/MULTIPLAN, a set of disks with Editor/Assembler tutorial, a utility for the Corcomp Triple tech card, more label making programs, but these print disk directories, and a disk to learn and use the language PILOT 99.

ALSO we have added a student organizer (see Gary's article), a new supercart disk, compliments of John Wilforth, a disk of Christmas graphics usable with the graphic label maker, and with transliteration codes for use with TI WRITER.

AND, if that's not enough, we also have added 4 new games disks, including Nibble, Perfect Push, a Lotto picker, and Fred (my son, age 8 LOVES Fred). In graphics, we now have Picasso, and a new disk of Christmas graphics, different from the one listed above.

Now, THAT is what you missed if you haven't been to check out the library in November or December! Yes, the weather can be tricky, but it's worth the trip! Trust me!

New this month we have a helpful note from Cliff Peaper. A lot of the new disks we are receiving are archived! And the system seems to be that the clue is an asterisk (\*) in front of the file name. For example, the file name might be \*CONVERT. I have not had, and will not have time to check every program, so please be aware of that, let me know by sending me a list of any programs you find that are archived. We have the most recent version of Barry Boone's archiver in the library. Archived files take less space, so we cannot unarc all the files without using an enormous amount of work and new disks!

New for January 1989 in the way of programs are the corrected version of C 99 (C 99 REL 4B) which will be in the MISC section. Also, four disks compliments of John

Wilforth: a disk of games by Terry Staph including poker, blackjack and wheel of fortune (without Vanna), a disk called 'I luv my TI labels + others' by Mike and Ed Machonis, Tiny grams by Ed Machonis, and a 40 column utility disk by Brad Snyder. Also new is a disk from Jim Alexander with three files on it - Boot, Lisp, and Reflections. Jim said LISP is a new language for the TI, but I think he was just pulling my leg! Come to the meeting and find out!!!

The BIG donation of the month comes from Mickey Schmitt. She donated to the club twenty-seven (yes, folks, 27!) games disks. They include disks to use with the adventure module, as well as some that are in extended basic. For those of you who would like to try

adventure games and do not have the adventure module, we have a disk version in the library, GAMEPS1004. This will autoloading out of Extended Basic, and let you find out how the gamers go at it.

As if that was not enough, we will have fourteen more utility disks for you to check out, including more Ram disk programs, printer utilities, a very interesting mailing label program which even prints out MAGNETIC MEDIA, DO NOT FOLD!, some programmers aids, a disk to save cartridges to a Graam Kracker, and a set of disks for a TI system check.

I think we have something for everybody. Come check us out! See you at the meeting!!!!

## FROM THE MAILBOX...

REPRINTED FROM CALL SOUNDS OF CW 99'ERS.

TWO TIPS by Charles Good LIMO OHIO 99 UG

DISK UTILITIES v4.1 TIP

Printing out a "DISK REPORT" complete with comments takes alot of paper, even if you use compressed print. If the disk has a lot of files the DISK REPORT will probably not fit onto the front of the disk envelope. Using "System Setup" and the following special characters will print your disk report in compressed, subscript, double strike, and small line feeds. From the "Printer Setup" submenu type "9" next to "Disk Report" and then enter the following "Special Character" code: !BOP!BE30!1B330B.

You can permanently enter this special character with a sector editor so that it will always be available for instant use. You need the complete documentation, only available to registered DISK UTILITIES owners to tell you where to do the sector editing. The code above works for epson compatible printers.

FUNNELWEB v4.1 TIP Do you have FWB v4.1 stored on a ramdisk designated other than DSK1. If so, when you call up FWB's DM1000 you may have to wait for physical drive #1 to grind away for awhile before DM1000 appears. This access of drive 1 every time you boot FWB's DM1000 can be eliminated. Use FWB's DISK PATCH, or any other sector editor, to display the first sector of the MG file. Make the display ASCII, and near the beginning of the sector you will see "DSK1.MG". Change this drive number to the ramdisk drive number that actually contains file MG and your problem is solved. Now, when you select DM1000 from FWB v4.1 it boots instantly!

FROM BRUCE'S COMPUTER MAGIC.

EASIER BOLD OR UNDERLINE ON TI-WRITER

Ever want to make an entire line or paragraph bold or underlined? Get tired of typing dozens of @'s to boldface a sentence? Here's what to do: Type in the line with normal spaces. Put the cursor at the beginning of the sentence. Then go to Replace String(RS) and type the following: / /@/

When the prompt (All,Yes,No,Stop) appears, select Yes. The (@) will be put before each word.

THE 17TH CHARACTER SET

The 994A manual tells you that there are 16 different character sets that you can redefine and change colors on. The 994A actually has 17. SET #0 is never mentioned in the literature. However, you do need extended basic in order to access the set. Try the following program for a nice surprise:

```
90 CALL CLEAR
100 CALL COLOR(0,7,6)
110 FOR I=1 TO 24
120 PRINT "hello"
130 NEXT I
140 INPUT "NOTICE THE COLOR OF THE CURSOR?":A$
```

HELLO TITLE SCREEN

Would you like to exit your program all the way to the Title Screen? You'll need 32K extra memory. Run this line:

```
10 CALL INIT :: CALL LOAD(-31804,0,36)
```

\*\*\*WELCOME\*\*\*WELCOME\*\*\*WELCOME\*\*\*

The PUG would like to convey our continued welcome to Don McCalla, Chuck Hussman, Walter Gardill, Charles H. Conner Jr., Matthew Falce, Leon Sienkiewicz, Art Gardner, Richard McNelis, Ken Farr, Rich Keppler, and Willis Richardson who have recently renewed their memberships.

JANUARY 1989						
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22	23	24	25	26	27	28
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# CCAC

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3 PM

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 Cor. Sec. and  
 NL Editor: Audrey Bucher 412-881-5244

**SCHEDULE**

3-4:30 Educational Programs with Gary.....Rm. 401  
 4:30-5 Hardware Class with John Wilforth.....Rm. 475  
 4:30-5 Multiplan Class with Audrey.....Rm. 401  
 6:00-? General Meeting

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