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ESTABLISHED
1985

WEST PENN 99'ERS

SUPPORTING THE
TI-99/4A
COMPUTER

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ISSUE   JUNE 1990
NO. 58

FOR THE RECORD

by Frank N. Zic
(Acting Secretary)

The May, 15, 1990 meeting was called to order by President Mickey Schmitt at 7:10 PM. She started the meeting with thanks to yours truly for taking the minutes in Scoop's absence. Lynn gave the Treasurer's report and passed out copies; Bob missed the meeeting, but Frank Cardello brought in the library; Norm said there are 35 modules and cassettes in the borrowing library. Joe had no news on new recruits. Ribbon re-inking $1.00 (see Art). Both Mickey and Scott had complete TI systems for sale at very reasonable prices. My,oh,my the IBM'ers don't know what they are missing. Gary gave a nice long detailed report on the new BBS. Speaking of BBS's, there were 5 modems given away free. Get your modem on line and do some friendly communicating. Next month I will bring in my 1 Meg HRD card for a demo.Both Mickey and Scott gave a report on the Boston Faire. It was reported to be smaller and perhaps a little less organized this year. Show demos were; The Missing Link and TI Print Shop. Print Shop was purchased and copies will be made available for a proper price. Mickey explained details on a new program called Identifile that analizes over 50 types of different programs and tells you in what format they are run. These areas include distinction between Adventure and T.O.D. games, Fonts, Instances, CSGD and much more. Sounds very nice.

Mickey showed her new Cassette booklet. She's making it available through the club. She also mentioned there is a conflict in the time and place of the Harrisburg Faire. Check elsewhere for an update. Next the usual raffle was held with winners being; myself, Ralph Gardonis and Wayne Meyers. Joe Ekl showed a small board with the new Rambo chips on it. Also announced was that on May 20, at the PUG meeting, the Spell-It program will be demoed. We were fortunate to have many nice demos for the evening's enjoyment and education. Lynn showed Graphics Xpander, (will be raffled off next month); Gary showed Piacasso; Paul showed more of his handy printer reports and I demoed Disk + Aid. Since I have a line or two left, I wanted to mention that I patterned my, by now familiar, closing remark (May the 4's be with you) after the movie (Return of the Jedi) where they say, "May the force be with you". I sometimes say, (May the good 4's be with you). This all translates as my salute to all fellow TI'ers. May you long enjoy your TI in good health.

WEST PENN 99'ERS CLUB INFORMATION

NEXT MEETING DATE: JUNE 19, 1990

MEETING LOCATION: ST. STEPHEN'S
                         BYZANTINE CATHOLIC
                              CHURCH

                         JUST OFF ROUTE 30
                         BETHEL ROAD, NORWIN

TIME OF MEETING: 7:00 P.M.

LIST OF WEST PENN OFFICERS FOR 1990

PRESIDENT:	MICKEY	335-0163
VICE PRESIDENT:	SCOTT	523-3754
TREASURER:	LYNN	835-4304
RECORDING SEC:	ED	864-4924
CORRESPONDING SEC:	GENE	829-0469
LIBRARIAN:	BOB	863-5672
NEWSLETTER EDITOR:	JOHN	527-6656

GENERAL ITINERARY OF THE CLUB'S MEETING

6:45 P.M.	DOORS OPEN
7:00 P.M.	GENERAL MEETING
7:45 P.M.	DEMOS AND NEW INFO
8:45 P.M.	HARDWARE & PRINTERS
8:45 P.M.	INTRO TO ASSEMBLY
11:00 P.M.	DOORS CLOSE

