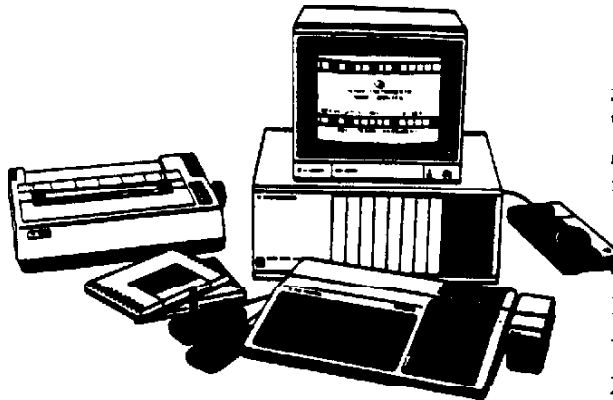# AMARILLO 99/4A USERS GROUP
P.O. BOX 8421 AMARILLO , TEXAS 79114-8421

President
Joe Slutz
5129 South Bonham
Amarillo, Tx 79101
359-7148

Vice President
Steve Eggers
5715 W. 50th
Amarillo, Tx 79109
353-6867

Secretary / Editor
Samuel R.M. Burton
1323 Callahan
Amarillo, Tx 79106
352-4778

Treasurer
Diana Woods
4704 S. Fannin
Amarillo, Tx 79101
358-9770

Technical Editor
Fred Dennis
1615 Lawson
Amarillo. Tx 79106
355-3868

Librarian
Jere Lawrence
8621 Columbia
Amarillo, Tx 79110
352-7353

JUNE 1988 NEWSLETTER
VOL 8 NUM 6

JUNE

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JULY

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This newsletter is the official publication of the AMARILLO 99/4A USERS GROUP, a non-profit organization serving member/users of the Texas Instruments 99/4A HOME COMPUTER and compatibles.

INSIDE THIS NEWSLETTER

Minutes of last meeting
President's Article
Editor's Comments
Treasurer's Report
STARFLEET drawings
Thumball Modification

FENNELWEB 4.0 DOCS
NOTE:A GENEVE IS COMING!
TI 99/5
Bits and Bytes
Computer Humor
Swap and Sell

* *
* * * TEXAS INSTRUMENTS * * *
Do you have their number?

TI CARES	:	1-800-842-2737
TI MANUALS	:	806-741-2265
TECHNICAL ASS'T	:	806-741-2663

The Amarillo 99/4A Users Group(AUG) releases its newletter 12
times annually in Amarillo, Texas. Material contained within
this newsletter has been freely compiled from various sources
(cited when ever possible). While every attempt has been made
to provide high quality factual and interesting articles, the
AUG and its editorial staff cannot accept responsibility for
errors in advertising or text appearing in this newsletter.
Any articles concerning hardware modifications are printed
with the understanding that the modifications void the
warranty and are undertaken at the reader's own risk!

===== ADVERTISING RATES =====
For best results, each ad must be on white photocopy ready
media. The AUG is not held liable for any damages exceeding
the cost of advertising. Members of the AUG are permitted to
advertise TI equipment in the Swap and Sell section at no
cost.

FULL PAGE	$10.00
HALF PAGE	5.00
QUARTER PAGE	3.00
BUSINESS CARD	2.00

=

SHARE YOUR KNOWLEDGE

Keep other TI99ers in touch with your work by contributing
articles, programs and helpful tips. If you want to grow and
prosper then your help is needed and appreciated by the
officers and staff of the AUG. For information about
submitting articles, call Sam Burton - Editor,
                        at (806)-352-1778.

We welcome papers,tutorials and application articles. Length
should be 400-500 words. We prefer delivery by mail or on a
5 1/4 diskette using TI-Writer compatible format. Double
spaced, letter quality hard copy is acceptable. Original
computer art work (TI-Artist or MAX-RLE files) are welcome.
Please include a short biography and author's telephone
number.

=

FROM THE EDITOR:

June is in the air and we seem to be well into a lovely summer here in
the panhandle of Texas! The Dallas TI Fair has come and gone and school
is out for most kids across the country. It has been very hectic
getting the newsletters out these passed few weeks. The good news is
that my wife Vicky and I are expecting our first child in October. So,
time will be precious indeed and will certainly make deadlines hard to
meet. As secretary I keep our group listed in COMPUTER SHOPPER and
answer any letters and requests for information. The mail is just about
caught up (the three day weekend really helped out a lot). We have
been getting several requests for GENEVE support and new members trying
to get started with garage sale systems.

It is now a full year since I took the office of secretary and about
six months since taking over the office of editor of our group
newsletter. I wish I could say that I always got the newsletter out on
time but several times the work just did not get done. I am of course
responsible for delays and missed deadlines. I know I will need some
more help in the weeks to come.

The TI community seems healthy enough but what we need is more growth.
The people who are going to switch to other computer probably have
already done so. We need to find those shut ins who are still using the
TI but done know about the Users Group. How can we reach those people?
Advertise...Post Memos...Talk to people...Handout flyers...these seem
like good ways to start. Other groups in larger cities seem very lucky
to have several hundred members and are able to host FAIRS on a yearly
basis. Our group will be fortunate to have it's first GENEVE owner this
month. That's right the new TI 99/4A compatible is finally here in
Amarillo! Steve Eggers will try to demo the 9640 at our next meeting...
this is one meeting you won't want to miss!

In this issue I've tried to get lots of information into some kind of
reasonably coherent form. What do you think of the STAR TREK graphics
of Mr. Barackman? He spent many hours making those drawing for TI
ARTIST/ DISPLAY MASTER demonstration. They are very reasonably priced
and can be ordered from address in the ADS section of the newsletter.
I also received my film back from photos taken at the FAIR. If time
permits I'd like to do a slide show and pass around the pictures at our
next meeting.

This newsletter has a lot to offer this month. I'm continuing the
Modifications Manual. Humor Page. Swap and Sell. and Programs section
of the newsletter. Write me a letter, send me your graphics, and share
your ideas. Send me any interesting computer articles or cartoons. I
need them for the humor page. Get involved .... See you at the next
meeting.

