SAN DIEGO COMPUTER SOCIETY

TI-SIG NEWSLETTER

JANUARY 1988

WOW, DID'YA SEE the December edition of the Computer Shopper? There was, in addition to the regular TI Forum which had a long blurb on the Myarc 9640, a long article on the Triton Turbo XT and also a long article on Forth by Glenn Davis. The last article included several screens to update our TI Forth to the latest standard (Forth-83). Anyway, your editor bought a copy of Mr. Veit's fine publication. It may have a lot about clones etc, but by Gosh, Veit has stood by the computerists of of all persuasions and not just gone on to hype the latest new machine like most computer mags did!

IT LOOKS LIKE IBM file compatibility with our TI is becoming the "in" thing to program among our great programmers. No sooner had CorComp brought out its TI-IBM Connection module, and the next thing you know, Genial Computerware released its PC-Transfer (disk based program) written by Mike Dodd. It does the same thing -- transferring ASCII data betwixt ye old TI and a MS-DOS formatted disk. It does it all too. Now, Paolo Bagnaresi and some of his chums over in Italy are talking about doing the same thing and there's been a rumor Tony and Will McGovern of Aussie-land are going to come out with a version. (And they said we were dead four years ago!) REM: these IBM transfer programs require DSDD capability.

MIKE McCANN OF THE Omaha TI User's Group is probably the most low keyed TI innovator around. In addition to his TPA, print shop type software he brought out earlier last year, he has quietly announced a new Forth hardware card called the Avanti-99 project. It will go in the P-Box and what its mission is, is unknown. The Chicago TImes newsletter calls it a "Multi- processor board for the TI 99/4A powered by the NC 4016 Forth Engine. A handout McCann was giving out at the November Chicago TI Fair stated each card is programmable, and each one has 48K of "high speed static RAM, and each card has the CM-FORTH operating system in ROM."

THE TIMES ARTICLE goes on to state: Several of these cards can be installed and used for different operations in the PEB at the same time. One card is fast -- they say it runs at 5 MIPS, which stands for 5 million instructions per second." The suggested retail price? Hold onto your keyboard: $500. It will be available in January 1988.

BETWEEN BEING A NEWSLETTER article writer and hardware hacker of note, John Willforth of the West Penn 99'ers User Group has to be one of the busiest people around. John's articles are becoming a TI legend. Pick up a newsletter and you're liable to see his by-line or mention of him. John recently brought out a neat little product which should be very helpful to any serious hardware afficionado. It is a bare board proto- typing board which has traces, IC pads and other circuitry which all adds up to a bread-boarder's delight. It is standard TI size and form. They go for $35 apiece and are available from:

THE COMPUTER BUG
5075 CLAIRTON BLVD. or
PITTSBURGH, PA 15236

QUANTITY ORDERS
SCOTT COLEMAN
823 NORTH AVE.
N. BRADDOCK, PA
15104

COLEMAN GIVES A sizeable price break for orders of 10 or more ($25 each). You are free to contact Willforth regarding technical questions:

JOHN WILLFORTH
RD 1 BOX 73A
JEANNETTE, PA 15644

OOPS, WE GOOFED: In our November newsletter we failed to include some c99 code necessary to run the floating point demo program by Don Chick. Look for the additional code on pages 2-3.

SDCS NEWS -- At ye SIG'S December meet Woody Wilson demoed a neat program -- a sort of cross between a Christmas card and a cartoon -- which was written by Ray Kazmer of Sylmar, CA. and being distributed as freeware or as a very reasonable fairware. (Ray suggested only two dollars for an exceptional program.) The program shows a scene depicting Snoopy's dog house and in a nearby tree, Woodstock's nest. The text informs us Snoopy went away with the family for Christmas, but left a gift for Woodstock.(Contd. pg 5)

- CORRECTION -

IN OUR NOVEMBER, 1987 newsletter we failed to include some additional code necessary to run the c99 Floating Point demo program written by Don Chick. We hope the omission has not inconvenienced anyone.

WHAT WE FORGOT to put in was a second c99 code listing which is included on this and the next page. The following code should be added to the FLOAT;C program which comes with the c99 vers. 2 release disk. (To do this, you would load the FLOAT;C file already on the release disk, then key-in this listing to the end of that program, then compile and assemble as usual.)

IN LOOKING OVER our instructions, we also goofed. Here is Don's instructions for loading the program.

