

Texas Instruments
USERS GROUP
TORONTO

FOR THE TI-99/4A COMPUTER

SEPTEMBER 1985

NINE T NINE USERS GROUP

29 INGLESIDE DR.
DOWNSVIEW, ONTARIO
M3K 1V2



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MEMBERSHIP FEES

FULL MEMBERSHIP \$25.00 / year
NEWSLETTER SUBSCRIPTION \$15.00 / year

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 our president in writing at the club address on the front cover or call and leave a message with his answering machine.

NEXT MEETING

The meetings are held on the last Tuesday of each month. The next meeting will be held on Tuesday, October 29 at the Black Creek Public Library in Downsview, starting at 7:30 pm. The library is at 2141 Jane Street just south of Wilson Ave. The entrance to the library is on Jane Street.

COMMERCIAL ADVERTISING

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

FULL PAGE	(6" x 7 1/2")	\$40.00
HALF PAGE	(6" x 3 1/2")	\$20.00
QUARTER PAGE	(3" x 3 1/2")	\$10.00

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

Members are encouraged to contribute to the newsletter in the form of articles, mini programs, helpful tips, 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 Emile Verkerk.

DISCLAIMER

Opinions expressed in this newsletter are those of the writers and are not necessarily those of the 9T9 USEPS/ GBCJP. 9T9 cannot assume liability for errors or omissions in articles, programs or advertisements.

EDITORIAL

The harder I work, the slower everything gets done.

That sums up my month, how about yours. First, my apologies for the small newsletter this month. If you had been in my shoes last month, you would understand.

Secondly, my apologies to Neil Allen. His article on keeping your PE Box cool and quiet, was extracted many months ago under pain of console failure. I finally got around to having it typed (by Ken), and I hope all of you can use it.

In order to liberate more time from my other identity (Mr. Businessman), I have been looking for Multiplan. Can't get it anywhere. If there is someone out there who wants to part with his cartridge at a reasonable price, please give me a call.

Running out of time, space, and mind, until next month. Happy Computing . . .

FOR SALE

Shugart 400 SL SS/DD Disk Drive and power supply <> \$180.00 or trade for an IBM disk drive <> Lino <> (416) 888-0008

TID BITS

-from DAN PARROTT of SMAUG of GRAND BAY, ALABAMA.
100 CALL CLEAR::CALL SCREEN(2)
110 CALL INIT
120 DIM A1(28),A2(28)
130 FOR A=1 TO 28
140 CALL SPRITE(#A,46,16,98,128)
150 A1(A)=SIN(A/4.456)
155 A2(A)=COS(A/4.456)::NEXT A
160 GOTO A=1 TO 28
170 CALL MOTION(#A,-A1(A),-A2(A))
:: NEXT A
180 GOTO 130

- A Quote from the Editor of COMPUTER SHOPPER. "There is no group of users more enthusiastic than the TI 99/4A fans considering they have been 'on their own' for so long with almost no corporate support is amazing". - Stan Veit.

-CENTRAL IOWA UG of DES MOINES, IOWA, offers a few suggestions for creating interesting sound effects using the TERMINAL EMULATOR II Cartridge. Using the program that appears on page 37 of the TEII manual you can create the following sounds.

STEAM LOCOMOTIVE: "KKKKKKKK" or "GGGGGGGG"
HELICOPTER: "UUUUUUUU" or "WWWWWWWW"
SMALL PLANE: "VVVVVVVV" or "YYYYYYYY"
MACHINE GUN: "JJJJJJJJ"
SEWING MACHINE: "XXXXXXX".

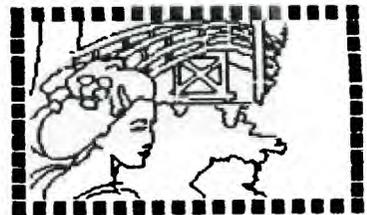
QUICK TRANSFER FROM MICROPENDIUM

TERMINAL EMULATOR II is a wonderful program, but when it comes to transferring data via Electronic Bulletin Boards it is a bit on the slow side. That's because it operates at 300 Baud.

However, the transfer rate can be speeded up considerably when transferring Basic or Extended Basic programs via phone lines. According to LARRY PROKOCKIS of THE NORTHCOST USERS GROUP, which is affiliated with THE CLEVELAND AREA 99/4A UG, the following method can speed up file transfer by up to five times while still operating out of a 300 baud modem.

First, both the sender and the receiver must select TI Basic. Then load the program to be sent, into memory and type SAVE RS232, but do not press ENTER yet. The receiver should type OLD RS232. When ready, switch over to the Modems and the sender presses ENTER. The receiver should wait about 5 seconds and then press ENTER. Both users should see a number at the top of the screen corresponding to the number of blocks of the program. This number will slowly count down to zero, at which point the transfer is complete. Since the program is loaded directly into memory, the receiver must remember to save the program to disk or cassette.

This method seems to work only between TI Home Computers.



NOISY BUT COOL by Neil Allen

Many people have complained of the noise that emanates from the turbo-engine that seems to power the TI PEB.

On short flights at the console the sound level is barely tolerable but for those of us that spend many hours at the controls of the TI, it does become obnoxious!

