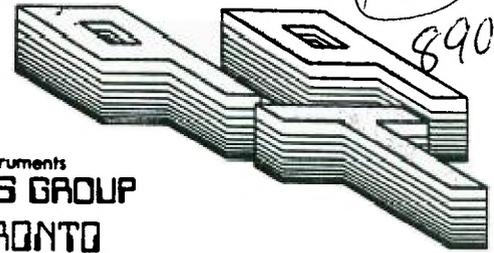


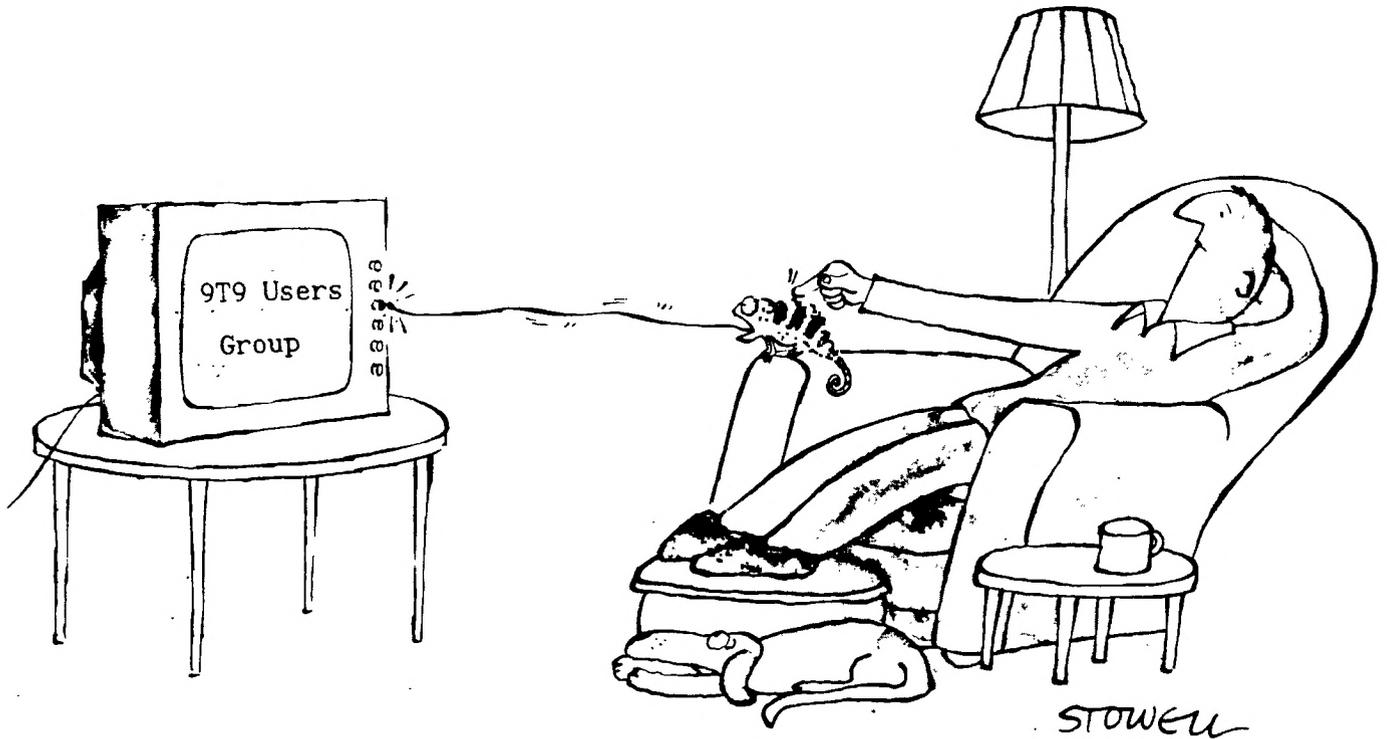
NEWSLETTER NINE-T-NINE

FEBRUARY 1989 ISSUE



Texas Instruments
USERS GROUP
TORONTO

FOR THE TI-99/4A COMPUTER



From:

9T9 Users' Group
109-2356 Gerrard St. E.
Toronto, Ont., M4E-2E2
Canada

To:

9 T 9 U S E R S G R O U P

EXECUTIVE COMMITTEE

PRESIDENT Steve Mickelson 657-1494
 VICE-PRESIDENT Neil Allen 255-2795
 SECRETARY/MEMBERSHIPS Randy Rossetto 469-3468
 TREASURER Peter Sandford 855-2107
 OFFICER AT LARGE Cecil Chin 671-2052
 LIBRARY DIRECTOR Gary Bowser 960-0925
 Andy Parkinson 275-4427
 Steve Findlay (416)727-6807



(416) PAST-PRESIDENT Lloyd Lindsay 743-3868

NEWSLETTER EDITOR

Steve Mickelson 657-1494

MEMBERSHIP FEES

FULL MEMBERSHIP \$30.00 / year
 NEWSLETTER SUBSCRIPTION \$20.00 / year
 DISK-OF-THE-MONTH SUBSCRIPTION \$30.00 / year additional

New meeting place
 (AS OF MAR. 30/89)
 1331 CRESTLAWN DR.
 UNIT D
 MISSISSAUGA
 (CANADA REMOTE SYSTEMS)

All memberships are household memberships. An newsletter subscription is only for those who do not wish to attend meetings, but wish to receive our newsletter and have access to our library. You are welcome to visit one of our general meetings before joining the group. If you wish more information contact either our president, in writing, at the club address on the front cover or phone him or our membership director.

The meetings are usually held on the last Thursday of each month, unless stated otherwise. Consult this issue of Newsletter 9T9 for the date and time of the next meeting. Meetings are held at meeting room of Canada Remote Systems, 1331 Crestlawn Dr., Unit D, Mississauga, (Eglinton Ave./Dixie Road-Area), starting at 7:30 PM and ending at 10:30 PM. No meetings are held in the months of July and August. December's meeting usually takes place the second week of the month.

COMMERCIAL ADVERTISING

Any business wishing to reach our membership may advertise in our newsletter. The rates are as follows. (height by width):

FULL PAGE	(10" x 7")	\$50.00
HALF PAGE	(5" x 7")	\$25.00
QUARTER PAGE	(2 1/2" x 7")	\$15.00

Please have your ads camera ready and paid for in advance. For more information contact the editor.

Don't forget, that any member wishing to place ads, may do so free of charge as long as they are not involved in a commercial enterprise.

NEWSLETTER ARTICLES

Newsletter 9T9 is published ten times a year by the 9T9 users group. Members are encouraged to contribute to the newsletter in the form of articles, mini programs, helpful tips, hardware modifications, jokes, cartoons and questions. Any article may be submitted in any form by mail or modem. We welcome the reprinting of any article appearing in this newsletter providing credit is given to the author and 9T9. If more information is required, call the editor. The name 9T9, Nine-T-Nine, Newsletter 9T9, Nine-T-Nine Users Group, and 9-T-9 Users Group are Copyright, (c), 1986, 1987, 1988, 1989 by the 9T9 Users Group, all rights reserved.

109-2356 Gerrard St. East, Toronto, Ont., M4E-2E2, CANADA

DISCLAIMER

9T9 Users Group is an independent, non-profit association of Texas Instruments TI-99/4A and Myarc 9640 users, and is not a part of Texas Instruments or Myarc Inc. Opinions expressed in this newsletter are those of the writers and are not necessarily those of the 9T9 USERS' GROUP. 9T9 cannot assume liability for errors or omissions in articles, programs or advertisements. Any hardware modification or project is presented for informational purposes, and the author, newsletter editor, and/or 9T9 Users Group cannot be held liable for any damage to the user's equipment. All such projects are done at your own risk!

CLUB BBS

The 9T9 Users Group sponsors the TI Tower BBS, (416)921-2731, 300/1200/2400 BPS, 24 Hrs. Sysop: Gary Bowser.



NINE-T-NINE USERS GROUP

TId Bits

#26

-By Steve Mickelson, President 9T9 Users Group
Compuserve 76545,1255; Delphi SMICKELSON; GENIE S.MICKELSON

Moving:

I believe it was Rodney Dangerfield who used to tell about how, when he was a boy, his parents sent him off to camp and upon his return, he found that they had moved away with no forwarding address. I hope our membership isn't getting the same idea. Seriously, Randy Rossetto has arranged for a new meeting place (see Randy's column or address on page 2). If you need more information, contact Randy.

Contributions:

My thanks to most of the executive who have contributed to this issue of the newsletter. It certainly gives this two-finger typist a rest from writing and therefore concentrate on editing. Keep those articles and reviews coming!

