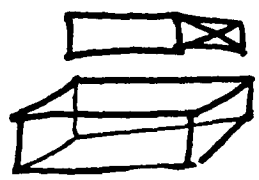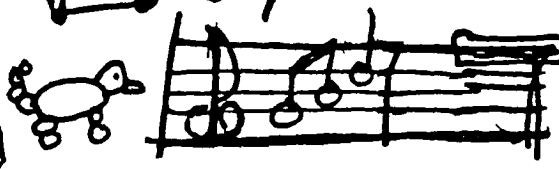QUESTION: WHAT DOES RUN THRU THE MIND OF A UNIVERSITY PROFESSOR?
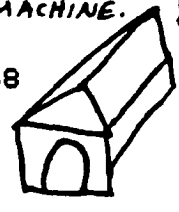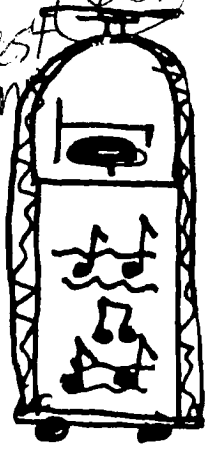
I BELIEVE THIS WAS DONE WITH APPLEWORKS, SINCE THE APPLE IS ED'S SECOND MACHINE.

ISSUE #3 MARCH 1988

FOR THE RECORD

by Ed Bittner
Recording Secretary

The February meeting of the West Penn 99'ers was started by editor in chief, John Willforth promptly at 7:03 sitting in for President Scott Coleman. After some opening remarks on label sheets, upgrading a Horizon Ram Disk to 1 Meg., comments on Birdwell's Disk Utilities Version 4.0, and C-MOS Chips (Jameco Electronics), the normal order of business, namely approval of the minutes, ensued.

The treasurers report was a healthy one in that dues for most of the current members have been paid, however, if you haven't, do it. We have indeed purchased a used club monitor for $100 and have diskettes on order. Old business, which Willforth is good at, proceeded smoothly. First on the list was a discussion of PEB systems for which RS232/PIO cards are scarce. It is possible however to use an Axiom Printer Interface to do limited RS232 type functions (See John on this one). John also presented some of the results of a survey conducted by an Ohio Users group on the type of people (smart), age of people (old and young), and kind of people (humans), who use TIs. Interesting Results.

Eric Zeno is doing a fantastic job with the library. Delegation of authority seems to be working. I will attempt to give credits next month to all those involved in making the library a sucess. We now have a cassette library, diskette library, literature library, newsletter library, and module library.

Under new business John announced that old copies of BYTE magazine were available for members to take with them. Interest peaked when John announced that they were free. The membership passed a motion that the executive committee should study and recommend an action regarding insurance.

The raffle (alpha-com interface with printer) was won by Charlie W., who declined and chose a rare copy of Family Computing Magazine. The second prize winner, Rob Ekl, happily accepted the printer and interface with the third prize going to Walter Kazosky, an Extended Basic manual.

Classes in Basics-E. Kepes, Adventure-M Schmidt, C-James Conn (what an actor) and Potpourri-Hardware-Ram Disks(and anyone else who will talk to him)-John Willforth, were conducted immediately following the main meeting. Adjournment at 8:17.
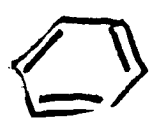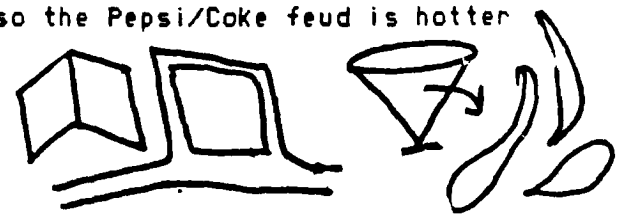
Earlier than usually submitted,
Scoops Bittner

Doodle
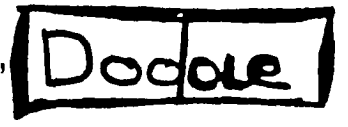
PS: The cookies and cakes were exceptionally good. Also the Pepsi/Coke feud is hotter than ever.