MEETING HIGHLIGHTS FOR THIS MONTH

LATEST T.I. NEWS AND SOFTWARE DISCOUNTS

T.I. PRODUCTS REPORT FROM THE LIMA SHOW

JP'S IDENTIFILE, DEMO BY MICKEY SCHMITT

HOME PUBLISHING, DEMO BY MICKEY SCHMITT

WEST PENN "LIBRARY DEMO" BY BOB SADUSKY

LATEST SOFTWARE DEMOS BY JOHN WILLFORTH

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THANKS TO THE COMPUTER BRIDGE NEWSLETTER FOR THIS FATHER'S DAY WRAPPING PAPER PRINTER PROGRAM, WITH YOUR NAME! SPIRIT OF 99

```
* FATHER'S DAY GIFT WRAP *

100 REM SAVE DSK1.DAD/WRAP
110 REM CHANGE LINE 270 TO Y
OUR PRINTER STATEMENT (EX:"P
IO")
120 CALL CLEAR
130 PRINT :"        MAKE YOUR
 OWN "
140 PRINT " WRAPPING PAPER
PROGRAM": : :
150 PRINT :TAB(7);"*********
*****": : :
160 PRINT
170 PRINT "     PRESS(ENTER)
AFTER":TAB(8);"EACH REPLY.":
: :
180 PRINT :TAB(7);"*********
*****": : :
190 PRINT
200 PRINT "GIFT IS FROM?";
210 INPUT FR$
220 PRINT "GIFT IS FOR?";
230 INPUT FO$
240 CALL CLEAR
250 PRINT "WHEN YOUR PRINTER
 IS READY,"
260 PRINT "PRESS ANY KEY TO
START PRINTING."
270 CALL KEY(0,KEY,STATUS)
280 IF STATUS=0 THEN 270
290 CALL CLEAR
300 PRINT "TO STOP PRINTING,
 HOLD DOWN ANY KEY."
310 OPEN #1:"PIO"
320 PRINT #1:CHR$(27);"1";
330 FOR A=1 TO 8
340 READ T$(A)
350 NEXT A
360 FOR P=1 TO 8
370 PRINT #1:T$(P);T$(P);T$(
P);T$(P);T$(P);T$(P)
380 GOSUB 430
390 NEXT P
400 PRINT #1:TAB(20);"TO ";F
O$;", HAPPY FATHER'S DAY FRO
M ";FR$
410 PRINT #1:
420 GOTO 360
430 CALL KEY(0,KEY,STATUS)
440 IF STATUS=0 THEN 460
450 STOP
460 RETURN
470 DATA "   O------    "
480 DATA "  /O#####/\   "
490 DATA " /#####/--\   "
500 DATA " ----------   "
510 DATA " [=====]===]  "
520 DATA " [=O=O=]=O=]  "
530 DATA " [=====]=O=]  "
540 DATA "              "
```

The hard part of learning to program is not in learning what the commands do -
it is learning how to put them together to make them do what you want them to
do! Key in this little program and run it to see what it does, then study it to
see how it does it.

```
100 ! WIDE BORDERS
      by Jim Peterson
110 CALL CLEAR :: S=16 :: B=
1 :: F=5 :: CALL SCREEN(S)::
 CALL COLOR(12,F,B):: FOR R=
1 TO 23 STEP 2
120 DISPLAY AT(R,1):RPT$("!~
",14):: DISPLAY AT(R+1,1):RP
T$(") ",14):: NEXT R :: FOR
R=3 TO 22 :: DISPLAY AT(R,3)
:RPT$(" ",24)::: NEXT R
130 DATA S CHANGES SCREEN CO
LOR,B CHANGES BACKGROUND,F C
HANGES FOREGROUND,N FOR NEW
PATTERN,D SAVES TO DISK
140 FOR J=1 TO 5 :: READ M$
:: DISPLAY AT(J+3,4):M$;:: N
EXT J
150 HX$="0123456789ABCDEF"
160 RS$="08C42A6E195D3B7F"
170 RANDOMIZE
180 DIM H$(16),R$(16)
190 FOR J=1 TO 16 :: H$(J)=S
EG$(HX$,J,1):: R$(J)=SEG$(RS
$,J,1):: NEXT J
200 CALL SOUND(50,523,5):: F
OR J=1 TO 8
210 A=INT(16*RND+1):: B=INT(
16*RND+1)
220 A$=A$&H$(A)&H$(B):: B$=H
$(A)&H$(B)&B$ :: C$=C$&R$(B)
&R$(A):: D$=R$(B)&R$(A)&D$ :
: NEXT J
230 CALL CHAR(124,A$&B$&C$&D
$)
240 CALL MAGNIFY(4):: CALL S
PRITE(#1,124,F,90,110)
250 A$,B$,C$,D$=""
260 CALL KEY(0,K,Z):: IF Z=0
 THEN 260
270 ON POS("SBFND",CHR$(K),1
)+1 GOTO 260,280,290,300,200
,310
280 S=S+1+(S=16)*15 :: CALL
SCREEN(S):: GOTO 260
290 B=B+1+(B=16)*15 :: CALL
COLOR(12,F,B):: GOTO 260
300 F=F+1+(F=16)*15 :: CALL
COLOR(12,F,B):: CALL COLOR(#
1,F):: GOTO 260
310 DISPLAY AT(20,4):"FILENA
ME? DSK";:: ACCEPT AT(20,17)
SIZE(10)BEEP:FL$
320 ON ERROR 340 :: OPEN #1:
"DSK"&FL$,INTERNAL,OUTPUT ::
 FOR CH=124 TO 127 :: CALL C
HARPAT(CH,CH$):: PRINT #1:CH
,CH$ :: NEXT CH :: CLOSE #1
330 DISPLAY AT(20,4):RPT$("
",23)::: GOTO 260
340 CALL SOUND(200,110,5,-4,
5):: RETURN 310
```

