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THE PUG PERIPHERAL

THE MONTHLY NEWSLETTER OF THE
PITTSBURGH USERS GROUP
DECEMBER, 1988

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8812

CLUB NEWS BY GARY TAYLOR

THIS MONTH I WILL BE HAVING A CLASS ON CHARACTER SETS AND GRAPHIC DESIGN. THIS IS AN EXTENSIVE SET OF DISKS CREATED BY DAVE ROSE OF FAIRFIELD, OHIO. IN 1985 HE RELEASED THE FIRST OF THREE DIFFERENT YET SIMILAR PROGRAMS TO PRODUCE GRAPHICS, PICTURES, AND CHARACTER FONTS FOR PRINTING ON GRAPHIC PRINTERS. DAVE ESTABLISHED A NEW STANDARD FOR GRAPHICS AND FONTS ON OUR COMPUTER. THOSE FILES THAT END WITH GR, DT, WR, OR CH ARE USED WITH THESE PROGRAMS AND MANY CAN BE FOUND IN OUR LIBRARY. THE FIRST PROGRAM CALLED CHARACTER SETS AND GRAPHIC DESIGN I, OR CS&GD-I FOR SHORT, CONTAINED THE EDITORS FOR PRODUCING THE GRAPHICS AND FONTS. IT ALSO SET YOUR CONSOLE UP AS A TYPEWRITER USING THE NEW FONTS AND ALLOWED YOU TO PRINT THE GRAPHIC THAT YOU CREATED WITH THE EDITOR.

THE SECOND PROGRAM IS CALL CS&GD-II AND WAS RELEASED A FEW MONTHS AFTER THE FIRST DISK IN 1985. THIS PROGRAM'S PRIMARY ENHANCEMENT WAS TO PRODUCE BANNERS USING THE FONTS CREATED WITH THE FIRST PROGRAM. YOU MAY REMEMBER THE FANCY BANNERS THAT I USED TO PUT UP AT THE MEETINGS. THAT WAS BEFORE I HAD TO WRITE THESE ARTICLES AND SO HAD MORE TIME FOR CREATING THEM.

THE THIRD IS CALLED, WHAT ELSE, CS&GD-III. IT WAS RELEASED IN 1986 AND FURTHER ENHANCES THE USABILITY OF THE FONTS AND GRAPHICS PRODUCED WITH THE EARLIER PROGRAMS. YOU CAN PRODUCE LABELS, COMPANY LETTERHEADS, AND EVEN PRINT OUT TI-WRITER DOCUMENTS USING ANY OF THE FONTS CREATED WITH ANY OR ALL OF THE PREVIOUS PROGRAMS. FOR EXAMPLE, THE HEADING OF THE NEWSLETTER WAS PRODUCED WITH THE LETTERHEAD PROGRAM THAT IS CONTAINED ON THE CS&GD-III DISK. SO IF YOU WANT TO SEE THESE PROGRAMS IN ACTION OR IF YOU HAVE QUESTIONS THAT YOU NEED ANSWERED ABOUT HOW TO USE THEM, COME TO MY 3:30 CLASS.

I HAVE JUST RECEIVED A COPY OF JOY PAINT '99 WHICH I ORDERED AT THE CHICAGO FAIRE FROM GREAT LAKES SOFTWARE. THE DEMONSTRATION I WAS SHOWN AT CHICAGO REVEALED AN ICON DRIVEN PROGRAM WITH PULL DOWN WINDOWS. IF I HAVE TIME AND THERE IS SUFFICIENT INTEREST I WILL TRY TO DEMONSTRATE IT AT MY CLASS TOO.

NOW HERE IS AN OFFER THAT YOU CAN'T REFUSE! I HAVE BEEN LOGGING ONTO COMPUSERVE ABOUT TWICE A MONTH TO PARTICIPATE IN THEIR NATIONAL CONFERENCES. WHAT IS A NATIONAL CONFERENCE? COMPUSERVE ACTS AS A CENTRAL BULLETIN BOARD WHERE ANYONE CAN CALL IN AND INSTEAD OF LEAVING MESSAGES TO SOMEONE IN A MAILBOX FOR THEM TO PICK UP LATER THEIR MESSAGE IS RECEIVED IMMEDIATELY. WHILE ON THE CONFERENCE YOU HAVE AN OPPORTUNITY TO SEND A MESSAGE TO ALL THE OTHER PARTICIPANTS WHO ARE LOGGED IN AT THE TIME. YOU WILL ALSO RECEIVE MESSAGES THAT ARE ENTERED BY OTHERS SO YOU ARE NOT LEFT OUT OF THE CONVERSATION. I HAVE NOTICED THAT THE OTTAWA TI USER'S GROUP ALWAYS SEEM TO HAVE SEVERAL MEMBERS ON ALTHOUGH THERE IS ONLY ONE LINE COMING INTO THE CONFERENCE. THEY ALL MEET AT ONE OF THE OFFICERS HOMES AND SHARE THE EXPENSE OF BEING ON-LINE. SO I AM OFFERRING ANY MEMBER OF THE PUG AN OPPORTUNITY TO JOIN IN THE FUN BY COMING OVER TO MY HOUSE ONCE A MONTH AND SEE WHAT THE CONFERENCE IS LIKE. IT WON'T BE FREE BUT THEN IT WON'T BE MORE THAN A BUCK EITHER. I USUALLY SPEND THE FIRST SUNDAY OF THE MONTH ON CLUB BUSINESS AND THIS WOULD BE A GOOD DAY TO START THIS EVENT. JUST GIVE ME A CALL TO MAKE A RESERVATION, ABOUT 6 PEOPLE IS ALL I CAN HANDLE.

MYARC'S HARD DISK CONTROLLER

THE HARD AND FLOPPY DISK CONTROLLER (HFDC) SOLD BY MYARC IS ABSOLUTELY GREAT. I PURCHASED ONE AT THE TI FAIRE IN HARRISBURG LAST OCTOBER AND WILL DEMONSTRATE IT AT THE DECEMBER MEETING.