PSS, Editor Note! This is the

West Penn 99'er

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TREASURER'S REPORT FOR FEBRUARY '88

          FROM JAN TRAYERS
*****************************************
*                                       *
* 2/16   CASH ON HAND    $ 68.25        *
*                                       *
* 2/16   LIBRARY SALES     60.00        *
*                                       *
*   "    MICROPENDIUMS     32.00        *
*                                       *
*        MEMBERSHIPS       60.00        *
*                                       *
*        EX. BASIC         10.00        *
*          BOOKS                        *
*                                       *
*        RAFFLE            52.00        *
*                                       *
*        JOY STICKS         5.00        *
*                        --------       *
*        TOTAL           $287.25        *
*                                       *
*        SUPPLIES        - 7.30         *
*                        --------       *
*          TOTAL          279.95        *
* 2/29   DEPOSIT         -209.00        *
*                        --------       *
*        CASH ON HAND    $ 70.95        *
*                                       *
*****************************************
*                                       *
* 2/16   BANK BALANCE    $1266.88       *
*                                       *
* 2/15   POSTAGE         _ 62.70        *
*                        --------       *
*                         1204.18       *
* 2/26   MICROPENDIUM    _ 33.00        *
*                        --------       *
*                         1171.18       *
* 2/29   DEPOSIT         + 209.00       *
*                        --------       *
*        BALANCE         $1380.18       *
*                                       *
*****************************************
*                                       *
*  TOTAL CASH BALANCE   $1451.13        *
*                                       *
*****************************************
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FOR THOSE OF YOU WHO HAVE NOT PAID YOUR DUES YET WHAT'S KEEPING YOU? THIS MARCH ISSUE WILL BE THE LAST ISSUE YOU WILL RECEIVE. JUST A REMINDER. OUR CLUB HAS GROWN AGAIN IN 1987, AND WILL DO SO AGAIN IN 1988, WITH YOU OR WITHOUT YOU. WE WOULD LIKE IT TO BE WITH YOU. WE HAVE FINALLY GOTTEN ALL ASPECTS OF OUR CLUB FUNCTIONING, AND CAN OFFER EVERYONE THE THINGS THAT WE SET OUT TO DO AT OUR FORMATION TWO YEARS AGO. IF YOUR LABEL DOESNT HAVE AN "88" ON IT THEN IT MEANS EITHER I SLIPPED UP (CONTACT ME OR JAN TRAYERS), OR YOU SLIPPED UP, AND I HOPE THAT YOU STILL CONTACT JAN OR MYSELF.
   * FULL FAMILY MEMBERSHIP IS $15.00 PER YEAR.
   * ASSOCIATE MEMBERSHIP IS $10.00 PER YEAR.
   THE ASSOCIATE MEMBERSHIP IS FOR THE NEWSLETTER ONLY. THE FULL FAMILY CARRIES ALL BENIFITS.
   CONTACT ANY OF THE OFFICERS LISTED BELOW:

PRESIDENT   SCOTT COLEMAN   (412) 271-6283
V. PRESIDENT MICKEY SCHMITT   (412) 335-0163
TREASURER   JAN TRAYERS   (412) 863-1575
CORESP. SEC. GENE KELLY   (412) 829-0469
SECRETARY   ED BITTNER   (412) 864-4924

MAKE ALL CHECKS OUT TO WEST PENN 99'ERS AND SEND TO : JAN TRAYERS 2151 MICKANIN RD. N. HUNTINGDON PA 15642

NEW BI-MONTHLY NEWSLETTER DEDICATED TO THE TI-99/4A. AVAILABLE ON DISK FOR $12.00 PER YEAR. HARD COPY IS AVAILABLE ALSO. CONTACT TID BITS RT. 2 BOX 412 SUMERDUCK, VA 22742 SAMPLE $1.00.

LINEAR AESTHETIC SYSTEMS POB 23 WEST CORNWALL, CT 06796 (203) 672-6360 HAS "THE CUBE" AND "QUADCUBE" FOR THE TI-99/4 AND THE 4A USING ONLY A CASSETE SYSTEM. THIS IS CURRENT INFO. AS OF FEB. 1988. SIMULATION OF ERNO RUBIK'S PUZZLE PLUS SPECIAL COMMANDS. $14.95 EACH P/P.