Line 110 clears the screen and assigns the screen
color and character foreground and background
colors to variables because these will be needed
in lines 280-300. Then a loop prints 14 pairs of
the characters !~ on the even-numbered rows and
14 pairs of the character) followed by FCTN V
(which prints as a blank so don't miss it when
keying this in!) on the even numbered rows. Then
another loop prints the blank character 24 times
to erase all but two rows of characters around
the border - note the semi-colon after that last
DISPLAY AT which prevents erasing the right bor-
der: this is simpler than using SIZE.
Line 140 reads the 5 data items in 130 and dis-
plays them.
HX$ contains the 16 hexadecimal numerals which
can be used to define a character. RS$ lists the
mirror images of those symbols in the same order.
For instance, hex 1 is binary 0001 and hex 8 is
binary 1000, its exact opposite.
RANDOMIZE insures a different pattern each time.
Two arrays are initialized to hold the arrays.
A loop picks the two strings apart, one symbol at
a time, placing one symbol in each element of
the array.
The CALL SOUND is just to acknowledge that the N
key has been pressed in line 260. The J loop runs
8 times to randomly assign a random number from 1
to 16 to A, and another to B. These are used to
select hex numbers from the arrays, to randomly
build a pattern of four characters. A$ is built
by adding pairs of hex symbols to its end, while
B$ is built by adding the pairs to its front;
thus the pattern defined by B$ will be upside
down to that defined by A$. C$ is built using the
mirror counterparts of those used by A$, and with
the pairs reversed, to design a character which
is reversed sideways, and D$ uses the same sym-
bols added to its front to make a mirror image
of B$. A single CALL CHAR redefines the ASCII
characters 124-127, using the 64 symbols of the
four 16-byte hex codes. I used ASCII 124-127 be-
cause they are little-used characters and because
ASCII 124 is divisible by 4, therefore can be
used to design a Magnification-4 sprite.
In line 270, POS looks for the position of the
letter, of the key pressed in 260, in the string
SBFND. If it is not found, POS would equal 0 and
the program would crash because ON GOTO must use
a sequence of numbers starting with 1, so +1 is
added to the POS statement. Now if a wrong key is
pressed, POS equals 0+1 and action goes to 260.
Lines 280-300 toggle through the screen, fore-
ground and background colors from 2 to 16 and
back to 2. If S, for instance, is already 16
(white) then adding 1 makes it 17 but the
expression (S=1) has a truth value of -1, multi-
plied by 15 is -15, subtracted from 17 brings it
back to 2.
The ON ERROR in 320 prevents a crash if a file
cannot be opened. Execution jumps to 340, a honk
sounds, and 310 asks for a better disk name.

THIS IS "PRINTERS #7 LIGHT" MEANING DON'T EXPECT ANYTHING HEAVY HERE. I WAS WORKING ON AN ARTICLE DEALING WITH DESIGNING YOUR OWN DOWNLOADABLE CHARACTERS AND THEN PRINTING THEM ON THE PRINTER JUST AS IF THEY WERE THE ROM RESIDENT CHARACTERS (NOT IN GRAPHIC MODE). I RAN INTO TIME PROBLEMS SINCE THIS IS A VERY EXTENSIVE EFFORT, AND I'VE BEEN AWAY TO SCHOOL FOR MOST OF MAY. MAYBE LATER.

MY PRINTER HAS A COMMAND (ESC,R,N) WHICH ALLOWS THE PRINTER TO SUBSTITUTE SOME SPECIAL CHARACTERS FOR THE STANDARD ROM BASED CHARACTERS YOU NORMALLY RUN, AND IN PLACE OF THE SET THAT MAY HAVE BEEN SELECTED BY THE SWITCHES (HARDWARE) ON MY PRINTER. WHEN THE COMMAND IS SENT TO THE PRINTER, THE STANDARD USA CHARACTERS (# $ @ [\ ] ^ ' { ¦ } ~) WILL HAVE BEEN PRINTED IF "N" IS = TO 0, THE FRENCH CHARACTERS WILL PRINT IF "N" = 1, GERMAN IF "N"=2, ETC.

THE PRINTER WILL STAY IN THAT MODE UNTIL EITHER ANOTHER "ESC,R,N" IS SENT WITH A DIFFERENT "N" SET OR THE PRINTER IS RESET "ESC,@", OR THE PRINTER IS POWERED OFF. THIS IS NICE SINCE YOU WON'T NEED A CHART TO SELECT THE CHARACTERS DESIRED.

IF YOUR PRINTER CAN'T AUTOMATICALLY ENABLE THE INTERNATIONAL CHARACTER SET OF YOUR CHOOSING AND KEEP THEM SELECTED FOR THE DURATION OF YOUR PRINTING JOB, THEN YOU CAN DESIGN YOUR OWN AND DOWNLOAD THEM TO YOUR PRINTER (SUBJECT OF ANOTHER ARTICLE), OR SEND THE SPECIFIC CHARACTER $TRING (129) WHICH PRINTS "●●" IN THE FRENCH FONT SELECTION. THE LATTER IS THE MOST DIFFICULT TO INCORPORATE IN MOST APPLICATIONS OF PRINTING TEXT FILES. THE CHR$(129) ABOVE IS JUST ONE EXAMPLE.

