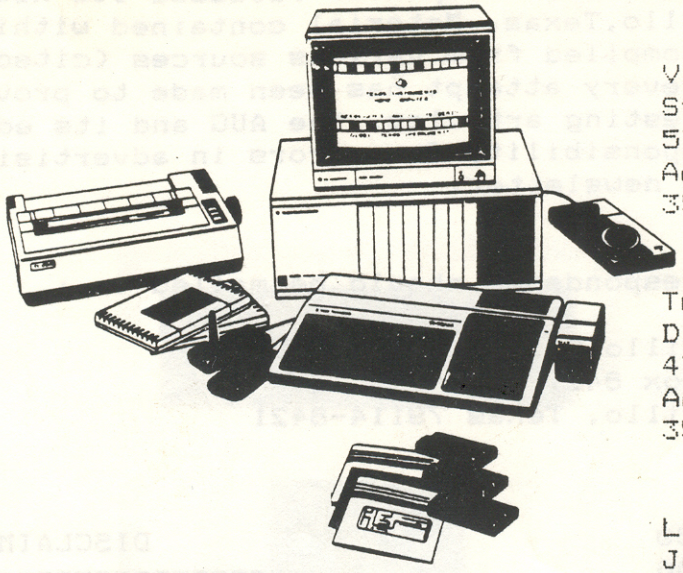
AMARILLO 99/4A USERS GROUP

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

AUGUST/SEPTEMBER 1988 NEWSLETTER
VOL 8 NUM 8

SEPTEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

OCTOBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

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 9640 GENEVE.

INSIDE THIS NEWSLETTER

****

* * * 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.

All correspondence should be mailed to :

Amarillo 99/4A Users Group
PO Box 8421
Amarillo, Texas 79114-8421

Advertising Rates

Full Page	$10.00
Half Page	5.00
Quarter Page	3.00
Business Card	2.00

For Best Results, each ad must be on white photocopyable media. The AUG is not held liable for any damages exceeding the cost of advertising.

DISCLAIMER
====================================

The Amarillo 99/4A User's Group (AUG) is not affiliated with Texas Instruments and has no type of relationship with them, either implied or otherwise.

WE are an independent non profit organization. Views expressed in this newletter do not necessarily reflect the views of the group.

=

Keep other TI99er's in touch with your work by contributing articles, programs and helpful tips. If you want the group 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 352-4778.

We welcome white papers,tutorials and application stories. Length should be 400-500 words. We prefer delivery by mail or on a 5 1/4 diskette 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.

=

The Presidents Letter

I have finally completed school and found a job! Now I can support this user group even more.

The news letter has been having some very interesting articles lately. Thanks go to Sam and Steve. Although they have been arriving about every other month they have been so jammed packed with info that it usually takes more than two sittings to absorb it all.

For the next meeting I am bringing some software publications of companies, and their addresses. Also, I have some newsletters from past meetings and from other groups as well, and an article about hard disk drives, and a comprehensive list of vendors of various TI-interested parties thoughout the world. I am just now realizing the wealth of information I have but never bothered to read or share. Sorry about that!

We are going to have an end of the summer(so sad) meeting so everyone that has been putting off attending to our meetings because of a super summer, you guys and gals just come on down.

The Prez

WANTED!

NEWSLETTER EDITOR !

REQUIREMENTS

MUST BE ABLE TO READ, WRITE, CAJOLE, BEG, BORROW, STEAL, CUT AND PASTE, LICK STAMPS, FOLD AND STAPLE ! ! !

BENEFITS

THE POWER AND THE GLORY AND
THE KEY TO THE P.O. BOX ! !

ALL APPLICANTS CONTACT THE PRESIDENT. FIRST COME, FIRST GOT IT ! !

* * Call PC Data Link * *

Visit the Special TI sections
for the 99/4A and Geneve
special interest groups !!!!!!

J. D. Stephens - SYSOP
Carl Bourn - JrSYSOP (TI)

** 655-7918 **

TI-99/4A

by Jonathan L. Zittrain

The Texas Instruments TI-99/4A is a computer that has fueled a remarkable community—a large and multi-faceted group of people that has flourished even after TI officially stopped supporting the machine in October of 1983.

The TI-99/4A was originally conceived by TI as a colorful, friendly, general- purpose home computer that would appeal to families looking to use it for education and home tasks, as well as hobbyists eager to see what an electronics giant such as Texas Instruments would put under the hood of its first computer venture.

The hobbyists weren't disappointed—the TI-99/4 (and later the 99/4A) was and is a phenomenal machine. Fully bit-mapped graphics with sixteen colors (usable on any TV set), four-voice sound, a 16-bit processor (albeit with an 8-bit bus; hence the TI-99/4A has a place in this article!), and the only BASIC compatible with the ANSI standard were just a few of the features that made the 99/4A stand head and shoulders over the giants of the time such as the Atari 800 and the Apple II + .

The TI community of today is well over 300,000 strong, with a staggering 1,000,000 TI-99/4A consoles actually sold by TI over the years. Those 300,000 consist of people who still have just the basic console, using it with plug-in educational and game cartridges as well as those who have "full-blown" systems. Both ends of the user spectrum combine as members of the hundreds of TI users groups still amazingly active across the world. Most have monthly meetings and newsletters, and boast greater attendance than many corresponding users groups for machines still supported by their manufacturers!

Users groups from areas such as Boston, Chicago, Seattle, New Jersey, DC, and Los Angeles host "TI fests," trade shows that give distributors, authors, and consumers a chance to get together in person to exchange goods and talk TI.

What is perhaps most interesting is the incredible variety of software available for the TI-99/4A. There is a fairly active set of TI distributors, and many authors have additionally taken to "fairware" to release their programs. Paul Charlton, a computer science student at RPI, was the first to port over XMODEM communications protocol for the 99/4A in his popular fairware program FAST-TERM. FAST-TERM, and other later additions, enabled TI users to set up an extensive network of bulletin boards across the country for the exchange of TI news, views, and software. PC Pursuit, a service that allows long-distance computer calling for a flat $25/month rate, has greatly contributed to the effectiveness of this network. National networks such as CompuServe, Delphi, the Source, and most recently GEnie have also been hotbeds of TI activity.

The original BASIC, FORTH and assembly programming languages have long been supplemented. Clint Pulley, another hobbyist hacker, made available a version of small-C for the 99, and the late Thomas Weithofer wrote an implementation of PILOT from scratch. The UCSD p-System IV.0 is also available via an expansion card.

