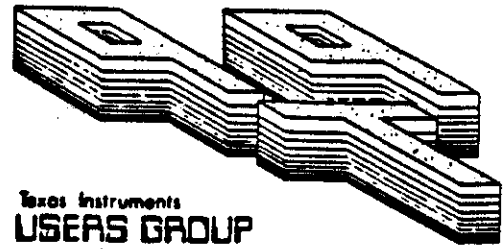


NEWSLETTER NINE-T-NINE

FEBRUARY 1991 ISSUE



EXCHANGE NEWSLETTERS NOTE
NEW MAILING ADDRESS!

Texas Instruments
USERS GROUP
TORONTO



FROM:
9T9 USERS GROUP
15 KERSDALE AVE.
TORONTO, ONT., M6M-1C9
CANADA

~~SECRET~~
LIBRARY
PAGE 10

To:

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ZIPPY PRINT

1991

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Circled are the 9T9 Meeting Dates for 1991																				
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9T9 USERS GROUP

9T9 USERS GROUP EXECUTIVE COMMITTEE

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VICE-PRESIDENT Neil Allen (255-8606)
SECRETARY/MEMBERSHIPS Randy Rossetto (469-3468)
TREASURER/OFFICER AT LARGE Cecil Chin (671-2052)

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NEWSLETTER EDITOR

Steve Mickelson (657-1494)

MEMBERSHIP FEE'S

FULL MEMBERSHIP \$30.00 / year
NEWSLETTER SUBSCRIPTION \$20.00 / year
DISK OF THE MONTH subscription add \$30.00 / year
(Delphi memberships add \$5.00 for credit card fees)

All memberships are household memberships. A newsletter subscription is only for those who do not wish to attend meeting, 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 by phone.

The meetings are usually held on the last Thursday of each month. (exceptions are December's meeting date, usually mid-month and the months of July and August, when there are no meetings. Consult this issue of Newsletter 9T9 for the date and time of the next meeting. Meetings are usually held in the lecture room main, at Canada Remote Systems, 1331 Crestlawn Dr., Unit D, Mississauga, (Eglinton Ave./Dixie Road Area), from 7:30 - 10:30 PM.

BBS

The 9T9 Users Group supports the Toronto BBS. The 71 Tower BBS # (416) 921-2731, 300/1200/2400 BPS, 24 hrs. Sysop, Gary Bowser

MAILING ADDRESS:

9T9 Users Group, 15 Kersdale Ave., Toronto, Ontario, M6M 1C9, Canada

COMMERCIAL ADVERTISING

Any business wishing to reach our membership may advertise in our newsletter.

The rates are as follows: (width by height):

FULL PAGE (7" x 10") \$15.00

HALF PAGE (7" x 5") \$7.50

QUARTER PAGE (7" x 2 1/2") \$3.75

Please have your ad's camera ready and paid for in advance. For more information contact the editor. Don't forget, that any member wishing to place ad's, may do so free of charge as long as they are not involved in a commercial enterprise.

NEWSLETTER ARTICLES

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 names, 9T9, Nine-T-Nine Newsletter 9T9, 9T9 Users Group, and Nine-T-Nine Users Group are Copyright (C), 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, by the 9T9 Users Group of Toronto, Canada, all rights reserved.

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Fax: (416) 367-3275



TIDBITS

#46

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

Attention Exchange Newsletter Rep's:

I put this item first, so as to let you know that this the LAST month we have the post office box and all mailing should be sent to the address on the cover of the newsletter. The reason why I put this is that the following Newsletters were sent to the OLD post office address:

- *EASTAnglia Region 99ERS (EAR99ers)
- *Long Island 99ER Users Group (LITI)
- *Ozark 99ER News
- *Southern Nevada Users' Group (SNUGLETter)
- *Hoosier Users Group (HUG)
- *Salt Lake Users Group (TISLAVES)/ Ogden TIUsers Group
- *Great Lakes Computer Group Inc.
- *TIUsers Group of Will County (99ER NEWS)
- *Users Group of Orange County (ROMNewsletter)
- *Pittsburgh Users Group (PUG)
- *Ottawa TI99/4A Users' Group

Please address all future exchanges and correspondence to:

9T9 Users Group
15 Kersdale Ave Toronto, Ont.
M6M 1C9, Canada

Ontario Computer Fair:

I gave those who attended, a showing of my "home movies", shot at the last Ontario Computer Fair. There were a number of good deals, I found:

I purchased a modem/power protector with EMI/RFI/Surge/Modem protected power strip, from Formosa Computers,(guess where it's made?), for \$20.00. This bar had the following features:

- *Built-in 15 amp circuit breaker
- *EMI/RFI/Noisefiltering
- *Lighted master on/off switch
- *Six foot heavy duty molded cable
- *six protected 3-prong outlets
- *modem/phone (modular) line surge protection
- *Protection indicator lamp
- *2 filter capacitors and 3 MOV's
- *Baked enamel finish
- *One year warranty

Protector Spec's:

- *Rating 125 VAC,15 Amps(1,875 Watts)
- *Maximum Surge Voltage, 6KV
- *Maximum Surge Dissipation, 50 Joules
- *Max Spike Current, 4500 Amps, 25C
- *Max Clamping Ratio, 1:2:1
- *Clamping Response Time, <1 nanosecond
- *Voice Rejection, 0/5-30 MHz
- *Attenuation, 15-30 dB
- *Temp Range -40C to +80C
- *Outlets, 6

Modem Protection Spec's:

- *Outlets, 2RJ11 Jacks
- *Max Surge Dissipation, 20 Joules
- *Max Spike Current 1200 Amps, 25C
- *Clamping Voltage, 140 Volts
- *Clamping Response Time <1 nanosecond

Another purchase was a "Mouse Stage", which is an anti-static mouse pad built onto a platform that puts the mouse above my Geneve keyboard. It is designed to sit above the keyboard, even with the keyboard's rear feet out.

The stage has a ruled door, which opens to reveal a small storage compartment, to store about four felt pens. On the right is a pull-out platform to hold the mouse. This stage helps give me added space to my crowded desk.

The platform sits above the calculator portion of my keyboard, as I use the 9640 primarily for word processing and seldom use those keys.

If your desk space is larger, the stages legs retract with a snap, in a way similar to the feet of the keyboard, to permit the mouse pad to sit, at a level parallel to that of the keyboard surface. This device is imported from Access 8 Inc, Woodbridge, Ont., L4L 5W6.

Attendance at the fair was heavy throughout the day, and those at our table fielded numerous technical and club-related questions, while giving away a large number of sample newsletters and fact sheets.

Apparently our representation at the Fair was so good that the 9T9 Users Group has been invited to attend future fairs, and has purchased three more ad's for March through May issues of the newsletter. You may expect to see a universal coupon, good for any fair.