I WROTE THE SIMPLE PROGRAM ON THE LEFT TO SHOW THE ELEVEN INTERNATIONAL FONTS ON MY PRINTER, AND SHOW THE IMPLEMENTATION OF THEM WITH LINE 140 AND THE PRINTING OF THEM WITH LINE 150. IF YOU HAVE AN EPSON COMPATIBLE PRINTER THIS MAY WORK FOR YOU. IF NOT TAKE A LOOK AT YOUR PRINTER MANUAL AND SEE IF YOU CAN FIND A SIMILAR COMMAND TO ENABLE INTERNATIONAL CHARACTERS ON. IF YOU DON'T HAVE THIS FEATURE AVAILABLE ON YOUR MACHINE, THEN YOU MAY CONSIDER THIS ARTICLE A TOTAL WIPE-OUT! SORRY!

THE PROGRAM BASICALLY MAKES ELEVEN LOOPS, INCREMENTING "N" FROM 0 TO 10. THESE "N" VALUES ARE USED TO CHANGE THE COMMAND IN LINE 140 SO THAT A DIFFERENT FONT GROUP IS ENABLED WITH EACH LOOP. THE LINE 150 CAUSES THE NEWLY DEFINED CHARACTERS TO BE PRINTED IN PLACE OF THE ASCII VALUES YOU SEE IN LINE 150. THE READ A$ IN LINE 120 PULLS A SINGLE NAME FROM THE DATA STATEMENT IN 170 TO INCORPORATE IN THE PRINT STATEMENT IN LINE 130.

THE PRINTOUT ON THE LEFT IS THE OUTPUT PRODUCED BY THE PROGRAM AND AS YOU CAN SEE, THERE ARE BY MY STANDARDS, SOME VERY UNUSUAL CHARACTERS PRODUCED WITH VERY LITTLE EFFORT. IT COULD BE USED AS A CHART TO ENABLE ME (IF I COULD WRITE IN SWEDISH) TO WRITE AND SUBSTITUTE THE USA CHARACTERS WHERE I NEEDED THE SPECIAL SWEDISH CHARACTERS AND HAVE THOSE INTERESTING CHARACTERS PRINT. YOU MAY HAVE MORE OF A NEED FOR SPANISH, OR GERMAN, OR FRENCH.

I REALIZE THAT MANY OF YOU MAY NOT USE THIS IN EVERYDAY COMPUTER USE, BUT IF YOU EVER NEED IT, I HOPE THAT YOU FIND THIS ARTICLE HELPFUL. ML.

```
100 OPEN #1:"PIO"
110 FOR N=0 TO 10
120 READ A$
130 PRINT #1:A$;" SPECIAL CH
ARACTERS";
140 PRINT #1:CHR$(27)&"R"&CH
R$(N):
150 PRINT #1:"   # $ @ [ \ ]
 ^ ` { ¦ } ~":  :
160 NEXT N
170 DATA USA,FRENCH,GERMAN,E
NGLISH,DENMARKS,SWEDISH,ITAL
IAN,SPANISH,JAPANESE,NORWEGI
AN,DENMARK II,,
```

USA SPECIAL CHARACTERS
   # $ @ [\ ] ^ ` { ¦ } ~

FRENCH SPECIAL CHARACTERS
   # $ à ° ç § ^ ` é ù ¨

GERMAN SPECIAL CHARACTERS
   # $ § Ä Ö Ü ^ ` ä ö ü ß

ENGLISH SPECIAL CHARACTERS
   £ $ @ [\ ] ^ ` { ¦ } ~

DENMARKS SPECIAL CHARACTERS
   # $ @ Æ Ø Å ^ ` æ ø å ~

SWEDISH SPECIAL CHARACTERS
   # ¤ É Ä Ö Å Ü é ä ö å ü

ITALIAN SPECIAL CHARACTERS
   # $ @ ° \ é ^ ù à ò è ì

SPANISH SPECIAL CHARACTERS
   ₧ $ @ ¡ Ñ ¿ ^ ` ¨ ñ } ~

JAPANESE SPECIAL CHARACTERS
   # $ @ [¥] ^ ` { ¦ } ~

NORWEGIAN SPECIAL CHARACTERS
   # ¤ É Æ Ø Å Ü é æ ø å ü

DENMARK II SPECIAL CHARACTERS
   # $ É Æ Ø Å Ü é æ ø å ü

RS232 INTERFACE MODIFICATION

by Bruce Forbes

Anyone who has ever written an article for publication knows how hard it can be to put your thoughts on paper in order for them to be informative to the reader. All those members that have taken the time to make contributions to the newsletter should be congratulated for a job well done. There are several of us which have had experiences that would be helpful to other members if we would just take the time to put them in writing. I realize that we do share our experiences verbally, but somehow most of the things we hear seem to get filed away in some deep, dark corner of our brains, seldom to ever surface again. One example comes to my mind;-------- at one of our 1985 meetings someone told us that a few of the printers on the market had a tendency to put out high spikes on their Acknowledge, Strobe and Busy signals. These spikes could cause some type of problems. However there was a remedy for it but I couldn't remember what it was.