ANNUAL COMPUTER AUCTION SPONSORED BY THE PENN-OHIO TI 99/4A USERS GROUP ON MARCH 14, 1988 AT 7:00 PM AT THE AMERICAN RED CROSS 266 WEST WOOD STREET YOUNGSTOWN, OHIO. YOU ARE TO COME TO BUY OR SALE. 10% AUCTION FEE. FOR MORE INFO CALL CHRIS PRATT (412) 964-8167

T.I.C.O.F.F.'88 THE EAST COAST COMPUTER SHOW ...SATURDAY, MARCH 26, 1988..9:00 TO 4:00. ADMISSION $5.00. (PROCEEDS TO STUDENT SCHOLARSHIPS). PRE-PAID ADMISSIONS GRT FREE IBM/TI SOFTWARE ON DISK. SEND CHECK & SASE TO: TICOFF 185 W. WEBSTER AVE., ROSELLE, NJ 07204 VENDORS, WORKSHOPS, FAIRWARE, HARDWARE SOFTWARE, SWAPSHOP. INFO: (201) 241-4550/8902

MAKE YOUR OWN DATA DISK FOR CERTIFICATE99
MATT ANDEL - TI-CHIPS - CLEVELAND, OHIO

YOU NEED CERTIFICATE99 AND TI-ARTIST TO DO THIS.

1) COPY THE BACK SIDE OF CERTIFICATE99.
2) USE A DISK MANAGER PROGRAM (DM1000) AND RENAME THE FILE NAME CDATA21 TO CDATA21_P AND CDATA22 TO CDATA22_P.
3) THEN LOAD TI-ARTIST AND CHOOSE 1) TI-ARTIST FROM THE MAIN MENU. THEN PRESS S FOR STORE. THEN PRESS L TO LOAD PICTURE. NOW THE FILENAME IS CDATA21.
4) NOW YOU SHOULD SEE 12 LITTLE GRAPHICS. NOW YOU WILL HAVE TO DRAW 3 LINES GOING DOWN BETWEEN THE PICTURES AND 2 LINES GOING ACROSS BETWEEN THE PICTURES.
5) NOW YOU CAN ERASE THE LITTLE GRAPHICS BUT NOT THE LINES YOU DREW.
6) THEN PRESS FCTN QUIT TO RETURN TO THE MAIN MENU. THEN PRESS 2) ENHANCEMENT. THEN PRESS S FOR SLIDES. PRESS 6) TO LOAD INSTANCE. NOW YOU CAN LOAD YOUR OWN INSTANCES AND PUT THEM IN THE BOXES YOU DREW BEFORE.
7) WHEN YOU HAVE PUT YOUR 12 INSTANCES IN THE BOXES, PRESS FCTN QUIT TO RETURN TO THE MAIN MENU. THEN PRESS 1) TI-ARTIST. WHEN TI-ARTIST COMES UP, GET THE ERASER AND ERASE THE LINES YOU DREW BEFORE.
8) NOW YOU CAN PRESS S FOR STORE AND S FOR SAVE. THE FILENAME YOU WILL SAVE IT AS IS CDATA21, AND YOU AFE FINISHED WITH THAT FILE.
9) NOW YOU WILL REPEAT STEPS 3-8, BUT THE FILENAME IS CDATA22 AND NOT CDATA21.
10) WHEN YOU ARE DONE WITH CDATA22, YOU CAN EXIT TI-ARTIST AND GO BACK TO YOUR DISK MANAGER PROGRAM AND RENAME THE FILE CDATA21_P TO CDATA21 AND THE FILE CDATA22_P TO CDATA22.
11) NOW YOU CAN LOAD CERTIFICATE99 AND WHEN IT TELLS YOU TO FLIP THE DISK AROUND, PUT IN THE DISK YOU JUST MADE. YOUR BORDER AND FONT CHOICES WILL BE THE SAME, BUT THE GRAPHICS WILL BE THE ONES YOU JUST MADE.
12) AND THAT'S ALL THERE IS TO IT!

B. J. MATHIS WRITING IN THE SOUTHWEST NINETY-NINERS (MARCH 1988) ISSUE, REPORTS THAT MANY POWER SUPPLIES AVAILABLE FROM RADIO SHACK FOR THE TI CONSOLE, HAD A PROBLEM WITH UNSTEADY +12 VOLTS, JUMPING FROM 9.5 V. TO 11.5 V. THUS CAUSING THE CONSOLE TO LOCK-UP AS WELL AS OTHER ANNOYING PROBLEMS. THE SUPPLIES AFFECTED HAD A PART NUMBER ON THE BOARD (ABOVE THE SERIAL NUMBER) OF 1053214-2, THE GOOD ONES HAD A PART NUMBER OF 1053201.