Our executive has decided to book tables for future fairs at Brampton, Newmarket and Toronto, in June. If any 9T9 members are willing to help "man" the table for an hour or two, in exchange for free admission to the fair, please contact me, or any other executive member. Dates of the fairs will be posted, next month. The executive decided to refer Jim Creighton and Ontario Computer Fairs to a group of fifteen or so Tiers who meet in the Niagra area, for the upcoming fair in St.Catherines. I had already given Jim Creighton Tom Arnold's address and phone number, so the Hamilton group may participate in the Burlington edition of the Ontario Computer Fair.

January's Meeting:

All 9T9 Executive were re-elected to the 1991 term.

I showed a short video of the Ontario Computer Fair, and taped segments from the meeting. I have digitized pictures from this tape for this and future issues of the newsletter, to add a little more depth to the publication.

Gary Bowser gave another demonstration of TIM, which now includes a "Son of a Board", (I prefer the name, "Son of a GROM"), which includes a replacement GROM, to remove design flaws in T.I.'s original firmware, in the 99/4A console. In a recent conversation with Gary, he informed me that Texas Instruments had sent O.P.A., a programming package, which includes many of the "trade secrets" of GROM programming, thus giving O.P.A. the ability to produce custom GROM chips.

I would think such information would eliminate the need to use PAL chips, to modify resident GROM's, (as companies such as Databiotics had done in their Supercart). Rather, one could rewrite the GPL code to be burned-in to a new GROM. This would make it possible for a complete rewrite and update of the console GROM, or more features in command cartridges, to make them more useful. Though consideration might be required about the copyright of the original code, personally, I can see anybody objecting to a user upgrading a cartridge, for an orphan computer.

If we carry that thought a bit further, we could see Multiplan, LOGO and TI Writer, among other cartridges upgraded, by a kit, to 80 columns, for use with OPA's TIM, (80-column adapter for 99/4A). Another application might be, with an agreement with Myarc, a GROM daughter board for the Geneve, to allow GPL to boot-up from a menu, like on the 99/4A, making available more memory.

I know one consideration Gary did talk about, was putting the next re-write of his BBS software, used on the BBS, into a cartridge, for commercial sale. The possibilities are endless!

We were shown the 9T9 Disk-Of-The-Month, or should I say Feature Disk.

Mail Call:

Dear 9T9'ers

Please note that we reviewed Jiri Svoboda's "Personal Banking" in our Jan. issue of WORDPLAY. Hope he gets some orders from some

of us. I, also, put a plug for your newsletter(see p.2, my column). Keep up the good work!

Wallace Murphy
c/o P.U.N.N.
P.O. Box 15037
Portland, Ore.,97215
U.S.A.

Hello 9T9ers,
I am a member of the P.U.N.N. users group here in Portland Ore.

In our Jan. issue of Wordplay (which is our newsletter), we had a review of a program called Personal Banking, by Jiri Svoboda. This program sounds like a winner! I would like to purchase this program, if it is at all possible. The review, by Harry W. Guenther failed to mention how or where to get this program.

Perhaps you 9T9ers can head me in the right direction. If you would pass this letter on to Jiri Svoboda, I would be very happy.

Also, don't hesitate to ask us if there is any thing we can do for you 9T9ers.

Ed Reynolds
606 S.E. 128th
Portland, Ore.,97233
U.S.A.

Dear Wallace, Ed and friends at PUNN,

Thanks for the notes and vote of confidence re: Jiri's software. As it was an entry in our club's software contest,(a winning entry I may add), it is now property of the 9T9 users group. I will refer your correspondence to our executive and see that PUNN is sent a copy of this shareware software. I have decided to publish your letter and reply, not only to facilitate a reply to both fellow Tiers, but to let Jiri see it in case he is inclined, to write you. Thanks, again, for writing,

Steve Mickelson, on behalf of

the 9T9 Users Group, Toronto

Dear 9T9ers, Steve, Neal, Randy, etc,

Just got back here and after 6 months away I'm having trouble(as always)getting set up & going...

System tells me I have no 32K & I know I installed it on a Ramdisk. The command SIZE in EXB says (13,928 bytes) -so where have the rest gone?!

And after I get that cured I gotta' get a P-Gram going & a TIM when it arrives. Maybe I'll never get back using Telco & Rambo -and I don't even have a hard drive. Yegads! This little hobby I decided to try some years back is becoming a formidable technical challenge -just trying to keep up.

Saying I'm sorry I didn't get to any meeting or see any of you (except the Bowser's) while in Canada, but I appreciate your dedication & effort and enclose my cheque for 1991.

Regards,
Leo
J.L.Thurlow
837 Espanola Way
Miami Beach, Florida, 33139
January 21/91

{Editor's note: Member Randy Peckham wrote the following comment regarding our reprinting of Competition Computer's price list in December's issue of Newsletter 9T9}

I've noticed the prices on some ads(i.e. Competition Computer Solution). Have you noticed that Tex-Comp under-sells almost everything in that ad?

For example, TI Writer & Editor Assembler only \$14.00 or \$19.00 at Tex-Comp, is \$49.95 at C.C.S. Just about every game module is \$5.00 cheaper at Tex-Comp. It's a waste of space, and a disservice to members. Just look at the pages from the catalog. Nobody beats Tex-Comp.

Randy Peckham
Nanticoke, Ontario

Thanks for the info, Randy. I hope to reprint the pages of the TexComp catalog in a future issue of our newsletter. -Ed.

9640 Mouse Bits:

This final Tidbit concerns adapting an IBM-type bus mouse for use with the 9640, for adding, upgrading or replacing a mouse. Thanks to Gary Bowser, we were able to adapt a Z-soft type bus mouse from an IBM to use with a 9640. Please note that this is not an RS-232 type mouse, as Asgard sells! Gary informed me that the IBM world uses standard colour-codes for many devices and rather describe pin number to pinnumber, it is easier to list the 9 pins on the DB-9 plug, and what color coded wire goes to what pin. So here goes:

IBM = PIN = 9640 = FCTN

YEL = 1 = BLK = YA
BLK = 2 = RED = XA
RED = 3 = YEL = YB
GRY = 4 = GRY = XB
BRN = 5 = ORG = S3 RIGHT
GRN = 6 = BLU = S1 LEFT
BLU = 7 = GRN = GND
WHT = 8 = BRN = +5V
ORG = 9 = WHT = S2 CENTRE

The above designations are for info only, as usual you modify the mouse at your own risk!

That's all folks, for this month!



MIKES'S CORNER
OR
Butter Fingers Repair Section

By Michael O'Dowd.9T9 Users Group

Last year I promised to attempt to to write an article each Month on problems encountered by persons like myself on the TI and that I would make the mistakes so that others would benefit. I retired in April 1990 and I thought that I would have lots of time for the computer. What fools we mortals are, Crazy Dreamers.