During the course of last year I burned out 2 MYARC RS232 cards. The problem leading up to the eventual burn out of the cards was flustrating and lead me to believe that MYARC might have been manufacturing inferior equipment. I even told them so when I sent the card back for repairs the second time. Their silence and the lack of knowledge on behalf of my local supplier left me bewildered as to what was causing my problems. About the first of January, 1986, I finally located my problem. I was talking with a technician about modifying a second RS232 card so I could run two of them in my PE box (more on this at a later date). During the course of our conversation he described, in painful details, the problems I had been having. It seems that the Panasonic line of printers happen to be one of those printers that put out high spikes. Eventually these spikes will burn out the RS232 card. Your printer might skew a line, drop a letter or word and even print garbage (sometimes). Eventually the printer will shut down. The next time you try to use it everything may/may not work fine. These problems might span a week or months before blowing the RS232 interface. It seems there is a simple modification to the RS232 card that will protect it from these spikes and eliminate the printer problems. I will attempt to describe this modification in order for you to protect your MYARC RS232 interface card.

You will need the following:

(1) needle nose pliers
(2) wire cutters
(3) small screwdriver
(4) solder
(5) low wattage soldering iron
(6) a sharp object such as a X-ACTO Knife or a razor blade
(7) one 100 OHM, one/quarter watt resistor

EDITORS NOTE: IT IS SUSPECTED THAT THIS ARTICLE FIRST APPEARED IN THE MANNERS NEWSLETTER. I HOPE THAT THIS INFORMATION IS CORRECT.

Proceed by pulling the RS232 interface card out of the PE box, follow all the safety precautions as described with your equipment. Before you proceed any further remember that static electricity can damage some semiconductor devices. Drain off any electrostatic charge from your body by touching a known earth ground. Make sure that your work area is free from any static electricity. As an added protection wear a discharge wrist strap device. Now locate the four plastic tabs at the bottom (card edge side) of your RS232, (see figure 1). Gently press in each of the four tabs while carefully prying the two halves apart. Once you have the card open remove the circuit board and place it on your work surface, component side down. The card edge should be away from you with the plug side to your right, (see figure 2). Locate the boomerang shaped foil track in the lower right corner of the card, (see (A) figure 2). With your sharp object scrape a path through the foil track to cut the continuity between points B & C, (see figure 2). Your last step is to solder the one/quarter watt, 100 OHM resistor between points B & C, (see figure 3), turn the card over and cut the excess wire from the resistor. Now reassemble your card and the modification is complete.
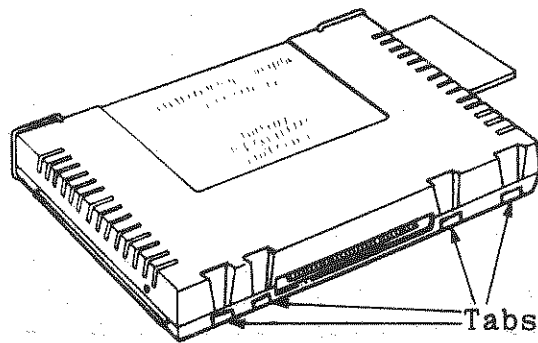

Figure 1

Please be aware that this modification is tailored to the MYARC RS232 card only. If you have a card by any other manufacture you should contact a "reliable" technician that is familiar with that brand of card. Of course the modification to your card probably will void any warranty left on your card. This is a proven, workable modification and will not interfere with the interface or any peripheral that you might want to hook up to it.
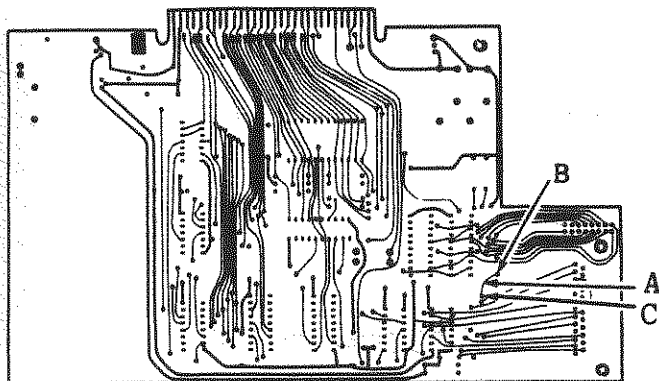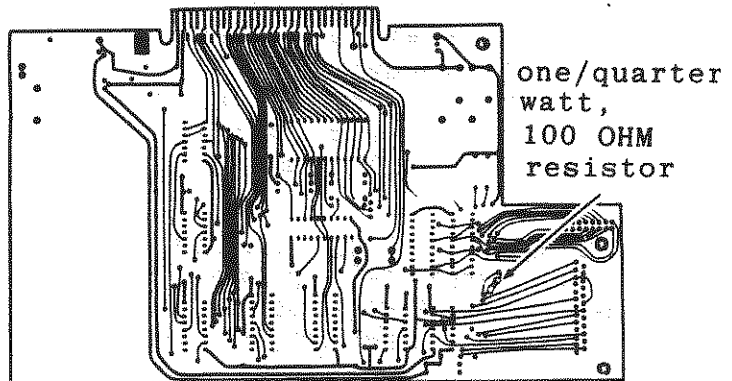