1. Select E/A "Load and Run"
2. Load the following programs:
   A. DSK1.C99PFI
   B. DSK2.FUNCTN (In NOV 87 NL)
   C. DSK2.FLOAT (revised version)
   D. DSK1.CSUP
   E. DSK1.PRINTF
   F. DSK1.SCANF
   G. DSK1.C99PFF
   H. DSK1.SAVE
3. After SAVE is loaded, hit enter and use SAVE for program name. Follow instructions on screen and have a disk in drive to save to DSKn.FUNCTN. This will run from E/A "Program File" and you won't have to load rest of programs!

ADD THE FOLLOWING TO end of FLOAT;C

```
/*
 * name: pow - is the power function
 *
 * f=pow(f1,f2)
 *
 *  f1 = base argument value
 *  f2 = the exponent value
 *  f  = result
 *
 */


pow(f1,f2)
  float *f1,*f2;
{
#asm
       MOV  4(14),0     POINT TO BASE
       LI   1,ARG        ARGUMENT
       LI   2,8
FPOW1  MOVB *0+,*1+
       DEC  2
       JNE  FPOW1
       MOV  2(14),0     POINT TO
       LI   1,FAC        EXPONENT
       LI   2,8
FPOW2  MOVB *0+,*1+
       DEC  2
       JNE  FPOW2
       LI   3,>8320      SAVE C WORK-
       LI   4,SAVREG     SPACE R10-R15
       LI   5,6
P3     MOV  *3+,*4+
       DEC  5
       JNE  P3
       LI   0,VSPTR      MOVE STRING
       LI   1,VSTACK     NUMBER
       MOV  1,*0
       MOV  *0,0
       LI   1,ARG
       LI   2,8          NUMBER OF
       BLWP VMBW        BYTES TO MOVE
       CLR  1            CLEAR FLOATING
       MOVB 1,STATUS    POINT STATUS
       BL   C$GPLL
       DATA >0024        RAISES A # TO A
       LI   3,SAVREG     SPECIFIED POWER
       LI   4,>8320
       LI   5,6          RESTORE C WORK-
P5     MOV  *3+,*4+      SPACE R10-R15
       DEC  5
       JNE  P5
       LI   0,VSPTR      VDP STACK PTR
       LI   1,8          RESET STACK PTR
       A    1,*0
#endasm,
   return(FAC);
  }
/*
 * name: sqr - square root function
 *
 * f=sqr(f1)
 *
 *  f1 = the number to take the square
 *       square root of
 *  f  = result
 *
 */


sqr(f1)
  float *f1;
{
       int fctn;
       fctn=38;
       return(math(f1,fctn));
}
/*
 *
 *  f1 = find the Exponent of f1
 *  f  = result
 *
 */
exp(f1)
  float *f1;
{
       int  fctn;
       fctn=40;
       math(f1,fctn);
}
/*
 *
 *  f1 = find the Natural Log of f1
 *  f  = result
 *
 */
log(f1)
  float *f1;
{
```