Andy Parkinson mentions "Home Publishing on the 99/4A", by Harry Brasher, a 74-page booklet which does a very good job of giving the reader an introduction and overview to the various art and graphic utilities for the TI user. It gives a clear, concise explanation of the various programs available upto the date of publication, (Sept./88). Other topics include trasnliterates, writing newsletters, Picasso, TI Artist, CSGD III, Graph X, Max RLE, TASS, Display Master, Calendar Maker 99, Joypaint, Fontwriter, Certificate 99, etc. Andy loaned me his copy, which includes a utility diskette. I'd heartily recommend it to anyone interested in getting the most of the graphics/printing for the 4A and plan to order a copy for myself. See Andy's review in this issue

Toronto Computes:

The TI community, in General, and our club, specifically got a boost from the Toronto Computes article about our orphan, past, present and future. The February issue had a detailed description of what we planned for this month's meeting. If you are not able to come to our monthly meeting and pick-up a free copy of this monthly newspaper/magazine dedicated to computing, you may subscribe to it for \$9.50 per year or \$18.50 for two years, (\$15 and \$28, respectively in the US). Send a cheque/money order, payable to Context Publishing Inc., 60 St. Clair Ave. West, Suite 1, Toronto, Ontario, M4V-1M7 or call (416) 925-4533 or FAX 925-7701.

PRESS / MBX Demo:

No word on the arrival of the PRESS. We hope to show a brief overview of the other Word Processors, including TI Writer, BA Writer, Companion, Writer Ease, and possibly Desk-top Publisher V 1.0, (see Andy's review on the last one in this issue). If there is enough interest this could lead to a series of workshops. I have received J.Peter Hoddie's Graphics Expander and hope to have a review of same in a future newsletter.

Steve Findlay and I plan to give a demo of the Milton Bradley MBX voice recognition system for the TI. We had a demo a few years ago, but hope to show several cartridges with this system.

Interest has revived in this system, which is still available through L.L. Conner, as Barry Boone has almost completed a utility, which will make this game system into a useful "no hands" TI accessory. See the following Delphi Forum message:

```
FOF!M>Reply, Add, Read, "?" or Exit> 8497, 3-JAN-22:08: 99/4A  
MEX utilities - From: BBOONE To: ALL
```

Just wanted to check once again to see what sort of interest there is in new software for the MEX system... I am 85% done with the Extended Basic interface, so that I am already writing demos that can read the keypad/joysticks and use voice recognition (one puts a dot on the screen and you move it by saying left/right/up/down)... another possibility is a version of an EZkeys type program that uses the 64 key keypad (which means 64 different macro keys, separate from the keyboard) Also I am nearly done with a set of generic assembler utilities that will allow an assembly programmer to take advantage of the MBX features using REF's... This stuff will be available as a package thru Texaments if/when it becomes available...

- Barry

Triple-tech Tips:

While at our last executive, we tested, for a future Disk-Of-The-Month a new utility program for the Corcomp Triple-Tech card. Gary Bowser mentioned how you could read the clock and "date-stamp" the file which you are working. Using Funel Writer he went into command mode and typed in LF and then 1 1 CLOCK; i.e. LF followed by 1 then a space and 1 again and another space, and then CLOCK, which promptly resulted in the date and time printed on line 1. If you used the LF command and typed CLOCK, without the start and stop line commands, you would find the date and time on every single possible line, filling the entire buffer.

The other tip was found while I had my niece and nephew over, using the TI system to play some games. There were several games, including a disk-based version of Parsec which would lock-up and refused to run. I had attributed this to rough handling of the diskettes by the playmates of my children. However, when my nephew pleaded to play Parsec, rather to use a master disk of the program, I decided to dust-off the cartridge. The cartridge started through the same sequence of play and locked-up!

This seemed to be just as the female voice would announce "press fire to begin". Aha! Since the speech synthesizer had been re-located on the Triple-tech card, I shut-off the P-Box, and re-set the console, voila! the game played, obviously, with no speech. I proceeded to remove the card and the piggy-back speech card and noted that the IC solder legs, (which seemed to be soldered with silver-solder), were discolored, almost black. I cracked-open a spare Speech Synthesizer and replaced the speech card with this card, (which had minimal discoloration to the IC leg's); put the Triple-tech card back-in the P-Box and found Parsec ran, and spoke the way it should. My daughter later found several games, which would either crash or not run, now ran; all seem to use the speech synthesizer. I have yet to determine what was wrong with the original speech card.

I know Blair MacLeod experiences several "snaps and pops" since he installed his speech synthesizer on a RAVE card in the box, as the MDOS is loading. I think that any software branded as defective, corrupted or not-compatible with either an expanded TI or Geneve system, should, if at all possible, be tested with the speech card removed.

Mail Order Problems:

At my work I received a memo to indicate that all computers or computer hardware accessories must have a sticker to indicate that they have been approved to meet new Canadian standards, which apply to all hardware manufactured after February 1, 1989. I have yet to check with Customs Canada, to see where this approval applies, and whether this regulations apply to any kits, cards or peripherals we may order for our TI-systems. It is certainly worth checking-out before you place your next computer hardware order:

80-Column Screens On The 4A:

While *much* discussion and debate still surrounds the pro's and con's of the Myarc Geneve, the 80-column display capabilities is certainly a strong positive point in favour of this card. As the debate continues, an alternative TI accessory has been gaining ground, providing a "common ground", bridging the gap between the TI and Geneve camps. That accessory being the 80-column display card or adapter for the 99/4A.

Two firms are producing such add-on's. Digit System's AVP card is one, (Newsletter 9T9 - Sept./Oct. 1987 issue, page 19), also is covered this month in a press release. While the other was produced by Mechatronic and sold by Technical Application Product Engineering, of Ontario, California.

Those who subscribe to MICROpendium may have seen the ad run by T.A.P.E. in the December, 1988 issue, (page 19). This card was being "cleared-out at \$89.00 U.S., plus an additional \$10.00, U.S., for the 800mA 7.5 V power supply. I placed a phone call to T.A.P.E. and spoke with Franz Wagenbach, (Newsletter 9T9 -March/88 issue, page 7), just a few day's ago.

Mr. Wagenbach informed me that he had taken orders to cover his currunt stock and a shipment expected, from Mechatronics. However, he put my name on a "waiting list", in case of a cancellation. I was told if he had enough user interest in the card, that he may be able to convince Mechatronics to make another production run of the 80-column cards, (so much for the rumour of Mechatronic's going out of business!). I was told that he had used an 80-column version of TI Writer, (the rumoured early version of Myword, perhaps?), Mass Transfer 80, and that work was proceeding on a GIF-utility for the 80-column cards. He was not aware of the 40/80 column PR Base, (version 2.1). Also Barry Boone had successfully connected a light pen and mouse to the card. He, also said that a digitizer could be connected to the card. I hope they make another production run in Germany, as the total price for the card and power supply is half that of Digit's card. Unlike the Geneve, such a card will not make obsolete the Triple-tech or 32K cards.

As an added point of interest, T.A.P.E. still had stock of the Epromer, which at \$59.95, includes software and power supply, (there was a \$6.50 shipping charge to Canada). Also available was the book 99-4A Intern, for \$6.95. I did not ask about Mechatronic XBII Plus, (\$23.95) or the TI-Mouse, (for \$59.95, including software and power supply). I did, however reserve an Epromer, and will send a check for one, which can handle EPROMS upto 128K of PROM memory.

If you are interested, T.A.P.E. accepts only cheques or money orders, write them at: 1439 Solano Pl., Ontario, California, 91764, U.S.A. or call (714)989-9906, remember the differences in time zones.

Saga Ends, Finally!

After over a month in the shop, I finally had my Magnavox monitor back, in working order. Apparently an IC and capacitor had to be replaced. I was given no explanation as to why it took four and half weeks to do a job that was supposed to take just a couple! Because of all my calls, the last which made to the manager of the service department, not to mention the long waiting time for the repairs, I was not charged for the repairs! You may recall that I sent my Geneve in last summer, thinking that it had failed. I cannot tell you how great it feels to have colour and sound restored to my system, six months is a long time!

Finally, a recent visit to Active Surplus on Queen St., I noted a number of RF modulators for the 99/4A available for \$5.00.

NEWS AND VIEWS FOR FEBRUARY 1989

-BY RANDY ROSSETTO, Secretary/Memberships 9T9 Users Group

-1- HAPPY NEW YEAR EVERONE!! Not a late salutation but one that last's for 365 day's (366 during leap year's).

-2- Let's start our new year with a membership drive. We have a number of back issues of the 1988 issues of the club newsletter which we are offering to any new members for 1989.

-3-ATTENTION NEWSLETTER EDITORS, due to the increasing postage costs, etc. the 9T9 UG will, in 1989, send out newsletters within our exchange community on a quarterly schedule rather than monthly. In this way no one loses out by not getting the information, as we all know not all user groups are prolific in the newsletter field.

-4-I am trying to put together a TI-BASE tutorial. Interested parties should sign up HERE.

-5-I have recently sourced a line of ribbon cable connectors to make up extension cables for the I/O port (firehose) and the GROM port (module). Aproximate price should be about \$25.00 for an 18 inch cable. Interested parties should sign up HERE.

-6-SEX-TAXES-SEX-TAXES-SEX-TAXES-SEX-TAX ES-SEX-TAXES-SEX-Now that I've got your attention there will be a change of meeting place starting with the MARCH MEETING on March 30, 1989. This is due to the fact that our beneficent landlord, Canada Remote Systems is moving to a new location mid-March and we have been invited to tag along with them. The NEW location will be: 1331 CRESTLAWN DRIVE, UNIT D, MISSISSAUGA, which is in the area of Eglinton Ave. and Dixie Road. Time will be the same at 7:30 pm. A map should be shown elsewhere in this issue.