Figure 2

one/quarter watt, 100 OHM resistor

Figure 3

END

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CLIPBOARD DEBUTS.....

THE CLIPBOARD PROJECT IS A NEW DISK MAGAZINE PRODUCED BY JOE DELEKTO AND JON DYER OF
THE ATLANTA USERS GROUP. THE THEME IS PRIMARILY TO TEACH THE USE OF "C" AND ASSEMBLY TO
PERSPECTIVE AND CURRENT PROGRAMMERS, BUT FUTURE ISSUES WILL ALSO CONTAIN OTHER SUBJECT
MATTER SUCH AS GRAPHICS, TELECOMMUNICATIONS, COMPILERS, PRINTERS, AND HARDWARE. THE DISKS
ARE BEING ISSUED AS "FLIPPIES" WITH SIDE A BEING FAIRWARE. SIDE A CONTAINS ALL THE TEXT
FILES, TUTORIALS, AND DESCRIPTIONS, WHILE B HAS THE ACTUAL PROGRAMS, ROUTINES AND SOURCE
CODE. BY MAKING THE A SIDE AVAILABLE TO EVERYONE, THE AUTHORS HAVE INSURED THAT YOU CAN
CHECK OUT THE CONTENTS BEFORE YOU SHELL OUT YOUR HARD EARNED CASH FOR SIDE B. VOL. 1 #1
IS ENTIRELY FAIRWARE AND IS DISCOUNTED TO SUBSCRIBERS. THE ATLANTA U.G. IS BACKING THE
PROJECT WITH SUBSCRIPTION GUARANTEE! IF THE MAGAZINE CEASES TO BE PUBLISHED, THE ATLANTA
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    JOE DELEKTO OR JON DYER
    (EDITOR)   (ASST. EDITOR)
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US AND WE WILL RETURN THE REMAINING
PORTION OF YOUR SUBSCRIPTION.

T.I. MULTIPLAN V 4.0

A Review
by Audrey Bucher
Pittsburgh User's Group

I just received in the mail this week, the new Fairware enchancement of the TI Multiplan Package by R.A.Green of Rag Software. The updates have been made to the Multiplan version released by Texas Instruments to all user groups.

The disk is a floppy and contains the standard version for those who use the MP cartridge. The flip side is for Gram devices (PGRAM or GRAM KRACKER).

Features include:

1. Almost a 50% reduction in run time.
2. Patches documented for default filenames.
3. Slight change in entering default disk, so as to accomodate Hard Disk users.
4. An MP Startup Loader for RAM Disk or Hard Disk users.
5. Patch documented for setting screen colors.

I compared the recalculation of a large spreadsheet, using the old version and RAG's new one and did indeed find the new one to be much faster.

Simply copy the files, MPBASE, MPCHAR, MPDATA, MPINTR and Overlay to your old MPlan disk and you are ready to go. In an article I wrote on Mplan in the December 1987 issue of the Peripheral, I mentioned that the time it takes to initialize MPlan and the response time when it is working with the overlay file is affected by the location of the files on the disk. I don't know if this holds true for version 4.0, however, I did copy by files one at a time in the following order. Overlay, MPHLP, MPCHAR, MPDATA, MPINTR and then MPBASE.

I really dislike white characters on a dark blue screen and always hit the space bar 11 times before loading the MPlan disk, so that I have black characters on cyan. Imagine my suprise, when after doing this, MPlan v 4.0 loaded with white characters on dark blue. I wasn't pleased with that.

However, included with MPlan v4.0 is a public domain program called Ragpatch that will lay assembly patches into your program.

In his review in the March Micropendium. Harry Brashear mentioned that he had read the docs for RAGPATCH, and couldn't understand a single word of them. Needless to say, when I read the docs, I didn't understand them either.

But since the desire to change my screen colors was so great, I decided to brave it and use the patch included on the disk. I loaded SETUP/STD into Funnelweb and proceeded to change the screen color from F4 to 17. While I was at it, I also edited the Default drive to DSK2. I saved the file and then loaded RAGPATCH thru the Option 5 loader (Program file).