A few companies have expressed interest in producing computer upgrades for the TI-99/4A that run all the original software but also take advantage of later computer industry developments and innovations, offering higher screen resolution, faster processing, and mouse-integrated graphics. One has even started production (Myarc's Geneve 9640). This raises the prospect of a fresh infusion of interest and enthusiam for the Texas Instruments 9900 family.

Yet even without new-fangled technology, the TI-99/4A computer is no slouch, and still has a comfortable place on the desks of many people—to help with home finances, education, programming, gaming, and telecommunications. The TI-99/4A simply refuses to die!

User Notes

TINYSONAR is challenging

Mike Stanfill, of the Dallas TI Home Computer User Group, seems never to come up short when it comes to tinygrams. And TINYSONAR is no exception. TINYSONAR appeared in the group's July newsletter.

In addition to writing tinygrams, Stanfill is the organizer of such well-intentioned Special Interest Groups as "Tinygrams: The Search for Mediocrity!" or "How I Wasted Five Years Writing Teensy-Tiny-Itsy-Bitsy-Teeny-Weeny Programs That I'm Not Sure Are Understood or Even Used by the Broad Majority of People Who've Seen Them!" (Would we make that up?)

Here's what he wrote about SONARGRAM:

A little something I've been diddling with for about three years, although not on a continuing basis. The basic idea was a submarine-hunt game where you had to use sonar (in this case CALL SOUND) to find and destroy the enemy. The rules are as follows:

As the game sets up, you will see your destroyer, represented by an "O," at the top of the screen. You'll also see the screen fill with at signs moving horizontally at varying speeds. These are icebergs and you must not let them hit your destroyer, which you will be moving about the screen using the arrow keys.

The submarine will be placed randomly and invisibly on the screen, moving at a constant speed. As you near it, you will hear the sonar begin beeping. The closer you get the louder the beep. If you come within 18 pixels (about two spaces) of the sub, it will become fleetingly visible (a flashing exclamation point). At this time you must fire depth charges by hitting the "Q" key, which will destroy the sub. The computer then generates another.

The sub moves at a constant speed, much slower than the destroyer. However, since it is using an Auto-Sprite motion, it will occasionally wrap off the screen just as you are closing in. The up-shot of this is that you will suddenly hear your sonar go dead just as you are about to pounce. Remain calm and begin the chase again.

The game ends when you strike an iceberg. The number of subs sunk will be displayed at this time.

```
1 !*******TINYSONAR*******
   ******A TINYGRAM******
   ***BY MIKE STANFILL***
   *DALLAS TI USER GROUP** !
224
2 CALL CLEAR :: RANDOMIZE ::
 FOR T=2 TO 24 :: CALL SPRIT
E(#T,64,2,T*8-7,RND*254+1,Ø,
RND*1Ø-4,#25,79,2,1,125):: N
EXT T :: DEF G=INT(RND*3)-1
!Ø34
3 CALL SPRITE(#27,33,1,RND*1
91+1,RND*255+1,G,G)!Ø64
4 CALL KEY(1,K,S):: IF S THR
N CALL MOTION(#25,((K=5)-(K=
Ø))*4,((K=2)-(K=3))*4)!171
5 CALL DISTANCE(#27,#25,V)!Ø
63
6 J=SQR(V):: ON ERROR 7 :: C
ALL POSITION(#25,U,P):: CALL
 COINC(#25,#INT(U+7)/8,8,H):
: IF U<185 AND H THEN 9 !171
7 IF J<91 THEN CALL SOUND(-9
9,44Ø,J/3):: IF J<18 THEN CA
LL COLOR(#27,2,#27,1)!Ø88
8 IF K=18 AND J<18 THEN A=A+
1 :: CALL SOUND(5ØØ,-7,Ø):: 
CALL COLOR(#27,7,#27,1,#27,7
):: GOTO 3 ELSE 4 !2ØØ
9 PRINT "YOUR SHIP HIT ICEBE
RG!":"YOU SUNK";A;"SUBS!" !Ø
Ø8
```

Slashing the zero in Multiplan

Those who'd like to permanently display zeroes in Multiplan with slashes can do so by modifying the MPCHAR file. This tip appeared in the Toronto TI User Group newsletter and elsewhere. It is attributed to Gene Nailon.

First, find the second sector of the file MPCHAR. The easiest way to do this is to copy MPCHAR to a newly formatted disk so that it will be the first file on the disk. MPCHAR will start at sector 22, so the second sector of the file will be located at sector 23.

Then, using the sector editor, call up this sector and about half way through the sector you will find the following hex code:
0018 2424 2424 2418
This code represents the zero character in Multiplan.

To slash the zero character, replace the above code with the following:
0018 242C 3424 2418

Save the changes back to disk. Copy the file back to your working Multiplan disk and try it out. The only quirk that you may notice is that when the cursor is on a cell, the zero (in reverse video) will not be slashed. But when the cursor is moved to another cell, the zero will be slashed.

***User Notes* is a column of tips and ideas designed to help readers put their computers to better use.**

Amarillo group seeks Geneve 9640 users

The Amarillo 99/4A Users Group is trying to form a strong Geneve 9640 support group, according to Samuel R.M. Burton, the groups secretary and editor.

He says the group has two Geneve users in Amarillo and three others correspond with the group, which would like to get in touch with others.

Burton says the group is willing to provide starter packs for new groups of 12 or more "fledglings."

For further information, write the Amarillo 99/4A Users Group, P.O. Box 8421, Amarillo, TX 79114.

USERS GROUPS

The following are additions and updates to our user group listings, which we began publishing in the May 1987 issue.

Colorado

Rocky Mountain 99ers, 1825 E. 113th Ave., Northglenn, CO 80233 (new address). Mark Payne, president. New BBS number is (303) 450-5285.

Georgia

Atlanta TI99/4A Computer Users Group, P.O. Box 19841, Atlanta, GA 30325. Phone (404) 231-0992. BBS numbers (404) 991-6250 and (404) 366-1914.

