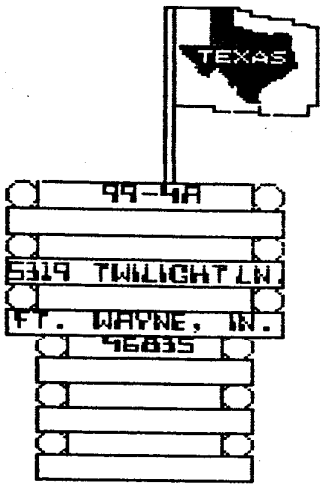

THE FORT'S USER GROUP

April 1987

PRESIDENT'S COMMENTS - BY GARY COFFEE

Spring is officially here and it appears that we have made it through another winter. People are starting to get out into the yard to clean up the debris blown in by those winter winds and , of course, there is the annual spring cleaning inside the house. Have you ever cleaned your computer? Now would be a good time - being spring and all! But how do you go about it - what do you clean ..... Bring your console to the next meeting and Tony Miller will again demonstrate some of his techniques of disassembling and cleaning the various ports in the console and those numerous cartridges. Enclosed in this newsletter, you will find more detailed instructions relating to this important subject. The GROM (cartridge) port and the SIDE (peripheral expansion) port are the "weak links" in the TI 99/4A system. Those areas tend to get dirty or oxidize (something) over time and unpredictable results occur. The Extended Basic cartridge seems to be very sensitive to the dirty port predicament.

The theme for April is RAM DISKS - hope some you RAM DISK owners will bring your "pride and joys" to the next meeting and show everyone how they work! I have no other demos for this meeting and, as such, hope some of you other members step forward with a demo of your favorite program or hardware item. If not - so be it! By the way, the most recent upgrade to my Myarc Extended Basic II - 128k operating system has now arrived and this version appears to work fine (version 2.12). The graphics and screen generation speeds are incredable - compares to some of those expensive computers! I hope to demo this at the meeting.

The console cleaning part of the meeting will be held after the normal meeting and demos - as a special workshop - bring your own tools and cleaning materials with you, if you are going to clean your console. This will be a great opportunity to do so!

The next meeting of The Fort's User Group will be held at the Shawnee Branch Library on Saturday April 11, 1987 - doors open at 9am and the meeting starts at 9:30am. The console cleaning workshop will begin after the meeting and the meeting room will be available until 1 or 1:30 pm, if we need it.

MINUTES

Meeting of March 14, 1987
Submitted by Dennis B. Przybyla, Secretary

President Gary Coffee called the meeting to order at 9:43 a.m. There were sixteen members and two guests in attendance. The Secretary's minutes of the February meeting and the Treasurer's report for March were published in the March Newsletter. The formal presentation of these reports at the meeting were omitted but submitted as published. There were no additions or corrections to the reports of the Secretary and Treasurer and the reports were approved as published.

As approved at the last meeting, the club has purchased a small black and white TV monitor for $73.47. It is a high quality Pansonic portable with a 5" screen, AC and battery powered. The defective Peripheral Extension Cable has been returned to Tenex for replacement.

Blair MacDermid conducted a very interesting and informative discussion on the computer language Forth. Charlie DeLabarre brought the group up to date on the membership handbook. There was a discussion on the value and need of the membership handbook. Just how elaborate should the handbook be in order to fulfill the need of the membership? Charlie will go forward on this project.

Members were again having difficulty with the modules working properly on their TI-99/4A's. This resulted in a discussion of how to clean the contact areas of the module and side ports of the computer and the necessity of cleaning the contacts of the modules as well. Tony Miller will again present a demonstration on the proper maintenance of the TI99/4A.

Blair MacDermid announced that the Forth User Group meeting will be held on Tuesday, April 14, 7:00 pm, room 138 Neff Hall, on the IPFW campus.

Kenneth and Kevin Mahoney were our guests at the meeting but not for long as Kenneth registered as a new member before the meeting ended. Welcome Kenneth! Our paid membership now stands at twenty-four active and one subscribing member. Martin Donahue was the door prize winner. He received the Defender Cartridge game.