(Cont'd on page 3)

```
        int  fctn;
        fctn=42;
        math(f1,fctn);
}
/*
 *
 *  f1 = find the Cosine of f1
 *       expressed in radians
 *  f  = result
 *
 */

cos(f1)
  float *f1;
{
        int  fctn;
        fctn=44;
        return(math(f1,fctn));
}
/*
 *
 *  f1 = find the Sine of f1
 *       expressed in radians
 *  f  = result
 *
 */

sin(f1)
  float *f1;
{
        int  fctn;
        fctn=46;
        return(math(f1,fctn));
}
/*
 *
 *  f1 = find the Tangent of f1
 *       expressed in radians
 *  f  = result
 *
 */

tan(f1)
  float *f1;
{
        int  fctn;
        fctn=48;
        math(f1,fctn);
}
/*
 *
 *  f1 = find the ArcTangent of f1
 *       expressed in radians
 *  f  = result
 *
 */

atn(f1)
  float *f1;
{
        int  fctn;
        fctn=50;
        math(f1,fctn);
}
/*
 *
 *  f1 = floating point number
 *  fctn=math function
 *  f  = result
 *
 */

math(f1,fctn)
   float *f1;
   int   fctn;
{
#asm
        MOV  @2(14),@FUNC SAVE MATH FNCTN
        MOV  @4(14),0     POINT TO NUMBER
        LI   1,FAC        TO TAKE SQUARE
        LI   2,8          ROOT OF
FSQR1   MOVB *0+,*1+
        DEC  2
        JNE  FSQR1
        LI   3,>8320      SAVE C W/S
        LI   4,SAVREG     R10-R15
        LI   5,6
FSQR2   MOV  *3+,*4+
        DEC  5
        JNE  FSQR2
        LI   3,>8375      SAVE PAD
        LI   4,SAVPAD
        LI   5,2
FSQR3   MOV  *3+,*4+
        DEC  5
        JNE  FSQR3
        LI   0,VSPTR      MOVE STRING #
        LI   1,VSTACK
        MOV  1,*0
        CLR  1            CLR FLOATING
        MOVB 1,@STATUS    POINT STATUS
        BL   @C$GPLL
FUNC    DATA >0000        SQUARE A NUMBER
        LI   3,SAVREG     RESTORE C W/S
        LI   4,>8320      R10-R15
        LI   5,6
FSQR4   MOV  *3+,*4+
        DEC  5
        JNE  FSQR4
        LI   3,SAVPAD     RESTORE PAD
        LI   4,>8375
        LI   5,2
FSQR5   MOV  *3+,*4+
        DEC  5
        JNE  FSQR5
        LI   0,VSPTR      VDP STACK PTR
        LI   1,0          RESET STACK PTR
        MOV  1,*0
#endasm
        return(FAC);
}
rad(jd,jm,js,f1)
        float *f1;
        int jd;           /* degrees */
        int jm;           /* minutes */
        int js;           /* seconds */
{
        float d[FLOATLEN],m[FLOATLEN],
              s[FLOATLEN];
        stof("3.1415926536",pi);
        itof(jd,d);
        itof(jm,m);
        itof(js,s);
        fexp(s,"/",itof(3600,ftemp),s);
        fexp(m,"/",itof(60,ftemp),m);
        fexp(m,"+",s,m);
        fexp(d,"+",m,d);
        fexp(fexp(pi,"/",itof(180,ftemp),
}                       ftemp),"*",d,f1);
```

(SDCS News continued)
How Woodstock gets the gift and what's in it is the subject of the cartoon, a great little story which runs for about five minutes. The demo was followed by a brisk question-answer session which was quite productive and informative.

ONE QUERY in that session was put to David Allen about the progress his friend, Charley Summerhill, a North County TI-er has had with his 9640. David commented that Charley's MYWORD word processor program is now working right. "The MYWORD program is really good and is a testament to the author's ability," David said. David mentioned that Charley, a most patient man, has grown weary of waiting for all the other software Myarc promised with the 9640.

AROUND THE WORLD in 99/4A seconds:

THE GRAMULATOR has been designed and is ready for production! Mark Van Coppenole 52 Audubon Rd., Haverhill, MA 01380, (617) 372-0336 has stated that a GRAMULATOR will cost between $130 and $160 and has these features: back-up GROM and ROM cartridges, act as a Super Cart, loads GPL code, and make your own customized TI operating system. It will also have on board the software needed to load and save GRAM/GROM for instant access. (This word comes to us from the West Penn 99'ers newsletter which states anyone interested should contact Mark who is testing the market for interest before going into production. Anyone interested?)

BECAUSE THERE ARE few Foundation RAMcards out there, we are not going to print an article by Travis Watford (in the Nov, 1987 issue of the Toronto UG's NEWSLETTER 9T9) about how to upgrade the card by adding an EPROM and making extensive hardware mods. What Watford seems to have done is come up with a method to raise the Foundation from a limited memory card to a true RAM DISK. (Contact him, the Toronto group or our hard copy librarian, Roland Anderson, if you are interested in getting a copy of the article.)

WORD FROM LA BELLE FRANCE (Reprinted from the Nov, 1987 CINDAY News, name of author unstated):

I exchanged letters with a TI owner in France. His English is not perfect but what he had to say is worth repeating:

"You asked me about the TI-99/4A support in France.

"The support is now very weak. The only magazine dedicated to the 4A wil stop with the next issue because may TI users bought French computers over the last three years, often to get French educational software for children. This magazine published fine programs, especially for assembly programmers.

"Before the Texas Instruments departure of the home computer market, the 4A was the best seller here. Many teachers used French version of TI-LOGO II. People from the French division of TI told me their division was leader in Europe Europe, even before England division. (Over than 100,000 consoles sold in France, 70,000 in England). They had been very disappointed."

ED. NOTE: Spelling as shown.