Maine

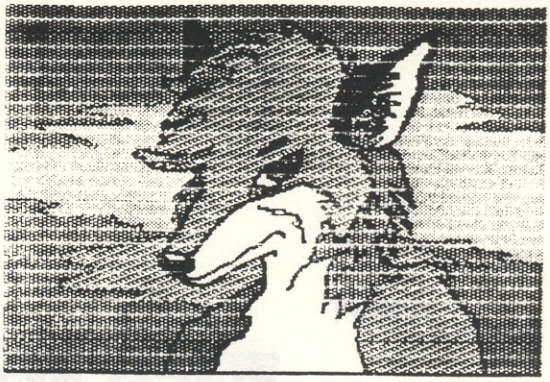
The Oakland TI Computer Club, c/o Eunice Spooner, Box 3720, Waterville, ME 04901 or c/o Eunice Spooner, c/o Eunice Spooner, Heath St., Oakland ME 04963. Meets at 7 p.m. Mondays during school year, 12:30 p.m. Thursdays during summer at Atwood School library, Oakland. Most members elementary school children but open to all. Library, newsletter. No dues.

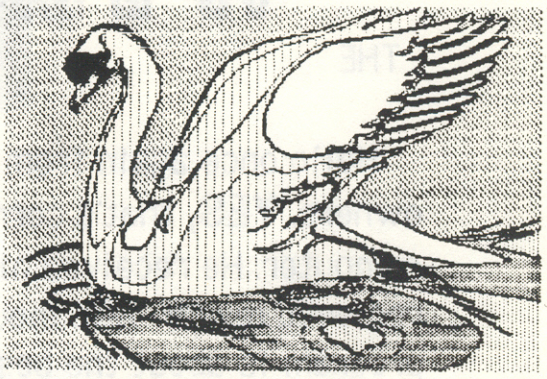
MYARC MY-Art and Mouse - A Review

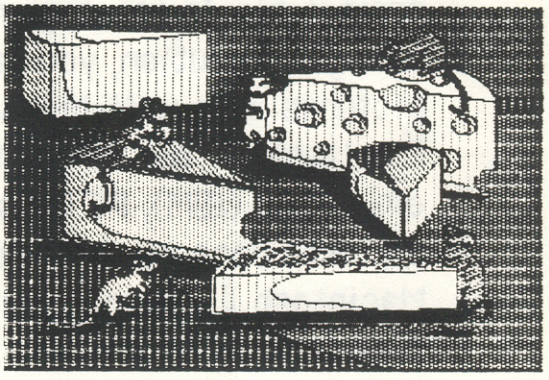
I recently recieved the MYARC mouse and the MY-Art program. The choice of colors is magnificent and the mouse interface is great, no flaw here, but when you start really getting into the program it becomes harder and harder to use. There are numerous keyboard inputs and it gets very confusing. MY-Art is alot like Picasso, but it is not that good. Since I have used TI-Artist since I got my 99/4A I like it the best. I cannot use TI-Artist on the 7640 because it just doesn't work. The thing I liked about TI-Artist is that I could have full mouse control when I had my Mechatronics mouse. I could choose everything with the little crosshair. With MY-Art you have to keep hitting F9 (HELP) to do anything. There is a new version of TI-Artist for the Geneve. It is version 2.016 and allows use of the MYARC mouse with the program. Overall, ease of use with MY-Art is very difficult and I think that MYARC should have taken more time with the program to make it more user friendly, like MacPaint. MY-Art doesn't even allow the loading of FONTS or instances and the program will only print to an EPSON or EPSON compatible printer. The mouse that you buy from MYARC is a nice mouse. I rate it about the same as a Mechatronics TI-Mouse. The MYARC mouse has three buttons and all are used for something, nice rolling action on any surface. I prefer to keep mine on a mouse pad to save it from getting any debris in it. I would like to see a real practical program come out on the Geneve that really lets me use the mouse like GEME, MY-Pro-WORD or MY-Pro-Art.

I rank the mouse and A+ for being well built and ease of use. The MY-Art drawing program, I rate a C, it is very complicated and really not that swift of a drawing program. I consider MY-Art to be a more doodling program than an art program.

Steve Eggers







The LEADING monthly devoted to the TI99/4A

Subscription Fees
$17 for 12 issues via domestic third class mail
$20.50 for 12 issues via domestic first-class mail
$20.50 (U.S. funds) for 12 issues Canadian or Mexican delivery
$23.50 (U.S. funds) for 12 issues foreign delivery via surface mail
$37.00 (U.S. funds) for 12 issues foreign delivery via air mail
(Texas residents add 87 cents sales tax)

Address Changes
Subscribers who move may have the delivery of their most recent issue(s) delayed unless MICROpendium is notified six weeks in advance of address changes. Please include your old address as it appears on your mailing label when making an address change.

Back Issue Policy
Back issues of MICROpendium are available to subscribers only. Those wishing back issues may notify us of the issue(s) desired and include $1.50 per issue desired in a check or money order. (U.S. and Canada; Texas residents add 5.125% sales tax.) For foreign air-mail delivery, add $2 per issue, 50 cents per issue surface mail. All prices listed are U.S. funds.
OUT OF STOCK: Vol 1, Nos. 1-2

Send me the next 12 issues of MICROpendium. I am enclosing $ in a check or money order in U.S. funds (Texas residents add 87 cents sales tax.)
Mail to: MICROpendium, P.O. Box 1343, Round Rock, TX 78680

Name_____
Address_____
City_____
State_____ ZIP_____

The set of numbers on the right of your mailing label indicates the cover date of your last issue.

* * Call PC Data Link * *

Visit the Special TI sections for the 99/4A and Geneve special interest groups !!!!!!

J. D. Stephens - SYSOP
Carl Bourn - JrSYSOP (TI)

** 655-7918 **

TI MOD MANUAL
VOL 1. PAGE 8

ON INSTALLING AN IBM POWER SUPPLY IN THE PERIPHREAL EXPANSION BOX

by Gary Crawford, N.O.V.A.

(AND ROCKY MOUTAIN 99ERS APRIL/MAY 88)

What do you do when the power supply in the Preiphreal Expansion box up and dies on you? Two of the options are:

1. Open the transformer and repair it.
2. Pack up the PEB and ship it to TI along with $55.00 for repairs. This time period is undeterminable.

One of the options that have not been in any of the newsletters or MICROPENDIUMS that I have seen, is the possibility of installing an IBM power supply in the peripheral expansion box. With the release of the new MYARC hard/floppy disk controller and the expressed need for an adequate power supply to run it, is just another good reason to consider the option of using an IBM power supply.