With the closing of the official meeting and general discussion, Robert Knox demonstrated his newly acquired CorComp 9900 Micro-Expansion System. This compact system includes the equivalent of the 32K card, RS232 card, and double sided double density disk controller card. Robert has two disk drives to complete the system. A very interesting piece of equipment.

The next meeting will be held on Saturday, April 11, at the Shawnee Branch Library.

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Membership/Treasury - Anthony W. Miller

As the onslaught of summer comes, so does the lack of sitting down to this trusty ol' computer. If this sounds like I have given up on this computer, you are wrong. The time I take in using this ol' orphan has just diminished with the sight of looking out the window at a nice Indiana spring day. At this time of year, most computer users are blind to the outdoors or they very seldom sit down and and use the dusty keyboard. Now is the time for most of the users to compile all of their questions so we have more time to answer them. As for this computer user, I have stacks of disks I havn't even touched. One of the reasons is, the time is not there to spend trying to learn how to operate the programs. If you are like me, my time is spent doing other things. The time it takes to learn a software package is a long drawnout process. From experience this is not just a TI problem. Branching over to the PC world, programs like Lotus 123, Dbase III+ and Multi-Mate takes a long time to sit down and use. If you don't use these every day, you tend to lose all of the knowledge that you have gained. I recently completed three courses in the above programs. This adds up to 60 hours of training on these programs. The time that is taken to learn these programs is so enormous, that when I get home, all I want to do is play. So, in order to use the programs that are written for the TI, I don't have the time to learn most of the programs that I have in my library.

Now is where the membership comes in. Out of the great membership that we have, I hoped we could get some of you to review the programs and report on how they operate. The time you have already spent on these programs can help all of us. This also includes games, word proccesors, data bases and utilities. Most of the members have their favorite programs they use all of the time. If we could get you to demonstrate these programs, the whole membership can benefit from this. At the next meeting, I will have a sheet you can fill out to let me know what programs that you, as a membership, feel you would like to demonstrate. This will allow all of us to be able to use the full potential of this ol' orphan.

Now on to the treasury report. At the last meeting, all of the attending members saw the new 5" monitor I purchased for the user group. I have also sent back the "aircraft eliminator" to Tenex. I hope it will be here by the next meeting. Recently I received mail from a Steve Johnson in Annapolis Md., a donation from the Memory Checker program that I wrote. With this donation to me, I will then also donate it to the user group in the sum of $5.00.

I would also like to take this time to welcome aboard Kenneth and Kevin Mahoney. WELCOME.

The treasury report for the month of March:

DEBITS

OLD BALANCE.....	$413.71
B/W TELEVISION.....	$ 73.47
POSTAGE(CONNECTOR).....	$ 1.25
BALANCE.....	$338.99

CREDITS

INTEREST.....	$ 1.45
DONATION(TONY MILLER).....	$ 5.00
MEMBER(1).....	$ 15.00
NEW BALANCE.....	$360.44

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>>>EDITOR'S NOTES<<<
by P. Murphy

This month I have two more excellent programs written by Tom Freeman of the LA99ers group. I have paraphrased his documentation to digest the information. For the entire DOC's listing see our library (and I have typed in these programs and have deposited them in our library...thanx TOM!).

ERROR CHECK FOR XBASIC PROGRAM ENTRY

Ever typed in a TI/4A version of a magazine program and noticed that the other versions have little numbers at the end of the lines that the TI version does not have? These are for error checking on your typing, to insure no mistakes. Have you ever run one of these lengthy programs just to find it crashes, all because of a simple typing error that you can't find? Does TI have one? NOW THERE IS!.