THE HARD AND FLOPPY DISK CONTROLLER COMES WITH A CONTROLLER CARD THAT FITS INTO THE P-BOX, A 70 PAGE USER'S MANUAL, AND TWO

MERRY CHRISTMAS

FROM THE PITTSBURGH USERS GROUP

CABLES TO CONNECT TO A HARD DISK. ALSO SUPPLIED WERE SEVERAL DISKETTES THAT CONTAINED A NEW MDOS AND GPL FOR GENEVE 9640 OWNERS AND A NEW DISK MANAGER PROGRAM CALLED MDM5 (MYARC DISK MANAGER VERSION 5). THE DISK MANAGER RUNS ON A STANDARD TI-99/4A, USING EA OR AN OPTION 5 LOADER. WHEN I BOUGHT THE CARD I DID NOT HAVE A HARD DISK DRIVE AND THOUGHT I WOULD USE THE CONTROLLERS SUPERIOR FLOPPY CAPABILITIES WITH THE 4A. THE CONTROLLER WILL SUPPORT UPTO 4 FLOPPY DISK DRIVES WITH FORMATS FROM SINGLE SIDED SINGLE DENSITY - SSSD, 360 SECTORS TO THE NEW 80 TRACK DISK DRIVES WHICH ARE CALLED QUAD DENSITY - DSQD, 2880 SECTORS. IT WILL ALSO SUPPORT THE NEW 3.5 INCH FLOPPY DRIVES. I ALREADY HAD DSDD DRIVES BUT WAS USING A TI CONTROLLER WHICH LIMITED THE FORMATTING TO 720 SECTORS. BY REPLACING THE CONTROLLER CARD I WAS ABLE TO IMMEDIATELY FORMAT DISKETTES WITH 1440 SECTORS. TO INSTALL THE HFDC, I REMOVED THE CLAM SHELL AROUND THE HFDC TO GET ACCESS TO FOUR DIP SWITCHES LOCATED ON THE CARD ITSELF AND SET THE CRU ADDRESS TO 1100. I THEN REMOVED THE TI DISK CONTROLLER CARD AND REPLACED IT WITH THE HFDC. I TURNED ON THE SYSTEM AND NOTHING WORKED! AFTER TRYING VARIOUS SWITCH SETTINGS AND RESEATING THE CARD, CABLES, EXTENDED BASIC CARTRIDGE AND ALL THE OTHER CONNECTIONS, I GAVE UP AND TURNED EVERY THING OFF AND WENT TO BED. SEVERAL DAYS LATER FRANK ZIC CALLED BECAUSE HE ORDERED A HFDC AND WANTED TO COMPARE NOTES BECUASE HE COULD NOT GET HIS TO WORK EITHER. WHAT WAS HAPPENING IN MY CASE WAS THAT THE HFDC ALWAYS LOOKS FIRST FOR A HARD DISK DRIVE AND IF IT DOES NOT FIND ONE IT WILL THEN LOOK FOR A FLOPPY DRIVE ADDRESSED AS DSK1. THIS PROCESS TOOK 45 SECONDS BEFORE THE HFDC ATTEMPTED TO LOAD FROM DSK1. SO I HAD JUST NOT WAITED LONG ENOUGH! ARMED WITH THIS INFOMATION THE HFDC WORKED FLAWLESSLY. FRANK GOT HIS TO WORK TOO.

MYARC'S DISK MANAGER HAS ALSO WORKED GREAT. THE FIRST QUESTION IT ASKS WHEN LOADED IS THE TIME AND DATE. THE HFDC HAS A CLOCK IN IT TO TIME STAMP YOUR FILES. UNFORTUNATELY, IF YOU TURN THE 4A OFF YOU MUST RESET THE CLOCK WHEN YOU POWER IT BACK ON AS IT IS NOT BATTERY BACKED UP. THE DISK MANAGER WILL FORMAT THE FLOPPIES IN ANY FORMAT THE DISK DRIVE WILL SUPPORT. ADDITIONALLY, IT WILL ALLOW YOU TO CREATE UP TO THREE DIRECTORIES ON A DISKETTE. FOR THOSE OF YOU NOT FAMILIAR WITH DISK DIRECTORIES, I WILL BE EXPLAINING IT MORE FULLY AT THE GENERAL MEETING DEMONSTRATION.

WELL I JUST COULDN'T STAND TO WAIT FOR THAT 45 SECONDS EVERY TIME I TURNED MY 4A ON, SO I OBTAINED A 15 MEG HARD DISK IN A STAND ALONE POWER SUPPLY. I FOLLOWED THE MANUFACTURES RECOMMENDATION FOR FORMATTING THE HARD DISK AND END UP WITH OVER 30,000 SECTORS. THE SECOND DAY WITH THE HARD DISK AND FURTHER READING OF THE USER GUIDE INDICATED THAT I SHOULD REFORMAT THE HARD DISK SEVERAL TIMES IN ORDER TO FIND THE FASTEST FORMAT TIME. THIS WOULD INSURE THAT ALL THE PARAMETERS FOR MY PARTICULAR DISK DRIVE WOULD BE SET FOR THE FASTEST ACCESS TIME. SO I SPENT SOME TIME REFORMATTING UNTIL I CAME UPON THE BEST PARAMETERS. I NOW HAVE OVER 59,000 SECTORS ON-LINE! I HAVE BEEN BUSY COPYING FILES TO THE HARD DISK AND STILL HAVE 50,000 SECTORS FREE!. THIS HAS GOT TO BE ONE OF THE BEST UPGRADES TO THE TI-99/4A AND I HEARTILY RECOMMEND IT TO ANY SERIOUS HOBBIEST.

THE PRICE FOR THE HFDC IS AROUND $325.00 AND CAN BE PURCHASED DIRECTLY FROM MYARC. A HARD DISK DRIVE CAN BE PURCHASED FROM MANY COMPANIES AS THE HFDC IS COMPATIBLE WITH THE SAME HARD DISKS DRIVES THAT ARE SOLD IN THE IBM XT OR AT. THE PRICE OF A HARD DISK DRIVE IS DEPENDENT ON THE SIZE OF THE HARD DISK. THE 5 MEG DRIVES ARE ADVERTIZED AROUND $125.00 AND PRICES GO UP FROM THERE. LOW POWER, HALF HEIGHT HARD DRIVES CAN BE PLACED IN THE P-BOX AS LONG AS THE POWER IS REGULATED PROPERLY. MYARC WILL SELL A 20 MEG HARD DISK FOR AROUND $265 AND THROW IN THE REGULATOR. SO YOU CAN NOW HAVE 20 MEG OF STORAGE ON LINE FOR LESS THAN THE COST OF A 1 MEG RAM CARD. THE HFDC CAN SUPPORT UP TO 3 HARD DISK DRIVES AND FORMAT THEM UPTO 134 MEG EACH IN ADDITION TO THE FOUR FLOPPIES. YOU CAN EVEN LEAVE THE TI DISK CONTROLLER IN THE P-BOX AND CONTROL 4 MORE FLOPPIES, FOR A TOTAL OF EIGHT.

THE ONLY PROBLEM THAT I KNOW OF IS WHEN YOU USE THE HFDC WITH THE GENEVE 9640 THE CONTROLLER WILL NOT ACCESS THE FLOPPY DISK DRIVES. YOU MUST KEEP YOUR TI DISK CONTROLLER IN THE P-BOX TO RUN THE FLOPPIES. THIS PROBLEM IS BEING WORKED ON BY MYARC INC. AND THE SOLUTION LIES IN A NEW VERSION OF MDOS RATHER THAN WITH THE HFDC.