I am sure that there are many hard core T.I. users that would have nothing but T.I. equipment and consider it a blasphemous idea. But after my experience when the power supply in my P.E. Box burned up, the IBM option was clearly the logical, financial and logistically correct thing to do. My system has been running ever since and I do not regret the conversion, as it's other inherent advantages support my decision.

1. An IBM power supply can be bought at your local computer store or through the mail. T.I. parts come from Lubbock, Texas.
2. a 150 watt power supply can be had for as little as $47.00 through Computer Shopper. The T.I. transformer costs $70.80 from Lubbock, Texas.
3. The IBM power supply with fan weighs about 1 pound. The T.I. power supply weighs about 7 3/4 pounds (whew!).
4. The IBM power supply runs much cooler as it doesn't have a monster transformer.
5. The fan which is a direct match is very quiet.
6. It is prewired for a hard drive and four floppy disk drives.
7. The T.I. power supply puts out voltages of: +8, +16, and -16, but all of the expansion cards use: +5, +12, and -12. The IBM puts out regulated +5, +12, and -12 voltages.
8. The PC-XT is rated at 150 watts and the PC-AT is rated at 200 watts.
9. Should the power supply ever need to be worked on, it can be done locally.

There are three major things to the conversion. The first is removing the old power supply. The second is installing the new power supply. And the third is a slight modification to the flex-cable card and foot circuts.

Before starting I must inform you that if you undertake this project it is at your own risk. It would help to know how to solder.

TOOLS REQUIRED:

- soldering iron
- desoldering tool
- diagonal pliers
- needlenose pliers
- various sized ignition wrenches
- philips screwdriver
- straight screwdriver
- multimeter
- dremel tool (rotary file)
- tape (to write on)
- spade connectors (2 pair)
- connector 4 pin male
  (Radio Shack #274-224)
- connector 4 pin female
  (Radio Shack #274-234)
- container (for nuts and screws)

REMOVING OLD POWER SUPPLY:

1. Remove power cord and take the lid off of the box.
2. Remove all screws from top

of the disk drive enclosure.

3. Remove the screws from the back of the box except the 2 that attach the spring clips for holding the top on.

4. Remove all cards except disk controller card.

5. Remove the single screw from each end of the box.

6. Remove the screws from the bottom of the box except those that hold the disk drives in.

7. Slide the box housing forward to gain access and remove the ribbon cable and the disk controller card.

8. By holding the sides of the box you should be able to slide the front, sides and enclosures off of the box exposing the power supply.

9. Remove all screws from bottom of expansion card frame and remove frame.

10. Remove the connector clips from the power supply printed circut board, (P/S PCB), remove the 2 screws at the bottom of the board and remove the P/S PCB.

11. Disconnect all spade connectors.

12. Remove shunt block (2 nuts)

13. Remove transformer (4 nuts)

14. Remove fan (4 nuts)

15. Remove the fuse.

16. Remove the power cord receptacle.

17. Remove the power switch.

18. Locate the 4 wires (green, black, yellow and brown) that lead from the expansion card board (ECB) to the 6 wire connector that was attched to the P/S PCB and cut the four mentioned wires at the connector.

19. Remove all of the studs that were used for mounting the old power supply.

20. Remove the wire bundle for the disk drives.

INSTALLING NEW POWER SUPPLY:

1. Disassemble power supply box.

2. Remove fan (keep screws for installing in P.E. Box).

3. Remove the new P/S PCB.

4. Cut the 2 wires to the 220 volt plug and solder together so to bypass the 220 circut.

5. Desolder the wires to the 110 volt plug , remove receptacle and intall in P.E. Box in place of the old one. (tag these wires as to where they belong.)

6. Resolder the wires to the power receptacle.

7. Assemble one of the 4 wire connectors using the 4 wires from the ECB (green, brown, yellow and black)

**** WHEN DOING THE NEXT
**** STEPS USE CAUTION WITH
**** POWER ON.

8. Hook up the power cord to the power supply and separate the 2 equipment wire bundles from the 4 disk drive wire bundles.

9. With the power on and using a multimeter check all of the wires in the equipment wire bundles. Locate and mark a +4 v., a +10.5 v., a -10.5 v., and a ground wire. These should all be in one of the bundles. Turn off the power and unplug it.

++ The IBM power supply utilizes a power loading circut and as such will not show full power without a load on line.

10. Assemble the other 4 wire connector (get this one right)

a. The +4 v. goes to the green wire of the ECB
b. The +10.5 v. goes to the brown wire of the ECB.
c. the -10.5 v. goes to the yellow wire of the ECB.
d. The ground wire goes to the black wire.

11. Install the new fan using the IBM hardware.

12. Remove the face plate from the power switch.
13. Cut the 2 wires from the switch about 2 inches from the switch and install the spade connectors on the 4 ends.
14. Remove the plastic face from the PEB front.

* * * *

Check these dimensions before cutting. I haven't looked at mine since reassembling and don't remember the exact dimensions. The switch clamps itself onto the face plate.

* * * *

15. Enlarge the original power switch hole to 1 1/8 inch wide by 1 5/8 inch high leaving a 1/4 inch lip on the left and bottom sides.
16. Cut a corresponding hole in the sheet metal front.
17. Assemble the switch on the plastic face then reattach the face to the front panel.
18. Enlarge the fuse hole in the back of the box enough to pass 3 of the disk drive cables through.
19. Route the other disk drive cable along the original path to the disk drive enclosure.

20. The P/S PCB is longer than the inside of the power enclosure that the board cannot be mounted flat on the bottom of the box. Therefore it must be mounted at an angle. I used hot glue (non-caustic, sets up in 3 seconds and can be pulled out by hand if need be) to mount one end, where the bottom and the back of the box come together. The other end must be high enough to clear the power switch in front so a spacer is needed to hold the board up at this end. A 2 1/2 inch spacer will do.
21. Test the fit of the front to the box. If everything appears to be Okay.
22. Reassemble the P.E. Box (don't forget to hook up the connectors for the power switch).

THE FLEX-CABLE CARD

All of the expansion cards use +12, -12 and +5 volts current, but the original power supply produced +16, -16 and +8 volts. Whats important about this is that the new power supply while unloaded puts out +10.5, -10.5 and +4 volts. The +4 volts won't open the 5 volt regulators to initiate the load on the power supply. It's for this reason that the 5 volt regulators (1 each) in this card and the foot must be bypassed, otherwise the computer will not boot up.

1. Remove the 4 screws from the bottom of the foot, remove the plastic casing and the metal casing. The 5 volt regulator is the only regulator there (see Fig.1).