MR. MATHIS GOES ON TO SAY THAT ED HALLETT, ALSO OF THE SW 99'ERS, DISCOVERED THAT BY ADDING A 300 OHM RESISTOR (R6 IN DIAGRAM) AND LED TO THE "BAD" POWER SUPPLIES, CAUSED THE +12 VDC TO BECOME STEADY. THOSE OF YOU WHO BOUGHT SOME OF THE SUPPLIES AFFECTED, WILL NOW BE ABLE TO USE THEM..

THE RADIO SHACK PART NUMBER FOR THESE SUPPLIES IS 277-1016. THE DIODE CAN BE REMOVED FROM THE DEFECTIVE SUPPLU THAT YOU ARE REPLACING, AND PLACED INTO THE HOLES IN THE NEW SUPPLY EXACTLY AS IT CAME FROM THE OLD SUPPLY. THIS IS TO SAY KEEP THE LED POLARITY THE SAME. IF YOU DON'T HAVE ONE IN YOUR OLD SUPPLY, NEARLY ANY RED LED WILL DO, AS LONG AS IT IS INSERTED CORRECTLY. THE FLAT SIDE OF THE LED OR THE SHORT LEG GOES TO THE HOLE MARKED "K", AND BE SURE TO PUT A SHIELD ON AT LEAST ONE LEG OF THE LED TO INSULATE THE LEGS FROM EACH OTHER.
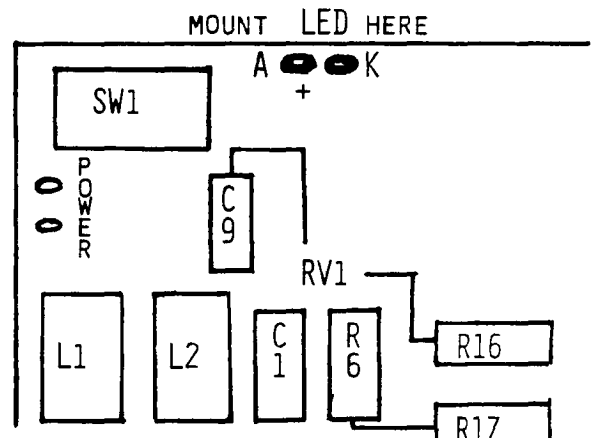
What we have discussed in the three previous articles are the Filer and one or two utility programs. Let us now go into the Editor.

Put the disk we made containing the Compiler, Editor, Filer etc. into drive #4 (let us call this the system disk). Put an empty formatted disk into drive #5. Turn on the P-BOX, then the console and then modify the printer for "PIO". Now call the Editor by entering "E". There will be a prompt that says "No workfile, File(<ret> for none)?". This prompt is asking for the name of an old file that you want to work on or if you want to create a new file press enter. Let us press enter. You will now see across the top of the screen a promptline that ends in a question mark. The question mark means that all of the selections cannot be shown and in order to see the rest of the choices, press Function I or the question mark (?) key. (This is true whenever the (?) shows in a promptline.) The choices that are available to use in the Editor are A(djst, C(opy, D(let, F(ind, I(nsrt, J(mp, K(ol, M(argin, P(age, Q(uit, R(plc, S(et, X(ch, and Z(ap. I do not use all of the above so I am only going to discuss those that I have used to create and edit programs.

In order to enter text in the Editor, press "I" (for Insert) and then start typing. When you get to the end of an 80 column line the cursor will stop and will not advance to the next line. In order to get to the next line you have to press the enter key. You do not have to be at the end of the line in order to press enter you can do it when ever you wish.

When you finish typing either all of your document or just a section of the document you want to save it. To do this first press Control C, (press the Control key and then press the C key.) This puts an invisible End of File marker in the document. This is necessary because the EOF tells the program to accept this text or any changes. After Control C, press "Q" (quit) and you will now see this menu;

U(pdate the workfile and leave.
E(xit without updating.
R(eturn to the editor, no updating.
W(rite to a filename and return.
"E" and "R" are more or less self explanatory.
"U" writes to a file on the #4 drive and titles it.

"System.Wrk.Text". If you use this option while developing your programs you will not have to do anything when you enter the Editor. The file "System.wrk.text" will be loaded automatically so you can work on it. I personally do not use this option, but it has some advantages with small programs. I use the "W" option.