DISK DRIVES (#4)
by John F. Willforth

If you studied the simple drawing of a Disk Drive Exerciser and read the discription (#2 and #3) you may already have a better idea on how a disk drive operates in conjunction with the controller and the diskette (storage media). I would now like to take some time to describe the basic concepts of disk drives. The jobs the drive has to do is:

1) Recognize when it is called on so it is the only unit to respond (DSx).
2) Let the controller know if a disk is present and rotating (INDEX).
3) Let the controller know if the drive is at Track 00 (INITIALIZED).
4) Let the controller know if the disk may be written on (not in the WRITE-PROTECTED mode).
5) Some drives put out a READY status to indicate that they are ready for additional commands.
6) Recieve the MOTOR ON term and simply turn on the spindle motor (turn the disk at 300 RPM).
7) Recieve the DIRECTION command on a SEEK or STEP to a command (IN/OUT).
8) Recieve the SIDE command (DS drives only) to select head 1 or 2.
9) Recieve the STEP command (after DIRECTION) to move the head(s) to the one track (cylinder) the CPU and controller decide has the sector(s) you are looking for.
10) Recieve the WRITE GATE (enable writing circuitry) command for preparing the drive to convert the digital data that will be coming on the WRITE DATA line and gate it to the WRITE HEAD part of the HEAD as analog data. The HEAD has both READ and WRITE windings in it.
11) Provide the CONTROLLER with the READ DATA coming from the READ part of the HEAD in a modified and amplified state. This includes ALL DATA that the HEAD reads (PREAMBLE, HEADER INFORMATION, DATA, and CHECK SUM). It is not smart and must leave it up to the controller to decide if it is at the right TRACK, SECTOR, and if the DATA is correct, CHECK SUM compares).

That's all that there is to it. I'll now go into some detail on each of the above, step by step. Some are very simple and quite obvious, and others are too!

First the DEVICE SELECT jumpers on your disk drive are there so that you can have up to four drives on your controller, and by jumpering the drive select circuit on a drive, it and only it will respond to a 0-Volts potential on it's DSx line (provided you haven't strapped another drive for the same DSx).

Next let's look at what happens when you insert a disk and call for a list of files on that disk (READ). When you tell the disk manager that you want to catalog the disk, the controller recieves instructions from the CPU to SELECT a drive, and what functions to perform in approximately this order:

1) Select DRIVE
2) Turn MOTOR ON and wait for up to speed (INDEX frequency)
3) Check TRACK 00 and reference FLOPPY CONTROLLER chip to see if the drive was at track 00, or at another track from a previous operation.
4) Select DIRECTION and step the HEAD STEPPING MOTOR in that direction a specific number of pulses. Controller looks this up to see how many step pulses must be given. The controller must ALWAYS know where the HEADS are before it can move them to a new track.
5) Apply proper number of STEP pulses to get the HEAD(s) over the right track on the disk.
6) The CPU and CONTROLLER will select a HEAD. Based on this READ we will sel. HEAD 1 (bottom), and gate it to the READ DATA line to the controller.
7) Now wait for the next INDEX pulse (synchronization of mechanical disk to the electronics).
8) READ everything. At this point the controllers job is to handle separation of HEADER (address etc.) and DATA, and CHECK WORD information. The continues to turn on this one track and read until the controller gives it another job to do. The information will now be acted on by the CPU or CONTROLLER and if a read error occurs, well that's going to have to wait until next month.

I did want to includ the disc to the right which is used to check and adjust the speed of the older type disk drive, with the belt driven SPINDLES. The disc can be attached to any drive to check the speed, as long as you center it on the end of the SPINDLE and not the MOTOR. After you have attached the disc you can either run a program that will keep the disk drive running, or you can ground pin 16 on the drive with only the power plug hooked to your drive. If you built the DISK DRIVE EXERCISER, just flip switch S2. Look at the disc and adjust the motor speed pot. until the bars appear still. That's all!

I'll pick up where I've left off today on READING, WRITING and a few tips next month.
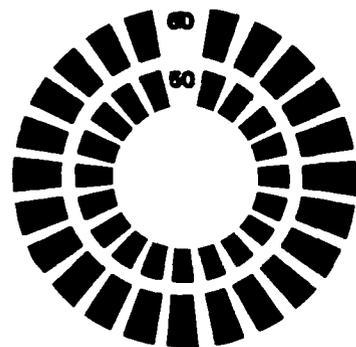
ERRORS, I'VE MADE ERRORS, I'VE MADE LOTS AND LOTS OF ERRORS (John Willforth)

   In the May issue of the PUG, in an article based on the MBP Card, I made an error on the CLOCK (58167) chip. Add a "RDY" pin 4 and take it to ground.
   In the June issue of the PUG, I wrote an article summing up the efforts of others in building a CLOCK circuit in the TI console or speech synthesizer. The article was not without error, and now for those who put the contraption on the shelf in frustration, you may want to give it one more try.
   First U2 output to U3 is marked pin 14, change that to pin 11. Next the clock might have partially worked, but had very strange times displayed. The data bus was 180 degrees out. D7 in the clock chip was going to D0 (pin 34) on the console I/O connector. It should have gone to pin 37. D6 to D6 (pin 40), D5 to D5 (pin 39) etc. and finally D0 to D0 (pin 34). The clock does work and has been built by many.
   In the October issue of the PUG, the article on the Disk Exerciser has a few mistakes. The Parts List shows C1, C2 as 470 pf. caps, but should read C1,C3 as 470 pf. caps. The second item should therefore read C2- 1 ufd. Capacitor. I also failed to show a Momentary contact switch in the Parts List as S6.
   The last correction (I hope!) is that IC U1a pin 7 (to +5) should be pin 14, and U1d pin 14 (to ground) should be pin 7. ie: the 74LS04 has ground and +5 reversed.