SAMUEL BURTON

MINUTES.......BY SAMUEL RM BURTON

The meeting was called to order by Joe Slutz at 7:15 PM.

Old Business consisted of FAIRE information. Attending officers were:
Joe Slutz(President),Steve Eggers(Vice President),Sam Burton(Secretary
and Editor),Diana Woods(Treasurer). Joe then continued the meeting
with software demonstrations.

New Business consisted of a treasurer's report. $256.00 makes up our
current balance. Joe read a list of dues paying members and let
everyone know their individual membership status.

Steve Eggers demonstrated the 4AFLYER cartridge. Several other
flight simulators were discussed. (Sam Burton demonstrated a flight
simulator program at the last meeting.) TI-ARTIST art work on STARFLEET
technical drawings by Mr. STEVE BRACKMANS was then shown and well
received by the group. (See the ad section for ordering details). The
various other programs purchased at the Dallas Faire were presented by
Joe Slutz. A demo of GREAT LAKES SOFTWARE program CALENDAR 99 was a
real hit! Finally you can make calandars with graphics combined. The
small instances were really impressive and added a lot to the usually
bland calendars generated by other programs. The group meeting was
followed by discussion and adjourned at 8:30 PM.

Two new TI users were introduced: Leon Miller and Justin Miller - let
us welcome these new comers!

ATTENDING WERE: Joe Slutz,Steve Eggers,Sam Burton,Diana Woods,Fred
Dennis, James Billingsley,Larry DeSierra,Erwin Kohn, Jake
Fortenberry,Frank Aleman,Robert McGaughey,Leon Miller,Justin Miller


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******************** TREASURER'S REPORT ********************
                       JUNE  1988
************************************************************

            FOR THE PERIOD MAY  1 - MAY   31

CASH ON HAND, BEGIN
CASH RECEIPTS                          $ 276.26
CASH AVAILABLE                           00.00
CASH DISBURSED                          276.26
CASH ON HAND , END                       20.00
                                        256.26


RESPECTFULLY SUBMITTED: DIANA WOODS, TREASURER AUG

************************************************************
```

This is page six of a continuing effort to log in a coherent
and easily used manual the many known TI hardware modific-
ations that are of interest to the more technically inclined
user. This month's additions come to us from Douglas Garner
and others of the Langley Resarch Center, Hampton Virginia.
It is a thumb ball for the joystick of your dreams! It is
only a suggested model but will work if constructed. It
brings to mind that the TI 99 premium joystick was built for
the Milton Bradley Xpansion (MBX) System. I wish somebody
would release the codes to program it!

"Thumball" Auxiliary Data-Input Device

A track-ball-type device is mounted on a joystick and operated by a thumb.

Langley Research Center, Hampton, Virginia

The Thumball is designed to enable the precise input of data about two different axes to an autopilot, avionics computer, or other electronic device without the need for the operator to remove his or her hands from the joystick or other vehicle control levers.

The Thumball mechanism (see figure) includes a ball retained in a socket in the end of the control handle in such a way that it is free to rotate. Two rollers are pressed by spring-loaded bearings against the ball at points 90° apart about its circumference. As the ball is turned by the operator's thumb, friction drives the two rollers and their respective disks through angles proportional to the rotation of the ball about its x and y axes. This well-known mechanism, called a spherical integrator, simply resolves the motion of the ball into its components about the x and y axes.

The two disks are made of transparent material and have a pattern of dark and transparent sectors printed on their surfaces. A pair of light sources and a pair of photodetectors are mounted on opposite sides of each disk in such a way that, as the disk rotates, light is alternately transmitted to and cut off from the photodetectors. As the disk rotates, the outputs of its two photodetectors produce two square waves, displaced from each other by 90°. The direction of the displacement is an indication of the direction of rotation of the disk, and the number of pulses produced is a measure of the amount of rotation of the disk. The square waves are passed through suitable decoding logic that converts them into a series of clockwise or counterclockwise pulses that can be fed directly to the autopilot or avionics compu-

ter to effect a change in heading and/or pitch trim, to reposition a cursor on the screen of a cathode-ray tube, or to make any other precise adjustment required.

This work was done by H. Douglas Garner, Anthony M. Busquets, Thomas W. Hogge, and Russell V. Parrish of Langley Research Center. For further information,

Circle 24 on the TSP Request Card.

This invention is owned by NASA, and a patent application has been filed. Inquiries concerning nonexclusive or exclusive license for its commercial development should be addressed to the Patent Counsel, Langley Research Center [see page 16]. Refer to LAR-13626.

NASA Tech Briefs, March 1988
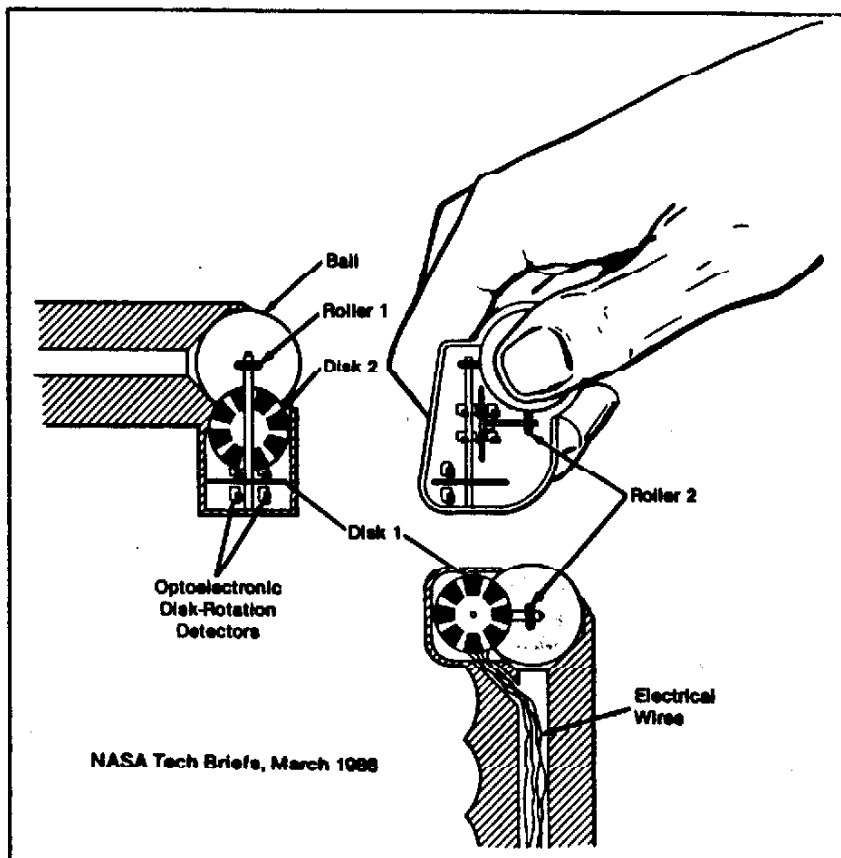
The Thumball Mechanism is mounted on the end of a joystick.