-7-COMMING UP two TI FAIRES worth visiting just to be there among or fellow 99/4A and Geneve users, OTTAWA TI FAIRE on April 29 at Merivale High School in Nepean, an Ottawa suburb, 10 am to 4 pm and Lima, Ohio where the Multi User Group Conference will be held on May 20, 8 am to 6 pm in Reed Hall in the Studeny Activities Building at Ohio State University in Lima. And one I forgot, the Fourth Annual New England TI Fayuh on April 1 from 10 am to 5 pm in Woburn, Massachusetts at the Ramada Inn off I95.

-8-REMEMBER those handy dandy (Randy) little projects OR what the TI-99/4A should have been from the beginning? eg:keyboard alpha lock diode(see article elsewhere)

eg:reset switch

eg:load interrupt switch

eg:firehose extender/eliminator/relocator

eg:widget or multiport GROM (module) adaptor/extender

eg:joystick adaptor to Atari pinouts

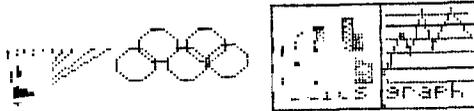
eg:keyboard extendor/adder for another keyboard

Which would you like to add to your system and haven't because you just didn't get around to doing. Let me know and then we can set up a demo for an upcoming meeting or a get together to install some of these mods to YOUR console! Interested parties should sign up here HERE.

-9-,-10-.I'm out!

DESK-TOP PUBLISHER VERS. 1.0
A Module by Databiotics

DESKTOP PUBLISHER vers. 1.0
A Review by A. Parkinson 9T9



At last I say, a way to do all those letters, articles, and reviews for 9T9 that I have been putting off because I don't have the time at home or when I do have the time someone else in the family is on the computer. All I have to do now is to take the spare console to work, plug in the module, and vola! my notes and pictures can be edited and saved to tape. Later when I'm allowed on the main computer at home they can be loaded, printed, and saved to disk. Now where did I put that tape recorder?

The picture editor creates a very small picture, see above, and has most of the drawing commands of the larger art programs except my favorite "zoom". Only one picture is allowed per page, so art will probably be simple titles, charts, or diagrams. The picture should be saved after drawing it and is saved in a format that is not compatible with any other TI drawing program.

Next enter the Word Editor. This word editor is not to be confused with a word processor because it contains none of the features of word processing programs, but does allow word editing a line at a time in 1 to 3 column modes. You eventually get the feel of the editor and an icon shows you where you are on the page. Right justification, if required, is done manually with the Fctn 2 insert key. I prefer the three column mode because the editing area does not scroll like it does in the other modes, but this review is in the two column mode. The file can be saved to cassette or disk and is in a DV80 format that can be loaded into other TI word processors if you want to further edit your file or use a spelling checker.

OK if you don't have an expanded TI and have a printer, or if you have a spare console and want to do some work away from home this module has some value. However, if you are planning to use this on an expanded full system, save your money.

HOME PUBLISHING ON THE TI 99/4A

A booklet review by A. Parkinson, 9T9 Users Group

I recently received a book and disk from the Western New York 99'ers Users Group on home publishing using existing programs. The book explains how the programs relate to one another and what is available.

On the disk are fonts for TI Artist Picasso, some pictures, a picture print utility, and other related software.

The price \$15.00 US includes two updates to be mailed later. Available from a sister users group Western NY 99ers, c/o Harry T. Brashear 2753 Main St, Newfane NY, 14108 Good value.

9T9 SOFTWARE CONTEST UPDATE FEBRUARY 89

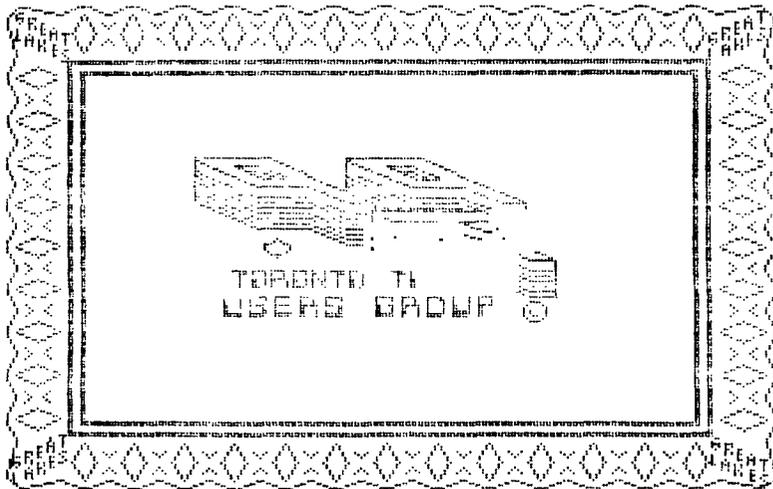
-A.Parkinson, 9T9 Users Group

To date we have received only three entries in our Library Software Contest. Come on folks get programming.

The rules are simple and the prizes are great:
First prize 50-diskettes.
Second Prize-30 diskettes.
Third prize 10 Disks.

- *Program can be in any 99/4A language
- *Must be user friendly
- *Must be useful
- *Must show name of Author and 9T9 Group
- *Multiple entries OK
- *Contest closes March 89 meeting

Note: The reviews on this page were done using Desk Top Publisher 1.0



SOFTWARE LIBRARY

PROGRAM REVIEW

BY

ANDY PARKINSON

New Software in our Library by Andy Parkinson

For the benefit of those persons unable to make the January general meeting included here is a brief description of the software introduced at that meeting:

Hockey is a two player game written in "c". It loads from EA or XB
----- requires 32K memory and two joysticks. The game is TriWare and plays somewhat like the Indoor Soccer Module. Docs included.
SSSD Disk Standard library charge \$2.00

1000 Words is a TI Artist Utility written in assy that converts TI
----- Artist pictures into a file that can be read and printed with the TI Writer Formatter. The program will allow one or two (with a small overlap) pictures to be printed across the page. This utility is a must if you own TI Artist and want to print a custom letterhead or graphics with TI Writer. Requires EA or XB, 32K, TI Artist, and a printer.
SSSD Disk with full docs. TriWare. Standard library \$2.00

Nasty is an XB program that gives our orphan a personality of its own
----- The program greets you with a new title screen and has new meanings for the reserved words, back, begin etc. Works best with speech. Requires XB w/32K. Also included is an XB cartoon APPLEJAM. SSSD Standard library charge \$2.00

Disk of the Month 9T9-89/01 January 1989 SSSD cost \$3.00

BACKGAMMON xb one player game against the computer from Home Computer
CAD ver1.9 computer assisted drafting is written in assy. It is TriWare and is not yet complete. Full docs included.

CALENDAR 3 Col is an xb calendar generator that prints out a year in a three column format. Written by 9T9'er K. Heffer.

GHOSTMAN is an assy game for one player somewhat like packman but there are no power pellets. Try the different speeds.

MCOPY ver1.1 is a copy program with a difference. The program header sectors will all be at the start of the disk. This speeds up the lookup time for a program especially on a disk with lots of files(i.e. Labeller) with docs.

MNLOAD Mortgage and Loan is three xb programs written by K.Heffer for our 1988 contest. This program is well done with a double list printout of your amortization.

Back Issues of 9T9 Disk of the Month

 Our library still has copies of back issues of our "Disk of the Month" for sale at \$3.00 for SSSD or \$5.00 for Flippys (less one dollar on your disks) Most disks require XB w/32K, single drive printer.

9T9-87/1 Jan/Feb 87 (Flippy) Cost \$5.00

 Death Station assy game Disk Label xb labeller
 Disk Sort assy cataloger Disk Manager II module dump
 Editor Assembler module dump I'm Lost assy game
 Overlay generator xb Paddleball assy game
 Rapid DV80 reader w/docs XB Calc spreadsheet w/demos
 Draw-PIO assy CAD w/demos docs Songs/EA assy music
 Tele-P assy convert phone #'s to letters

9T9-87/2 Mar/Apr 87 (Flippy) Cost \$5.00

 Mad Bomber assy game Breakthru assy game TriWare
 Cantina Band xb music Ghost Busters xb music
 Godfather xb music Joystick tester xb program
 Graph paper custom prints (Tri) MAX-RLE w/docs demos
 Safari letter search puzzles Schedule 1 month to printer
 Tiny Calendar year to printer World xb map logs distances
 Ass Dump II xb screen dump TI Sort DV80 file sort w/doc

9T9-87/3 May/June 87 (Flippy) Cost \$5.00

 Bank assy chequebook program Bar Graph xb program
 Crossword puzzle on screen CassTrans cassette to disk
 Q4CAT 4 across catalog printer Tourist xb US travel info
 VCR Guide catalog your tapes XB3Column print DV80 3 wide
 Animator 4th w/docs demo (Tri) Load Art xb slide show
 Word Count "c" counts DV80 files Letterhead TL file TI-Wtr
 XB-Chars new character set

9T9-87/4 Sep/Oct 87 (Flippy) Cost \$5.00

 Amortize xb mortgage w/docs Mac TI xb calculator
 Characters new xb set Net Worth calculates to pntr
 Physical Fitness module dump Weight Control Nutrician
 Honey Hunt module dump Sound Track Trolley mod dump
 Touch Typing Tutor mod dump DOS/99 with docs

9T9-87/5 Nov 87 (SSSD) Cost \$3.00

 Alpiner module dump Bardot xb for adjusting TV
 Chariots of Fire xb music Diskmapper assy utility
 First Class label xb Gothic assy banner
 TI Colours xb program Weather forecast your own

9T9-87/6 Dec 87 (SSSD) Cost \$3.00

 Crime xb Game Bert Ernie Demo w/speech
 GBS disk utility (Tri) well done Giants Dwarfs xb game
 GDIR assy disk directory Piano xb Music
 Yahtzee module dump Softly xb Music

9T9-87/7 Christmas 87 (SSSD) Cost \$3.00

 Monopoly game runs in xb Archiver vers 2.3
 MUSIC 4th Xmas music graphics Soliti pegjump game assy
 Connect 4 Module dump Title sheet generator xb

HARDCOPY

by Steve Findlay, 9T9 Users Group

Well, not too much new this month. In the November issue I made a mistake in one of the binder headings. The BINDER #1 (supplemental) should have been BINDER #2.