Programs are to be stored in MERGE format after typed in and then this leaves only one extra step for the programmer and one for the user who is typing in the published program. The programmer must save his/her program in merge format and then run the following program...

```
100 !CREATE CHECKSUMS FOR XBASIC PROGRAMS, BY TOM FREEMAN, LA 99'ERS !250
110 !SHOULD BE USED TOGETHER WITH "CHECK" ASSEMBLY FILE THAT WILL PRINT CHECKSUMS ON SCREEN !099
120 DISPLAY AT(2,1)ERASE ALL:"CREATE CHECKSUMS FOR XBASIC ERROR CHECKING": :" BY TOM FREEMAN" !085
130 DISPLAY AT(10,1):"INPUT MERGE FILE?":" DSK1." !007
140 DISPLAY AT(13,1):"OUTPUT MERGE FILE?":" DSK1." !108
150 ACCEPT AT(11,3)SIZE(-15)BEEP:I$ :: OPEN #1:I$,VARIABLE 163,INPUT !192
160 ACCEPT AT(14,3)SIZE(-15)BEEP:O$ :: OPEN #2:O$,VARIABLE 163,OUTPUT !053
170 DISPLAY AT(20,1):"ANALYZING LINE":"CHECKSUM IS " !014
180 LINPUT #1:A$ :: IF LEN(A$)=2 THEN CLOSE #1 :: PRINT #2:CHR$(255)& CHR$(255): : CLOSE #2 :: STOP !115
190 Z=ASC(A$)*(256)+ASC(SEG$(A$,2,1)):: DISPLAY AT(20,15)BEEP:Z !141
200 B$=SEG$(A$,3,163):: L=LEN(B$):: IF L>157 THEN 230 !162
210 N=0 :: FOR X=1 TO L :: Y=ASC(SEG$(B$,X,1)):: N=N+Y :: NEXT X :: N=N AND 255 :: N$=STR$(N)::
N$=RPT$("0",3-LEN(N$))&N$ !088
220 DISPLAY AT(21,13)BEEP:N$ :: PRINT #2:SEG$(A$,1,L+1)&CHR$(131)& N$&CHR$(0):: GOTO 100 !252
230 DISPLAY AT(22,1)BEEP:"WARNING!":" LINE";Z;"IS TOO LONG!":"PRESS ANY KEY TO CONTINUE" !123
240 CALL KEY(0,K,S):: IF S=0 THEN 240 ELSE PRINT #2:A$ :: GOTO 180 !232
```

Notice the "!" and 3 numbers at the end of each line? The program was run on itself! THE USER MUST BE WARNED NOT TO TYPE THESE 4 CHARACTERS, since they were not computed into the checksum. At the end (it may take awhile) the programmer types in NEW and merges in the output file, then save it normally. This is the form to be published.

Now what the user must do is once type in the CALL LOAD program, listed below, then upon entering XBasic...

```
CALL INIT :: CALL LOAD("DSKx.CHECK") :: CALL LINK("CURSOR")
(if program saved off with name 'CHECK')
```