```
HHH    HHH   IIIIIIIII
HHH    HHH   IIIIIIIII
HHHHHHHHH      III
HHHHHHHHH      III      and Cheerio. Well, it's time for
HHH    HHH   IIIIIIIII  another newsletter and I am all ready
HHH    HHH   IIIIIIIII  to get going and all fired up about
                        getting into the swing of things for
```
June. I am very pleased to see the new members in the users
group and I hope that we can get some more. I am interested
in programming in TMS 9900 Assembly language so I can try a
thought that I have going through my head at this point in
time. The idea I have is to make an Icon evrionment on the
99/4A using the mouse and have pull down menus. I hope that
it can be done without running out of memory and having to
get a 128k card.

I recently got a P-Code card from Sam Burton, and it was
broken. So, I sent it to TI and in two days I got it back,and
along with a new P-Code card, I also recieved all the UCSD p-
SYSTEM manuals! I find this very generous of Texas
Instruments. I thank them for this.

Talking to a friend in Dallas, he told me that there were a
few unreleased games from TI that might interest our users
such as Joust (Atarisoft) and Battlestar Gallactica (TI) and
many more. We have one, Lasso, and we need to get some more.
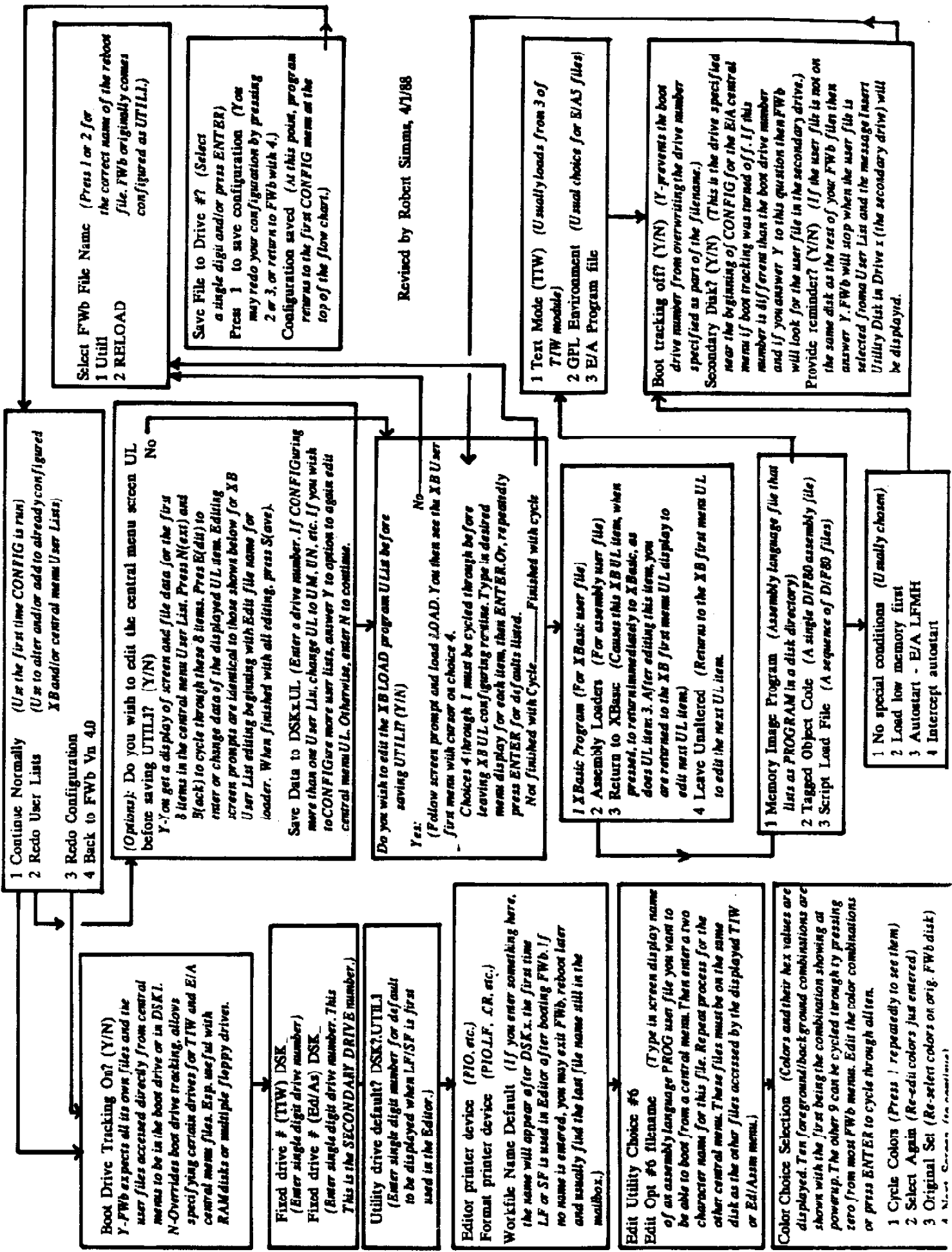Well not much more to say, See you at the Meeting!!!!!!!!!!!

                    Steve Eggers

FOR SALE:

FUNNELWEB 4.0 MENU FLOW CHART

FCTN-7 (AID) from any of these menus gives a disk directory.

First menu box:

```
1 TI Writer       A : . . . .
2 Edit/Assm       B : . . . .
3 XB Return       C : . . . .
4 . . . .         D : . . . .
5 Myarc DM        E : . . . .
6 TI-FORTH        F : . . . .
7 . . . .         G : . . . .
8 . . . .         H : . . . .
9 . . . .         I CONFIGURE
```

Extended BASIC first menu,
USER LIST. Boots from DSK1.LOAD
Items 4-L can be customized
with CONFIG to load any XBASIC,
PROGRAM image, or D/F 80 software.

Exiting CONFIG returns to E/A menu.

E/A CENTRAL MENU box:

```
1 EDITOR (Runs ED,EE)
2 ASSEMBLER (Runs ASAT)
3 LOADERS
4 c-COMPILER
5 DISK PATCH
6 UTILITY (Customized with
           CONFIG;boots any Assm file
7 RESET/QUIT
```

E/A CENTRAL MENU.
Alternates
with TI-W by
pressing a
non-num. key.

<—SPACE BAR—>

TI Writer CENTRAL MENU box:

```
1 EDITOR (Runs ED,EE)
2 FORMATTER (Runs FO,FP)
3 DM1000 (Runs MG,MH)
4 MODEM (Runs User's MD)
5 DATABASE (file UTIL1)
6 UTILITY (Customize w/CONFIG
7 USER LIST (Needs file UL)
```

TI Writer
CENTRAL MENU.
Boots directly
after loading
file UTIL1.

LOADER MENU box:

```
1 TEXT MODE (Loads PROGRAM files normally loaded from TI Writer #3
2 GPL ENVIRONMENT (Loads PROGRAM files that otherwise use E/A #5
3 PROGRAM(E/A) (Loads PROGRAM files that are images of E/A #3 object code.
4 LOAD/RUN(E/A) (Loads D/F 80 object files that otherwise use #3 of E/A module.
5 SCRIPTLOADER(Loads predefined sequence of D/F 80 files; needs file SL)
6 LOW MEMORY LOADER (Puts D/F 80 obj) files in low mem;needs LL)
7 L&R ALL MEM (Loads auto-starting D/F 80 obj) files into mem anywhere.
8 (Not shown on screen. Cancels auto-start of auto-starting D/F 80 object files.)
```

LOADER MENU.
Loads from #3 of
Editor Assembler
Central Menu.

(Requires EA)

User List CENTRAL MENU box:

```
1 : . . . .
2 : . . . .
3 : . . . .
4 : . . . .
5 MYARC DM
6 NEXT UL (Runs UM, a recus-
          tomized dupe of UL)
7 CASSETTE (Loads E/A
          PROGRAM from CS1)
8 CARTRIDGE ROM
```

User List
CENTRAL MENU.
Loads from #7
of TI Writer Central
Menu. Items 1-8 can
be customized with
CONFIG to boot
any program image of

FUNNELWEB 4.0 CONFIGURL PROGRAM FLOW CHART

Revised by Robert Simms, 4/1/88

Select FWb File Name (Press 1 or 2 for the correct name of the reboot file. FWb originally comes configured as UTIL1.)
1 Util
2 RELOAD

Save File to Drive #? (Select a single digit and/or press ENTER) Press 1 to save configuration (You may redo your configuration by pressing 2 or 3, or return to FWb with 4.)
Configuration saved (At this point, program returns to the first CONFIG menu at the top of the flow chart.)

1 Continue Normally (Use the first time CONFIG is run)
2 Redo User Lists (Use to alter and/or add to already configured XB and/or central menu User Lists.)
3 Redo Configuration
4 Back to FWb Vn 4.0

(Optional): Do you wish to edit the central menu screen UL before saving UTIL1? (Y/N)
Y - You get a display of screen and file data for the first 8 items in the central menu User List. Press N(ext) and B(ack) to cycle through these 8 items. Press E(dit) to enter or change data of the displayed UL item. Editing screen prompts are identical to those shown below for XB User List editing beginning with Edit file name for loader. When finished with all editing, press S(ave).

Save Data to DSK.UL (Enter a drive number. If CONFIGuring more than one User List, change UL to UM, UN, etc. If you wish to CONFIGure more user lists, answer Y to options to again edit central menu UL. Otherwise, enter N to continue.

No

Do you wish to edit the XB LOAD program ULs before saving UTIL1? (Y/N)
Yes:
(Follow screen prompt and load LOAD. You then see the XB User first menu with cursor on choice 4.
Choices 4 through 1 must be cycled through before leaving XB UL configuring routine. Type in desired menu display for each item, then ENTER. Or, repeatedly press ENTER for defaults listed. Finished with cycle
Not finished with Cycle
No

1 Text Mode (TTW) (Usually loads from 3 of TTW module)
2 GPL Environment (Usual choice for E/AS files)
3 E/A Program file

Boot tracking off? (Y/N) (Y - prevents the boot drive number from overwriting the drive number specified as part of the filename.)
Secondary Disk? (Y/N) (This is the drive specified near the beginning of CONFIG for the E/A central menu if boot tracking was turned off. If this number is different than the boot drive number and if you answer Y to this question then FWb will look for the user file in the secondary drive.)
Provide reminder? (Y/N) (If the user file is not on the same disk as the rest of your FWb file then answer Y. FWb will stop when the user file is selected from a User List and the message Insert Utility Disk in Drive x (the secondary drive) will be displayed.)

1 XBasic Program (For XBasic user file)
2 Assembly Loaders (For assembly user file)
3 Return to XBasic (Causes this XB UL item, when pressed, to return immediately to XBasic, as does UL item 3. After editing this item, you are returned to the XB first menu UL display to edit next UL item.)
4 Leave Unaltered (Returns to the XB first menu UL item to edit the next UL item.)
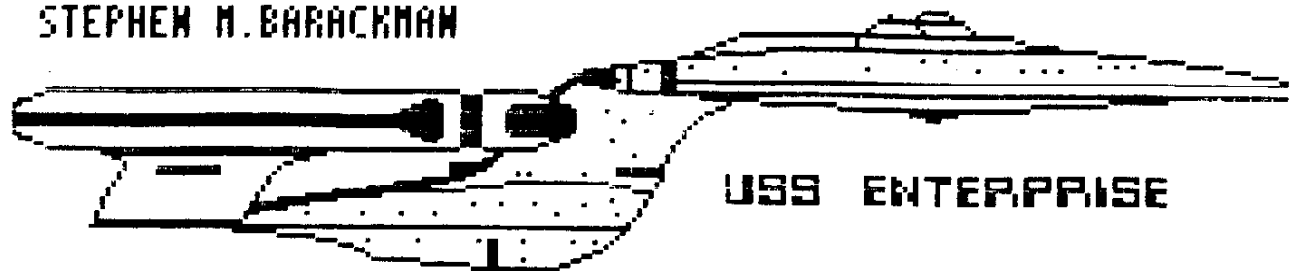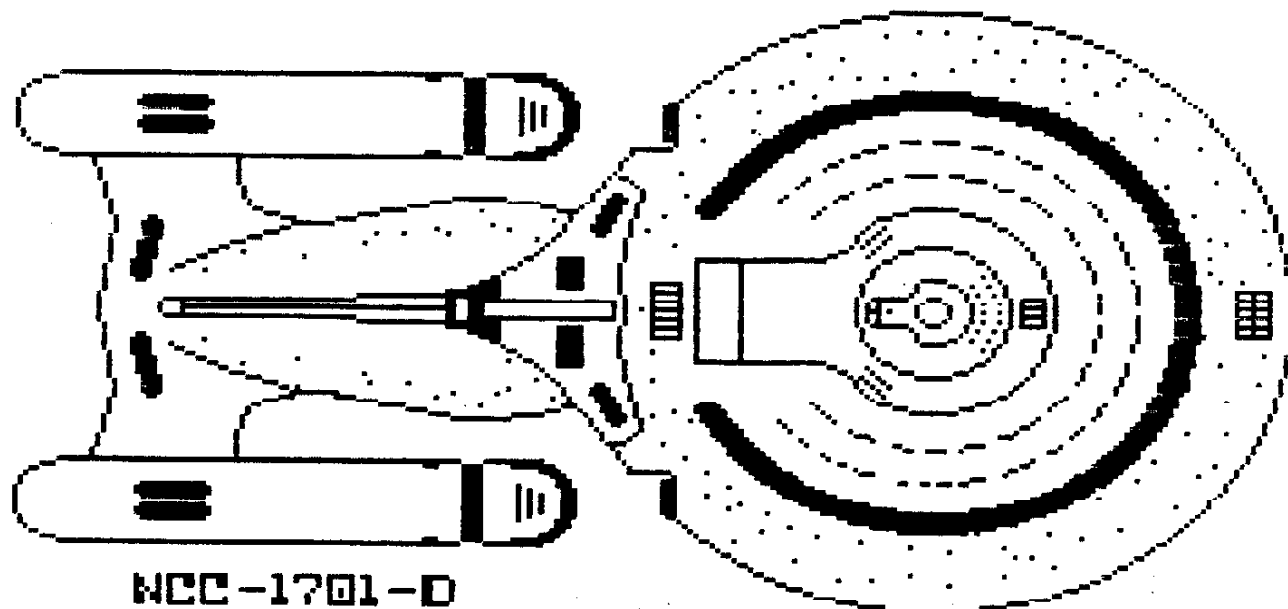
1 Memory Image Program (Assembly language file that lists as PROGRAM in a disk directory)
2 Tagged Object Code (A single DF/80 assembly file.)
3 Script Load File (A sequence of DF/80 files.)

1 No special condition (Usually chosen)
2 Load low memory first
3 Autostart - E/A LFMH