Presto, in a matter of seconds, the patch was made. Now I no longer need to use the space bar to obtain the colors I want and no need to use a sector editor to permanently change the default drive.

I'm sure I will never write a patch (which is what the docs for RAGPATCH are explaining) since I don't understand assembly language. However, I was happy to have the patch available to edit and use. Also included is a patch for setting up Hard Disks and RAM Disks.

If you use MPlan, I'm sure you will appreciate version 4.0. It is available from:

RAG SOFTWARE
R. A. Green
1032 Chantenay Dr.
Cloucester, Ont.
Canada
K1C 2K9

SOME HELPFUL "CALLS" IN EXTENDED BASIC.....

TO GET A TRUE RANDOM NUMBER IN YOUR PROGRAM ADD THIS LINE: CALL PEEK(-31880,A,B):: CALL INIT :: CALL LOAD(-31808,A,B) ED NOTE: I DO SUSPECT A TYPO HERE. TRY -31880 FOR BOTH, AND IF THAT FAILS TRY -31808 FOR BOTH. I'VE NEEDED THIS MANY TIMES, AND I FEEL THERE IS SOMEONE OUT THERE WHO WILL RECEIVE IMMEDIATE HELP FROM THIS HASTILY INSERTED HINT¿?¿? MAYBE!

TO DISABLE THE QUIT (FCTN =) FROM ENDING HOURS OF PROGRAMMING, ENTER THIS LINE FIRST AND RUN IT: 10 PRINT "QUIT KEY DISABLED" :: CALL INIT :: CALL LOAD(-31806,16)

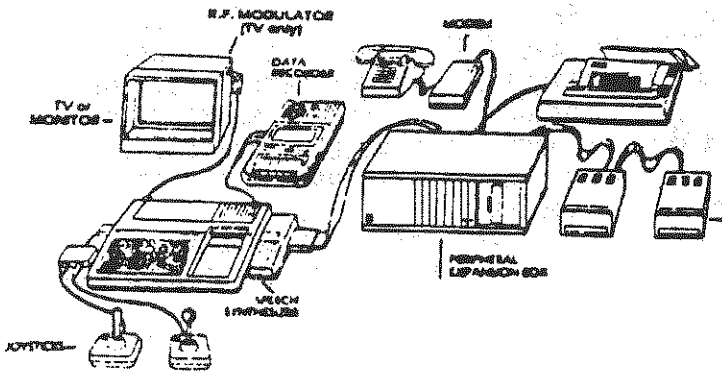THESE TWO HINTS ARE REPRINTED FROM A REMINDER PRINTED IN THE B.C. 99'ER U.G. NEWSLETTER OF AUG./SEPT. 1989.

SOMETIMES WE JUST NEED TO BE REMINDED. JF.

It's time to get organized!!
You need to PE/2 it!!!

Does your computer area look like this?

Yes, look right to see how it could be.

The development of the original TI-99/4A computer system was an evolutionary process with "NEED" causing new asscessories to be developed and designed into the exsiting TI-99/4A computer as best possible.

The results gave us expansion modules connected to the side of the TI-99/4A as well as the "FIRE HOSE" and the P.E. Box. This type of system, due to it's many connections, has inherent reliablity problems as well as consuming large amounts of space on desks and tables.

It is for these reasons we developed our own Model PE/2 EXPANSION CHASSIS for the TI-99/4A.

As a result of the very favorable response to our new EXPANSION CHASSIS at the TI FAIRE in New Jersey, we have made the decision to build ten systems which shall be available in six to eight weeks. Any paid orders taken at this time shall be guaranteed not to be more than the estimated prices of $275 for the GENEVE MODEL and $325 for the TI-99/4A, even if the actual units cost more. Three of the ten units were purchased at the FAIRE in NJ. Call or write if you would like to reserve one!

Now, get organized with RAVE 99's NEW PROFESSIONAL EXPANSION CHASSIS for the TI-99/4A and GENEVE computers.
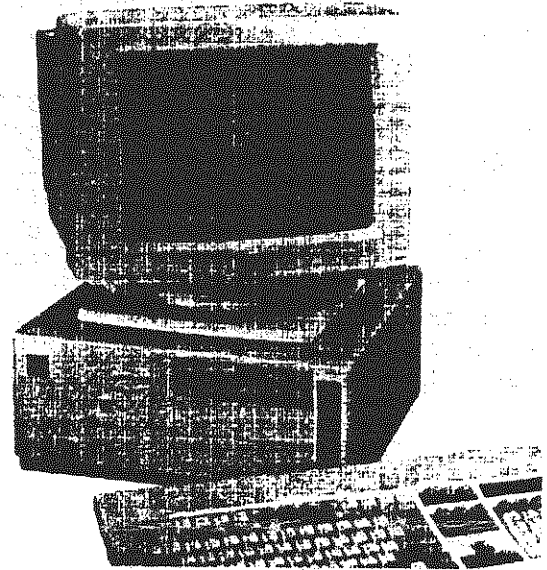
Our new EXPANSION CHASSIS has modern computer styling utilizing a space-saving design. The new chassis design allows the use of existing TI-99/4A or GENEVE computers , P.E. Box cards, and disk drives into a single enclosure.