My first article received a very generous response from "Larry Tippet " of Model City, Ny. Larry sent me articles and books on Electronics and some other material. (Thank you again Larry).

Some of my drives were getting cranky I managed to keep them going, then Andy Parkinson gave me a power box and advice and Ralph Goodman appeared and gave a helping hand (actually two) to get me going again. It was good fun but unfortunately a little later I became involved in a project which required my computer to work continuously, so I bought two half height D/S/D/D and hooked them up with my single density drive. The half height drives I bought are grey and the address system is very simple and easy to hook up.

With the computer and I working at top gear on the project, plus laying a hardwood floor, it put experimenting with my TI out of the question. Later I went overseas to the leapracaun Country, (Bejapers, I was born under a Shamrock In Dublin) and later finished up in France then back to work some magic in Toronto. (Magic is my main hobby and also a source of income).

It is now January 30 1991 and I have fixed a rumbling noise in one of my old extra drives and got it into working order again. Following the circuits and digging out spare parts seems to be the hardest part and in reality if the problem is too expensive to repair, it is better to get a new drive and just do the tinkering with the drives for love. When you do make them work it is a small victory. My circuit library on drives is slowly growing.

I use TI writer and like it very much and although I got a copy of Funnelweb many years ago I did not use it . Gary Bowser gave me a Disk on TI writer some years ago and I found it most useful. The Disk Manager cataloged damaged disks that other other system could not read.

Some time ago I tried Funnelweb and liked the feature of it retaining the name of the program when the formatter is entered. This Month I tried the latest version but my needs are simpler at the moment and Funnel Writer is too complicated for me at present.

A person wishing to learn anything about electronics should make up or buy an electronic experimenters board. It is a board with holes in it to take the connections . You could make one by drilling holes in plywood or a piece of perforated board and add wire to carry the current and nails for the connections.

Electronic shops sell boards which have have copper tracks in them to carry the current and really help in building complicated circuits, I think it is called veroboard.

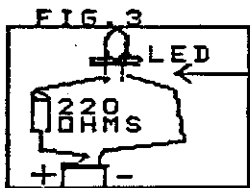
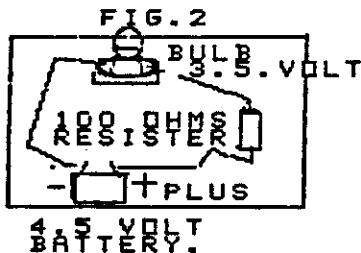
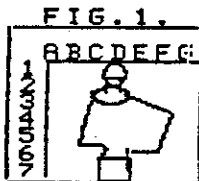
To make sure your connections are correct you should make a grid on the board as shown on the drawing (fig 1). Draw letters along the edge on one side and numbers along an adjacent edge.

To make a simple circuit you will require a 4.5 volt battery a couple of 100 ohm and a 220 ohm resistors a led and a battery bulb. Connect up the bulb as in (fig.1), the bulb should light , then swap the battery connections and the bulb will still light as the bulb allows current to flow both ways, if a 100 ohm resistor is added to the circuit the lamp goes dim as the resistor restricts the current. Fig 2.

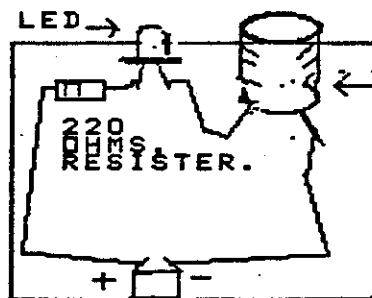
Now connect the components as in (Fig 3); the led should light, then swap the connections on the battery terminals so that the positive is now where the negative should be, the LED will not light because the current cannot flow through it in that direction. A light emitting diode (LED) is used to show that a current is flowing in a circuit.

To make good connections the parts should be soldered but holding things together with paper clips and little springs will do for simple experiments.

Now let us have some fun with a capacitor and test its ability to store an electric charge. A 100 microfarad electrolytic capacitor (100uF) is required. Connect as shown , if the connection is correct the LED should light as the capacitor charges, then go off when the capacitor is fully charged. Now take off the battery connections and join them so that the circuit is complete then reverse the capacitor and replace the connections. If done properly the LED will light and go out as it uses the charge stored in the capacitor. The voltage across a capacitor equals that of its power supply. That is why it is dangerous to poke around in a TV set even when it is unplugged. Fool around with these circuits because they are the basis of all electronic gadgets and it helps us understand whats happening in our computer and disk drives.



MINUS LEG OF LED
LED LIGHTS.
SWAP BATTERY WIRES
LED WILL NOT LIGHT



LED WILL
LIGHT
IF
BATTERY
IS
CONNECTED.

THIS IS HOW TO CONNECT THE BATTERY TO THE LED AND CAPACITOR.

Some time ago, I shared a cute story that went something like this:

Did you hear about the computer programmer who went to the refrigerator for a drink and found a note from his wife saying, "I've decide to leave you:" ... and it was dated a month ago!

I believe that the following is a copy of the original document!

cdm

TO MY DARLING HUSBAND

I am sending you this letter in a bogus software company envelope so that you will be sure to read it. Please forgive the deception, but I thought you should know what has been going on at home since your TI computer entered our lives two years ago. The children are doing well. Tommy is seven now and is a bright, handsome boy. He has developed an interest in the arts. He drew a family portrait for a school project. All the figures were good but yours was excellent! The chair and the back of your head are realistic. You would be very proud of him.

little Jennifer turned three in September. She looks a lot like you did at that age. She is an attractive child and quite smart. She still remembers that you spent the whole afternoon with us on her birthday. What a grand day for Jen, despite the fact that it was stormy and the electricity was out. I am also doing well. I went blond about a year ago and was delighted to discover that it really is more fun! Lars, I mean Mr. Swenson, the department head, has taken an interest in my career and has become a good friend to us all. I have discovered that the household chores are much easier since I realized that you didn't mind being vacuumed but that feather dusting made you sneeze.