For those of you that are really into word processing, here are a few terms used in the "big" processors. The last line in a paragraph when it ends up all by itself at the top of a new page or column is called an ORPHAN and the first line of a paragraph left at the bottom of a page is called a WIDOW. Just a little bit of trivia for those in the know.

And on with the show...

BINDER #1 (Supplemental)

* A BASIC program listing called Disney. (Manasota - Jan 86)

BINDER #3 (Supplemental)

* A tip on creating slides in TI Artist. (TI Sig - Apr 88)

* A poor man's disk system modification to add a disk controller to the console. (TI Sig - Apr 88) * A tutorial from FunnelWeb Farm on squeezing assembly language code. Great for trying to fit those last few lines you desperately need into the TI's limited memory. (TI Sig - Sep 88)

* Another tutorial from FunnelWeb by Tony McGovern. This article describes how to write assembly programs to interface with the FunnelWeb environment. (TI Sig - Dec 88)

* A tip on how to access Extended BASIC from a ramdisk without a disk access looking for a LOAD file. Create a file with the following code and list it on the ramdisk menu. CALL INIT :: CALL LOAD(-31952,255,255,0) (TI Sig)

* The mention of a new upgrade kit for the TI disk controller that allows faster head stepping times (previously 20 ns), as well as 4 drives and other un-named conveniences. Another kit mentioned from the same source allows the TI RS232 card to emulate a thermal printer. It will also permit short form designations for long device names. EG. SIO could be equal to "RS232/2.BA=4800.DA=8.PA=0". Write to: John Guion, 11923 Quincy Lane, Dallas, Texas 75230. (BCS - Dec 88)

BINDER #4 (Supplemental)

* A Fast-Term key cue card. (TINS - Oct 85)

* An Extended BASIC game program called Insanity. (TINS - Oct 85)

* An assembly language listing of an alpha-lock routine. (Winnipeg - Feb 89)

BINDER #5 (Supplemental)

* A tutorial on using and programming DEP (Display Enhancement Package). A group of assembly routines used by XB to provide 40 columns and other enhancements. (Ottawa - Feb 86)

BINDER #10 (Supplemental)

* An article on constructing a remote full-sized keyboard for about \$35-\$40.

The article has excellent detail and clear pictures. (Sudbury - Nov 87)

BINDER #11

* An Extended BASIC program called BBS Filer. I have been using this program for quite a while and it does come in handy if you call a large number of BBS's. (FLUG - Nov 86)

* A schematic diagram for a PEB speech interface card. (Jun 87 - FLUG)

* An article on adding LED lights to all four 8K blocks of the 32K memory expansion addition in the console or speech synthesizer. (Aug 87 - FLUG)

* A speech tutorial using TELL and Text To Speech. (Aug 87 - FLUG)

* A complete memory map of TI 99/4A. (Oct 87 - FLUG)

* An Extended BASIC utility program for TIBBS. (Sep 87 - FLUG)

* A Tinygram BASIC program called FCC Stomp. (Sep 87 - FLUG)

* An assembly language program listing for cataloging disks. I typed this program in but I found that there was a missing section that dealt with finding whether a file was protected or not. (Aug to Sep 87 - FLUG)

* A schematic diagram for the unreleased TI 99/4A IEEE 488 interface card. This interface can be used to connect analog test instruments to the computer. (Oct 87 - FLUG)

- * For those people that own an early version Corcomp RS232 card, a resistor change that might make a difference. (Oct 87 - FLUG)
- * An article that discusses the algorithm and format used in Archiver. (Jan/Feb 88 - FLUG)
- * An article on purchasing and connecting the inexpensive IBM PC jr. thermal printer advertised in the Computer Shopper. Don't forget to purchase the optional adaptor cable! (Apr 88 - FLUG)
- * A review of the First Annual Texas TI Faire by Richard Fleetwood. Richard mentions that Texas Instruments looks on the selling and buying of 99/8's, 99/2's and HexBus devices as HARDWARE PIRACY! (Jun 88 - FLUG)
- * A mention of a true MIDI interface that has almost been completed by the DORIG user group in England. (Jun 88 - FLUG)
- * Editor/Assembler manual corrections. (Aug 88 - FLUG)
- * An assembly language listing for a screen dump program that can be called from BASIC. (Jan 89 - FLUG)
- * A Multiplan tip that states: when using windows you can move from window to window by using the semicolon (;) command. (Mid-Hudson - Oct 84)
- * Getting the ACCEPT AT command to accept 255 characters. See "Tips To Use With Your TI". (Mid-Hudson - Jun 85)
- * A correction to page 421 of the Editor/Assembler manual on saving and loading to cassette. The manual states that "CS1." should be used, but according to Brett Kropf, the correct filename is "CS1.." (double period).
- * An Extended BASIC loader for FORTH. (Will County - Jan 85)
- * An assembly language update for the four column lister QUADCOL, by Mike Dodd. (Will County - Sep 87)
- * An Extended BASIC program called Multiprint. It is a 2 or 3 column printing program. (Will County - Mar 86)
- * A list of program fixes for the game program LEGENDS version 1.0. (Will County - Feb 88)
- * A couple of XB subprograms for screen dumps. (Vol 2 No 7 - SGV Printout)

BINDER #12

- * An assembly listing for an audio spectrum sound generator. (Ryte Data - Sep 86)
- * An article on constructing an 8K DSR RAM board. (Ryte Data - Mar 87)
- * An article on modifying the Corcomp Triple Tech Card which adds two coloured LEDs for clock and buffer indicators. (Ryte Data - Jun 87)
- * An extensive article on building an RGBI monitor interface for the 99/4A. (Ryte Data - Jun 87)
- * An Extended BASIC program that adds printer output to TI BASIC programs. (Orphan Survival Handbook - Pg 1-7)
- * Assembly language listing to restart a program after a QUIT command in XB. (Orphan Survival Handbook - Pg 2-11)
- * A collection of one of the best c99 tutorials by Warren Agee and Ron Albright which includes a c99 Programmers Reference Sheet by Herman Geschwind. (Orphan Survival Handbook - Chapter 3)
- * Another collection of FORTH tutorials. (Ryte Data - Chapter 4)

'TIL NEXT MONTH... CALL LOAD(-31932,32)

HOW TO GET QBERT RUNNING ON GENEVE

from the Delphi Forum:

by Massimo Cariboni
Via Agadir, 2B

20097 SAN DONATO MILANESE (MI)
ITALY

WARNING!

This modify is only for personal use and anyway for QBERT owners. Distributing modified copies of QBERT may infringe Parker Brothers copyright. For any kind of further information, please feel free to leave a message for me (Massimo Cariboni) through the mailbox PAPERINO (Daniele Marini) here on DELPHI.

This is another brief file that will help you to fix a program (QBERT) made for the TI-99/4A so that you can use it on the new Geneve 9640.

Here's the tip on how modify QBERT for making it running on Geneve 9640 and TI99/4A.

1) Copy on a blank diskette the files QBERT and QBERT1 saved with GRAMKER or Peter Hoddie's program CS.

2) Using a sector editor, look for the following sequence: 02200100D8008C020280880016F7045B. Now Change 8800 into 8700. Sector to be modified on my QBERT version is located at sector 34 (H22), offset 136 (Hex 88).

3) Save the sector just modified.

4) QBERT is now ready to be enjoyed even on the Geneve 9640.

The following press release comes from GENie:

Dijit in San Diego is producing and selling some very interesting products. This file conatins some pertinent info, pricing and such, on these products. They also support a local BBS which is where I got this stuff. My Thanks to Lutz Winkler for allowing me to share this here. 20 sectors. Keywords: info, parts, hardware, software, 80 column

D/J/T/D/J/T/D/J/T/D/J/T
D /
/ DIJIT Systems /
J /
/ Bulletin Board /
T /
D/J/T/D/J/T/D/J/T/D/J/T

DIJIT Systems
4345 Hortensia St.
San Diego, CA 92103
U.S.A.
Phone: (619)295-3301
BBS: (619)278-8155

Welcome to the DIJIT Systems Bulletin Board. Our purpose is twofold, to help acquaint the TI-99/4A community with DIJIT Systems products and to provide a forum for their application. We want the board to be a two way street. To this end, we will maintain a timely collection of text files, tutorials and applications as well as programs for download which we may originate or glean from on-line data bases or publications. But we also need your input in the way of applications and programs as well as bugs and fixes. Our message base will provide a convenient means of getting questions answered as well as acting as an information exchange.