If "W" is pressed you will see "Output file (<cr> to return)" at this point enter "#5 :Filename" and the text is stored on the #5 disk under the file name with a suffix of .TEXT added to it. For example if you called your file "Buffer" the Editor would store it as "Buffer.Text". After the file is saved you will see "E(xit or R(eturn to editor?". If you press "E" you will go to the main command line. If you press "R" you will be back in the editor and you can position the cursor using the cursor keys and then press "I" and continue typing in your document.

If there was a document on the disk that we wanted to modify when we entered the Editor, we would enter it's file name where it said "No workfile, File(<ret> for none)?", the file would then be loaded. We do not have to add the suffix .TEXT because the editor will do that. When it comes time to save the document press "W", the file name is displayed and a statement saying that if we enter "$" the file will be saved under the same file name, without having to type the entire file name. This assumes that we were not using System.wrk.text.

In order to get a printed copy of our document we leave the editor and go to the Filer. After entering the Filer press "T" (transfer), and after the prompt enter "#4:Filename.Text,#6:" and your file will be printed. In this situation you MUST add the suffix .TEXT or you will get an error message.

Well this was another long session. More next month.

"TIPS FOR BEGINNERS"

-BY FRANK N. ZIC-

Here we go together-No.13. Little did I realize that over a year
ago when I first started to write these articles, that I would still
be at it today. Seems that it's like being long winded.   Do you
think that this trait is inherited from someone in our club? Hmmm,
could be. Onward...From time to time I make notes of various items
concerning TI-WRITER.   Not that we need more on this well covered
topic, but some of these tips are not well covered while still being
quite useful. Look them over and give them a try.

**-If you want to place a Carriage Return at the end of a
shortened line, you might find that it does not always take.
You can always place it there by holding CTRL/8, which places
the Carriage Return where you want it,then you must use FCTN/3
to delete the extra line. So, try it first to see how it works
and then think of it as one combined step of--CTRL/8 FCTN/3. By
using it a few times in practice you gain the confidence to use
it during your regular work without further questioning in your
mind, does it or doesn't it work. You will know what it does
and how it reacts.

**-When in the Editor mode and printing out your message with
the PF (Print File) command, you can also have the line numbers
print out along with your text by simply placing an L then a
space in front of PIO in the command instruction. Don't forget,
however, you lose the last 6 characters at the end of each line.
So, keep your line lengths to a maximum of 74, this includes the
Right Margin.

**-Remember that the normal page length allows for 66 numbered
lines.   This also includes any blank lines you have placed in
your text. The normal page done by the Formatter also includes
6 automatically placed spaces at the top and 6 spaces at the
bottom of each page for skipping over the perforations between
tractor feed sheets.   This means that you have an effective
normal 54 lines for your text. Remember, too, that any lines of
instructions to the Formatter do not take up a line space, nor
do any of the .CO (Comment) commands. These are just reminders
to yourself that will show only in the Editor mode.

**-Are you annoyed with having to switch disks from the Editor
to the Formatter? Well, with two disk drives and Funnelweb
Ver.4.0, you now can go to the Formatter by executing the
following: FCTN/9, Q-ENTER,E-ENTER. This will bring you back to
the Menu screen. Press No.2 (Formatter) and you're there. This
version also gives an audible beep at the end of each line that
indicates there are only 4 spaces left to fill before you are
shifted to the next line. Another nice new added feature is the
numbered scale (0 to 79) at the bottom of your working line.

As always, may the good 4's be with you.

LET'S TALK RAM DISKS PART IV
By John F. Willforth

The MYARC RAM DISK is one of the most popular and versatile units on the market. My thanks to Scott Coleman for his input to the preparation of this article. Scott has the 512K version, and this is the model that most of you would probably migrate to in time.

The MEMORY EXPANSION CARD (as MYARC calls it), comes in three sizes, the basic 32K unit, the 128K model, and the 512K RAM DISK. The card is architecturally similar to the 128K card from FOUNDATION, in that it uses 32K RAM space. It has up to 16 banks of 32K, with the entire 32K block being switched at once, verses the 2K bank switching occuring in the HRD.

The MYARC unit is supported between power failures (intentional and normal shut downs) by a 9 VDC supply which is plugged into your AC outlet. This is why the unit is reliable until the AC power to the house drops.

Since the MYARC unit has the basic 32K expansion memory already a part of itself, the 32K card in the PEB, or a similar 32K in the console, in a side car type unit, standalone, or in the speech unit, will have to go.