EVERYONE WHO OWNS A TI WHO

LIVES WITHIN 500 MILES OF

LAS VEGAS IS HEREBY SUMMONED

TO THAT CITY FOR THE GREAT
XPO
TI 88

TI FEST WEST

Palace Station Hotel and Casino
2411 W. Sahara Ave., Las Vegas

Feb 27, 28 -------- 9 a.m 6 p.m.

FROM HOLLAND: Woody Wilson reports he has obtained from Bill Flournoy some twenty-two disks of programs of which most are in Dutch. Woody is trying to translate the Dutch to English. He has been trying to find someone who can help him translate some of the commands. So far no luck. (Perhaps its because we don't have the money to pay for a good translator). We will share the disks with anyone that can help us translate.

HERE'S A RAMCARD TIP from the TI-SHUG (Sydney, Australia) NEWS DIGEST, the author appears as John Paine, Technical co-ordinator:

A problem recently cropped up with my Horizon ramcard. As a result of a glitch in the system, whenever I first turned on the PEB, the ramcard light would come on and stay on. To make matters worse, the screen would blank and the keyboard became disabled. It looked like a classic case of lock-up and would have meant taking out the RAMCARD, removing the batteries and letting the card discharge. Since I hadn't backed up the (Cont'd pg.6)

the ramcard onto a disk,this would have meant the total loss of all the files. No way!, I thought to myself and tried to come up with a less drastic solution. I needed to disable the automatic power-up routine of the ramcard DSR, but I couldn't access either the ramcard or any of the diskdrives in order to load a diagnostic program. The only thing I could think of was to use EASYBUG in my MINIMEMORY module, and there in lies the solution.... To cut a long story short, here is what you need to do:

1) Turn everything off.
2) Turn on the console first with MINIMEMORY inserted and select option 2 (EASYBUG)
3) Turn on the PEB and TV.
If everything worked out OK, the ramcard light won't be on and the keyboard will respond to input. If things didn't work out, go back and repeat steps 1-3 until they do.
4) Type in C1000 and <enter>. (Or C1200 or whatever)
5) Type OI and <enter>.
At this point, the ramdisk light should come on and stay on.
6) Escape from the C command by pressing the '.' then M4000 and <enter>.
7) Change the AA to 00 and press <enter>.
8) Quit EASYBUG and return to the title screen.

You should now be able to load the CONFIG file and re-boot the ROS. In my case, I am using version 6.3 of the CALL MENU ROS from the Miami TI Users Group.

NOW, BACK TO CANADA (all in 99/4A seconds, wow!): In an article entitled "RAMDISK RECOVERY" HAL TONKIN tells in an article in the Ottawa UG Newsletter (Dec, 1987) how he followed a similar procedure as that John Paine used as listed above, plus a few more steps, to recover a long C99 program he had been writing and saving in his Horizon ram disk. He apparently had shut down his system depending on the ramcard to save it. However, upon powering up, the disk went into a continuous loop thru its power-up routine. The procedure really is a bit different and the HRD owner will probably want to make copies of both articles, both of which, again, are in the SIG's hard copy library. (Hitting pretty heavy on that hard copy library aren't we . You betcha Yo Mama we are: that library has the answers to a lot of problems if you're willing to dig.)

STEVE LANGGUTH, a premier programmer of the Ozark 99'ers group in Springfield Missouri, has probably pushed out the 99/4A frontiers as far as anyone. He wrote the Fractal Explorer which display displays graphics based on fractal math. In an article he wrote for the GENIE BBS he tells how he built a digitizer system and then wrote the software to provide bit-map graphics for our TI. The article is too long to reprint and is available in the SIG hardcopy library (see the Sept-Oct 1987 edition of Toronto groups "Newsletter 9T9.")

STEVE USED circuits designed by Steve Ciarcia which are shown in articles carried by Byte Magazine in May and June 1987. There are two components to the system: a "digitizer/transmitter" and a "receiver/display." Warning: if you are thinking of doing this yourself, note that Steve spent about $150 apiece to buy the parts for the boards! On top of that, he had to write the software to operate the system. Steve summarizes his effort as follows:

> "The ImageWise Video digitizer system is a fairly simple to build, relatively inexpensive, very powerful video digitizer that CAN be used with the 99/4A. If all you are interested is digitizing video from a camera or VCR, all you really need is the digitizer/transmitter board, which can be assembled for about $150 to $175. To use the digitized images on the 99/4A you will have to "sacrifice" a lot of the resolution. But, because the system sends its data through a standard RS-232 interface, it will continue to be compatible as you "upgrade" your graphics capabilities...."