DIJIT Systems Products

AVPC - The Advanced Video Processor Card works in the P-Box with a minor modification to the console. This brings to the TI-99/4A the video capability you dreamed about.

- * 80 Column text word processing
- * Crisp Vivid RGB Video
- * 512 Color Palette
- * High Resolution Graphics
- * Up to 192K of Fast Video RAM
- * 8 Sprites per Line
- * Mouse and Light Pen Port
- * Supports Video GENLOCK and "real time video frame grabbing"



RGB - The RGB Conversion Kit brings easy on the eyes RGB to your TI-99/4A. See **On The Fastrack** your favorite TI programs in crisp text and lively colors as you've never seen them before. Requires the RGB Decoder and the Console Conversion Kit (soldering required).

CACHE - 8K Static RAM, battery backed, and Editor/Assembler in a TI CARD cartridge case. Great for program development.

MINI CELL - Mini Memory Lithium Cells with leads spot-welded especially for DIJIT Systems. Meets or beats TI specs. Don't take chances soldering ordinary cells.

VIDEO - Alignment Generator program converts the TI-99/4A into a test pattern generator to sharpen up your TV or monitor.

AVPC QUESTIONS AND ANSWERS: The following questions have been asked of us concerning the AVPC and other DIJIT products. Since most of the questions asked tend to be redundant, we have chosen the bulletin board medium as a means of disseminating the information while cutting down on our overwhelming correspondence. If the answer to your question isn't here then please address it to us in the E-Mail section and we'll add it to the list.

WHAT IS THE AVPC? The DIJIT Systems Advanced Video Processor Card is an advanced accessory for the TI-99/4A. It is installed in the Peripheral Expansion Box and functionally replaces the existing Video Display Processor in the console.

IS THAT ALL THAT'S TO THE INSTALLATION? No. There is a minor change to be made in the console which effectively puts the existing VDI "to sleep" and allows addressing video functions in the P-Box. No soldering is required.

WHAT TYPE OF MONITOR IS NEEDED FOR THE AVPC? It is strongly recommended that an 80 column rated Analog RGB monitor be used. Only such a monitor can legibly display 80 column text as well as present the 512 colors and advanced graphics functions the AVPC is capable of generating. See our text file "Monitors" for what's available on the market today.

CAN I USE A COMPOSITE MONITOR WITH THE AVPC? We do NOT recommend it. A composite monitor doesn't have the video bandwidth nor a picture tube fine enough to display 80 column text. We did make a provision to drive a composite video monitor with the AVPC. However we had a monochrome monitor in mind not a color monitor. Frankly, the color display is terrible, not even Yamaha uses the composite video output of the V9938 in their own MSX II computer where the composite video signal is derived external to the V9938 from the R, G and B signals.

HOW ABOUT A TV? Definitely no. A TV is even worse than a composite monitor.

WELL THEN CAN I USE THE TTL TYPE RGB MONITOR THAT IS USED WITH THE IBM-PC? No. The TTL RGB monitor requires 5 volts of digital video data to drive it and it can only display 16 saturated colors. The AVPC generates 1 volt of analog video and up to 512 colors. They are completely incompatible.

WHAT SHOULD I LOOK FOR IN AN 80 COLUMN RGB MONITOR? There are two major factors affecting the resolution of a monitor, the bandwidth of the video amplifiers and the coarseness of the phosphor dots on the display screen.

Most TV sets can adequately display 40 column text and have a video bandwidth of approximately 3 to 4 Mz. But if you really examine the text displayed, you will find that the characters have a very "soft" appearance, that is, the edges of the characters are not sharp and well defined like those on a printed page. This softness is due to the electron beam not switching on and off abruptly. That little bit of time required to switch the electron beam on or off is referred to as "rise time". In the ideal world this time would be zero, but in the real world even the fastest events in nature take a certain amount of time. The closer we can approach the ideal, the shorter the on - off time, the crisper the edges of the characters displayed.

It can be shown mathematically that "rise time" and bandwidth are inversely related. That is, as the rise time approaches zero, the bandwidth of the video amplifiers required approaches infinity. We can rigorously calculate the characteristics of the video amplifier required by Fourier analysis, however for a quick estimate we can use a "rule of thumb":

$$BW(\text{MHz}) \rightarrow 500 / Tr (\text{nsec})$$

The formula states that the amplifier bandwidth in Megahertz is approximately equal to 500 divided by the rise time of the pixel in nanoseconds.

Typical Tr for the TMS9918A, TMS9928A, TMS9929A is 50 ns. So the video amplifier bandwidth required is approximately 10 MHz. The V9938 requirement is similar.

The other major factor determining resolution of a monitor is the screen of the cathode ray tube on which the data is displayed. There is generally no problem with a monochrome screen, be it amber, green or white. But the screen of an RGB display consists of tiny dots of red, green and blue phosphors which are lit in various combinations and intensities. The glow is blended by the eye to give the appearance of the various colors of the spectrum.

The size of these dots in relation to the size of the screen determines the resolution of the CRT. Two common CRT sizes used in computer monitors are 12" (320 mm) and 14" (370 mm). These measurements are taken across the outside diagonal of the tube. The width of the displayable screen for these tubes is 243 mm and 280 mm respectively.

Many computer systems use 640 pixels horizontally for 80 column display by formatting the characters in an 8 x 8 pixel block. The V9938, however displays 60 columns using 512 pixels by formatting the characters in a 7H x 8V pattern. The 512 is exactly double the 256 used by the TI VDP for 40 column display and does not include an allowance for "backdrop" or overscan on either side of the computer generated image. Add approximately 90 pixels for backdrop for a total of 602 pixels displayed.

If we divide 370 mm by 602, we get a dot pitch of .6 mm which is the minimum spacing between adjacent pixels to display the 80 column text. Since the average TV picture tube has a dot pitch of .6 mm, it sounds great. However, having just enough pixels to light as there are generated by the computer or TV only works on those huge TV screens used in stadiums or other outdoor displays. It doesn't work with a CRT, especially if you sit very close to it and stare at it for an extended period of time.

You need about 25% more physical pixels on the face of the CRT to eliminate undesirable things like the "moire effect", the pattern we're most familiar with when we look through two window screens, one behind the other. This occurs because the computer generated image is never in perfect registration with the phosphor dots on the screen. On a 14" CRT, it's been found that .5 mm dot pitch makes for a marginal 80 column display. We recommend .42 mm dot pitch for comfortable viewing. Of course .31 mm is much better, but then the price is also much higher.

There you have it then, a 10 MHz minimum video bandwidth and a .42 mm maximum dot pitch are required for a comfortable RGB monitor. We recommend the Magnavox 8CM515, which has these characteristics, as the best value.

WE'VE HAD A NUMBER OF QUESTIONS CONCERNING MONITORS AND TVs FROM OUR FRIENDS OVERSEAS WHICH I WILL TRY TO CLARIFY. First of all I'd like to say that everything above relating to composite video monitors and TVs still applies. The AVPC uses the Yamaha V9938 video display processor designed for use in the MSX II computer. There have been very few MSX computers sold in North America. That computer system is sold almost exclusively outside of the United States.

In North America the the electric utility power system (mains) is 60 Hz and 115 volts while most overseas countries have standardized on 50 Hz and 220 volts. The TI-99/4A will accomodate either power (mains) standard.

It has been determined in the early day of television that the vertical scan frequency of video display devices should be directly related to the power (mains) frequency in order to reduce the effect of external electrically caused noise and interference on the video. Thus the noise interference tends to be stationary on the screen instead of annoyingly moving up or down.

To accomodate the different vertical scans, TI provided two different VDPs for the TI-99/4A, the TMS 9918A for domestic use and the TMS 9929A for use in countries with 50 Hz mains frequency. The Yamaha V9938 accomodates the 50 Hz and 60 Hz vertical scan frequencies through software, a much more elegant solution.

The video horizontal scan frequency of the V9938 is 15750 Hz, while NTSC is 15734 Hz and PAL is 15625 Hz. Most RGB monitors should have no problem locking on although the horizontal frequency adjust may have to be "tweaked" a little to center the picture.

CAN WE PROVIDE CABLES WITH THE SCART CONNECTION? SCART is an acronym for Syndicat des Constructeurs d'Appareils Radiore'cepteurs et Te'le'viseurs, the French radio and TV manufacturers association. They devised a connection system by which a TV could be used to display peripheral equipment such as VCRs, video disk players, games, etc., including personal computers. The standard makes use of a special 21 pin connector known in France as a "peri" connector and in England as a SCART connector. The pinout and signal levels are also specified. The SCART standard has not been adopted here in the United States and the connectors are almost impossible to obtain although if the quantities justified it, they could be imported. Please note: As far as we know the SCART standard covers only the connector type, signals and signal levels. It says nothing about screen display concerning resolution or video bandwidths. Therefore, just because a monitor has a SCART connector doesn't mean that it is an 80 column monitor.