The MYARC unit will function with MYARC'S XBII to allow basic programs up to 128K in length. This could be a major advantage to someone who wants to write a very large program in basic and up till now been frustrated in the attempt. Remember also that you will have tremendous enhancements at your finger tips with that XBII, which does require the 128K memory, and with this advantage also comes the warning that there are still some bugs in that XBII program, and that if you do decide to use this package, the effort should be for yourself, since there is not an abundance of users with this same set up.

The SPOOLING feature is really a big plus for this RAM DISK. The unit will always have at least 80K of the 512K set aside for the spooler. Scott tells me that this leaves 400K for a RAMDISK (512K - 32K - 80K = 400K). It will decrease in availability, as the size of the spooler increases.

The PRINT SPOOLER is used by replacing the usual device names "PIO" or "RS232" with "SPPIO" and "SPRS232". No connection exists between the two cards involved in the printing process, the RAM DISK and the RS232 card. The MYARC card spools the data to be printed when instructed to do so by either command above, and sends it to the RS232/PIO card on an interrupt driven basis. This means that disk accesses will slow down this spooling process. Note that if your printer is equipted with a small printer buffer internally, you will never notice a pause. In any case the machine will function essentially as if it were used in conjunction with a large print spooler. The CORCOMP RS232 unit is not compatible with the MYARC RAMDISK.

The RAMDISK can supersede any other drive by executing CALL EMDK(N) where "N" is the drive number. CALL EMDK(0) will disable disk emulation. The RAM DISK can always be accessed through device name "RD"

Other calls include CALL RDDIR, to list the RAM DISK directory, CALL PART (400,80) or CALL PART (0,480) as ex. to partition memory between the RAM DISK and the print spooler, where the numbers represent thousands (K) bytes. CALL VOL ("NAME") to rename the volume as well as other useful calls.

I would like to be able to tell you all the software that will run on this card as well as any other hardware it will not cooperate with, but in trying to keep these articles to one page and cover the essentials, I've decided to stop here before I have the opportunity to give you too much incorrect info.

The MYARC RAM DISK has been very well received by the T.I. community, and you can't go wrong in getting one. The intent in these articles is to give you an overall view of the various units, so you may be a little better informed when you do buy.

Next month I'll try to cover the CORCOMP "MEMORY PLUS". That is if one of the people using one can give me some feed-back on the unit.