STEVE INVITES anyone who's interested to either drop him a line on Genie or to write him. He'll sell the software programs for $11 plus a disk to put them on:

STEVE LANGUTH
2956 SO. BARNES
SPRINGFIELD, MO 65804

WE NOW HAVE LISP: The computer language that is. Selling a LISP interpreter is

CHARLES RENTMEESTERS
410 N. CARROLL ST.
MADISON, WI 53703
1 608 256-0725

The San Francisco TI Users Group news letter brought this word. It noted the fairware is $15 plus one disk-mailer and notes: "Incomplete but will be updated. FAST! Has 44 commands, supports recursion, includes brief primer." (We don't know much about LISP except it is supposed to be a language for developing artificial intelligence.

(Editor's note: The following article was printed in The PUG and BYTE-LINE newsletters. The original author's name is not known but the article had a comment that the procedures and program listed had been tried and did work.)

COPYING A CARTRIDGE TO DISK

To do this, make sure you have the TI Disassembler, a cartridge with ROM chips only (You can find out by opening it up then look to see if it has large chips only. If it does, it is ROM only. If it has any small chips, too bad, you have GROM which hasn't worked for me yet since it is in GPL. Use either a widget or cover pin 1 of the cart being copied with tape. (Pin 1 is the rightmost pin on the bottom side.) Also, a printer, although not necessary, is convenient.

INSTRUCTIONS:

(1) COVER PIN 1 OF CART BEING COPIED. THIS IS NOT NECESSARY IF YOU HAVE A WIDGET.

(2) IF YOU HAVE WIDGET, PLUG E/A IN SLOT #1, THE CART BEING COPIED IN SLOT #2 AND XB IN SLOT #3.

(3) MAKE SURE YOU HAVE A TOTALLY BLANK DISK TO COPY THE CARTRIDGE ON.

(4) SWITCH TO THE E/A CART (EITHER WITH WIDGET OR JUST INSERT IT.) INSERT E/A DISKETTE 'A', PRESS OPTION 2 (3 ON THE 99/4) TO SELECT LOAD AND RUN. FOR FILE NAME TYPE 'DSK1.DEBUG' AND PRESS ENTER. TYPE 'DEBUG' FOR PROGRAM NAME.

(5) WHEN THE DEBUGGER PROMPT APPEARS, SWITCH OVER TO SLOT 2 (THE CART BEING COPIED) AND OR INSERT THAT CART. MAKE SURE THE COMPUTER DOESN'T RESET. IF IT DOES, CHECK PIN #1 TO MAKE SURE IT IS DEACTIVATED AND START OVER. (WITH THE WIDGET, DON'T PRESS RESET.) NOW MAKE SURE THE DEBUGGER IS STILL OPERATIVE (PRESS ENTER A COUPLE TIMES.)

(6) NOW TYPE IN 'M6000 8000' AND PRESS ENTER. THE SCREEN SHOULD START SCROLLING UPWARD AND DISPLAY DIFFERENT NUMBERS. IF ALL YOU GET IS '6000=00 00 00 00 00 00 00 00 **********', ETC. OR ZEROES ONLY, MAKE SURE YOU HAVE ROM CART ONLY AND THAT THE SLOT HOLDING THE CART TO BE COPIED IS SWITCHED ON, OR IS PLUGGED INTO THE CARTRIDGE PORT. OTHERWISE, YOU SHOULD BE GETTING ALL KINDS OF NUMBERS AND YOU WILL PROBABLY SEE THE TITLE OF THE CARTRIDGE IN THE FIRST FEW LINES AT THE RIGHT. NOW LET THE SCREEN DISPLAY THE NUMBERS A WHILE AND MAKE SURE THAT EVERYTHING IS OK.

(7) WHEN IT IS DONE, PRESS QUIT (FCTN=) TO GO BACK TO THE TITLE SCREEN.

(8) SELECT OPTION 2 OF THE E/A, AND THEN 3 FOR LOAD AND RUN. INSERT THE DISKETTE WITH TI DISASSEMBLER AND LOAD IT.

(9) PRESS ENTER ONCE. THEN TYPE 'START' AND ENTER. THE DISASSEMBLER TITLE SCREEN SHOULD APPEAR. NOW SWITCH OVER TO THE CART BEING COPIED (OR PLUG IT IN.) MAKE SURE IT DOESN'T RESET OR OTHERWISE STOP.