HOW WILL THE AVPC DISPLAY MY EXISTING PROGRAMS? The AVPC will display most popular TI-99/4A programs as usual, but much clearer when they are displayed on a high resolution RGB monitor.

IS THE AVPC COMPATIBLE WITH ALL EXISTING TI-99/4A SOFTWARE? The AVPC is compatible with most popular programs, however it is less tolerant of poorly written software than the unmodified TI-99/4A.

WILL EXISTING PROGRAMS BE DISPLAYED IN 80 COLUMN MODE? No. Existing programs are displayed exactly the same way as they are on the TI-99/4A. The enhanced features of the AVPC require specific application programs to invoke them.

CAN I ACCESS THE ADVANCED FEATURES OF THE AVPC THROUGH EXTENDED BASIC? You can access some of the features such as the mouse, with drivers written by Dodd and Hoddie, also some of the graphics features with routines such as those written by Jeff Kittka. See our X-Modem download section. As other drivers become available we will post them on our BBS.

HOW ELSE CAN I ACCESS THE ADVANCED FEATURES OF THE AVPC? The advanced features of the AVPC are accessed through specific application programs such as the 80 column TI-Writer editor, 80 column Multiplan etc. All the features of the card are accessible through FORTH and C as well as Assembly Language. (DIJIT Systems will have a programmers guide for sale to people who wish to program in the latter lower level languages). We have found that many of the early programs written for Myarc 9640 under GPL, especially graphics, will also run on the AVPC.

IS THE AVPC COMPATIBLE WITH OTHER THIRD PARTY PERIPHERALS? The AVPC was designed to work with and be compatible with Texas Instruments TI-99/4A peripherals. Hardware and software not conforming to Texas Instruments hardware and software specifications may not work with the AVPC.

WHAT IS A "QI" CONSOLE? "QI" stands for Quality Improvement and was the designation given the last production model of the TI-99/4A, before Texas Instruments went out of the home computer business. Internally, it had a newly designed PC board on which a large gate array consolidated the logic functions performed by discrete "glue chips". Another feature was an improved switching power supply made by an offshore contractor. The latter were surplused out to Radio Shack and others and had the contractor's name "IRIICHI TSUSHIN KOGYO CO., LTD." on them. Externally, the "QI" is a beige console recognized by looking at the side accessory port. The shielding "finger stock" is silver colored, all non-"QI" consoles have gold or brass colored "finger stock". We cannot endorse the "QI" consoles for use with the AVPC because they are a rarity and we have not tested them. Besides, there are plenty of standard consoles on the used market and we know they will work.

IS THE AVPC COMPATIBLE WITH THE HORIZON RAMDISK? Yes, there was an incompatibility between the AVPC and the Horizon Ramdisk. The AVPC, being the new kid in the neighborhood has received some "heat" for incompatibility. The Trade Union argument that "the last card in the box has the lowest seniority" and so should take the "heat", we found unacceptable in this case. We knew the AVPC was compatible with TI, CorComp and Myarc disk controllers and had no problems when saving Text2 (80 column) files or other advanced files to floppy disk. If you couldn't save them to the HRD, then clearly the Ramdisk was not emulating a standard floppy disk drive. The problem was in the HRD Operating System or ROS. Barry Boone came to our rescue by writing a ROS "patch" for HKD owners who also have V9938 based video systems. BARRY'S ROS PATCH really consists of two different programs, one for the TI and CorComp disk controllers and the other for the Myarc disk controller. Both are "Fairware" and are included in the download section of the bulletin board under the title: "Horizon ROS".

I HAVE A RAVE KEYBOARD, WHY CAN'T I GET THE AVPC TO QUIT WITH "[FCTN] ="? Incorporated in the power up routine of the AVPC is a little feature to eliminate the bane of the BASIC programmer. Namely, to have keyed in a long program and requiring a "+" sign, to have your finger slip from the [SHIFT] key to the [FCTN] key and watching your work disappear. Now you have to make an effort to QUIT, you must use two hands and press [FCTN], [CTRL] and "=". The RAVE keyboard only scans two keys at a time and so it can't sense our three key QUIT feature. However RAVE does sell a cable assembly for their keyboard which works like the reset button on the ~C works with all terminal programs that we are aware of.

WHY DOES THE AVPC HAVE PROBLEMS WITH THE RS-232 CARD? The AVPC was designed to work within the hardware and software constraints of the TI-99/4A. To do so required sharing the external interrupt bus between the P-Box and the console. This incidently, is one of the major differences between the AVPC and the Mechatronics 80 Column Card. The RS-232 card was the only card made by TI or third party vendors that made use of this external interrupt bus until the AVPC came along. There is a "bug" in the TI Interrupt Service Routine that causes the card to shut down when an interrupt is sensed but there is no data in the incoming buffer. CorComp and Myarc copied the ISR and the "bug" with the same results. If TI stayed in business and had brought out any more interrupt driven peripheral cards, they would have had to contend with the ISR "bug". DIJIT sells code correction EPROMs for the TI, CorComp and Myarc RS-232 cards.

WHAT IS "FAST VIDEO RAM"? The AVPC was designed not just to display computer text and graphics on the screen, but to work with "real time video frame grabbers" and other digitizers. For this reason Yamaha recommended the more expensive 120 nanosecond fast video RAMS. Some brands of 150 nsec RAMs will work just fine. However we found that some, notably the TI 4464-15 does not work.

CAN I USE THE AVPC'S EXTRA RAM FOR OTHER PROGRAMS? The CPU cannot directly access the AVPC's RAM and so cannot run programs out of it. Video RAM can be used as a buffer to store data, however. As explained above, TELCO does just that and stores its modules or overlays in video RAM, in effect making it work as a RAMDISK. Access to video RAM for data storage can only be had through Assembler or other low level languages.

WHAT IS GENLOCK? The term "genlocking" is a contraction of "general locking" and refers to the complete synchronization of a video accessory with an external video source. Genlocking is required in order to do superpositioning of graphics or other video, on the source video also for digitizing. In a TV studio, all cameras and special effects devices are synchronized by a standard clock signal that is distributed throughout the studio. However when such a standard signal is not available, it is necessary to derive the synchronizing information from the source video by means of a genlocking device. The name "Genlock" has been applied by Amiga to an accessory capable of superpositioning or overlaying computer graphics and text onto externally supplied video.

WHAT IS A 'REAL TIME FRAME GRABBER'? It is a video digitizer that can capture a video image as fast as it is presented. Some video digitizers in use today, notably on the Amiga, cannot capture live video. They work by slowly scanning a picture in monochrome through color separation filters and storing it in memory where it may be manipulated for the purpose of screen display or dumping to a printer. A television image consists of 2 'fields' interlaced together to form a complete picture called a 'frame' which is equivalent one picture of a movie film. Each field requires 1/60 of a second, the total frame then takes 1/30 of a second to display. In countries using the PAL standard, a field requires 1/50 of a second and a frame is 1/25 of a second. Our DIJIT-EYE-ZER will be capable of capturing either a field or a frame in 'real time', as quickly as it is displayed. And we will be able to do it in 256 colors in medium resolution mode.

DOES THE AVPC WORK WITH THE BUD MILLS 32K CONSOLE MEMORY EXPANSION KIT? We have not had any complaints on that from our customers. Barry Boone claims to have no problems with it and his Mechatronics card. We will maintain a conservative wariness on this one because it gets its speed increase by eliminating the 'wait states' that TI had built in to assure timing compatibility with peripherals.

MONITORS - DIJIT Systems SELLS MONITORS We Recommend Magnavox 8CM515

 PRICES as of December 1988 - US Funds
 [Subject to change]

AVPC (192K)-----\$250.00 ✓
 AVPC (128K)-----\$220.00 ✓
 [Requires Analog RGB or monochrome monitor.] Not available for "QI" versions of TI-99/4A.

Console Alteration at DIJIT -- \$25.00 (Plus shipping)
 Cable (unshielded) for Magnavox 8CM515 ----- \$25.00
 Cable (shielded) for Magnavox 8CM515 ----- \$35.00
 RS-232 EPROM - Code correction required for BBS Terminal Programs.

TI RS-232----- \$22.00 ✓
 CorComp RS-232 (24 pin)----- \$20.00
 CorComp RS-232 (28 pin)----- \$20.00
 Myarc RS-232 ----- \$20.00

RS-232 Card Alteration at DIJIT-\$25.00 (Plus shipping)

RGB Console Conversion Kit ---- \$35.00 ✓
 Decoder Interface ----- \$75.00 ✓
 For 1V p-p, 75 ohm Analog RGB monitors only. Price quoted for standard connector: DIN-6, DB-9, DB-25, EIAJ-8.

CACHE CARD ----- \$30.00

Mini Memory
 LI CELL (includes SH)----- \$5.00

VIDEO Alignment Generator ----- \$20.00

MAGNAVOX 8CM515 MONITOR ----- \$295.00

SHIPPING AND HANDLING
 Cont. USA-\$5; AK, HI, Canada-\$10
 Monitor SE in Cont. USA ----\$15
 Overseas = Inquire
 CALIFORNIA Residents add 6-1/2% tax.