Until next month, keep the TIme.

```
100 ! Instance Printer V1.5
110 !      08/06/87
120 ! by Robert Coffey Jr.
130 !     102 Woodgate Road
140 !     Tonawanda, NY 14150
150 !
160 ! Assembly Subroutine
170 ! Written 12/08/87
180 ! by Harry Wilhelm
190 !
200 CALL INIT
210 CALL LOAD(8194,38,214,63,248)
220 CALL LOAD(16376,77,73,82,65,67,76,38,40)
230 CALL LOAD(9748,0,0,0,0,0,0,0,0,0,0,0,0,0,0,4,0,6,0,3,0,7)
240 CALL LOAD(9768,2,224,36,244,4,204,2,11,37,21,2,2,38,20,2,3,0,6,4,192)
250 CALL LOAD(9788,2,1,0,1,4,32,32,12,4,32,32,24,18,184,204,160,131,74,5,129)
260 CALL LOAD(9808,6,3,22,246,2,3,1,0,5,67,2,5,0,7,8,19,4,196,2,9)
270 CALL LOAD(9828,3,0,2,6,0,7,9,41,193,198,2,39,255,255,194,39,38,20,66,3)
280 CALL LOAD(9848,194,8,19,1,161,9,6,70,21,244,195,96,38,28,6,13,10,29,4,206)
290 CALL LOAD(9868,195,197,63,160,38,30,195,207,19,2,2,45,0,4,195,109,38,32,163,
13)
300 CALL LOAD(9888,6,196,222,196,6,13,22,253,6,5,17,1,16,216,6,204,216,12,37,20)
310 CALL LOAD(9908,4,192,2,1,0,7,2,2,37,20,216,32,38,32,131,124,4,32,32,16)
320 CALL LOAD(9928,216,32,38,32,131,124,2,224,131,224,4,96,0,112)
330 DIM F(32,8),P$(32)
340 T=1 :: ESC$=CHR$(27):: FILE$="DSK2.INSTANCE" :: LF$=ESC$&"3" :: ZERO$=CHR$(0
)
350 DISPLAY AT(1,4)ERASE ALL:"INSTANCE PRINTER V1.5" :: DISPLAY AT(3,5):"by Robe
rt Coffey Jr."
360 DISPLAY AT(5,5):"Assembly Subroutine" :: DISPLAY AT(6,6):"by Harry Wilhelm"
370 DISPLAY AT(9,4):"INSTANCE:"&FILE$ :: ACCEPT AT(9,13)SIZE(-13):FILE$
380 DISPLAY AT(13,7):"(1) DOUBLE DENSITY" :: DISPLAY AT(15,7):"(2) QUAD DENSITY"
390 CALL KEY(0,K,S):: IF K<49 OR K>50 THEN 390 ELSE DENSITY=VAL(CHR$(K)):: CALL
HCHAR(DENSITY*2+11,7,42):: DISPLAY AT(18,11):"Working...."
400 STRIKE=DENSITY+T :: LF=21*(STRIKE/3)+T :: FILLER=64*DENSITY :: TEMP=4/DENSIT
Y
410 OPEN #1:"PIO.CR.LF" :: OPEN #2:FILE$&"_I",INPUT :: IF DENSITY=1 THEN FORMAT$
=ESC$&"L"&CHR$(192)&CHR$(3)ELSE FORMAT$=ESC$&"Z"&CHR$(128)&CHR$(7)
420 PRINT #1:ESC$:"@";
430 INPUT #2:WIDTH,LENGTH :: J=(32-WIDTH)*(13*DENSITY)
440 FOR A=T TO LENGTH :: FOR B=T TO WIDTH :: INPUT #2:F(B,1),F(B,2),F(B,3),F(B,4
),F(B,5),F(B,6),F(B,7),F(B,8):: NEXT B
450 FOR Z=T TO 5 STEP 4
460 FOR B=T TO WIDTH :: P$(B)=""
470 CALL LINK("MIRACL",F(B,Z+3),F(B,Z+2),F(B,Z+1),F(B,Z),DENSITY,TEMP,P$(B))
480 NEXT B
490 FOR ZZ=T TO STRIKE :: IF ZZ=STRIKE THEN PRINT #1:LF$;CHR$(LF);ELSE PRINT #1:
LF$;CHR$(T);
500 PRINT #1:FORMAT$;RPT$(ZERO$,FILLER);:: CALL SPACE((J),ZERO$)
510 FOR B=T TO WIDTH :: PRINT #1:P$(B);:: NEXT B :: CALL SPACE((J),ZERO$):: PRIN
T #1:RPT$(ZERO$,FILLER);CHR$(10):: NEXT ZZ
520 NEXT Z :: NEXT A
530 PRINT #1:ESC$:"@" :: CLOSE #1 :: CLOSE #2
540 CALL HCHAR(5,T,32,500):: DISPLAY AT(11,12)BEEP:"DONE!" :: DISPLAY AT(15,5):"
Print another? (Y/N)"
550 CALL KEY(0,K,S):: IF S=0 THEN 550 ELSE S=POS("YyNn",CHR$(K),1):: IF S=0 THEN
 550 ELSE IF S<3 THEN 350
560 CALL CLEAR :: END
570 !
580 SUB SPACE(J,ZERO$)
590 IF J<255 THEN PRINT #1:RPT$(ZERO$,J);ELSE PRINT #1:RPT$(ZERO$,255):: J=J-25
5 :: GOTO 590
600 SUBEND
```

CONVERTING THE VERSION 2.2 CONSOLE `

By John Drennen, West Penn 99'ERS

Getting around the Version 2.2 console has not been much of a problem with fully equipped systems. One could use the Corcomp Disk Controller Card($150) to bypass the V2.2 operating system and run non-TI cartridges. The GRAM KRACKER($190)by MG can also run non-TI cartridges by using a non-v2.2 operating system in its gram 0. The other GRAM CARDS might also be used,but I am not sure. The Corcomp Grom-Buster($30) has been the most attractive alternative for the console only users.

All of the above work,but why not get to the heart of the problem: GROM 0 (CD2155NL). By ordering the CD2155NL chip from TI,you can upgrade your V2.2 console to the standard console. On most of the consoles, this chip is in a socket,but I have come across a few consoles in which this chip is soldered. This is all that has to be done.

The part number is 1015960-1155. The cost from TI is $3.80 + TAX + $3.00 SHIPPING. The phone number is 1-806-741-2265.