PUTTING GROM BASED CARTRIGDES IN YOUR CONSOLE (The easy way) John F. Willforth

   If you would like to install several (up to 6 GROM chips) inside your own console without any circuit boards, and just a little wire, listen up!
   Because the addressing is internal in a GROM, they can be stacked, and all of the GROM sockets in the TI-99/4A are pin for pin identical to each other. Take GROM 0, 1 and 2 from their sockets above the CPU chip, and stack them carefully and solder ALL 16 of their legs together. Now plug the whole 3-Chip unit in the GROM socket next to the Sound chip, observing direction (pin 1 location). Now you will note that you have two empty GROM sockets with the potential of six of these little beasties being stacked right on the CPU board. First though you better test the console to see that you have everything still operational.
   Multi-Plan requires five GROMS, and Editor Assembler one, for a total of six, and this will be one example of a full boat for these sockets without cutting a hole in the RF shield to stack these chips to sky-scraper proportions. You may prefer TI-Writer, one GROM, Disk Manager II, two GROMS, or any of the many GROM only cartridges that TI made, even games could be included in this list.
   To keep this simple, however, I reference Multi-Plan, and Editor Assembler. Remove the groms from their circuit boards carefully. Since you must keep all five of the MP chips selected at the same time, I would recommend that you make note of the E/A chip so that it doesn't get mixed with the MP chips just yet.
   Stack any three of the MP chips and solder them together as you did to the console GROM chips earlier. Cut the part of pin 14 off the bottom chip of this 3-chip unit so that when this unit is inserted in the middle of the three sockets, there will be no connection to the corresponding pin in the GROM socket, but be sure that all three GROM pin 14s are soldered together. Now take the other two MP GROMS and piggyback them, and cut the bottom of pin 14 as before. Pick up the E/A GROM, and bend pin 14 straight out, you don't have to cut it's pin. Slip the two MP GROMS on the TOP of the E/A GROM, and solder ALL but 14.
   Using 3- 12"lengths of multi-stranded wire (ribbon-cable works well), attach the center wire to the column of three pin 14s on the console GROMS by using a low wattage soldering iron, and one of the other two wires to the single pin extended from the E/A GROM, and the remaining wire to the two pin 14s of the MP immediately above the E/A GROM. Connect the two MP GROM pin 14s to the three MP GROM pin 14s in the middle GROM socket using a short length of wire.
   Using a SPDT switch (on that is OFF in the center, and will stay on when it is thrown to either side), solder the center wire (from pins 14) of the console GROMS to the center lug on the switch. Attach the other two wires to either of the two remaining lugs on the switch.
   Before buttoning up the console test the switch to see that if the switch is in the middle on power-up, only Console BASIC is on the menu. When the switch is thrown in on of the two possible directions, on power-up, BASIC and EDITOR-ASSEMBLER will appear on the screen, and in the third position, on power-up, BASIC and MULTI-PLAN will appear on the screen. Then locate the switch inside the console in a convenient position, and button it up.
   If you desire more selections, follow this same scheme but use a rotary sw. to allow more selections. This works, and should take very little time. You may want to order your GROMS from TI, instead of tearing up a cartridge. GOOD LUCK!

DO YOU KNOW OF AN EPSON PRINTER WITH A BAD PRINT HEAD?

   When the Epson came out with their MX, FX lines of printers the ads said you would be able to replace the NEW STYLE REPLACEABLE PRINT HEAD for $35.! Well if any of you ever tried to get one for $35. you probably found that the shipping and handling must have been in the neighborhood of $90. because the going price was $125.+ for this PRINT HEAD. When the printer cost originally was over $500. this was not too bad. Now you can get printers that are more EPSON COMPATIBLE than EPSON, for $125. and with a two year warranty, who would pay $125.+ for a print head?
   Well, while flipping through the pages of the latest COMPUTER SHOPPER, I came across an ad by ALLTECH ELECTRONICS CO. INC, 1300 E. EDINGER, SUITE D, SANTA ANA, CA 92705, (714) 543-5011 for an EPSON PRINTER PRINT HEAD CAT.# A24A31-E for $12.95!

‡IMPACT/99‡

By Jack Sughrue

TI-BASE: PART TWO

Last time in IMPACT I waxed enthusiastic over Dennis Faherty's TI-BASE. In the few days since I wrote Part I of this review I have grown even more fond of this fantastic database.

You can throw out all your others, just as you did your old TI WRITER and DISK MANAGER cartridges after FUNNELWEB came out.

TI-BASE is perfect for business, school, home, and playtime. This can handle anything you want a database for and lots of things you didn't know you wanted one for before seeing this creative package.

But before I list a pile of its operational properties, it might be better to start (as I had to) with the simple things. Last month I said I wanted to create a personal library catalog of works by comedy author P.G. Wodehouse. It could just as easily be a video library or recipes or a checkbook or mailing addresses or whatever. It does all these simple tasks more easily than any other database I have used for the TI. Its input has no restrictions, nor does its output, as you will see.

The Wodehouse collection I have includes paperback books, hardbounds, multi-book anthologies, short stories, tapes, videos. I have a numerically-assigned bibliography. I also have sheets of paper with the various titles under which the same books were printed. And I have a lot of odd pieces of information about many of the printed materials from different sources, including some library research. And, of course, I have many of the books.

So I first had to decide how I wanted this information collected and how I wanted it to appear in final screen display and hard copy forms.

I have over 200 separate items, but for our purposes I'll use the first few. All books.

At first glance I realized that the pre-computer operation is similar to many databases. I have to construct a field (title, original publication date, assigned number for cross-referencing [like K235 for Mozart's works] and so on).

I'm allowed 17 different fields on each record page. More than I'll ever use. I'm allowed up to 255 characters for each field. Again, more than I'll use. And I'm allowed over 8,000 records per database. Definitely more than I'll ever use. And I can create an infinite number of bases.

So, I put my TI-BASE in Drive 1 (though I can assign it to any dirve or RAM) and my initialized blank disk for creation of the database in Drive 2 (though I could initialize it from inside the program itself while I'm using it). I load TIB automatically by choosing Extended BASIC.

TIB takes about 97 seconds to fully load. Then you are asked for the date in this form: 09/18/88. This info goes onto your disk and database, so be sure the write-protect tabs are not on either disk. And be sure you made backups (as recommended by Faherty) and keep your originals safe.

Next you'll be presented with a STATUS report with these defaults:

    DATDISK=DSK2.
    PRGDISK=DSK1.
    PRINTER=PIO.
    LINE=80
    PAGE=56
    HEADING=ON
    TALK=ON
    SPACES=1
    RECNUM=ON
    LSPACE=256
    DATE=09/08/88

I stuck with the Data and Program drives and with the Printer. I changed Line to 134 because I wanted a condensed printout. I kept the Page length of 56 lines. I shut OFF the Heading because I planned to print out lots of different hardcopies and didn't need the heading. I retained TALK which displays the commands as they are being executed. And the Spaces between columns at 1 and the 256 character Lspace for the variables I was about to create. I shut OFF the Record Numbers because my assigned numbers (which start at 1 intead of 0) would give me a cleaner, more relevant printout, as well as screen display. There is no cursor here. Just a dot in the lower left corner. That means TI-BASE is ready for your command. I had to make those changes above, so I just typed SET LINE=134 (ENTER) and SET HEADING=OFF (ENTER) and SET RECNUM=OFF (ENTER). I then typed at the dot DISPLAY STATUS just to see that everything got in okay. It did. Simple.

Now I typed CLEAR to clear the screen (and ENTER, of course, after each command).

But I don't like the screen colors of white on dark-blue. So at the dot I type COLOR BLACK DARK-YELLOW. Voila! A nice crisp black-on-yellow screen, though I could have chosen any combination I wanted.

Have you noticed that at the Command Dot I simply type in a word or two that DIRECTLY and INSTANTLY performs the operation? At last. I am ready to create a structure for my P.G. Wodehouse database.

At the dot I type CREATE DSK2.WODEHOUS (8-letter DB title). This sets up the base automatically for my personalized structure.