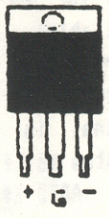


Fig.1

2. From the back side of the board desolder the 2 outside "legs" and lift them out of the board. (Do not remove the center one.
3. Using a short piece of fine insulated wire bend it into a horseshoe shape and solder the ends into the board where the 2 "legs" were removed.
4. Reassemble the foot.
5. Remove the 4 screws and 2 clips from the flex-cable clamshel and open it up.
6. There is only one voltage regulator here too. Do the same to this one as was done with the foot.

That's it. The conversion is complete. All that is left to be done is to hook it up to the computer.

CONTINUED NEXT PAGE

==========

WHAT IS PC PURSUIT

By Dave Ratcliffe
Wiz Tib SySop

==========

Those of us who use the computer to communicate with bulletin boards inother cities know the feeling of panic that sets in when the monthly phone bill arrives. Calling BBS's long distance can be a costly proposition. It is even more so for a BBS SySop. Text files and software don't grow on trees after all, and supplying a BBS with both, means LOTS OF CALLS. Until now, my monthly phone bill for computer-related calls has hovered in the $75 - $100 range. My wife, meanwhile, has hovered over me with intent to do bodily harm, if the bills kept coming in that high! Luckily, someone at Telenet hada great idea. They call it **PC PURSUIT.**

What PC PURSUIT amounts to is a way to make unlimited long distance calls to computer BBS's in certain areas for a flat fee of $25 a month!!!!

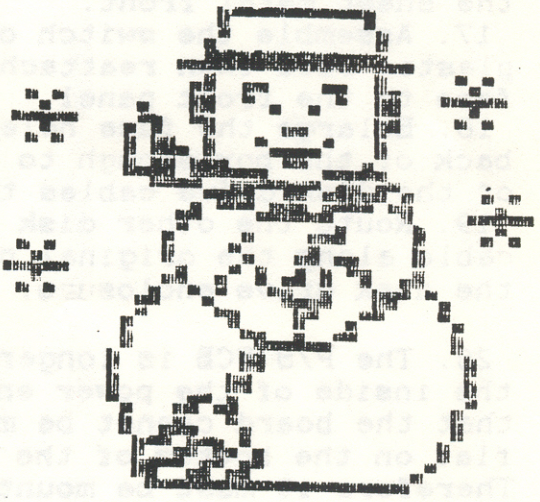
HERE'S HOW IT WORKS: First you call your local TELENET access number (usually 1 number for 300/1200 baud and another for 2400 if it's available). When your computer connects, you choose the area code you are calling and the speed you will use, then enter your ID# and Password. Upon connection to terminal in the area code you want, you simply treat thesystem as if you were dialing from your own modem (ie. enter ADTD 7$((). If you get a **CONNECT** on your screen, you are on-line and can stay that way as long as you wish. ($25 flat rate, remember?). If the system you are calling is busy, the word **BUSY** will appear on your screen. You can tthen enter a?, the normal Hayes command for re-dial, and keep trying till you get a connect. When you are finished with your session, you can disconnect from the area code you were calling and connect with another to make more calls.

NOW< HERE ARE THE DRAWBACKS. While you can access PCP from any city with a TELENET number, you can **ONLY** call areas that have been set up with thenecessary equipment. To date, only 25 cities are so equipped; Los Angeles, Tampa, Chicago, and others teeming with BBS's. NEXT, PCP charges you in one of two ways. Either by regular monthly postings to the credit card of your choice, or by automatic withdrawals from your checking account. They believe that avoiding a monthly mailed bill helps keep the costs down. LASTLY, some of the most heavily used area codes or "nodes" do not have enough lines for easy access. A call to the 202 area can take several hours toget through, because of thelimited number of access lines. The Bonuses are obvious!! Unlimited length and number of calls to PCP cities! No matter how many calls you make, you pay ($25) per month MAX!!!

ONE IMPORTANT NOTE: PCP has **NOTHING** to do with CompuServe, The Source, Delphi or GEnie.. They all have their own access numbers.

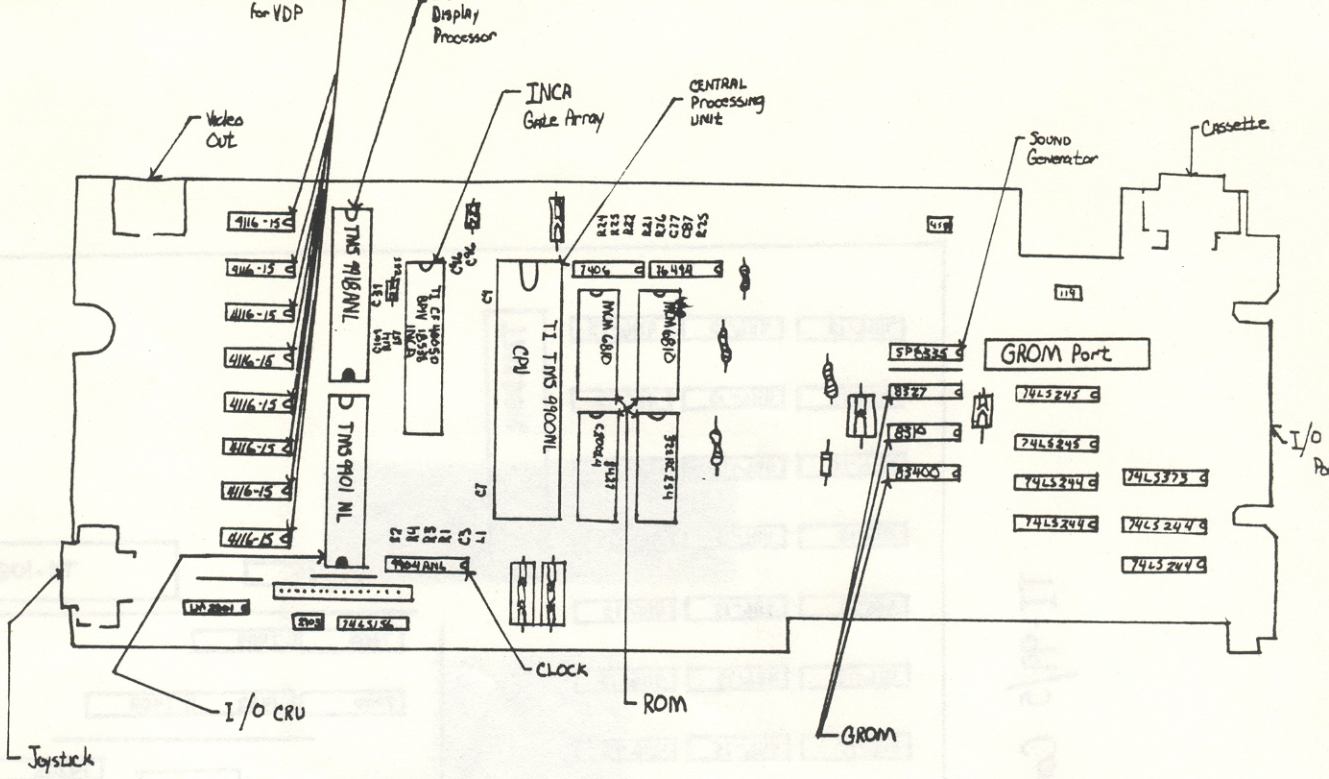
Since I received my PCP access in mid Oct., I have logged onto BBS's in Pheonix, Arizona; Seattle, Washington; Miami, Florida; Philadelphia, PA.; Atlanta, Georgia, and Dallas, Texas. I can now converse regularly with Stu Olson, Walt Howe, Paul Charlton and many others whose names are very familiar to the TI world. Is PC PURSUIT worth it? After reading the above, you be the **JUDGE?**