This one line can be saved off with a line number and then RUN each time instead of typing it in every time. What the assembly routine at CURSOR does is some housekeeping such as moving the numbers 0-9 to character 13-14, changing the colors there, redefining the cursor, putting up the title screen, and then turning on the user defined interrupt. Now at every VDP interrupt (each 1/60 second) the routine at CHECK begins. The interrupt can be turned off with CALL LINK("OFF") and back on with CALL LINK("ON") at any time and the shape of the cursor will tell you which mode you're in. Now every time you enter a new program line the checksum will appear at the bottom of the screen and one extra line scrolled up. HERE IS THE KEY - IT SHOULD CORRESPOND TO THE ONE PUBLISHED THAT YOU WERE TYPING IN. Hence, no errors.

```
100 CALL INIT :: CALL LOAD(9460,0,0,0,0,0,0,106,160,106,216,0,10,11,13,0,0) !180
110 CALL LOAD(9484,0,126,66,66,66,66,126,0,31,31,32,32,88,66,65,83,73,67,32,69) !144
120 CALL LOAD(9504,82,82,79,82,32,67,72,69,67,75,69,82,32,32,32,32,32,32,85,83, 73,78) !107
130 CALL LOAD(9526,71,32,67,72,69,67,75,83,85,77,83,32,32,32,32,32,32,66,89,32,84, 79,77) !119
140 CALL LOAD(9548,32,70,82,69,69,77,65,78,44,32,76,65,32,57,57,69,82,83,2,132, 0,10) !052
150 CALL LOAD(9570,17,2,2,36,0,7,2,36,0,48,192,68,2,33,0,176,6,193,4,32,32,32) !199
160 CALL LOAD(9592,4,91,2,0,3,240,2,1,37,4,2,2,0,8,4,32,32,44,2,0,4,128) !121
170 CALL LOAD(9614,2,1,39,22,2,2,0,80,4,32,32,44,2,0,7,0,4,32,32,36,4,32)
180 CALL LOAD(9636,32,24,0,38,2,2,37,22,2,3,96,96,2,4,0,36,192,66,172,131,6,4) !204
190 CALL LOAD(9658,22,253,2,0,2,228,2,2,0,24,4,32,32,36,4,32,32,24,0,38,2,0) !067
200 CALL LOAD(9680,2,228,2,1,37,46,2,2,0,24,4,32,32,36,4,32,32,24,0,38,2,0) !020
210 CALL LOAD(9702,2,228,2,1,37,70,2,2,0,24,4,32,32,36,2,0,3,240,2,1,37,12) !006
220 CALL LOAD(9724,2,2,0,8,4,32,32,36,2,0,38,36,200,0,131,196,4,91,2,0,3,240) !119
230 CALL LOAD(9746,2,1,37,4,2,2,0,8,4,32,32,36,4,224,131,196,4,91,216,32,152,2) !239
240 CALL LOAD(9768,36,248,6,224,36,248,216,32,152,2,36,248,6,224,36,248,6,32, 36,248,136,32) !133
250 CALL LOAD(9790,36,248,36,250,26,8,136,32,36,248,36,252,27,4,4,224,36,244, 4,224,131,4) !013
260 CALL LOAD(9812,216,32,36,248,156,2,6,224,36,248,216,32,36,248,156,2,2,0, 8,28,2,1) !054
270 CALL LOAD(9834,37,20,2,2,0,2,4,32,32,36,2,0,8,15,2,1,244,0,2,2,0,13) !105
280 CALL LOAD(9856,4,32,32,32,5,128,6,2,22,251,2,0,7,4,4,32,32,48,7,96,36,244) !204
290 CALL LOAD(9878,22,62,2,1,0,3,152,33,36,254,131,117,19,3,6,1,22,250,4,91, 200,32) !180
300 CALL LOAD(9900,131,4,131,4,19,49,136,32,131,4,131,74,22,45,7,32,36,244, 208,160,131,66) !038
310 CALL LOAD(9922,9,130,2,0,8,32,2,1,39,22,4,32,32,44,4,224,37,2,184,49,37,3) !195
320 CALL LOAD(9944,6,2,22,252,200,11,36,246,4,32,32,24,0,38,2,0,2,226,193,96,37, 2) !138
330 CALL LOAD(9966,2,2,0,10,2,3,0,100,2,6,0,2,4,196,61,3,6,160,37,94,5,128) !027
340 CALL LOAD(9988,192,194,6,6,22,248,193,5,6,160,37,94,194,224,36,246,4,91) !104
350 CALL LOAD(16376,79,78,32,32,32,32,37,244) !042
360 CALL LOAD(16368,79,70,70,32,32,32,38,14) !240
370 CALL LOAD(16360,67,72,69,67,75,32,38,36) !002
380 CALL LOAD(16352,67,85,82,83,79,82,37,122) !053
390 CALL LOAD(8194,39,22,63,224):: CALL LINK("CURSOR") !143
```

Thanks again to Tom Freeman of the LA99ers!!

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Programming in "C"
by Jeff York
Continued next month...

Console Cleaning
-by-
Anthony W. Miller

$$$ CAUTION $$$

This article requires the disassembly of the console that has C-MOS chips inside. These chips can be ruined by a static charge. Prior to following the instructions, please make sure that you are grounded. This includes touching a metal object such as the PEB box. If you have been experiencing static electricity in your home, please do not perform this disassembly on carpeting. Instead do this on a wood or linoleum floor.