The answer is to change the fan for a quieter one.

A few observations in regard to the construction of the PEB(Peripheral Expansion Box).

- Its component parts are
- Power supply
 - 8 Service card slots.
 - Port Board.
 - Disk Drive.
 - Metal chassis.

Yes-you are right-who has eight(8) cards working?

Compared to other computer systems ours is built like the proverbial school-house. I know of no-one using more than 50% of the PEB's power supply output, even for short periods of time.

The average configuration of the PEB is four(4) cards:

- Expansion Card.
- Disk Controller Card.
- RS 232 Card.
- Memory Card.

No-one has ever, to my knowledge, felt anything but slightly warmed air coming from the fan output and I monitored the fan output temperature very closely when the computer was required to sort,correlate and print out 3041 records of 9 entries into approx.2000 catalogues. (Running time 28 hours).

To reduce the noise of the PEB I have found that two(2)

modifications produce the best results.

The first is to change the fan to an enclosed 3" replacement which can be purchased in many electronic surplus stores(used) or from most electronic retailers(new).

Used-\$9.00 to \$12.00

New -\$24.95 to \$39.95

These enclosed fans produce less than 25% of the noise of the TI fans for two reasons. First, the enclosed design and blade configuration are much quieter and second, they move only 5% as much air as the TI originals.

The second modification is to remove the grill covering the fan opening.

In my personal test of the "before" and "after" modifications an electronic thermometer borrowed from my darkroom, was placed suspended between the transformer and printed circuit board opposite the voltage regulator. This allowed the probe to be surrounded by 1/2" of air in what I believe to be the hottest location within the power supply. The Box was then closed and completely re-assembled with the thermometer output card protruding from the rear upper right corner. A sort program was then run transforming a name file program into memory sorted by category and sent to disk drive 2.

The resultant work load took one hour and twenty minutes to complete. Continuous use of the expansion card, memory card and disk controller and the two half-height drives, produced a maximum temperature of 104.2 deg.F. The replacement fan was installed and the back grill removed using sheet metal cutters. The original file was then manipulated for the same time period. The resultant maximum temperature was somewhat of a surprise as it was only 101.6deg.F.

With only 1/4 of the noise I was

convinced and you may come to the same conclusion!

The complete operation will take approx. 30 to 45 minutes to complete.

Tools and supplies required are:

Small Phillips screwdriver.

5/32" Nut driver.

Long handled Phillips screwdriver.

Side Cutters.

Sheet metal cutters.

Soldering Iron and solder.

Length(2") of 1/8" Heat Shrinkable tubing (or electrical tape).

Replacement fan.

The procedure is quite simple, so let's get started.

Unplug and remove the supply cord.

Using the small Phillips screwdriver, remove the two long screws (underneath) from the bottom of the disk drive and likewise the two short screws from on top of the disk drive.

Slide out the disk drive and carefully remove the two connecting cables.

Place the disk drive(s) in a safe location away from the work area.

Remove all cards from the PEB and store in a safe place.

Remove all black headed Phillips screws(15) except the two mounting the top cover clips.

Don't miss the single screw holding the front edge of the disk drive wall (away from the front edge when the PEB is upside down). On a flat surface, separate the box by sliding the front and sides forward leaving the exposed power supply and gold coloured sheet metal box on the working surface. If it will not separate with only a little tugging then you have missed a screw!

Using the long bladed Phillips screwdriver, turn the power supply board mounting screws several times. (These screws are found in the rear left hand corner of the power supply compartment). This allows the board to be moved to the left to gain more room to work

on the fan.

With care, unplug the two black leads attached to the fan.

Remove the four small nuts and washers mounting the fan, then remove fan.

Using wire cutters, cut the black leads from the TI fan leaving 1/2" only of wire on the fan.

Remove 1/4" of insulation from the cut ends.

Slide over the wires 1" of heat shrink.

Insert the bare copper wires through the hole in the new fan's terminals and flatten so that the wires lay parallel to the terminals.

Solder in place.

Slide heat shrink over bare wires and terminals and shrink to fit. (Electrical tape could be used for this).

Your replacement fan is ready for mounting but first let's do modification #2.

Using sheet metal cutters remove the fan grill by following the pattern of the holes, leaving a large hole in the back panel.

Check the arrow on the new fan to determine the air flow direction.

Plug in new fan to the plugs that you removed the old ones from. (Leads pointing down).

Mount new fan using the four nuts and washers originally removed.

Re-position power supply board and tighten the mounting screws.

Test your work by plugging in the AC cord and switching the unit on.

Is the air blowing out of the back of the box? It is? Great it works!

Turn off the unit and unplug the AC cord and continue assembling the PEB.

Slide on the front and sides being careful passing the fuses.

Re-install all screws.

Test the box one final time to assure yourself that everything is in place and working.

Insert the service cards.

Connect drive cables to the disk drive(s).

Slide disk drive(s) into PEB and mount with the two short screws on

top.

Stand the PEB on its side and insert the bottom two long screws and tighten.

We are now all back together!

Connect AC cord and all expansion cards to the console and now you can get back to work on your program in relative peace and quiet!!