)(*)(*)(*)(*)(*)(*)(*)(*)(



THINK

COOL



TI-99/4A Quality Improved Component Location

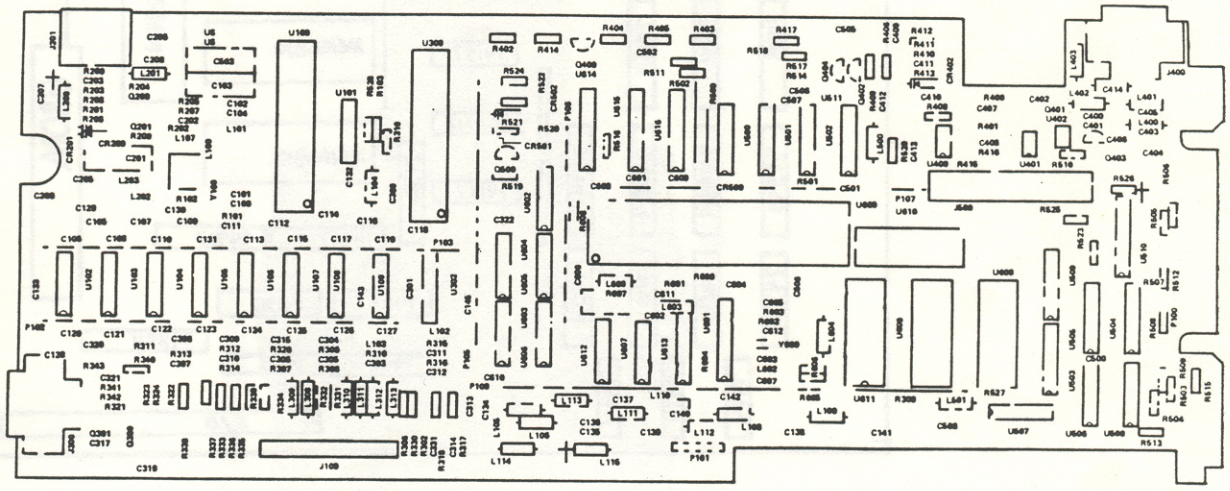
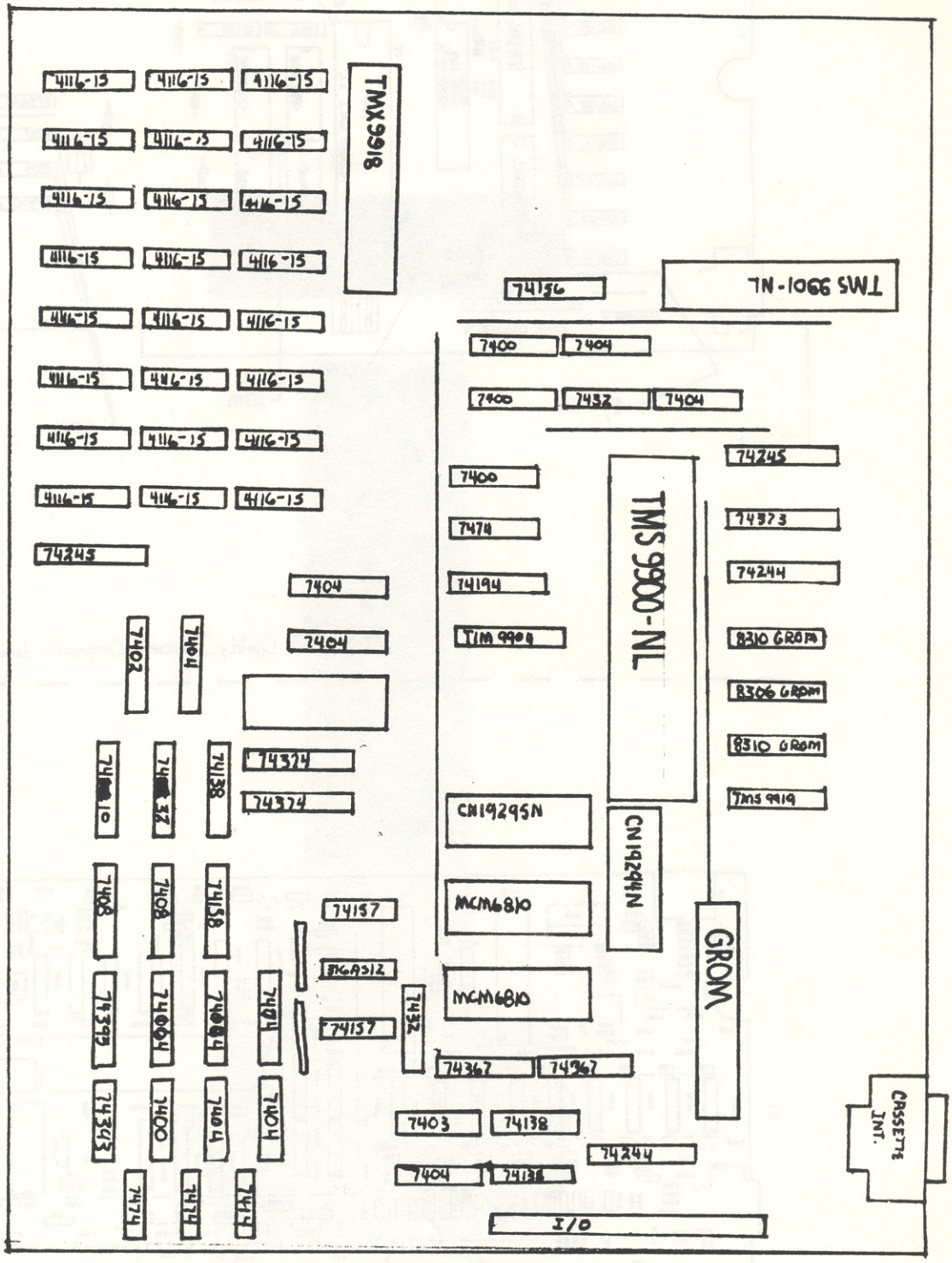