FOR STARTING ADDRESS, ENTER '6000'. FOR ENDING ADDRESS, ENTER '6500'. NOW INSERT THE DISKETTE YOU WANT IT COPIED TO AND TYPE IN 'DSK1.CART1' FOR THE DEVICE NAME AND PRESS ENTER TO START THE DISASSEMBLY PROCESS. THE DISK DRIVE COMES, ETC, AND THE DISASSEMBLY CODE SHOULD APPEAR ON THE SCREEN. FOR EXAMPLE, THIS MIGHT APPEAR: '61FC JNE >6F64 OR >16F4'.

TO PAUSE THE DISASSEMBLY, PRESS A KEY. PRESS IT AGAIN TO GO ON. THE PROCESS WILL CONTINUE FOR A WHILE. WHEN THE NUMBER ON THE LEFT='>6500' OR AROUND THAT NUMBER, THE SCREEN WILL STOP SCROLLING. PRESS ENTER TWICE TO RETURN TO THE E/A MENU.

(10) NOW PRESS QUIT. PLUG IN OR SWITCH OVER TO THE XB CART AND ENTER THIS PROGRAM:

```
10  REM XB ONLY, HAS LINPUT, WON'T
    WORK IN VANILLA BASIC
100 CALL CLEAR
110 INPUT "SOURCE FILE?>DSKn.":A$
120 INPUT "OBJECT FILE?>DSKn.":B$
130 OPEN #1:"DSKn."A$,VARIABLE 80,
    INPUT
140 OPEN #2:"DSKn."B$,VARIABLE 80,
    OUTPUT
150 LINPUT #1:C$
160 D$=SEG$(C$,6,27)
170 PRINT #2:D$
180 IF EOF(1) THEN 200
190 GOTO 150
200 PRINT "FINISHED"
210 CLOSE #1 :: CLOSE #2
220 DELETE "DSKn"A$
```

(11) RUN THIS PROGRAM. FOR SOURCE FILE INPUT 'CART1'. FOR OBJECT FILE, INPUT 'CART11'. NOW THE DRIVE WILL COME ON AND IT WILL TAKE A WHILE BEFORE IT IS FINISHED. WHEN IT IS DONE, IT WILL SAY SO. IF YOU RECEIVE AN ERROR, CHECK TO SEE YOU HAVE THE RIGHT DISK INSERTED AND THAT THE SOURCE AND OBJECT FILES ARE

----Continued on page 7 ...

NOTE FROM WOODY: I have a program that is quite different from this one. Uses a modified version of "DISKO" (the program that is furnished with FUNNELWEB) to determine the number of chips. You do not have to open the cartridge. See me if you need it. Very easy to use.

VALID. ALSO, CHECK TO SEE ENOUGH DISK SPACE IS AVAILABLE. WHEN DONE, PRESS QUIT.
(12) NOW ACTIVATE THE E/A MODULE AND INSERT THE E/A DISKETTE 'A' AND SELECT 1 FOR EDITOR. PRESS 1 FOR LOAD FILE AND FOR FILE NAME USE 'CART11'.
(13) WHEN LOADED, PRESS FCTN-9 FOR THE EDITOR COMMAND LIST, EXAMPLE: Edit,Tabs,Files,Delete,Insert, etc. THEN SELECT 'R' FOR REPLACE. NEXT TYPE IN V,1000/6/A AND PRESS ENTER. NOW PRESS 'Y'WHENEVER THE CURSOR IS ON A JMP 6??? OR A LI 6??? OR A SB,CB,B,BLWP,LI AND ALL OTHER ONES EXCEPT TWO DIGIT (FOR EXAMPLE '6?') OR DATA STATEMENTS. WHEN YOU REACH THE LAST ONE, THE EDITOR WILL BE IN THE EDIT MODE. PRESS FCTN-9 AND TYPE 'R' FOR REPLACE. THIS TIME, TYPE IN V,1000/7/B/ AND PRESS ENTER. DO THE SAME THING AS THE THE LAST TIME. WHEN YOU ARE FINISHED., SAVE THIS IN VARIABLE 80 FORMAT ON THE EDITOR COMMAND LIST.
(14) DO STEPS 8-13 AGAIN, CHANGING THE ADDRESS FOR DISASSEMBLY PROCESS THE SECOND TIME AROUND TO 6500 AND ENDING ADDRESS TO 7000, THE FILE NAME TO CART2, SHRUNK VERSION TO CART 22, AND THE THIRD TIME, 7000-7500, CART 3, CART33; THE FOURTH TIME 7500-8000, CART 4, CART44. THEN GO TO THE NEXT STEP.
(15) TYPE IN THE FOLLOWING PROGRAM IN THE E/A EDITOR:

```
     DEF   START
     AORG  >A000
STAPT
     COPY  'DSKn.CART11'
     COPY  'DSKn.CART22'
     COPY  'DSKn.CART33'
     COPY  'DSKn.CART44'
     END
```