4 Intercept autostart

Boot Drive Tracking On? (Y/N)
Y - FWb expects all its own files and the user files accessed directly from central menu to be in the boot drive or in DSK1.
N - Overrides boot drive tracking, allows specifying certain drivers for TTW and E/A central menu files. Esp. useful with RAM disks or multiple floppy drives.

Fixed drive # (TTW) DSK_ (Enter single digit drive number.)
Fixed drive # (Ed/As) DSK_ (Enter single digit drive number. This is the SECONDARY DRIVE number.)

Utility drive default? DSK2.UTIL1 (Enter single digit number for default to be displayed when LF/SF is first used in the Editor.)

Editor printer device (PIO, etc.)
Format printer device (PIO.LF, .CR, etc.)

Workfile Name Default (If you enter something here, the name will appear after DSKx. the first time LF or SF is used in Editor after booting FWb. If no name is entered, you may exit FWb, reboot later and usually find the last file name still in the mailbox.)

Edit Utility Choice #6
Edit Opt #6 filename (Type in screen display name of an assembly language PROG user file you want to be able to boot from a central menu. Then enter a two character name for this file. Repeat process for the other central menu. These files must be on the same disk as the other files accessed by the displayed TTW or Ed/Asm menu.)

Color Choice Selection (Colors and their hex values are displayed. Ten foreground/background combinations are shown with the first being the combination showing at powerup. The other 9 can be cycled through by pressing zero from most FWb menus. Edit the color combinations or press ENTER to cycle through all ten.)
1 Cycle Colors (Press 1 repeatedly to see them)
2 Select Again (Re-edit colors just entered)
3 Original Set (Re-select colors on orig. FWb disk)
4 Next Screen (to continue)

STEPHEN M.BARACKMAN

USS ENTERPRISE

NCC-1701-D

STARFLEET

USS ENTERPRISE

UNITED
FEDERATION
OF
PLANETS
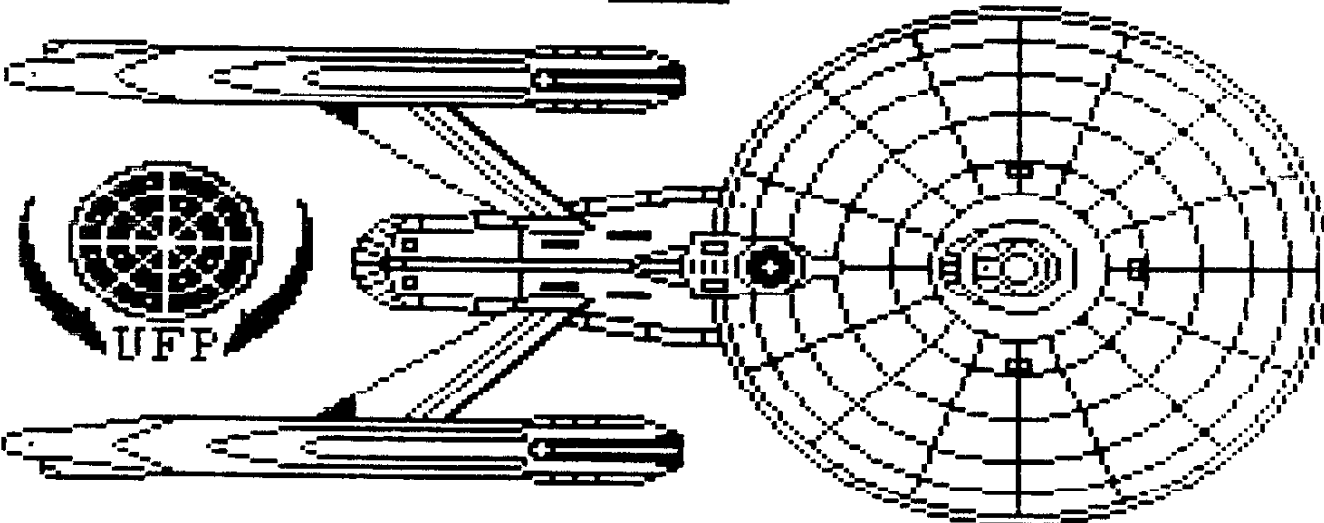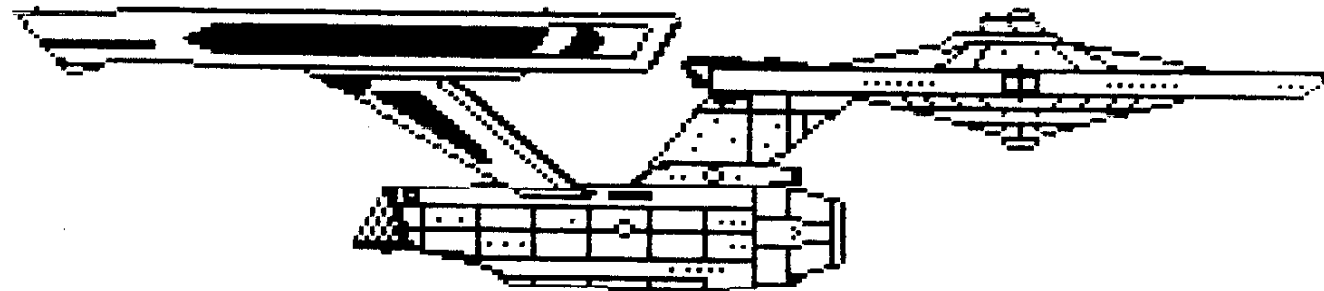
UFP

DRAWN BY

Stephen M. Barackman
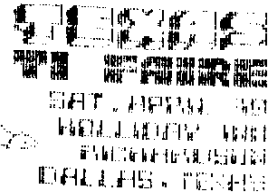
NCC-1701

UFP

Stephen M.Barackman

NCC 1701   U.S.S.ENTERPRISE

UFP

N.C.C.1701A   U.S.S.ENTERPRISE

Bits and Bytes........by Sam Burton

Our Users Group is listed in a national magazine , check out
this month's Computer Shopper in your local bookstore.(When
we get our BBS running I will try to get it listed as well.

If you need ANYTHING for your TI call 352-4778 or contact
Fred Dennis at 355-3868.

IMPORTANT!!!- This next meeting Steve Eggers will demo his
new GENEVE computer. You will want to see this machine in
action!

DID YOU KNOW THAT TI STILL SUPPORTS THE TI COMMUNITY?
Sure enough that is the sign of a good company...coustomer
service. We usually hear negative comment from other vendors
but Texas Instruments does not need to do anything for the
99er community yet still does provide information, repairs,
and diagnostic aids. (I bet IBM PC jr. users wish they had
that kind of support from IBM.)

Our mailing rates are getting more expensive all the
time...please consider this fact when the vote for raising
dues is taken. (An alternative would be to apply for non-
profit group status.)

The Dallas Fair photos and slides are in! I will try to get a
projector reserved for the next meeting.

ONE LAST TIME FOR THOSE WHO MAY HAVE MISSED IT...Get your
latest TI-WRITER Manual Update from Dick Altman. He rewrote
that whole manual into an easier to read version. It can be
run interactive with TI-WRITER to give you direct use of the
instructions in a real application mode. This is available on
disk from Dick at no charge! Please be sure to support the