A 200 Watt Power Supply provides more than enough power for the computer, P.E. Box cards, and FIVE Disk Drives.

Access to the cartridge port is available from the right side of the chassis.

The front panel has a Power Switch, KeyLock, Reset Switch, Turbo switch, "Power" LED, "Hard Disk" LED, and "Turbo" LED.

The Expansion Chassis has 8 expansion slots for TI type P.E. Box Cards.

This Product is required for those who wish to have both functionality and and neat appearance around their computer work area.

The estimated cost of this system is $275.00 for use with the GENEVE and $325.00 for the TI-99/4A.

PLEASE REMEMBER THAT THESE COSTS ARE ESTIMATES!!

NEW HARD/FLOPPY CONTROLLER FOR THE TI-99/4A IS REALLY COMING ....

I TALKED LAST NIGHT WITH CHRIS PRATT (PROUD TO SAY A MEMBER OF THE WEST PENN 99'ERS) ABOUT A HARD/FLOPPY CONTROLLER THAT HE AND A FRIEND HAVE DEVELOPED AND TESTED ON A PROTO BOARD. I NEEDED MORE SPECIFICS ON THE CARD, WHICH WILL BE UNVEILED OFFICIALLY IN ABOUT FOUR WEEKS.

CHRIS WILL HAVE A COMPUTERIZED AUTO-ANSWERED PHONE LINE TO TAKE CREDIT CARD ORDERS, AS WELL AS THE USUAL METHODS OF ORDERING IN PLACE SOON. I EXPECT TO HAVE OFFICIAL ORDER FORMS IN THE JULY ISSUE OF THE WEST PENN 99'ER. HEY, I'M SO EXCITED, I'M GETTING THE CART BEFORE THE HORSE.

THE NAME OF THE COMPANY IS ELECTRONIC SYSTEMS DEVELOPMENT CORPORATION (ESD). THE CARD WILL USE SURFACE MOUNT TECHNOLOGY, AND FEATURE AN EEPROM FOR DSR CONTAINMENT AND EASE OF UPDATING AND THE ELIMINATION OF SET-UP SWITCHES. IN OTHER WORDS, IF AN UPDATE BECOMES A NECESSITY, YOU WILL JUST HAVE TO LOAD IT AND STORE IT IN THE EEPROM PERMANENTLY WITH NO NEED OF SPECIAL EQUIPMENT, OR REMOVAL OF THE CARD FOR DISASSEMBLY. IT CAN BE DONE IN A FEW SECONDS! YOU WON'T HAVE ANY OF THOSE CONFUSING SWITCHES TO SET EITHER, BECAUSE THE INFORMATION THAT THEY REPRESENT, WILL BE STORED IN THAT SAME EEPROM, AND WILL BE SET BY MENU SELECTION.

THE CARD WILL SUPPORT ALL FLOPPY DENSITIES RIGHT NOW, 360K 720K AND 1.2K 5¼" DRIVES, AND 720K AND 1.44MEG 3½" IN ALL THE CURRENT TI, CORECOMP AND MYARC DENSITIES. THE CARD WILL SUPPORT UP TO FOUR FLOPPIES, AS WELL AS FOUR HARD DRIVES OF VARIOUS DENSITIES. THEY INDICATE THAT THE WD1010A (WESTERN DIGITAL) HARD DISK CONTROLLER CHIPSET IS BEING USED, AND ALLOWS FOR 256, 512, OR EVEN 1024 BYTES/SECTOR TO BE USED. THEY WILL BE USING THE 512 BYTES/SECTOR AT 17 SECTORS/CYLINDER (TRACK), AND WILL MULTIPLEX THIS TRANSPARENTLY TO THE CPU. THE FLOPPY DRIVES WILL HAVE A 2793 FLOPPY DISK CONTROLLER.
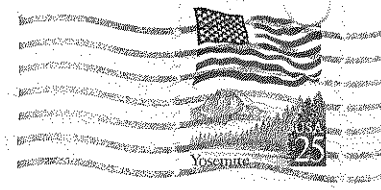
THE PRICE OF THE CONTROLLER WILL BE $225. AND YOU MIGHT AS WELL START TO SAVE THOSE COINS, BECAUSE IT WON'T BE LONG NOW. I'D LIKE TO GIVE YOU MORE INFORMATION RIGHT NOW, BUT I'VE LEARNED THAT TI'ERS ARE PATIENT!

MORE NEXT MONTH. JOHN F. WILLFORTH

FIRST CLASS MAIL

DON'T FORGET THE WEST PENN 99'ERS

MEETING ON TUESDAY JUNE 19TH !