FIGURE F. TI-99/4A LOGIC BOARD COMPONENT LOCATION DIAGRAM

TI-99/5 Component Layout



LET'S TALK RAM DISK

by John F. Willforth

We have a problem as TI-99/4A users these days that most market viewers and many TI owners would not have believed possible just a few months ago. There are four major vendors of RAM DISKS in the U.S.A.. There is also a variety of features and sizes in these units, some of which are not found in units being produced for Atari, Commodore, Apple, or the P.C. lines of computers. The biggest problem facing the user now is "which to buy ?".

The purpose of this article is to provide some thoughts and facts to help you decide. The next several paragraphs are not intended to promote any one of the RAM DISKS mentioned, and may contain erroneous information, hopefully by omission rather than commission.

First a RAM DISK is by definition, a software/firmware supported RAM circuit board emulating a DISK. i.e. a circuit card, that when plugged into your PEB, will allow you to store and retrieve disk type files to/from the unit with the same ease as you would to your physical disk drive (DSK1 for example). Because RAM is a non-mechanical device, it is not subject to the delays of positioning a read/write head over a cylinder (TRACK), and waiting for the diskette to now rotate to the desired sector, and then read/write data from/to the spinning disk in serial (like cassette) form. These three mechanical limitations are the main reason that disks are slow. Yes, disks are about as much faster than cassettes as RAM DISKS are faster than disks! If you buy one, YOU WILL enjoy that kind of improvement, no matter which brand you buy.

The major two types of RAM DISKS are those using DYNAMIC RAM (MYARC, CORCOMP) and STATIC RAM (HORIZON, MIKE BALLMAN enhanced HORIZON [sold by Bud Mills]).

* DYNAMIC RAM is less expensive, larger capacity, but requires more support circuitry, draws more power, and is more cumbersome to support if the power is lost (like turning off the PEB).
* STATIC RAM is lower power and thus easy to support during power outages. They are more expensive, take more space on a board, and thus for the amount memory needed, more expensive than DYNAMIC RAM.

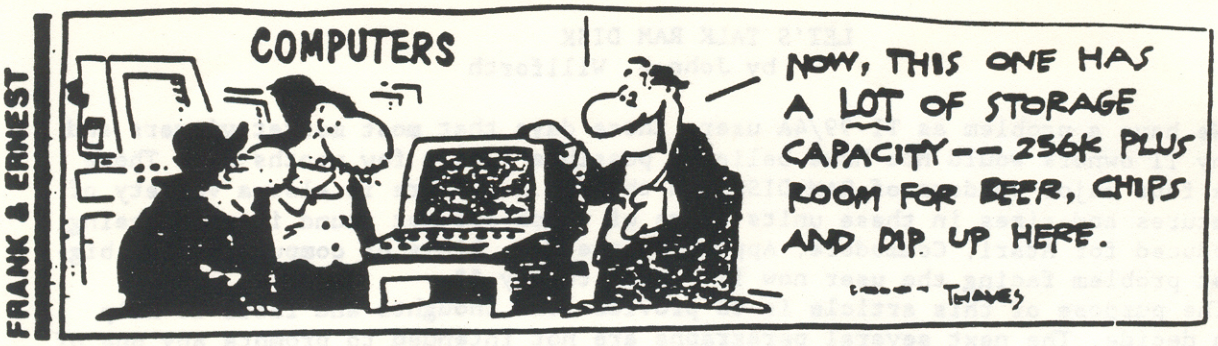
I would like to talk about additional features. The first one that I am most asked about, is the spooling features. All but the HORIZON and the enhanced HORIZON, have the spooling feature. At this printing, all that have spooling do it in a different manner, but just as effectively. Some of you may ask, "What is SPOOLING?". Well to make it simple, spooling is storing data that is to go to a device (printer modem, etc.) in memory space, and releasing it as it can be used by the receiving device. Remember the TI sits there sending to the printer until all the file is sent. Then it is able to accept your next command or continue instructions. A spooler accepts this information as if it were the printer, modem etc., and at a much higher rate than any of those peripherals could, and in most cases will accept the entire file to be processed in a few seconds verses several minutes. The TI-99/4A will then ASSUME that all that it had to do was done and come back to you for further use, when in fact the job is still being completed by the spooler at a pace that the printer, modem etc. can handle it. Pretty neat! Huh?

Another feature is partitioning, or multiple disks being assigned within a single RAM DISK CARD. What this means is that if you have a single drive on your system (DSK1 for example), you may call a portion of a RAM DISK DSK2, or DSK3, DSK4, etc. Now you have one physical, and up to who knows how many other disks which are part of the RAM DISK.