Up on the screen comes a #1 followed by a long slash and a couple short ones. I type NUMBER in the long slash and ENTER. The cursor jumps to the first short dash. I type N over the default C because this is to be a number instead of character. When I get to the next small dash I type 3 because my numeration will never reach into the thousands, so a three-place digit is sufficient for my needs. An extra box appears. This is for decimals. I type 0 because I'm only going to deal with whole numbers. (When I eventually do my CHECKBOOK database someday, I will use this.) When I press ENTER here, the cursor jumps down one line and a #2 and similar slashes appear. ‡

The top line now reads like this: 1 NUMBER (This is the field for the biographically assigned numbers) N 3 0. The next line will be typed in as this: 2 ORIG_DATE N 4 0 for the original publication date and a number which will take up four spaces.

The next six fields (all characters) are done as follows:

```
3 TITLE C 26
4 H_P_T_S_O C 1
5 JV_BL_OTHR C 2
6 FIRST?YNM C 1
7 OWN?YN C 1
8 COMMENTS C 255
```

I assigned Title 26 characters because that is the most characters any novel or play title has; #4 merely tells me in one character if the material is Hardbound, Paperback, Tape, Story, or Other; #5 lets me know in two characters if the item is about JeeVes, BLandings, or OTher; #6 asks if this is a first edition. The M is for Maybe (to check later). #7 wants to know if I own it; and #8 lets me input comments up to 255 characters long. That way I can list alternate titles, descriptions, characters, plot, whatever.

So my very personal 8-field record structure is finished in about a minute. Before we leave this, though, I check it out. The cursor can be run all over the screen for any changes easily. Now I execute (Fctn/8) to continue the process of creating my database. At this point I was asked if I wanted to input data. I did, so I pressed Y. (At this point I could have created some more templates, as TI-BASE handles 5 databases simultaneously by providing slots for each base.)

My next step (as record #1 appears on the screen) is to simply fill in the blanks I created. Here is what I type for the first record:

```
1 001 (for bib #)
2 1902 (orig pub date)
3 POTHUNTERS, THE (title)
4 P (paperback)
5 OT (other than Jeeve or Bland)
6 N (not first edition)
7 Y (I own this book)
8 First book of PGW. "Turn of the century" English
```
public school tales. Mostly boxing. St. Austin's boarding house. In single-book collection with A PREFECT'S UNCLE TALES OF ST. AUSTIN'S (#2 3).

I check it out, make any changes, and press ENTER. It automatically records on DSK2, my "WODEHOUS" data disk.

This TI-BASE is fast, simple, and direct. My second record template is waiting for me to just fill in the blanks. I continue on and on until about two dozen records are established. Then I quit for dinner by typing CLOSE ALL. The program takes care of all my database records. Then I type QUIT.

Stuffed with roast turkey, I return to my TI, load up TI-BASE and type again the date.

Once the command dot appears I type USE DSK2.WODEHOUS. Bang! It's ready for me. I type DISPLAY STRUCTURE just to see my template. Still there.

Perfect. I type EDIT 5 just to see if it'll pull up my fifth record page. It does. Instantly. I run my cursor around just playing with the editing functions. The program comes with a key strip and most functions (such as INSERT [FCTN/2]) just toggle on and off. In the EDIT mode I page FORWARD and BACK with the 5 6 keys. Neat and easy. And instantaneous.

But I'm ready to add more. I just type APPEND and the next blank record (#25) comes up. I just go on filling up record after record as effortlessly as buttering hot corn muffins. This is fun.

All the time I'm doing this stuff I keep thinking of more and more uses for TI-BASE.

After a while I stop (after 83 records) to try out some other features.

First, I want to get some screen displays.

I type SORT ON TITLE. Zip!!! My 83 records are now sorted alphabetically by title. To prove it I next type DISPLAY ALL TITLE NUMBER. You guessed it. This gives me two columns: the titles alphabetically with its biblio number in a neat column just to the right in the 27th screen column. So I type DISPLAY 10 and get th first 10 records displayed alphabetically with all 8 fields. Then I type SORT ON NUMBER. Zip!!!

I type DISPLAY ALL TITLE NUMBER ORIG_DATE OWN?YN (I must type my original template names.) Now I get four nice columns all in numerical order.

I play, thus, for about a half hour trying all kinds of configurations.

How do you suppose one goes about getting a hardcopy? Right! I type PRINT with all the same combos as DISPLAY. With the identical results on paper. The printer is on and starts right up printing exactly what I asked for in numeric order: PRINT ALL NUMBER TITLE ORIG_DATE OWN?YN. I had already set my NX-1000 for condensed. A beautiful four-column readout is in my hand. I type SORT ON TITLE; then PRINT ALL TITLE COMMENTS and get a quick, alphabetical column of titles followed by my complete comments.

I guess I don't have to go on with this, but if I want to delete I type DELETE (and what I want deleted) and later I can recall it (by typing RECALL and the item).

I cannot imagine what could be easier. This is wonderful! And I haven't even tried the Tutorial Disk yet, nor have I even begun to explore even a small part of what this database does. This is going to take me months. I don't care. I can use it instantly for 99% of all my database needs without even looking at the manual any more. It's that easy. But I still want to discover the secrets of TI-BASE still hidden from me.

However, most TI users (if you're like me), will need just the stuff I dealt with during these first few hours with this new software. For those people who need a professional database of the highest order, they are in luck. It's here, also.

I've never unconditionally recommended any commercial software in the 7 years I've been reviewing stuff for the TI. But I do now with TI-BASE. The price of $24.95 is ridiculously low for such software and is

offered even lower to user groups order in any size bulk. It comes with two disks, a 40-page manual (which I wish were bigger and in black and white instead of blue and grey and had some step-by-step tutorial-type instructions), and a function key strip. Send your order (with $1.50 S & H) to Texaments, 53 Center Street, Patchogue, NY 11772 or credit charge at 516-475-3480.

I think we're going to be seeing lots of companion disks, templates, and textware for TI-BASE from users world-wide.

Excuse me. I think I'll get started on a few more templates.