The house is in good shape. I had the living room painted last spring. I'm not sure if you noticed it. I made sure the painters cut air holes in the drop cloth so you wouldn't be disturbed. Well, my dear, I must be going. Uncle Lars, Mr. Swenson, I mean is taking us all on a ski trip and there is packing to do. I have hired a housekeeper to take care of things while we are away. She'll keep things in order, fill your coffee cup and bring your meals to your desk, just the way you like it. I hope you and the TI have a lovely time while we are gone. Tommy, Jen and I will think of you often. Try to remember us while your disks are booting. Love, Mary

H21 RAG-TIMP 2 MP NEW RAGS updated Multiplan v4.0 disk

101 FORTHDOCS 5 TEXT Forth Manual on disk (incomplete)
 102 TIREWRITE 1 TEXT Helper file for TI-WRITER commands.
 103 TYPETTE 1 A basic course in Beginners Typing
 104 TUTORIALS 1 XB Tutorials for XB
 105 SPEEDREAD 1 XB32 Tutorial for SPEED READING + tests
 106 GPLMANUAL 2 TEXT TI's GPL User's Guide ARCD
 107 PEPMANUAL 2 TEXT NEW TI's PEB Tech Manual ARCD
 108 JAPANESE 1 XB NEW Teach yourself a Japanese language
 109 TIBASE 4 TEXT NEW Tutorials on the TI-BASE package

M01 4thMUSIC 1 FRTH Music or Graphics Demo in Forth
 M02 AXLE-F-EA 1 EA NEW Beverly Hills Cop theme song in EA
 M03 MUSIC#01 1 EA Selection of good EA Music
 M04 SORGAN 1 EA NEW A fancy computerized keyboard organ
 M05 XB#MUSIC#- > XB >>> XB music disks (06 disks so far)
 M06 XMAS-1985 1 XB32 NEW A selection of XMAS music from 1985
 M07 MAKERDEMO 1 EAXB NEW A demo of TI's Music Maker program!
 M10 MUSIC-MAN 1 XB32 The MUSIC MAN album
 M11 S-PACIFIC 1 XB32 The SOUTH PACIFIC album (volume 1)
 M12 WIZARD/OZ 1 XB32 The WIZARD OF OZ album
 M13 PATSYCLINE 1 XB32 The best of PATSY CLINE album
 M14 STARTREK 1 XB32 The STAR TREK album
 M15 BEATLES 1 XB32 The BEATLES album

C01 C99PROGS 1 EA C99 Programs Disk A
 C02 HV-1988 1 XB32 1988 MISC. FROM HUNTER VALLEY UG
 C03 TI-PSYCHO 1 XB32 Simulation of a PSYCHIATRIST!
 C04 GIRL/CALS 4 XB Prints a Girlie Calendar for 89

P01 BEAXS 2 XB32 Editor Assembler on Disk Version
 P02 STAR 1 XB32 Super TI Assembly Routines for XB
 P03 TI FORTH 1 EA TI FORTH programming language
 P04 TI PILOT 2 EA TI PILOT programming language
 P05 TOOL KIT 1 EA A set of programming utilities
 P06 CBASIC 2 EA NEW cBasic Language Compiler v4.0
 P07 P-SAMPLER 1 Sample of different languages
 P08 XB-TOOLS 1 XB32 Tools to assist the Extended Basic
 P09 ED 2.1 1 XB32 2.1 Enhanced Display Package
 P10 UTILDISKB 1 XB32 ACE, COLIST, DISK HACKER, TEXT-BASIC
 P11 PULSAR 1 EA Assembly Routines for X/B use
 P12 LISP99 1 EA LISP for the TI99
 P13 FRACTUAL2 1 EA32 2.0 FRACTUAL EXPLORER with docs & demos
 P14 XBTEXTLOAD 1 XB32 Converts DIS/VAR80 to XB program
 P15 GEEI 1 EAXB Graphics GEEI Language with docs
 P16 NASTYXBOS 1 XB32 OS with a mind of it's own
 P17 DASSH 1 FRTH Universal Disassembler in FORTH
 P18 HOTBUG 2 EA NEW Hot debugger from Charles Earl
 P19 RAGASMT 2 EAXB NEW RAGS v7.1 of 9900 MACRO ASSEMBLER
 P20 RAGLINKS 2 EAXB NEW RAGS v3.0 of 9900/GPL LINKER
 P21 RAGPLASMT 2 EAXB NEW RAGS v1.0 of GPL MACRO ASSEMBLER
 P22 RAGPLDASH 2 EAXB NEW RAGS v1.0 of GPL DIS-ASSEMBLER
 P23 RAGPLMANL 2 TEXT NEW RAGS GPL MANUAL (needed for above)

S01 SPEECH/01 1 TE2 Samples of singing speech programs
 S02 TITSPEECH 1 XB32 Text-To-Speech
 S03 SPCHSPRWD 1 XB32 SUPERWORD for XB with docs & demo

T01 FT/OW/MT 2 EAXB ... Fast-Term, Omega, Mass-Transfer
 T02 TELCO 2 EAXB ... DOES ANYONE HAVE THE LATEST VERSION
 T04 DELPHIAID 1 XB32 Explains the DELPHI system

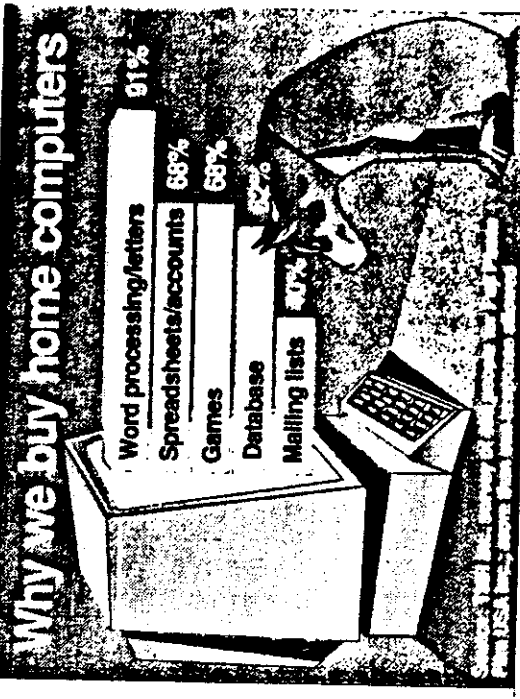
U01 CALEMDARS 1 XB A set of different calendars progs.
 U03 LABELER 1 XB Prints labels with over 110 logos
 U05 SCREENDMP 1 Almost anyplace screen dump to PIO

U06 SYSTEMIST 1 XB#M TI system test for XB or MM by TI!
 U07 UTILDISKA 1 EAXB ... Selection of Util's in XB and EA
 U08 LOGODUMP 1 LOGO ... Logo dump program (EA5 type loader)
 U09 LOGOSTART 1 LOGO ... Logo auto start program EA5 loader
 U10 GRPHLISTR 1 EA Graphic Lister in c99 with docs
 U11 NAMELOCKT 1 XB32 Label Maker, Mailing List, Calendar
 U12 GRABLABEL 1 EAXB Grabber Label (similar to LABELER)

W01 BA WRITER 2 EAXB 1.3 TI Writer on Disk Version and more!
 W02 CRUNCH 1 Crunches Dis/Var 80 files
 W03 FUNNELWEB 2 EAXB NEW Latest 4.13 of wonderful Funnelweb
 W04 FUNNELWB+ 2 XB32 Companion disk for FUNNELWEB
 W05 1000WORDS 1 EAXB Print ARTIST pictures from TIWRITER
 W06 TIWRITER2 1 TWTR 2.0 European Release of TI-WRITER
 W07 CAGWRITER 1 EAXB 4.0 RAG software TI-WRITER with docs

USA SNAPSHOTS®

A look at statistics that shape your finances



By Suzy Parker, USA TODAY

TALES OF A POWER SUPPLY, PART II
by Tony Lewis 12/90

Having just read the "Tales of a Power Supply" article in the December 1990 issue of the West Penn 99'ers newsletter, and having a little free time, I decided to put my two cents in concerning upgrades to the Pbox power supply.