SAVE THIS AS 'CART55' IN VAR 80 FORMAT. NOW LOAD THE ASSEMBLER, OPTION 2 AND FOR THE SOURCE FILE NAME, USE 'CART55', FOR OBJECT FILE NAME, USE 'CART66'. ASSEMBLE USING THE 'R' OPTION. WHEN IT IS FINISHED, JUST LOAD AND RUN. FOR THE PROGRAM NAME, USE 'START'.

IF IT DOESN'T LOOK RIGHT, USE THE EDITOR AND LOOK AT THE FIRST AND LAST LINES OF THE DISASSEMBLED CODE TO SEE IF THE NEXT FILENAME HAS IDENTICAL CODE OR IF ANY LINES ARE LEFT OUT. WHEN DONE WITH THIS, ASSEMBLE IT AGAIN. IF NECESSARY, CHECK AGAIN UNTIL IT WORKS.
(16) GOOD LUCK. THE END.

NOTES FROM WOODY'S DESK

THE SEPTEMBER 1987 ISSUE of TIPS99 from the TI PUGET SOUND 99ERS had the following tip:
DM1000 FIX
From the Southern Nevada Users Group
From the desk of Mike Dodd

DM1000 has an annoying little bug if you happen to own a CorComp disk controller. When DM1000 formats disks in double density, it puts 16 sectors/track on the header, even though it formats 18 sectors/track, which is all very fine and well if you keep it on a CorComp controller, for the reason that the CorComp never even heard of 16 sectors, so it doesn't care what the header says. HOWEVER, if you send the disk to someone who has a MYARC disk controller, then the MYARC controller looks at the header and sees "16 sectors per track." so it reads the disk based on that information. But it's 18 sectors per track! So, the MYARC reports a "blank" disk. After having several people complain about my "blank" disk, I found a fix for DM1000. For V3.5, edit the first sector of the MGR1 file. At byte 216, you should see (in hex):

10 00 02 D0 00 5A

Change the 10 to 12. Write the sector back to disk and never worry about it again. If you are using another version of DM1000 that has the same problem (I don't know if any others do), search for the above bit of code. It should be very close to the beginning. It is also possible to change those disks formatted as double density by changing the sectors per track information in the first sector (Sector 0). Once again a sector editor is necessary. Sector 0 is called up for editing and byte 12 (decimal) or C (hex) is changed from the existing 10 to 12 (both in hex)

NOTE: MYARC disk controller users should not reset the sector 0 byte from >10 to >12! If you do, the system will assume it is 18 sectors per track. In that case, you will see the same problems that we CorComp users have seen.

FNLWEB/4*0, PRBASE (Vn.2), CorComp RAM
If you change the name of the UTIL1 file on PRBASE to DB, re-name your RAM-DISK PRBASE, load the PRBASE files into RAM, and select "DATA BASE" off of the FNLWEB menu, you get a fast loading data base, but it isn't QUITE right! Your first screen of your DATA file will have the message "Enter String in Field, press PROCD...". Normally, PRBASE reads the disk and says it is initializing and the numbers count up on the top and bottom right side of the screen. Until we find out what is wrong, try this: Change the PRBASE "LOAD" program to a name other than "LOAD" (I use LOAD3) and put it in RAM. Add name "PRBASE" to first FNLWEB menu. When you CONFIGURE, on the third line (FILE) use name you changed LOAD to. ("DSKR.LOAD3", for example). Change RAM name to PRBASE if you load your PRBASE files into the RAM, otherwise make sure you have the PRBASE disk in one of your floppy drives. PRBASE uses volume names so it will hunt for the files. (Not as fast loading as the RAM)

SAN DIEGO COMPUTER SOCIETY

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JANUARY 1988 NEWSLETTER

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