First of all, we need to get the proper tools. Following is a list of tools that I have found very helpfull.

1) Small Phillips Screw-driver.
2) A soft eraser.
3) One credit card.
4) A flat table.
5) Radio Shack contact cleaner.
6) One black magic marker
7) A lot of patience

STEP 1 Disconnect the console from all of the cables that are hooked to it. Never do any work to the console when there is power applied. Now let us wait two minutes for the capacitors to discharge.

STEP 2 There are seven phillips head screws on the bottom of the console. (By the way, I am working with the newer model of console. It is the beige console. The black and silver console is the same construction, except for the off and on switch). Four are located in the front and three are located in the rear. After loosening the screws, just lift the bottom off of the console. Be careful on turning this piece over, the screws will fall out. If you must turn this over, do this on a flat table so you will not lose the screws.

STEP 3 With the console turned over,(keyboard down) there are two screws that hold the power supply on. Notice the routing of the power wires. They are on the left side of the plastic pilon. After taking out these two screws, just pull the power supply up about an inch. There is a plug that connects to the upper left corner. This plug has a lever that hooks onto the connecter. Just press on the lever and pull the plug off of the power supply board. At this point if you have access to a good finned heat sink, you could replace the clamp-on heat sink. I did this and my power supply runs much, much cooler. (Just a quick hint).

STEP 4 Now comes disconnecting the keyboard. There are approximately four screws holding the keyboard on. Take these out, but do not remove the keyboard yet. Just leave it sitting where it is.

STEP 5 Now comes the time to remove the motherboard. This is the silver clamshell. There are three screws that hold the board on. One on the right, one in the center hole of the clamshell and one on the left side. After these are removed, make sure that you can lift the clamshell. If you cannot, then you missed one.

STEP 6 Now is the time to unhook the keyboard. Just lift the clamshell up and unplug the keyboard. I use an old trick here. I first mark the connector with a black magic marker on the connector and the board so that I know which end to plug the keyboard back into.

STEP 7 Now that the motherboard and clamshell are lifted out, we can now clean the connectors. The first one we will clean is the Grom port (or cartridge port) connector. This has a shield over it. It can be easily removed by lifting on the ends. This has a felt wiper in it. Just be careful because it can break if you pull too hard on the edges. They just need to be moved a little. Now is when the black magic marker comes in handy again. Mark on the clamshell the position of where the cartridge plugs in. This way you know how to re-install the connector. The connector is plugged into the motherboard. We can now remove it. Just unplug it. Usually wiggling it back and forth will unplug it. With the credit card and the contact cleaner, spray the inside of the connector and move the corner of the credit card back and forth inside the connector to clean the contacts. If the card comes out dirty, just wipe the corner off and repeat until the card comes out clean.

STEP 8 Now with the soft eraser, erase the circuit board edge of the connector. Do this very gently, just enough to get the crud off of the plated contacts. After you are done, spray the eraser dust off of the card edge. After the card edge is sprayed, do not touch the edge any more. This keeps any oils from your fingers from getting on the card edge. Now we can put the felt wiper cover back on the connector and plug it back in the way we marked it. If by chance you didn't mark it, it goes in with the Grom connector facing opposite the way the modulator cord is plugged.

STEP 9 With the soft eraser, erase the I/O connector. This is the connector that the speech synthesizer or the PEB connector plugs into. After this is done, spray the eraser dust off with the contact cleaner.

STEP 10 Now we can reverse the procedure that we used to disassemble the console. When putting the clamshell back on, be very careful of two things: 1) Make sure that the keyboard is plugged in before putting the screws in the clamshell and 2) The center screw in the clamshell does not fall into the clamshell itself. If this happens, the calmshell will have to be disassembled to remove it.

This procedure should eliminate a lot of the lockup problems associated with cartridges like Extended Basic. One word of advice to remember: The cartridge itself might need cleaned also if the Grom port is excesively dirty. This is the one cartridge that you use all of the time.