As you may recall, my friend Al Beard told you how to convert your original Pbox power supply system to use a modern PC type switching power supply. Basically, the original Pbox power supply system used linear voltage regulators to generate the power for the +8, +16, and -16V lines in the Pbox. A linear voltage regulator takes input voltages that are much higher than what you'd like to see come out the other side, and (without going into too much technical detail) converts the excess voltage to heat. Linear regulators have efficiencies of 40-60% depending on how they are made. In other words, up to 60% of the electrical energy that goes into the linear regulator gets converted to heat, and not electricity. Hence the need for a cooling fan in the Pbox, and heat sinks on the better designed cards (some TI and third party cards used the metal clamshell as heat sinks for the regulators). Why use such inefficient regulators? Because they are cheap, and they only need one part (the regulator itself) to work. That saves space on the Pbox card.

Switching regulators, on the other hand, have higher efficiencies, around 80% or more, which translates to less heat. They do cost more than linear regulators, and usually require extra parts like resistors, inductors and capacitors. But with high conversion efficiencies, they don't produce the heat that linear regulators do. The PC type power supply that Al bought was of the switching type.

Now, the original concept of the Pbox was to provide the raw high voltages for each card, as well as the regulated +5 and +12V needed by the (one) floppy drive (remember, this is the early 1980s). While the floppy drive got regulated power, the cards had to have their own voltage regulators to get the right voltages they needed. The advantage to this is that if one card experienced electrical problems, then the rest of the system was unaffected, and you could tell which one went bad because its light was out. And the regulator just had to keep up with the fluctuating power demands of the card it was on; the main power supply voltages was set high enough to account for the system fluctuations of all the cards operating at one time.

The fly in the ointment was pointed out by Al in his article: the raw power put out by the Pbox power supply is much higher than 8V and 16V and -16V. And the greater the difference between the input voltage versus the output voltage that a linear regulator has to maintain, the greater the heat that the regulator has to try to lose. The third party cards that do not have the metal clamshell enclosure, or any other heat sinks, can suffer from localized heat buildup when the card is in operation, which can lead to the brown areas mentioned by Al.

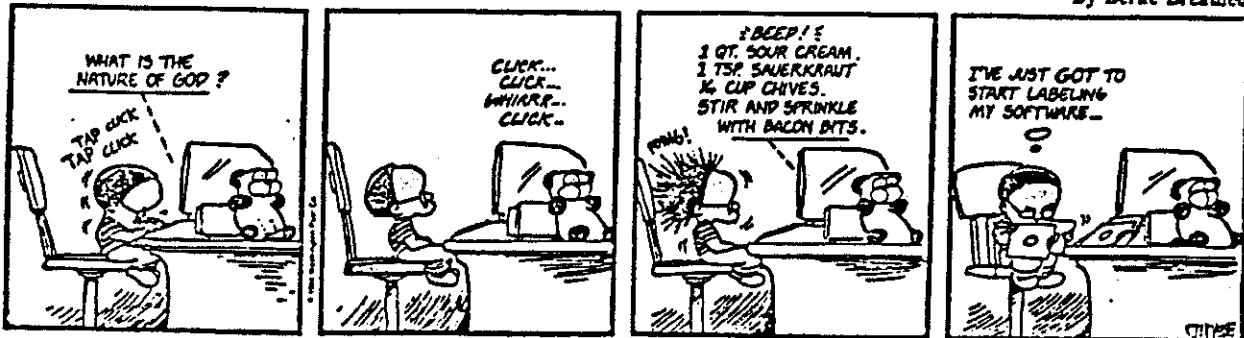
In Al's article, he basically told us how to convert the Pbox power supply system to a PC-type power system whereby the main power supply has all of the responsibility for voltage regulation. The PC power supply outputs the +5, +12 and -12V to the disk drives and the peripheral cards, and it alone must maintain the voltage levels within the $\pm 5\%$ most devices need. To convert the peripheral cards, you simply jumper the input line to the existing linear regulators on the card to the output line, effectively bypassing the linear voltage regulator, and eliminating local heat buildup.

West Penn 99'ers

BLOOM COUNTY

These past strips are being rerun while Berke Breathed recovers from injuries suffered in an airplane accident.

By Berke Breathed



THE FUTURE TI-99/4A

WORDPLAY The PUNN Newsletter - Portland, OR
.....

GPL/Assembly and the future TI-99/4A approach to Software/Hardware.

~~~~~by~Richard Lynn Gilbertson~~~~~  
GPL (Graphics Programming Language)

Well there are many things that can only be done in GPL. And as Assembly Language programmers know many of the subroutines built into the console lead right back to the GPL interpreter. Making them useless for pure Assembly approaches that would like to use them. My approach is to imbed Assembly into the GPL code and branch to it only when speed is required. GPL is great for what Texas Instruments designed it for, which is set-up, menus, and for storage. Programing wise GPL always leads back to GPL, while Assembly has to exit to the original start up screen, or to other Assembly Language programs. When creating programs GPL takes less memory space to do the same thing as Assembly. That is becuae GPL is a BYTE orientainted language and Assembly is a WORD (two bytes) orientainted language. I use both languages, but for speed I need the Assembly. For control I use GPL. So Assembly is good for speed, and GPL is good for menus, storage, set-up, and controlling the whole thing in a orderly fashion. You need gobbs memory to get that out of Assembly.

Future projects may include adding TE2 speech to Extended Basic. Or may include a better GRAM0 operating system by eliminating Cassette and replacing it with Mouse routines.

Looking at some news letters I found TI-99/4A MEMORY ARCHITECTURE by John F. Willforth. It shows where all MEMORY MAPPED PORTS are including FastRAM, Sound, VDP, Speech, and last but not least GROM/GRAM.

History: Texas Instruments decided that if they sacrificed 8 bytes they could gain 40K of GROM/GRAM. Now there are 16 banks so that is: 40K times 16 banks equals 640K.

It requires little thought to see that if each of the 16 bank lines went through a PAL chip that made 4 more per normal bank that you would get:

PAL:::BANKS:::1BANK:::TOTAL  
004 \* 00016 \* 0040K = 2560K  
~~~~~ 1/4MEG