(Jack Sughrue, Box 459, E. Douglas, MA 01516)

```
Y 001 POTHUNTERS, THE
Y 002 PREFECT'S UNCLE, A
Y 003 TALES OF ST. AUSTIN'S
Y 004 GOLD BAT, THE
N 005 WILLIAM TELL TOLD AGAIN
Y 006 HEAD OF KAY'S, THE
Y 007 LOVE AMONG THE CHICKENS
Y 008 WHITE FEATHER, THE
Y 009 NOT GEORGE WASHINGTON
N 010 GLOBE BY THE WAY BOOK, TH
Y 011 SWOOP!, THE
N 012 MIKE
Y 013 GENTLEMAN OF LEISURE, A
Y 014 PSMITH IN THE CITY
Y 015 PSMITH JOURNALIST
N 016 PRINCE AND BETTY
N 017 LITTLE NUGGET, THE
N 018 MAN UPSTAIRS, THE
Y 019 SOMETHING FRESH
N 020 UNEASY MONEY
Y 021 PICCADILLY JIM
```

Sample: 3 fields, ascending numeric order by bilio number; columnized by "own" "#" "title" - printed exactly as is (and as desired) directly through printer.
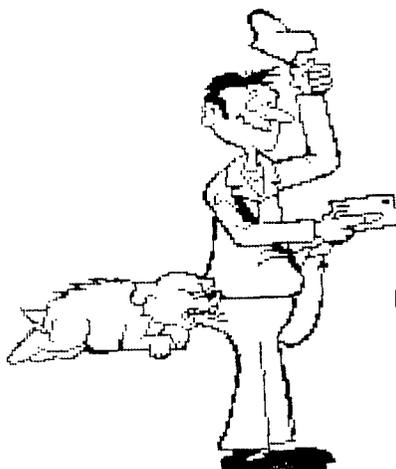
REPRINTED FROM M.U.N.C.H.

FINANCIAL PLANNING ONE LINERS

By Tony Falco

Until computers came on the scene, calculations involving compound interest were laborious and complex. In most on the job applications, values were not calculated but rather they were read from tables. Your TI can now make financial calculation easy as illustrated by the four one liners below.

Suppose Auntie Mabel donates $1000 for your newborn son's education. Running program 1 you will find that if you invest it at 8% compounded monthly and leave it for 18 years then you will have earned $4,200.57.

You estimate needing $100,000 (a conservative estimate) for college 18 years hence. Program 2 tells you that at 8% compounded monthly for 18 years you should make a one-time deposit of $23,806.27 to have $100,000 when you need it.

When you see that amount you decide that a systematic savings plan would be more practical for you. So you will invest $200 a month at 8% annual interest for 18 years. Program 3 tells you you will have accumulated $96,017.23 by the end of your 18 year ordeal.

You are curious to find the exact monthly deposit needed to yield your $100,000 goal. Program 4 to the rescue. This program says you will need $208.30 per month if you use all the figures above.

More technically speaking. Program 1 computes the future value of a one-time investment. Program 2 computes the present value for a one-time investment. Program 3 gives values for an annuity. And the last program creates values for a sinking fund.

Of course, the hardest part is not computing the values but coming up with the dough.

```
1 CALL CLEAR :: INPUT "Inves
ted: $":P :: INPUT "Rate:"R
:: INPUT "Cpds/Yr:":N :: INP
UT "Years:":T :: A=P*(1+R/10
0/N)^(N*T) :: PRINT "FINAL V
ALUE=$"&STR$(INT(A*100+.5)/1
00) :: END

2 CALL CLEAR :: INPUT "Neede
d:$": A :: INPUT "Rate:":R :
: INPUT "Cpds/Yr:":N :: INPU
T "Years:":T :: P=A/(1+R/100
/N)^(N*T) :: PRINT "Deposit
=$"&STR$(INT(P*100+.5)/100)
:: END

3 CALL CLEAR :: INPUT "Depos
it:$ ":P :: INPUT "Rate:":R
:: INPUT "Times/Year:":N ::
INPUT "Years: ":T :: A=100*N
*P*((1+R/100/N)^(N*T)-1)/R :
: PRINT "Final=$"&STR$(INT(A
*100+.5)/100) :: END

4 CALL CLEAR :: INPUT "Neede
d:$" :A :: INPUT "Rate:":R :
: INPUT "Times/Yr:":N :: INP
UT "Years:":T :: P=A*R/((1+R
/100/N)^(N*T)-1)/N/100 :: PR
INT "Deposit=$"&STR$(INT(P*1
00+.5)/100) :: END
```

MULTIPLAN
Part 13
By Audrey Bucher

In the first article of this series one year ago, I promised to reprint an article that gave instructions on how to use Multiplan for Word Processing. I did that article and am doing this one using MP. I'm not sure I would use this method very often but it can be useful to someone who would like to print something in columns and does not want to bother with a multi-column program.

Before I begin though, I'd like to pass along this bit of information about my favorite software program. In the March issue of Consumer Reports this past year, various software packages were rated. Spreadsheets were a part of this and Multiplan rated second best. Smart Software was first and the popular Lotus 1-2-3 came in fourth. The advantages of Multiplan were listed as --- relatively easy to learn and use, documentation better than average and more reliable than most.

Now on to the business at hand. The following is a RE-PRINT OF AN ARTICLE FROM THE PUNN NEWSLETTER IN PORTLAND, OREGON. No author was listed.

Word processing with MP? Why not? Multiplan has many advantages over TI-Writer and the Editor/Assembler. For instance, MP will allow you to format your document in a columnar layout and print it in a condensed text, providing for a larger amount of text on a given page. In addition, MP will center your text where desired and allow for movement of blocks of text in a much more flexible format.

Using Multiplan as a Word Processor does have it's drawbacks. Among these are the lack of a global editor, editing of text is a bit more difficult (you can't simply type over your text), and fast typists will have to learn to slow down a little due to the programs relatively slow processing speed.

Despite these drawbacks, however, for many applications Multiplan may be the easiest way to solve the problems at hand.

I don't propose to go into a full tutorial on the use of Multiplan, for that I would refer you to the Multiplan manual. I realize that many people find this a formidable document, but for use as a text processor, only a general knowledge of the use of Multiplan is necessary. Therefore, in this discussion, I will merely cover what I have found to be the easiest steps to follow in setting up and using the worksheet.

Starting with an empty worksheet, your first step should be to select the OPTION command and turn off the recalc option. Since you will be doing no mathematical calculations, this will eliminate the considerable delay incurred as the program searches for mathematical cells.

Next, select the FORMAT option, then DEFAULT on the sub-menu, and finally WIDTH on the next menu, and set the default column width at 30 columns. I realize that it is possible to set the width up to 32 columns, but by setting it at 30 we will later be able to widen it to 32 to allow for a buffer between columns of text.

The next setup step that is advisable is to again select the FORMAT,DEFAULT option, but this time select the CELLS option on the third menu. In the alignment column Pselect L for left. Remember, when Multiplan is displaying the ALPHA/VALUE prompt, hitting a number as the first character in a line will select the value option rather than the Alpha. Therefore if the first character in a line is a numeric one, you must first hit enter twice to specifically select the ALPHA command. In case you forget, however, and the only characters entered on that line are numeric ones, this will prevent them from being right justified or otherwise skewed.

The final setup step I use us to select the WINDOW option and place a border around the one open window. You may then use this border as a line length guide while typing. You may type up to but not including the column containing the right border without having your text cut off.

You are now ready to begin entering your text. Start at R1C1 and enter one line after the other in C1. I prefer to enter all of my text in column one and format it later, since this makes it somewhat easier to move data about. Another advantage is that you don't have to worry about keeping track of where you are located on the page.