reproduction and mailing costs or he'll loose his enthusiasm.
The address is DICK ALTMAN
                        1053 SCHRADER STREET
        TEL #(415)-661-1994 SAN FRANCISCO, CA 94117

Our group MICROPENDIUM subscription runs out next month so I
have sent in our renewal. These magazines are available from
the secretary. Newsletters from other groups are stored in
the main library metal files (first floor). If your not
reading them your missing a lot of good information on your
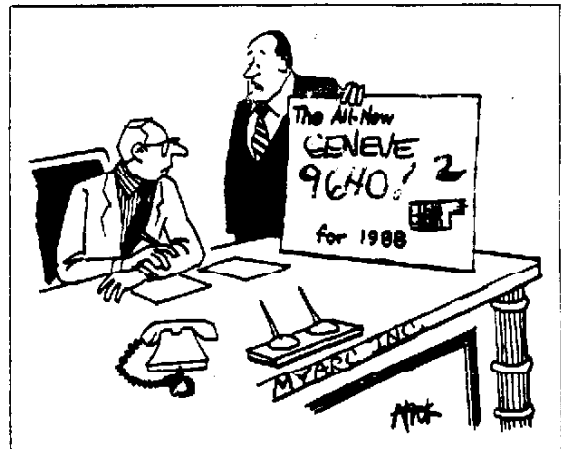TI home computer. Ask for more details.....

If you like golfing you will like PAR-FORE. This 3d graphics
program will be demonstrated at the next meeting. Come
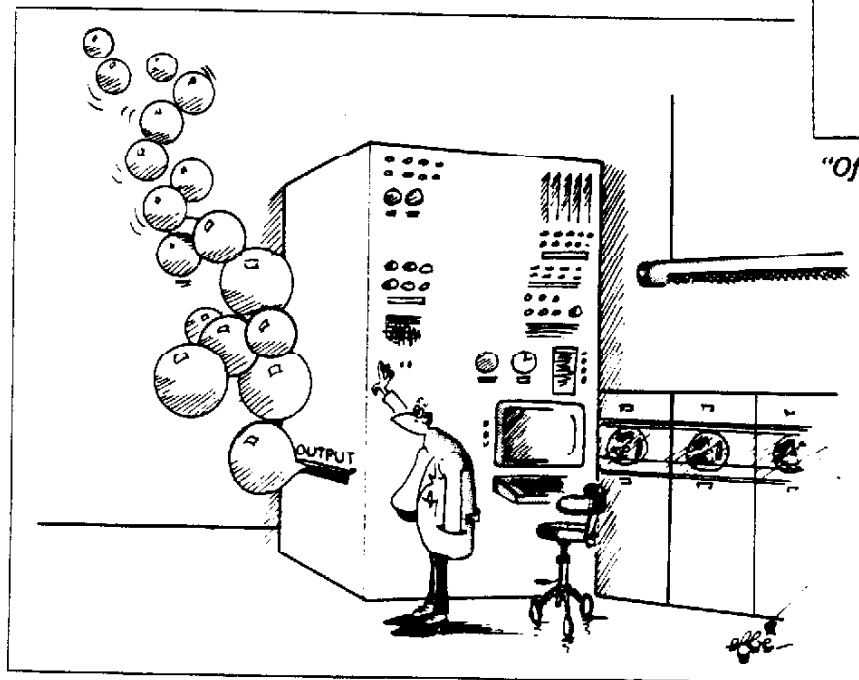prepared to enjoy yourself!!!!!

Assembly Language Humor

Everybody is familiar with the programmers guide. Here is one for the assembly language programmers.

BH	BRANCH AND HANG
BST	BACKSPACE AND STRETCH TAPE
CDCF	CONDENSE DISC AND CROSS FILES
CKSF	CONVERT KEY TREE TO SEQUENTIAL FILE
CM	CIRCULATE MEMORY
CPPD	CRITICAL POINT POWER DUMP
CRN	CONVERT TO ROMAN NUMERALS
DAO	DIVIDE AND OVERFLOW
ED	ERASE DIRECTORY
EDR	EXECUTE DESTRUCTIVE READ
EIBE	ERASE INSTRUCTION BEFORE EXECUTION
EIOC	EXECUTE INVALID OP CODE
EMU	EMULATE SYSTEM 3
ERCF	EXTRACT RECORD AND CROSS FILE
ESP	ERASE SECTOR POOL
FOTA	FAULT ONLY ON TECHNICIAN'S ABSENCE
FSRA	FORM SKIP AND RUN AWAY
HCF	HALT AND CATCH FIRE
IDPS	IGNORE DISC WRITE PROTECT SWITCH
IEOF	IGNORE END OF FILE
IETM	IGNORE END OF TAPE MARKER
IFL	INVERT FORWARD LINK
IIB	IGNORE INTERRUPT AND BRANCH
IRAC	INJECT RANDOM ASCII CHARACTERS
LCM	LOAD AND CLEAR MEMORY
MLR	MOVE AND LOSE RECORD
PACSP	PRINT ALL CHARACTERS IN SAME POSITION
PBD	PRINT AND BREAK DRUM
PPL	PERFORM PERPETUAL LOOP
RAST	READ AND SHRED TAPE
RCR	REWIND CARD READER
RI	RANDOM IGNORE

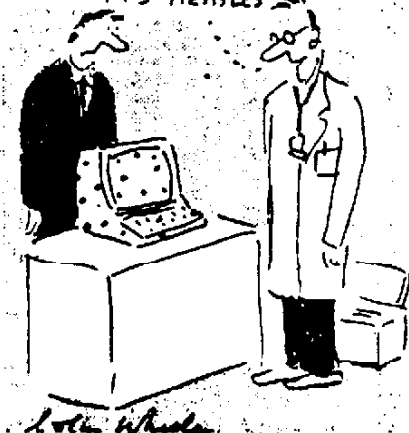|	
RIRG	READ INTER-RECORD GAP
RLF	REVERSE LINE FEED
RLL	RANDOM LOGIN LOCKOUT
RPA	RANDOMIZE PORT ASSIGNMENTS
RS	RANDOM SLEW
SFFR	SET FALSE FORWARD OR FAST FORWARD AND REWIND
SFOP	SET FALSE OUT-OF-PAPER CONDITION
SFTT	STRIP FROM TRACTOR TEETH
SH	SPONTANEOUS HALT
SMD	SPONTANEOUS MEMORY DUMP
SPE	SET PARITY ERROR SPEC
SRSD	SEEK RECORD AND SCAR DISC
SRZ	SUBTRACT AND RESET TO ZERO
SSB	SCRAMBLE STATUS BYTE
SSJ	SELECT STACKER AND JAM
SSSD	SEEK SPINDLE SHAFT AND DESTRUCT
SWP	SELECT WRONG PRINTER
UDR	UPDATE AND DELETE RECORD
USML	URGENT-SENSITIVE MODEM LOCKUP
WWLR	WRITE WRONG LENGTH RECORD

From The Cleveland Free Net, (216) 368-3888.

"Of course, if it doesn't run, we could all be in big trouble."

TI-99/4A SUPPLIERS
Courtesy of Janet Ryan
NUTMEG TI-99ERS Users Group
12/12/87
Via SFV Times 1/88
Updated by
Barry Long
Central Pa 99/4A Users Group
1/26/88

[FROM NET 99ERS
APRIL 1988]

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Codes: S=software H=Hardware K=Keyboards P=Publication *=Catalog Available

AMNION HELPLINE (S)
114 Carl St.
San Francisco, CA 94117
(415) 753-5581

ARMADILLO BYTES (SH*)
Box 181662
Dallas, TX 75218
(214) 328-9257
(also hardware repairs)

ASGARD SOFTWARE (S*)
P.O. Box 10306
Rockville, MD 20850
(301) 559-2429

L.L. CONNER ENTERPR (SH)
COMPUTER & ELECTRONICS
1521 Ferry St.
Lafayette, IN 47904
(317) 742-8146
(317) 423-4879

DATABITOICS, INC (SH*)
P.O. Box 1194
Palos Verdes Estates
CA 90274

DIJIT SYSTEMS (RGB Conv)
4345 Hortensia St.
San Diego, CA 92103

DISC ONLY SOFTWARE (SH*)
P.O. Box 4170
Rockville, MD 20850

ENHANCED PC PURSUIT SERV.
GTE Telenet Comm. Corp.
12490 Sunrise Valley Dr.
Reston, VA 22096
1-800-368-4215 8-5 M-F
1-800-835-3001 24 hrs

GENIAL COMPUTERWARE (SP)
835 Green Valley Dr.
Philadelphia, PA 19128
("DISC-A-ZINE")

GREAT LAKES SOFTWARE (S*)
804 E. Grand River Ave.
Howell, MI 48843

HORIZON RAM DISK (H)