OR:

PAL:::BANKS:::1BANK:::TOTAL
016 * 00016 * 0040K = 10240K
~~~~~ 1MEG

OR:

PAL:::BANKS:::1BANK:::TOTAL  
256 \* 00016 \* 0040K = 163840K  
~~~~~ 16MEG

OR up to:

PAL:::BANKS:::1BANK:::TOTAL
32768*00016 * 0040K = 20971520K
~~~~~ 2048MEG

FINNALLY:

PAL:::BANKS:::1BANK:::TOTAL  
65535\*00016 \* 0040K = 41942400K  
~~~~~ 4095MEG

I'm not an electronics wiz, I am a programmer. But I've had a few discussions with those who do know it can be done. And I've read the comments of the engineers that designed the TI-99/4A. This seemed exactly where they were going. Consider Assembly and GPL all being run from the original operating system that is already in the TI-99/4A! Now that IS TOTAL COMPATIBILITY!!!!

The TECHNICAL TRAINING COURSE OUTLINE which is in my library of books to have. This book is mostly the development outline of the TI-99/4A, 4B (yes, 4B), and the TI-99/4X (99/B). Now having read it several hundred times with no electronics talent I have found that the only difference between the 4A and 4B is three (3) jumper wires and one (1) chip. W.Germany is suppose to send us the data (5 months ago) of how it is done.

(continued

The 4B has twice the load/save speed of the 4A. The 4B doesn't need the VDP to transfer disk to memory, it goes straight to CPU memory. Also it's 100% compatible with the 99/4A. The 4B software sets up a PAB like the 4A, but the 4A uses the VDP to transfer the data, so the 4B can run the 4A software.

I just wanted to mention that from the average users point of view, he just wants to load and go. GPL combined with Assembly and hardware modifications like the 99/4B are the types of approaches that will never create a bottle neck. Most of the hardware made for the TI is an attempt toward that. But it seems there is a real lack of knowledge of GPL and what it is best at. Also as the console has most of it's memory devoted to it,

trouble only occurs when you are trying to avoid GPL in Assembly. Programs written in Assembly can be re-written to run from GPL and little change is needed. Imbedded Assembly run from GPL saves the area it runs from, runs, restores the area and continues. You can call it, use it, and return the to Extended Basic program just where it left off. Now I will admit that this method would slow down the original Assembly program. But we want convenience, speed, and compatibility! Not just speed. Besides this is exactly the kind of stunt we can do that the rest of Computers around can't do. WE DON'T LOAD A DIFFERENT OPERATING SYSTEM!
OUR OPERATING SYSTEM IS BUILT IN!
NUFF SAID! RICH

WINDOWS 9640 VERSION 2.0

WINDOWS 9640, Version 2.0, is now ready for release. WINDOWS 9640 picks up where Version 1.0 stopped and now adds support for non-WINDOWS compatible programs.

WINDOWS 9640 now allows DISKASSEMBLER, HyperCopy, The Printer's Apprentice, and others to run without the prior restrictions that were required with the earlier version. Each of these non-WINDOWS 9640 programs can be swapped in and swapped out at will to bounce between one program and another.

In addition an EDITOR by Peter Nuys, released in 9640 NEWS, works flawlessly with WINDOWS. Now run up to 7 copies of the same program (memory providing) with each containing its own file. If you're an assembly language programmer, this means you can be working on up to seven source files, save them, toggle to MDOS from inside WINDOWS, run your Assembler/Compiler of your choice, and if an error occurs, immediately toggle back into your source file and make the change. No more reloading your editor and then reloading the document to use it. It will already be in memory, but the source code must still be on floppy for the assembly/compile process.

System Requirements

Version 2.0 requires the following:

80 column monitor
Myarc mouse or Logitech serial mouse
Geneva 9640

Additional memory allows more programs to run....

To Update your V1.00 or V1.01 copy of WINDOWS 9640, send \$10 (to include a new manual and disk) and a letter with your serial number or \$25.00 if you don't own WINDOWS 9640 to:

Beery W. Miller
P.O. Box 752465
Memphis, TN 38175-2465
U.S.A.

CONFIDENTIAL FILE

Guest Columnist: Tony Lewis

A POTENTIAL PERIPHERAL

Speaking of Tony Lewis and Al Beard, we have been conferring for over one year (we're busy folks) on a semi-secret project for a new peripheral for the TI and Geneve. Modern personal computers (IBM, clone, Mac, etc) usually have the capability to utilize a specialized microprocessor called a math coprocessor. A coprocessor will do something much more efficiently than the main processor, and usually much faster too. A math coprocessor is set up to intercept requests to the main processor to perform complex math, perform the math, and tell the main processor what the answer is (much like having a smart friend in school). The main stumbling block is that math coprocessors are usually designed to work only with a certain main processor (ie - the Intel '387 math chip only works with the Intel '386 microprocessor). However, it turns out that the good folks at Motorola designed their math coprocessors, the MC68881 and MC68882 to work in a 'peripheral' mode with just about any microprocessor, as well as a true coprocessor with the 68020 and 68030 micros. After reading the data manual for the 68881, and consulting with the Motorola engineers, I determined that the 68881 could be used with the 9914A or the Geneve. It will take some slightly complicated circuits and software, but overall the 68881 can perform single and double precision mathematics far faster than either the 9900 or 9995 micro could do in assembly alone.

Who would want such a peripheral, why would they want it? Well, serious users who utilize the FORTRAN or C compilers could see a dramatic increase in speed and accuracy of their programs. Graphics based programs, particularly those that are on machines with the V9938 video chip could support faster drawings, since the 68881 could determine the position of the individual bits more easily via various built-in trig. functions. The built-in BASIC/XBASIC could not directly use the math functions; assembly programs would have to be utilized to access the chip.

The cost of the card would possibly be as low as \$150, if done as a kit. The majority of the cost would be the 68881 chip, which retails for around \$90.

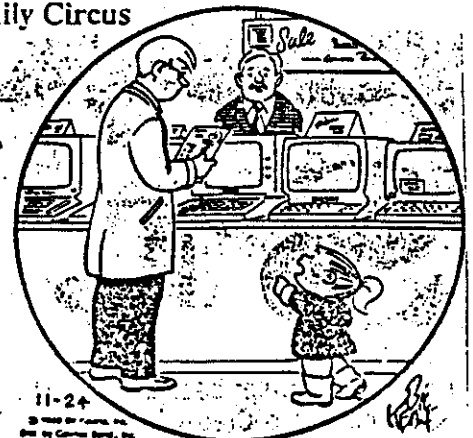
Please note that this is not an 'announcement' of a new product. The facts are that there may only be just one of these ever built. And what we have right now is not completely working right yet, so the whole project may just wind up as a lot of part-time effort to create a non-working peripheral. However, I am curious as to the possible interest in the TI/Geneve world for a math coprocessor peripheral as described above (any interest by others is always a good incentive on cold winter nights to keep plugging away). If you would possibly be interested in such a device, please drop me a card or letter to the address below, or leave me a message on Compuserve (73357,1730) or BIX (tonylewis), or contact Al Beard.