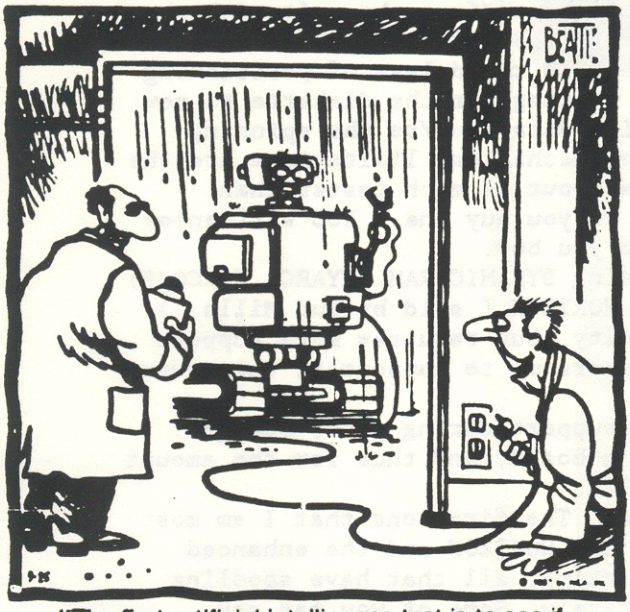
Still another feature is built in COMMANDS, each disk mentioned above has it's own set. For example, you can type "CALL DM" in BASIC COMMAND MODE, and a file called DM1 will be booted from the disk, followed by DM2. Many commands dealing with memory are also incorporated.

Features such as CLOCK, (Time Of Day), Analog-To-Digital, etc are now coming available on the RAM DISKs.

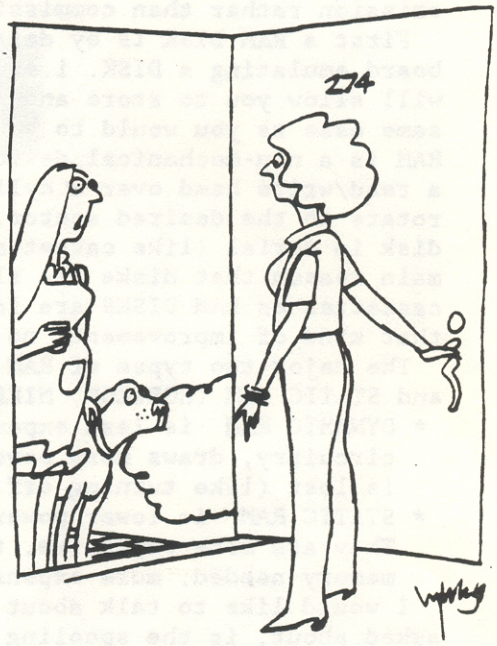
You may need more information to order your RAM DISK than I've provided here. Next month's article will get more specific on each RAM DISK but if you believe the ads, maybe you can understand them a little better now, and your ready to jump in. Good luck!



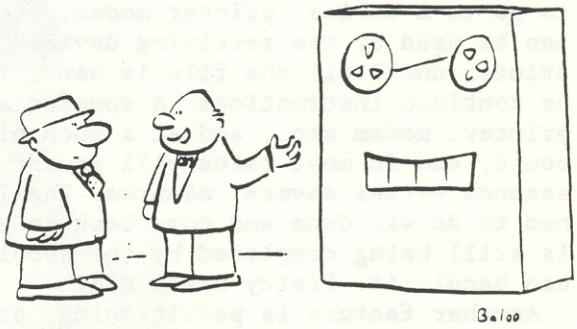
SNAFU/by Bruce Beattie



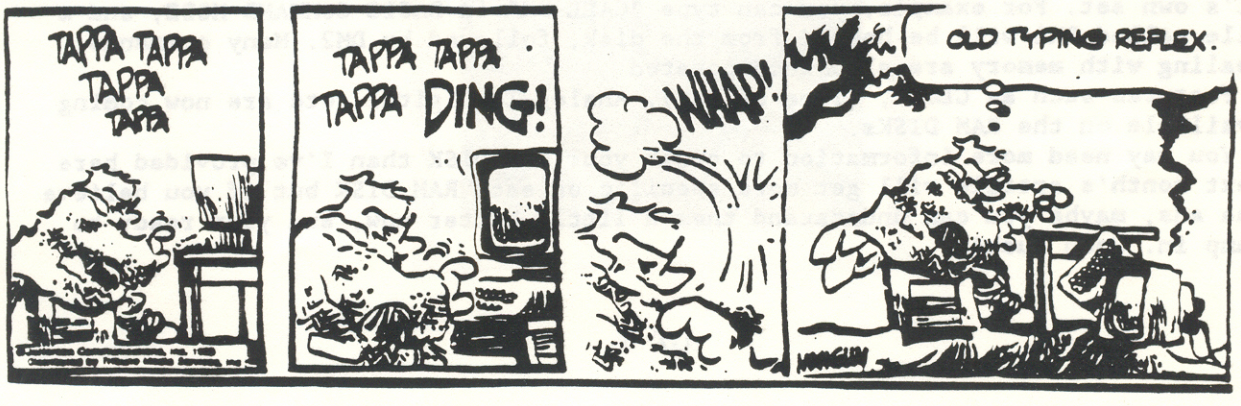
"The first artificial intelligence test is to see if it's smart enough to come in out of the rain."



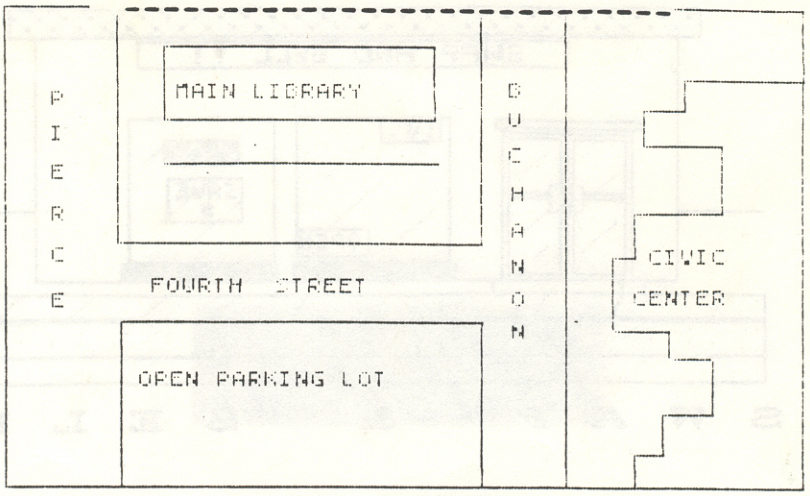
"May I borrow a cup of sugar and your software on menus?"



"Now, this model makes mistakes like any other, but it also has an excuse-making circuit."



AUG MEETING LOCATION MAP



MEETINGS ARE SECOND MONDAY OF EVERY MONTH AT 7:00 PM IN MEETING ROOM ON SECOND FLOOR OF MAIN LIBRARY...I'LL SEE YOU THERE!

Amarillo 99/4 Users Group
P.O. Box 8421
Amarillo, TX. 79114

TO