TI SYSTEM FOR SALE

"I HAVEN'T LOCATED THE PROBLEM YET."

1 Silver/Black console, 1 TI Peripheral Expansion Box, including: TI SS/SD Disk Drive, TI Disk Controller Card, Corcomp 512K RAMdisk memory card, (includes 32K memory expansion on the card) - this card has both AC power supply and battery back-up as well as write-protect and CRU 1000/1400 remote switches-, Writer Ease software loadable into the RAMdisk, (this is the word processor with built-in spell checker), TI Writer cartridge, Disk Manager 2 cartridge, plus your choice of hundreds of disks of programs, (just bring blank diskettes along). The above includes all necessary manuals. Package price \$600. Contact Nicos at 690-6644, (Toronto).

A Short Review by ARTBYERS
Date: 27-JAN-1989 22:39

Funnelweb V 1.3 The file READ FIRST.TEXT is a resume of the new features of FW 4.13 plus a BUG REPORT on the DM-1000 that comes with Funnelweb V 4.1x. It is suggested that you read this file before d/l'ing so you can make a decision what part or parts you want to d/l. In General, however, unless you own a 9640, a Mechatronics 80 col card, or a DIJIT AVPC 80 col card, you do not have to d/l the 80COLUMNFW.ARC file.

80COLUMNFW.ARC is an archive that contains Funnelweb ED and EE files that work in 80 columns and have enhanced features over the normal 40 column editor. Use them with FWB v4.13 in place of the normal 40 column ED/EE files if you have an AVPC card or may from a Geneve in GPL mode.

The archive also contains an associated doc file written by Tony McGovern and unpacks to 102 sectors. We are not distributing the modified Horizon ROS mentioned by Tony in his doc file because possible legal problems. Bud Mills services owns the rights to the Horizon ROS. Owners of Horizon Ramdisks who are interested in obtaining Tony's ROS should contact Bud Mills Services.

FW4 13.ARC is an archived Funnelweb v4.13. It unpacks to 701 sectors and contains the normal 40 column ED/EE files.

FW4 13A.ARC and FW4 13B.ARC are identical with the above except that FW has been split into halves, each unpacking to less than 358 sectors. If you only have SSSD drives or if you are nervous about d/l'ing a 480+ sector archived file. Download these instead.

(Note: THE 80 COL EDITOR APPEARS TO RUN ON THE GENEVE. jlc)

In 40 col mode changes on FWB 4.13 are small. A problem between Horizon Ram Disks and Myarc Disk Controllers was discovered and fixed. There are some minor improvements in the paging of directors from QD or SD with E/X as well as with N/B. The [P]rintout of the disk directory has been upgraded.

80 COLUMN CHANGES AND IMPROVEMENTS.

Most changes are in the optional 80 col. editor files, ED/EE. Bugs have been swatted and it now works OK with TI, Myarc and CorComp Disk Controllers. The 80 col editor was written specifically for use with the DIJIT APVC card. As of this date (Jan 27) it is not known if it works with the Geneve in the GPL mode or with Mechatronics 80 col card. Both Mechatronics and Geneve use the same Video chip as the AVPC card.

Other improvements include the ability to [V]iew file in 80 cols from SD, a new directory that displays 20 files at a time. You can also protect and unprotect files from SD, something not avail in 40 col. Control Y will also release the right margin a/w/a the left margin.

BUG IN DM-1000 All versions of 4.1x right thru 4.13

The version of DM 1000 included with FW 4.1x SOMETIMES fails to properly copy disks sector by sector when you select COPY DISK from DM-1000's Utilities submenu. This seems to occur when you try to copy a disk of greater than SSSD on to a not initialized disk. DM 1000 is SUPPOSED to detect that the disk is not initialized, sense the correct format and initialize accordingly. What actually happens is that the target disk is always initialized as SSSD no matter what so of course after sector 360 you get errors and no copying beyond that. No problems occur if the Target disk is already correctly initialized with INITIALIZE or BOX FORMAT.

PROGRAM FROM THE SOURCE

```
100 REM STORY TELLER - WRITTEN IN CONSOLE BASIC
110 REM REQUIRES TERMINAL EMULATOR II AND SPEECH SYNTHESIZER
120 REM DURING INPUT MODE, THIS PROGRAM WILL SPEAK EACH WORD AS ENTERED.
130 REM FCTN-S CAN BE USED TO CORRECT ERRORS ON THE CURRENT LINE.
140 REM THE PROGRAM WILL WRAP WORDS.
150 REM TO EXIT INPUT MODE, ENTER THE WORD "END" ON A NEW LINE.
160 REM THE PROGRAM WILL THEN PRESENT 4 OPTIONS:
170 REM 1) LIST THE STORY
180 REM 2) SPEAK AND LIST THE STORY
190 REM 3) ADD TO THE STORY
200 REM 4) EXIT THE PROGRAM
210 REM SOME WORDS THAT ARE CORRECTLY SPELLED MAY BE MISPRONOUNCED.
220 DIM A$(200)
230 CALL CLEAR
240 SAYS="STORY TELLER"
250 PRINT TAB(10);SAYS::TAB(15);"BY"::TAB(11);"KEN GAUGER"
260 OPEN #1:"SPEECH",OUTPUT
270 PRINT #1:SAYS
```

```

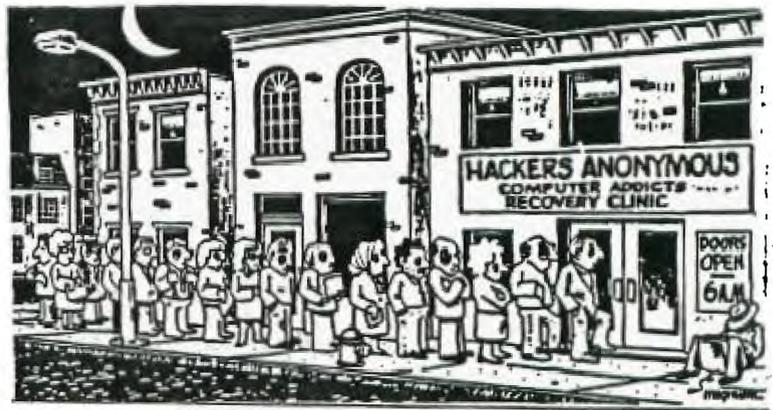
280 SAY$="TO END YOUR STORY, ENTER"
290 PRINT ::"TO END YOUR STORY, ENTER"::"END"::
300 PRINT #1:SAY$
310 PRINT #1:"F'D"
320 SAY$="ON A NEW LINE"
330 PRINT SAY$:
340 PRINT #1:SAY$
350 SAY$="BEGIN YOUR STORY:"
360 PRINT SAY$:
370 PRINT #1:SAY$
380 BS=""
390 I=1
400 CALL KEY(0,K,S)
410 IF S=0 THEN 400
420 IF K<>8 THEN 620
430 I=I-1
440 IF I<1 THEN 590
450 IF LEN(BS)<>1 THEN 480
460 BS=""
470 GOTO 490
480 BS=SEGS(BS,LEN(BS)-1,1)
490 BS=SEGS(BS,1,LEN(BS)-1)
500 IF BS<>" " THEN 570
510 IS=0
520 JS=POS(BS," ",IS+1)
530 IF JS=0 THEN 560
540 IS=JS
550 GOTO 520
560 KPOS=IS
570 CALL HCHAR(24,I+2,32)
580 GOTO 400
590 I=1
600 CALL SOUND(100,220,2)
610 GOTO 400
620 IF (K=32)+(K=13)=0 THEN 770
630 IF I<=KPOS THEN 670
640 PRINT #1:SEGS(BS,KPOS+1,I-KPOS)
650 KPOS=I
660 GOTO 770
670 IPOS=0
680 JPOS=POS(BS," ",IPOS+1)
690 IF JPOS=0 THEN 720
700 IPOS=JPOS
710 GOTO 680
720 IF IPOS=0 THEN 760
730 KPOS=IPOS
740 PRINT #1:SEGS(BS,KPOS+1,I-KPOS)
750 GOTO 770
760 PRINT #1:I:
770 IF K=13 THEN 1010
780 BS=BS&CHR(K)
790 IF I>27 THEN 830
800 CALL HCHAR(24,I+2,K)
810 I=I+1
820 GOTO 400
830 KPOS=0
840 IF K=32 THEN 970
850 IPOS=0
860 JPOS=POS(BS," ",IPOS+1)
870 IF JPOS=0 THEN 900
880 IPOS=JPOS
890 GOTO 860
900 AS(II)=SEGS(BS,1,IPOS-1)
910 II=II+1
920 BS=SEGS(BS,IPOS+1,29-IPOS)
930 CALL HCHAR(24,IPOS+2,32,29-IPOS)
940 PRINT :BS;
950 I=LEN(BS)+1
960 GOTO 400
970 AS(II)=SEGS(BS,1,28)
980 II=II+1
990 PRINT :
1000 GOTO 380
1010 IF BS="END" THEN 1070
1020 AS(II)=BS
1030 KPOS=0
1040 II=II+1
1050 PRINT :
1060 GOTO 380
1070 CALL CLEAR
1080 PRINT "ENTER YOUR CHOICE:":: 1) LIST STORY": 2) TELL STORY": 3) ADD TO S
TORY": 4) END STORY TELLER"::