Until next time -->

-Tony-

FOR SALE

COMPLETE TI 99/4A SYSTEM - INCLUDES THE FOLLOWING:

- TI 99/4A CONSOLE
- PERIPHERAL EXPANSION BOX WITH 1 FULL HEIGHT DSDD DISK DRIVE (DSK1)
- 1 FULL HEIGHT DSDD STAND ALONE DISK DRIVE WITH POWER SUPPLY (DSK2)
- SERIAL/PARALLEL CARD (RS 232) - FOR PRINTER AND/OR MODEM
- MYARC 512 K MEMORY CARD WITH MYARC EXTENDED BASIC II CARTRIDGE (AND VERSION 2.12 SOFTWARE)
- POWER SUPPLY FOR MYARC MEMORY CARD - KEEPS CARD ACTIVE EVEN WHEN SYSTEM IS TURNED OFF
- CARTRIDGE EXPANDER (WIDGET) - CONVERTS CARTRIDGE PORT TO ACCEPT 3 CARTRIDGES AT ONCE
- 100+ DISKS OF PROGRAMS - SOME OF THE BEST COMMERCIAL AND FREEWARE PROGRAMS WITH DOCUMENTATION
- TEAKWOOD ROLL TOP DISK CABINET - HOLDS OVER 200 DISKS
- GEMINI 10X PRINTER - 9 X 9 DOT MATRIX - EXCELLANT TEXT AND GRAPHICS - WITH CABLE
- CUSTOM MADE CABINET TO HOUSE THE PE BOX, HOLD MONITOR, AND COMBINED BOOK SHELF - INCLUDES SINGLE ON/OFF SWITCH TO CONTROL THE COMPLETE SYSTEM
- VOLUMES OF TECHNICAL MANUALS, TIPS, AND PROGRAM HELPS
- CARTRIDGES INCLUDE:
    - TI EXTENDED BASIC
    - TI DISK MANAGER 2
    - MYARC EXTENDED BASIC II W/ E/A CHIP INSTALLED - RUNS BASIC, FULL EDITOR/ASSEMBLER, AND MYARC XBASIC
    - NAVERONES DISK FIXER
    - PERSONAL RECORD KEEPING
    - PARSEC
    - ADVENTURE (WITH ALL ADVENTURE PROGRAMS)
    - MOON MINE
    - TUNNELS OF DOOM
    - TI-WRITER
    - TERMINAL EMULATOR II

I WOULD PREFER TO SELL THE COMPLETE SYSTEM IN ONE PACKAGE. HOWEVER, I WILL CONSIDER SELLING SELECTIVE ITEMS.

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GARY COFFEE
PHONE: 219/747-5436
OR
219/747-2891

****

W.I.S.H. LIST

WISH GAC0686...A terminal emulator program that would transfer a complete disk rather than one file at a time.

WISH TM0686...Would like a ribbon cable connector (female) for a 36 pin .100" card edge connector.

WISH GAC0786...A program that would download different fonts to a dot matrix printer i.e., script, gothic, roman, etc.

WISH BCD0886..Would like a ribbon for a GORILLA BANANA and info on how to access the printer in graphics mode.

WISH JY0886...A program that converts CALL LOAD statements into assembly language source code.

WISH BCD0986..Would like a used expanded system (RS232 Optional), at least one disk drive and 32K memory expansion.

WISH GCC1286..Would like a casette cable and educational programs or modules (primary level).

ANSWER GAC0686...Use FREEWARE program "MASS TRANSFER" available from Stuart Olson, 25322 W. Wayside Place, Lake Villa, IL 60046. Program now in user group library.

ANSWER TM0686...Connectors you want are available from PILGRIM'S PRIDE, 5 Williams Lane, Hatboro, PA 19040

ANSWER JY0886...The program to convert CALL LOAD to ASM. LANGUAGE source or object code has been written by Tom Freeman of LA99ers and is in our library.

ANSWER GAC0886...Program called OLDENG prints any TI-WRITER file in old english letters - also Character Sets and Graphics Design III provides 6 full character sets - can be purchased from TEXAMENTS.