Thanks for your support and interest.

Tony Lewis
409 Drolmond Drive
Raleigh, NC 27615

West Penn 99'ers

Family Circus



11-24

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"Instead of a mouse, do they have one with a kitten?"



Version 4.2 of Funnelweb has a useful utility program called DISKREVIEW. It is a combination disk directory, file review, and program loader. With this program you can:

- * Call up/print a directory of a disk in any drive
- * Protect/unprotect files
- * Delete/rename/view files
- * Load and run any E/A or Extended Basic language programs

The last feature is particularly nifty because you don't have to know anything about the program structure that you're trying to run. All you do is place the cursor next to the program that has been listed by the directory feature, press R (for Run), press FCTN 6 (proc'd), and then a number (usually 1 to 3 in the case of assembly programs) of what the DISKREVIEW program suggests as appropriate. That's all. The selected program will then load and run. No more guesses as to trying E/A #1, 2, or 3. No more wondering what an "object" file is, or it's name. I have gotten into the habit of running most of my programs through DISKREVIEW. It's also quick to load and run, which makes it a real competitor to other XB loaders. This, by the way, leads me to the only problem that I have found to date using this.

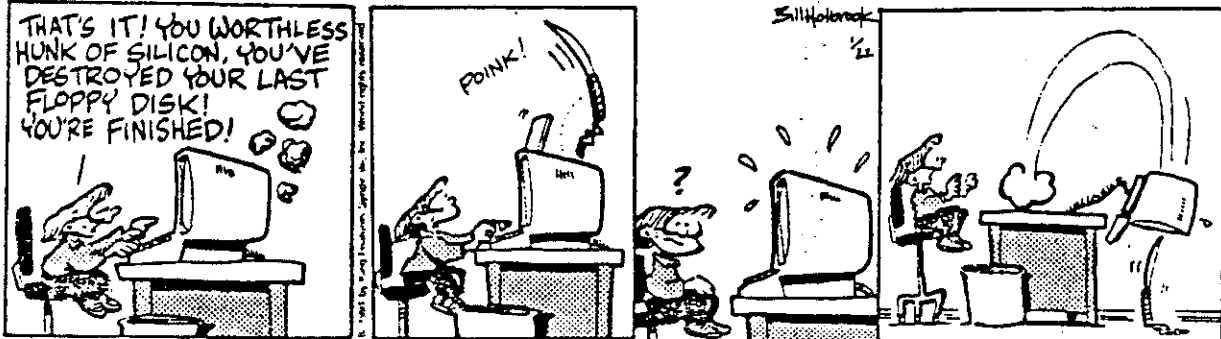
It appears that this program 'seeds' the randomize statement in XB programs with the same number each time the XB program is loaded and run. To give a practical example of what this means to the user, let's run an XB program that would generate a random sequence of five, one digit numbers. The following is such a program:

```
1 OPEN #1:"PIO" :: RANDOMIZE :: FOR I=1 TO 5 :: NUMB=INT(RND*9) ::
PRINT #1:NUMB, :: NEXT I :: CLOSE #1:END
```

If this program was loaded and run through DISKREVIEW it produces the following sequence on my computer: 3,5,1,8,4. If it were loaded and run again through DISKREVIEW, the same exact sequence of numbers would be generated in lieu of the desired effect, namely a different set of numbers. By following this through, any XB program that utilizes a random number generator will always start the same each time it is loaded and run through DISKREVIEW. In the case, say, of a card game, this dooms one into playing the same hands every time. There are a couple of ways out of this problem. One is to alter the DISKREVIEW program. I'm not smart enough to do that. The other is to clear (FCTN 4) the XB program from running once it has been loaded through DISKREVIEW and then type in RUN (and press ENTER). This will clear the 'seed' number out and permit the program to run as advertised. For those of you that may have been using DISKREVIEW to load your XB programs and finding that perhaps the resulting game (or whatever) is always producing the same results, it may not be the fault of the XB program. Try the above suggestion and see what happens.

Notwithstanding the above, DISKREVIEW is a fine program. I recommend that if you haven't been using it, please do. You will be pleased with the results.