Once you have finished entering your text, you are ready to format the data into columns. Since the maximum column width on the TI Printer is 132, we will divide the text into 4 equal columns of 32 and have a 2 column border on the left and right margins.

Assuming we're working with one page as an example, there are two ways you can format the text. One would be to simply divide it into 54 rows per column (assuming your page length is 66), and leave whatever may be left over in the fourth column. You might also decide that you would like the columns to be of even length, in which case you would simply divide the total number of rows by four, and make each column that length.

For example, let's assume the total number of rows, when the document is formatted in one column is 200. 200 divided by 4 is 50, so we would make each column 50 lines long.

To do this, we would copy from row 51 to 100, and place the copy in row 1, column 2. Next we would copy row 101 to 150, and place the copy in row 1, column 3, and finally we copy from row 151 to 200 and place the copy in row 1, column 4.

You now have the entire document in rows 1 through 50 and columns 1 through 4, but you still have copies of columns 2 through 4 below row 50 in column one. To get rid of these, use the DELETE command. Now change the default width to 32 to provide spaces between columns.

You are now ready to print the file. To do this first save the file to disk. Next exit MP and select BASIC, then enter the following commands:

```
OPEN #1:'PIO'
PRINT #1:CHR$(15)
BYE
```

If your printer is not connected to the parallel I/O interface, you will need to supply the proper filename. This procedure sets up the printer to print in condensed text.
(EDITORS NOTE: if you have TIMP PRINT you may enter an eXternal copy command in Row 1 to set your printer from within MP).

Next re-enter Multiplan and select PRINT, OPTIONS. Enter your printer name in the setup field and return to the PRINT menu. Now select MARGINS and set the left margin to 2 and change the print width to 132.

All that need be done now is to select the PRINTER command and your document should come out in 4 even columns.

T. I. Writer (Part 11)
Stan Katzman

This part will deal with headers, footers, begin a page and inclulde file.

Let's start with headers. If we want to number a page and every page sequentially what you do is type the following at the beginning of your document .HE %<enter>. What this will do is number each page of a multi-page document sequentially putting the number in the upper left hand corner. If you want the number elsewhere at the top of the paper type .HE^^^^^^%<enter> and the carets (required space symbols) will put the number of the page the same number of spaces to the right of the left margin as you have carets.

If you want to have a header on the top of each page that is of the same type and says something then type upper left will be the word "Hello". (Of course you could use any statement you want.) You can also "mix them up". Type .HE Hello page%<enter>. (By the way the % sign here means to number sequentially.) And at the top of each page will be "Hello page 1", "Hello page 2" etc. To turn off the header just enter on a separate line .HE<enter>.

We can also number at the bottom of a page if we want. Type at the start of your document .FO %<enter> and the numbering will be on the bottom left hand corner. If we type .FO^^^%<enter> the number will be moved to the right depending on the number of carets, just like the header. .FO Hello<enter> will print "Hello" on the bottom left of each page.

To make the printer start a new sheet of paper you have two options in the Formatter, .BP and the "New Page" entry in the Editor (Control 9). The Ctrl 9 will work in the Editor and in the Formatter, .BP<enter> works only in the Formatter.

The last command I want to discuss is a very powerful command, Include File. If you have a very large document too large for your computers memory, like a book, just make each chapter a separate file to disk with names like CHAP1, CHAP2, CHAP3, etc. Then make another master document that has all the formatting commands for page length, margins, headers, and each chapter listed in an Include File (.IF) command, like so:

```
.FI;AD;PL 60;LM 10;RM 79;HE^^^% IF DSK2.CHAP1
.IF DSK2.CHAP1
.IF DSK2.CHAP2
```

The beauty of this is you do not have to give any formatting commands with each document, it is done with the master document which is the only file name that is entered when the file name is called for in the Formatter. The entire document will be printed out formatted and in the sequence asked for in the master file. You are only limited by the number of disks that you have. Is that not powerful and terrific?!!!
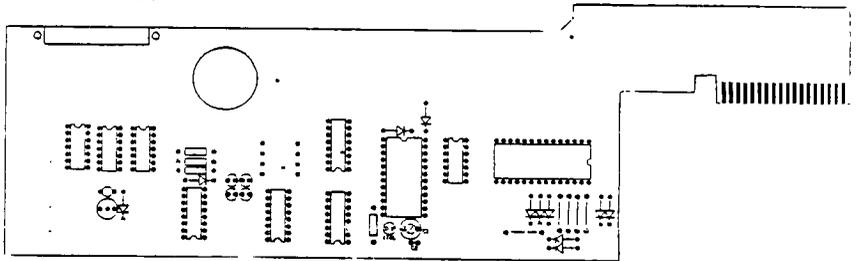
MEETING MINUTES OF PITTSBURGH USERS GROUP

Date: Nov. 20, 1988

Location: South Campus, Allegheny Community College

Meeting called to order by Pres. Taylor 6:30 P.M.

Minutes of the last meeting were read by Secretary Reich. Approval of them was moved, seconded & passed.

Treasurer Shoemaker gave a Report. Balance on hand at the start of October was $704.55. After expenses for October, balance was $373.26

Librarian Harper gave her Report. She informed us that The Library format is being revised to be easier to use. Mickey Schmitt is donating 30 adventure game disks are fairware. All Picasso discs which were made were sold. She took additional orders.

SYSOP Kelly reported that there had be 2138 calls and 1900 messages. Progra which are available off the BBS are Lis Reflection, File Print, Shipping Label BBS was changed from Version 1.42 to 1 which is faster and has a few more feature

In the absence of Newsletter Edit Bucher, Pres. Taylor reported that t price of printing the Newsletter wi probably be increasing because ownership the printing Company has changed hands.

Pres. Taylor gave his Report:

He received notice that Member Dr. McElroy has passed away.

He introduced new attendees Chuck Connors, Ted Gurowski & Ed Samson.

The Group's new re-inker has been made available to Members.

He issued an invitation to Members to attend BOD meetings.

He also issued an invitation for Members to attend Compuserve conferences on network computers the 1st Sunday of each month at 9:00 PM at Gary's home.

He reviewed the Carlisle Faire which was held in conjunction with a Hamfest. He suggested that PUG have a table at the next Faire.

Gary reviewed the Chicago Faire which he attended and passed-around fliers which he received there.

There is a new word processing program called Press which has been issued By Asgard. It is available at a group rate. Mickey Schmitt will take orders at the next meeting.

NEW BUSINESS:

Pres. Taylor suggested that at the first of next year the Group's theme be changed from Graphics to some other area. Members voted to have Education as the next theme for classes, demos etc.

Discussion was held as to how to get the many TI computers which are in storage & not being used back into operation. They could be used in schools or libraries. Scout Groups could take this on as a project. Upon a call for volunteers, Herb Reich agreed to try to get the program started.