P.O. Box 554
Walbridge, OH 43465
(419)-666-6911

INNOVATIVE PROGRAMMING (S)
P.O. Box 2757
Rohnert Park, CA 94928
(707) 585-3922
Note: Discontinueing support

McCANN SOFTWARE (S)
P.O. Box 34160
Omaha, NE 68134

MILLERS GRAPHICS (SH*)
1475 W. Cypress
San Dimas, CA 91773

ML SYSTEMS (K)
BOX 268
Valley Falls, RI 02864

MYARC, INC. (SH*)
P.O. Box 140
Basking Ridge, NJ 07920

NAMELOC SOFTWARE (S*)
3971 SE Lincoln
Portland, OR 97214

PILGRIMS PRIDE (SH*)
P.O. Box 2
S. Williams Lane
Hatboro, PA 19040
(215) 441-4262

QUALITY 99 SOFTWARE (S*)
1884 Columbia Rd #1021
Washington, DC 20009
(202) 667-3574

QUEEN ANNE COMPUTER
SHOPPE (SH*)
6102 ROOSEVELT WAY N.E.
Seattle, WA 98115
(206) 283-0953

RAVE 99 Co. (KH)
112 Rambling Rd.
Vernon, CT 06066
(203) 872-9272

MR DAVID ROSE (S)
2781 Resor Rd
Fairfield, OH 45014-5053

RYTE-DATA EXPRESS (PH*)
210 Mountain St.
Haliburton, Ontario
KOM 150
(705) 457-277 (order)

T.A.P.E. Ltd. (SH*)
1439 Solano Pl.
Ontario, CA 91764
(714) 989-9906

TENEX COMPUTER EXPRESS (SH
P.O. Box 6578
South Bend, IN 46660
(219) 259-7051 (info)
(800) 348-2778 (order line
(800) 259-7033 (order stat

TEX-COMP (SH*)
P.O. Box 33084
Granada Hills, CA 91344
(818)-366-6631

TEXAMENTS (S*)
53 Center St.
Patchogue, NY 11772
(516) 475-3480

TRITON PROD. CO. (SH*)
P.O. Box 8123
San Francisco, CA 94128
(800) 227-6900

VIDEOVISION (SH*)
236 Upton St.
Grafton, MA 01519
(617) 839-4134

MICROpendium (P)
P.O. Box 1343
Round Rock, TX 78680
TI-99/4A monthly news
publication (GOOD!)

COMPUTER SHOPPER (P)
P.O. Box 1419
Titusville, FL 32781-9988
(800) 327-9926
May be purchased locally

CORCOMP (SH*)
2211-B Winston Rd
Anaheim, CA 92306
(714) 956-4450

THE BUNYARD GROUP
P.O. Box 53171
Lubbock, TX 79453
Manual for TI (hardware)

TIGERCUB SOFTWARE (S*)
156 Collingwood Ave.
Columbus, OH 43213

The Peripheral Shoppe

New half-height DS/DD disk drives - $80.00
Used half-height DS/DD disk drives - $50.00
TI external disk drive assembly - $60.00
TI RS-232 card for P.E. box - $60.00
CorComp RS-232 card for PEB - $40.00
Unitech Modem/Speakerphone - $40.00
Volksmodem with TI cable - $20.00
Radio Shack Modem 1B - $20.00
TI speech synthesizer - $25.00
TI joysticks (set of 2) - $10.00
TI-WRITER package - $20.00
TI LOGO package $20.00
Disk Fixer module $10.00
25 original PLATO DISKS (make offer)

Call Fred Dennis at 355-3868 (evenings)

WANTED: TI COLOR MONITOR in good shape.....
        Call Sam Burton 352-4778 after 6 PM

Wanted :Your sellable TI items....call Sam Burton

FOR SALE: Various Cartridge Games ($5-10)
          2 Modems 300 baude rate
          TI-Writer in Original unopened package
          3 complete starter consoles(power supply,RF
          mod,books) $60.00 /each

          PE-BOX (32K,disk controller,ss Shugart drive,RS 232
          flex cable, all cards original TI equipment)
          $320.00

          32k memory expansion card (TI original) $90.00
          RS 232 card   (TI original) $80.00

          TI tape recorder with cables $45.00
          Call Sam Burton

FOR SALE:Console, PE BOX, monochrome monitor, and various
cartridges....$300.00.................call Richard Whitehead
                                       352-5281

FOR SALE: Mechatronics Mouse for your TI system.. works with
          TI-Artist. Call Steven Eggers $150.00

NOTICE: The Swap and Sell section of this newsletter is
provided for your computer needs. Should you have an item to
sell or swap let the editor put your ads here at NO CHARGE.

FOR SALE OR TRADE:

**TI-99/4A black console with
Rave-99 keyboard $150.00**

**TI expansion box with 32K &
single disk drive $125.00**

Complete system - $250.00

**Call Mike Phillips in Lubbock
at 791-4894 (evenings)**