On The Fastrack



Hardware

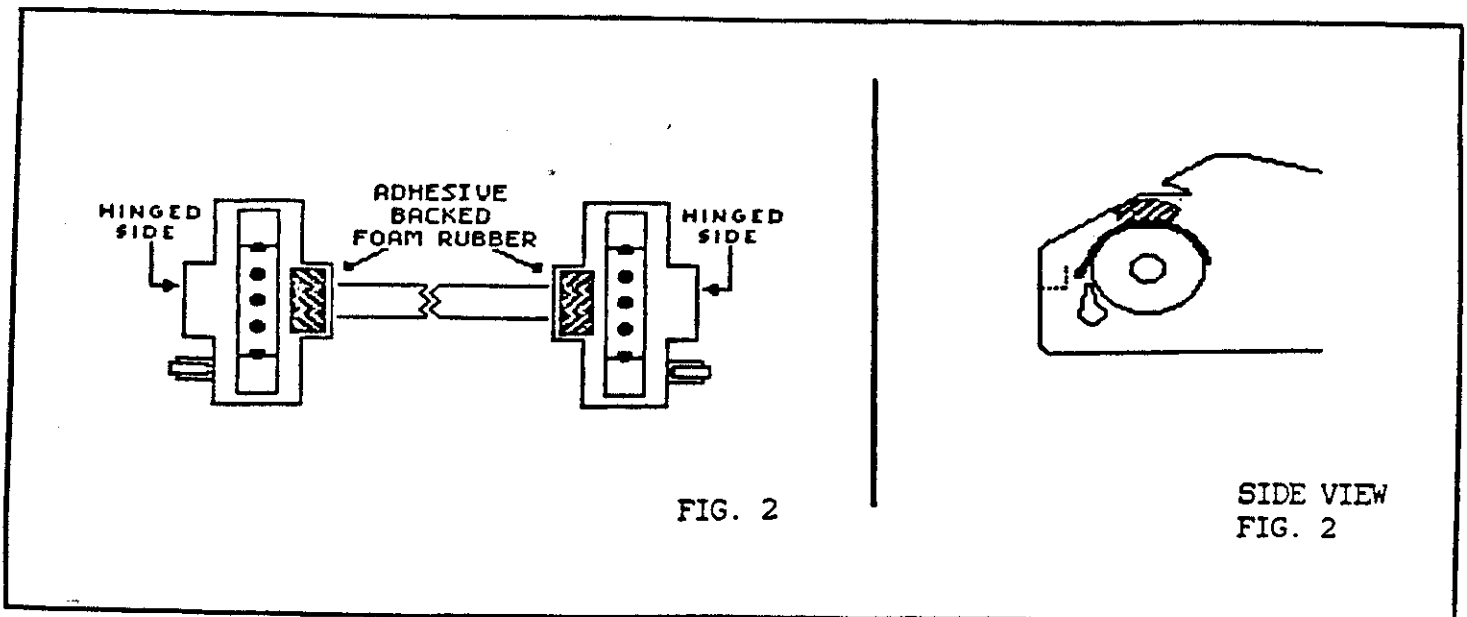
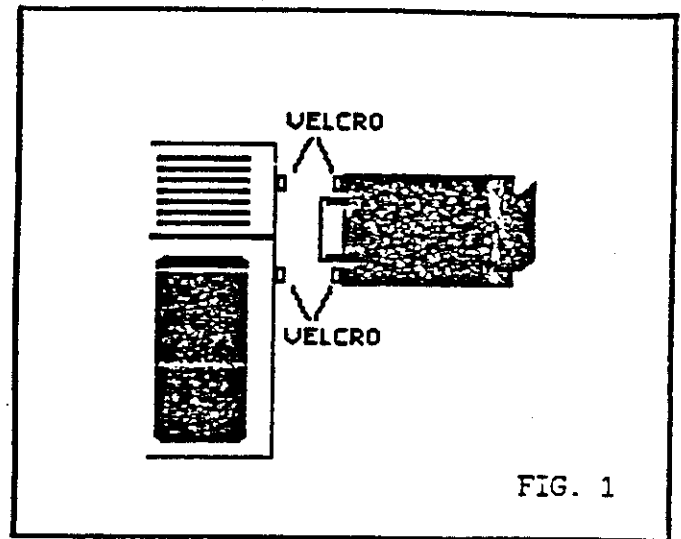
Q & D HARDWARE MODS

Steve Burns
Bluegrass 99'ers

Sometimes a simple straightforward solution is the best. Here are two examples of quite different problems that I solved in similar ways. Both took only seconds and have worked quite well.

The first problem was one that is common to nearly everyone who owns a TI and expansion box. The heavy connector and "firehose" cable that plugs in to the side of the console frequently comes loose when the console is moved. This fix requires only a small piece of adhesive backed Velcro. Cut two small strips to fit on either side of the connector and place them as shown in Fig.1. The Velcro will help prevent the "firehose" from pulling loose, even when the console is scooted all over the desk. This is cheap, easy and makes no permanent modification to either console or cable.

Another problem I had was using pinfeed labels with my NX-1000 printer. Although the printer should have handled them with no trouble, they kept jumping off the pins and jamming. The NX-1000 depends on little plastic covers to hold the labels on the pins. I took some adhesive backed sponge rubber (such as is used for weatherstripping) and placed it on top of the plastic pin covers so that when the rear printer cover is snapped in place, it prevents the little pinfeed covers from flipping up (see Fig.2). The labels now feed through flawlessly.



4A NEWS

"9640 NEWS" is now forging into the TI-99/4A market with a new publication, "4A NEWS". Where "9640 NEWS" brought new information about the Geneve to its readers, "4A NEWS" will bring NEW information, news, reviews, programs, and answers not previously available to the 4A user about hardware and software.

Even though the 4A has been in existence for many many years, new ideas, programs, concepts are continually being seen. New hardware and software are being developed every day that continually exploits the 4A. "4A NEWS" will bring the NEWS, new PROGRAMS, or anything else that may come along to your doorstep. In addition, subscribers will receive discounts (as they become available) on other commercially available software. All information will be original and will not be available by any other means.

Each volume will contain 5 issues (disks) at a low introductory price of \$20.00 (\$25.00 for foreign delivery) mailed to your address. Each issue will appear approximately every 3 months (dependent upon how much new information takes place).

As I am forging into 4A market no checks will be cashed until 2 weeks before the first issue ships. If for some reason not enough interest is generated, then all checks will be returned.

To Order,

Make check or money order to:

Beery W. Miller
P.O. Box 752465
Memphis, TN 38175-2465
U.S.A.

I am eagerly looking forward to supporting the TI-99/4A in this new publication. Look for major software to be forthcoming in the next issues, but I am not going say what they are..... yet!!!!!!

CONTROL OF THE CS1 REMOTE by Ed Hall

(Reprinted from the Nov. 1990 issue of MANNERS)

Have you ever wondered if there might be a way to control the remote line which turns on and off the cassette motor? Well there is a way and it doesn't take too much work either. You do need the 32K memory and for the following program the XBASIC cartridge as well. First let's talk about why you would want to control this line for anything else. What about using the computer to control other devices? With a little bit of circuitry and the following code a program could be written to turn on and off lights or maybe a stereo. Your TI could be at work while you're away. It could be used for security.

The following set up a link program will to allow user control of the cassette remote control for CS1. By doing so, an XBASIC program can be used to control external items other than the cassette recorder. This program has to be loaded and run in Extended Basic with the 32K memory expansion operating.

```
110 CALL INIT
120 CALL LOAD (16368,79,70,70,
32,32,32,36,252)
130 CALL LOAD (16376,79,78,32,
32,32,32,36,244)
140 CALL LOAD (8194,37,4,63,240)
150 CALL LOAD (9460,2,12,0,45,
29,0,4,91,2,12,0,45,30,0,4,91,203,78)
```

Once the program is run, control of the remote is accomplished by the command, CALL LINK("OFF") to turn off the control and CALL LINK("ON") to turn on the control. I would suggest trying this first while watching the cassette spindle, with the cassette on, to see how it operates. Once you get a feel for it, you can write a program in XBASIC to perform the timing.

West Penn 99'ers

Message #224 04:02 02/18/91 Public
Topic: General BBS BS
To : ALL
From : RANDY ROSSETTO
Title: PE BOX FOR SALE

Read? A)bort,N)o,C/R = Yes > Yes

I HAVE A FEW TI GOODIES FOR SALE:
PE BOX COMPLETE WITH 32K,DISKCONTROLLER
SSSD DRIVE AND RS232, \$225.00
WITHOUT RS232 \$150.00
TI EXTENDED BASIC NEW IN THE BOX NEVER
USED \$25.00
PHP 1600 TI TELEPHONE MODEM 300 BAUD
NEW NEVER USED \$25.00
CALL RANDY AT 469-3468