I have loaded the following modules and programs to confirm that this modification is complete and compatible with all software and hardware:
*MINER 2049er(a side port module),PACMAN, DONKEY KONG, WORD WRITER, PDM 99, JUNKMAN JR. , SUPER DUPER, PLATO, TUNNELS OF DOOM, ADVENTURE, MINIMEMORY, PERSONAL RECORD KEEPING, EDITOR ASSEMBLER, MULTIPLAN, TI-WRITER, EXTENDED BASIC, PAINT N PRINT, BIG FOOT, HOME CONTROL, Q*BERT.*

DM1000, NIGHT MISSION, STRUCTURAL ENGINEERING LIBRARY, ALL STAR BASEBALL, CUBIT, OLD DARK CAVES, ADVANCED DIAGNOSTICS, DISKASSEMBLER.

I have been using my converted console for about a month with no problems, either software or hardware. The hardware tested includes: TI and Corcomp disk controller cards, speech synthesizer, Gram Kracker, X-10 Powerhouse, Axiom Parallax, cassette recorder, Mechatronic Epromer.
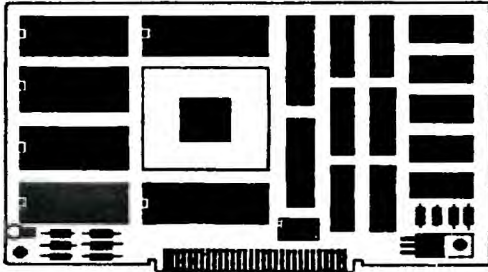*The picture below will show you which chip to replace. The chip may be marked CD2155 8327 DCHY. The 8327 is the DATE CODE.*

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 \         * * * * * REPLACE THIS CHIP       :      :  : CASSETTE :
  \          *                               :_____:    PORT     :__
 /           *__                                                   :  :
/            :  __  __  __  __ 9:                                  :  :
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/_____                           ---:A  O
/                              :     ----------------       ---:N  R
\                              :     :              :       ---:S  T
 \      TMS 9900NL             :     : MODULE PORT  :       ---:I
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   \                           :                            ---:N
    \/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/
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I'M TRYING TO INCLUDE THINGS OF INTEREST TO A WIDE VARIETY OF USERS. BELIEVE ME THIS IS GETTING MORE DIFFICULT, AND IT IS NOT BECAUSE OF THE LACK OF THINGS TO INCLUDE IN THE NEWSLETTER, BUT BECAUSE OF THE ABUNDANCE OF INFO. FOR THE TI-99/4A. BELIEVE ME THE ONLY REASON FOR THE FAILURE OF SOME USERS GROUPS OUT THERE, IS BECAUSE EITHER ONLY ONE OR TWO ARE TRYING TO DO IT ALL, WHILE THE REST OF US "USERS" JUST SET AND COMPLAIN. IF USERS GROUPS OF ANY MACHINE FAIL TO KEEP THE "USERS" INFORMED, THE INTEREST WILL DISAPPEAR AND SO WILL THAT GROUP. I HOPE THAT THIS AMAZING MACHINE WILL SURVIVE ANOTHER 9 YEARS! YES, 1979 WAS WHEN THE TI-99/4 CAME OUT. OLD TECHNOLOGY YOU SAY, WELL TRY TO DO IT BETTER CHEAPER. YOU CAN'T. DON'T LOOK TO BIG BLUE TO SOLVE ALL YOUR PROBLEMS AND FILL ALL YOUR NEEDS.
                    J.F.W. WEST PENN 99'ER

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RON MARKUS of RON'S COMPUTER IN CLEVELAND, OH, IS PICKING UP MORE AND MORE OF THE SLACK IN SUPPLYING NEW AND USED HARDWARE AS WELL AS SOFTWARE FOR THE DISK AND CASSETTE USER. I RECOMMEND THAT IF YOU ARE LOOKING FOR ANYTHING FOR THE TI 99/4A, YOU SHOULD CONTACT RON'S COMPUTER 18038 SALLY AV. CLEVELAND, OH 44135 (216) 676-6675   THANKS RON!

WEST PENN 99'ERS

% JOHN F. WILLFORTH
   R.D. #1 BOX 73A
   JEANNETTE,   PA
            15644
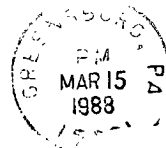
MARCH 1988 ISSUE

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