```

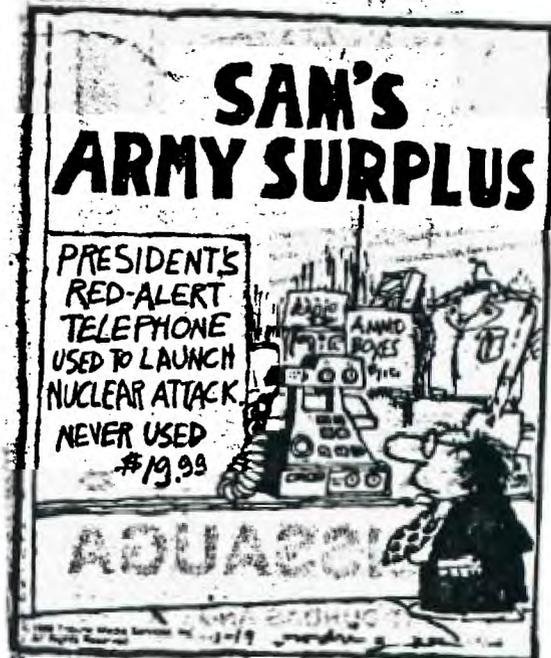
```

1090 INPUT "YOUR CHOICE? ":OPT
1100 IF (OPT<1)+(OPT>4)<>0 THEN 1090
1110 IEND=II-1
1120 ON OPT GOTO 1130,1130,1280,1300
1130 CALL CLEAR
1140 FOR I=0 TO IEND STEP 21
1150 J=I+20
1160 IF J<IEND THEN 1180
1170 J=IEND
1180 FOR JK=I TO J
1190 PRINT AS(JK)
1200 IF OPT=1 THEN 1220
1210 PRINT #1:AS(JK)
1220 NEXT JK
1230 PRINT "PRESS ANY KEY TO CONTINUE.":
1240 CALL KEY(0,JK,STAT)
1250 IF STAT=0 THEN 1240
1260 NEXT I
1270 GOTO 1070
1280 PRINT "CONTINUE YOUR STORY."::
1290 GOTO 380
1300 STOP
1310 END

```



Charlie



SINGLE CHIP 32K MEMORY EXPANSION.....
By Joe Spiegel of the Airport Area Computer Club

Joe is still doing it. He has decoded around the ROM in the console using diodes in order to make the use of the new 32K EPROM (single) Chip, the 62256. He has also designed a single sided board that can be etched by you, in order to build this project.

Joe will either send you an etched board for \$3.00 (unbelievable), or a complete unit ready to solder (4 wires to the U504 chip in your console), for and get this, \$25.00. Hey Joe! Your ruining the neighborhood. You know that for him to do it at these prices, Joe is "doing it for YOU". He will need your old GROM connector back after you install the unit he builds for you.

Joe, does your wife know that the family will not see you for the next two years. Send inquiries to the :

AIRPORT AREA COMPUTER CLUB
% JOE SPIEGEL
P.O. BOX 710
CORAOPOLIS, PA 15108

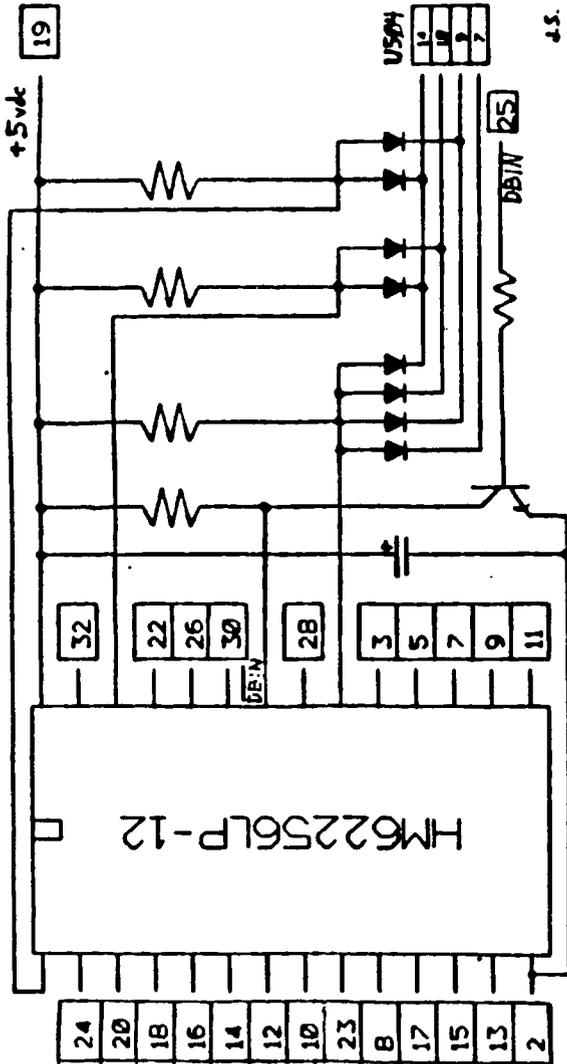
OR CALL JOE AT: 412 457-8284

9T9 - Page 18

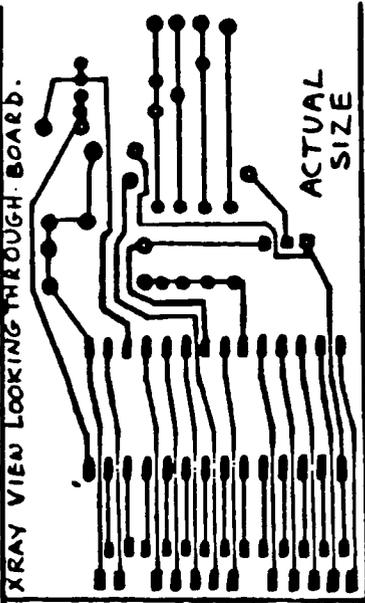
Notes:

- All resistors - 1K
 - All diodes - 1N914 or 1N34
 - Transistor - 2N2222 or 2N3904
 - Capacitor - 22 nfd Tantalum
- All pin numbers refer to connections on the GROM port except the four lines going to U504 on the motherboard.
- The transistor and its base and collector resistors may be omitted if DBITN is obtained from U508, pin 9, on the motherboard.

SINGLE RAM CHIP 32K Expansion

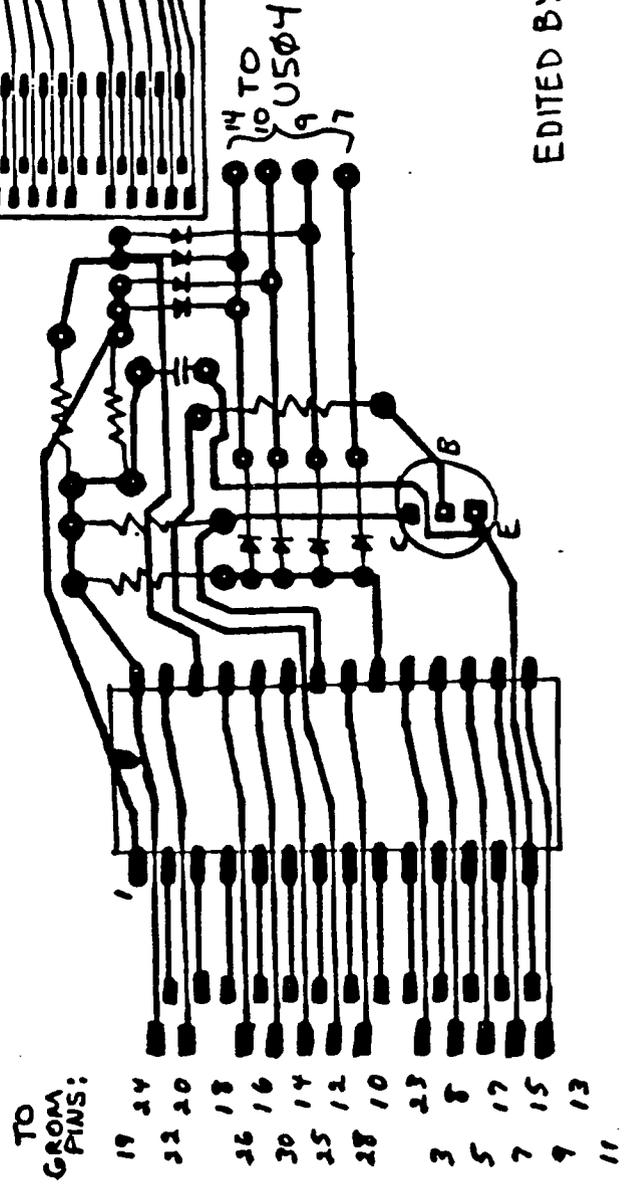


45.



THE PATTERN ABOVE
COULD BE USED TO
PHOTO ETCH A BOARD

COMPONENT LAYOUT



EDITED BY John F. Wilfirth WP99ER APR 87