A disc of Dinos was won by Paul Brucher.

Eric Zeno has developed a board for installation inside the TI console which will contain 32K expansion, speech synthesizer & a clock battery back-up. Interested Members must furnish their own chips.

The following demonstrations were given:

Gary Taylor—Macflix, M-copy to re-arrange files on a disc.; and Disc of Dinosaurs published by Asgard.

Marty Kroll—Grand Ram; Memory Magic module with 64K.

Meeting adjourned at 8:40 PM.
Respectfully Submitted
Herbert H. Reich, Recording Secy.

"TIPS FOR BEGINNERS"
-by FRANK N. Zic

Here we go together No.16. Since I have prepared the following instructions for typing a message with "THE PRINTER'S APPRENTICE" for a classroom presentation I thought perhaps an article might help some others who might be having some difficulty too. This article suppliments my article No.14 and should be easier to follow.

1 Place the TPA disk in drive #1 (APA-99) side active. Note: This is a slow loading program.
2 Select "1" CHARACTER EDITOR. Note: Imagine a coma in between each word. This gives better definition to each of these command words. Improved seperation was not possible on the disk because all of the 360 sectors are used.
3 Select "S" for SETUP. ###Press ENTER.
4 Select "S" for SOSH. ###Press ENTER. Notice there is no flashing "S" from the previous selection of the "S" from above in step No.4. Sometimes the previously selected letter will be flashing at the spot where the next selection is to be placed. Some times this spot is blank and at other times it will have an entirely different letter flashing there. I feel it may be best to just ignore what appears so as not to get confused. Simply note that when you select a letter for this spot, it will appear and not be flashing.
5 Select "D" for DISK. ###Press ENTER.
6 Select "F" for FILENAME. ###Press ENTER.
7 At this time flip over the disk in No.1 drive to make the APAFILES side active.
8 Type in DSK1.BAUHAUS. ###Press ENTER.
9 Select "X" for EXIT. ###Press ENTER.
10 Select "E" for EDIT. ###Press ENTER. Note: A column of numbers will appear on the left. side of the screen.
11 Press CTRL/9 . Press the letter "W". The "W" is just an example of any letter that may be selected. The "W" will appear in the line ASCII CHAR TYPE. ###Press ENTER.
12 ###Press ENTER. This selects the next default(87).
13 ###Press ENTER. This selects the next default(24).
14 Select "R" for READ. ###Press ENTER. Note: A medium size "W" appears at the top of the screen.
15 Press CTRL/R. Note: A large "W" appears on the left side of the screen.
16 Press FCTN/9.
17 Select "P" for PRINT. ###Press ENTER.
18 Select "P" for PRINTFILE. ###Press ENTER.

19 Type in PIO.CR or your printer designation.
   ***Press ENTER.
20 Select "V" for VARIABLES. ***Press ENTER.
21 Select "G" for GEMINI or "E" for EPSON.
   ***Press ENTER.
22 Select "S" for SO. ***Press ENTER.
23 Type in "20" for LEFT MARGIN. ***Press ENTER.
24 Type in "60" for RIGHT MARGIN. ***Press ENTER.
25 Type in "4" for SPACE. ***Press ENTER.
26 Type in "2" for INTERCHARACTER. ***Press ENTER.
27 Type in "N" for NO CENTER LINE. ***Press ENTER.
28 Select "S" for STRING. ***Press ENTER.
29 Type in your message, for example... I HOPE THIS WORKS.
   ***Press ENTER.
30 Turn on your printer.
31 Select "G" for GO. ***Press ENTER. Note: As the
   printer completes your selected message, that same message
   will appear on the screen.
32 This ends this portion of how to use THE PRINTER'S APPRENTICE
   Note: Should you want to print a different message or
   change some of the parameters, you need only - Select
   "B" for BACK and then Select "V" for VARIABLES, (Step No.20)
   change the numbers to experiment and see how they affect
   your printout. Try other printing styles by loading in some
   different FONTS from the TPAFONTI:1 and TPAFONTI:2 disks.
   The best way to learn more about this versatile program is
   to take one part of it at a time, just as we are doing now.

I sincerely hope this rather lengthy but by no means complete
discussion helps you with this difficult to follow program.
To help with your next attempt, I have included the following
short-cut listing. Press ENTER for each comma in the list:

1 S,S,D,F,(Flip TPA disk) DSK1.BAUHAUS,X,E,CTRL/9 W,,,R,
CTRL/R FCTN/9 P,P,PIO.CR,V,G or E,S,20,60,4,2,N,S,
(Enter your message and turn on the printer) , G.

Until next time may the good 4's be with you.

THE KIDDIE CORNER
by Sue Harper

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

Have you ever played with MAD LIBS? There are
places to make lists of adjectives, verbs, nouns,
and other parts of sentences. Then, there is a
story, and fill in the blank spaces, where the
words you put in the lists are used. For
example, let's use an adjective : HUGE, a verb :
SNORTED, and a noun : ANT. Now, let's put them
in this sentence:

The (adjective) boy with his pet (noun) were
(verb) by a train.

The sentence becomes:

The huge boy and his pet ant were snorted by a
train.

Well, let's create a program that will make up
silly sentences!

First, part of the program will have to ask for
words. This part of the program will be INPUT
statements, like this one:

20 INPUT "GIVE ME AN ADJECTIVE":A$

Line 20 will ask for one noun. Next, you must
decide how many words, and what kind of words
(nouns, adjectives, verbs, adverbs, whatever!).
Notice the A$ at the end of the line. Each line
will have a different letter, each one followed
by a dollar sign. So line 30 will be B$, line 40
will be C$, and so on.

The second part of the program will put the silly
words into sentences. Decide what the sentence
will look like - think about the example at the
top of the page. Here is the sentence from the
top of the page as a program line:

60 PRINT "THE ";A$;" BOY AND HIS PET ";B$;" WERE
";C$;" BY A TRAIN."

Here is the whole program to make a one sentence
silly story.

10 CALL CLEAR
20 INPUT"GIVE ME AN ADJECTIVE":A$
30 INPUT"GIVE ME A NOUN":B$
40 INPUT"GIVE ME A VERB, PAST TENSE":C$
50 CALL CLEAR
60 PRINT "THE ";A$;" BOY AND HIS PET ";B$;" WERE
";C$;" BY A TRAIN."
70 END

To make your story longer, just add more INPUT
and more PRINT statements.

Next month we will try out some colors on the
screen.

See you next month!!!!!

DECEMBER 1988

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
(18)	19	20	21	22	23	24
25	26	27	28	29	30	31

JANUARY 1989

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
(15)	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

CCAC SOUTH CAMPUS
3 PM

3-4:30 Character Sets & Graphic Designs with Gary ..Rm 401
4:30-6 Hardware class with John Wilforth ....Rm 475
6:00-? General Meeting - Demo Hard disk with TI-99/4A

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