K3 TI USERS GROUP
PO BOX 1945
KANKAKEE, IL
60901

KANKAKEE, IL
SEP 15
PM
1986
609

USA
22

MARK YOUR

CALENDAR!

SEPTEMBER

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

OCTOBER

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

BOURBONNAIS
MUNICIPAL
CENTER

1 pm til 4 pm

AUGUST CHAIRMAN'S NOTES
by George Lempeotis
CHAIRMAN

At the June board meeting the board members restructured the board and elected new officers. Only four board positions where open for duties and three board members where left as voting members. The following is a list of the four active positions and the elected member to each.

Chairman	George Lempeotis
Vice-Chairman	Bruce Shearer
Librarian/ Treasurer	Beverly Cook
Newsletter Editor	Mark Harms

The K*3 TI Users Group has 19 paid members as of July, 1986 and enough funds to continue printing the newsletter for the next year. This should put our group in good financial shape for the next year. The group has lost five members over the past two months and unfortunately has continued a membership slide over the past two years. The club has lost about 20 members a year for the last two years. The board will make our membership loss the # 1 priority to improve on, and we welcome suggestion from anyone to bring back old members and maybe a few new ones.

One of our lost members was a board member Richard De Roos, who has contributed greatly to our group. Sorry to see him go.

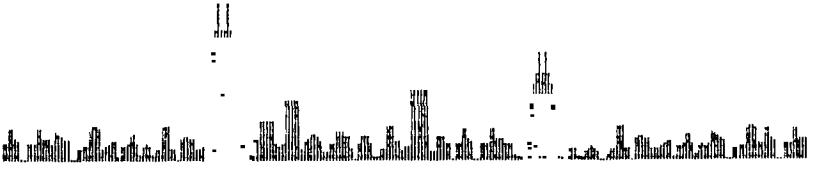
The board members approved the printing of the newsletter at a local commercial copy service, to improve print quality. Let us know your reaction to the new printing of the Newsletter.

At the September 20, 1986 main meeting will feature a demo of the Bug-Out program. With Bug-out you can save a module (up to four GROM chips) to disk. The free program of the month will also be Bug-Out.

The October 18, 1986 Main Meeting will feature a demo of the MiniWriter III module by DataBiotics. MiniWriter III is a word processor that can be used only with a console and printer, no expansion system needed. A disk full of games will be given away as the free program of the month.

Over the next few months the board will work on the clubs decreasing membership, and hopefully we can do some good and improve our record. We would welcome comments from present and past members, maybe lack of communication has been part of the problem.

That is all for now, hope to see you at the next meeting.



SUPERCART II[illegible]

By Mark Harms

Yes. Once again here is another article on the famous SUPERCART. It seems that there is no limit to what you can do with this thing.

I recently read and article somewhere that you could put all the groms you wanted into the console. I thought that was great, but if the console went bad or you want to use a friends system you would have to bring you console along. That seemed a bit much so I combined the two articles, one on the SUPERCART and the other on the groms in the console. What I got was something really neat!

My module now consists of E/A,TI-Writer,Disk Manager II, all in grom and 8K of CPU Ram. The front of the module supported two single pole double throw switches, and a red reset switch that I added in case the module was not used in a Widget.

First thing to do is get all the stuff that you need to make a SUPERCART:

1)	6264-15 CMOS RAM	3.00
2)	1N914 DIODES	50/1.98
1)	CR2320H 3V LITHIUM BATT.	1.79
1)	1k OHM RESISTOR 1/4 WATT	5/0.39
1)	2.2 mf TANTALIUM CAPACITOR	.89
2)	SPDT Micro-Mini tog switches	1.59 ea
1)	Spring switch norm open	5/2.59

In addition to this you will need the groms from the modules that you want in your new cartrige. E/A is required but after that you can put in any other two programs that you want. How about Multiplan and TI-Writer? I recommend either ordering the groms that you want from TI or using a "SPARE" module, since there is always a remote chance that you may have a problem.

If you have all the parts, you are ready to start. The module you decide to tear apart is up to you. Just push in

the panel on the front of the module and make sure that there are connectors on both sides! Some good ones are Munchman, TI-Invaders, and Tombsone City. These are the ones I have used although Parsec and Congo Bongo are even better!

This is a good time to practice your soldering. Remove all chips off the board, and clean out the holes of the large chip and two of the small chip areas. I will not go into all the details of making the standard SuperCart, just explain the difference.

Once you have the board ready to put the chips on, try it in the console. This may sound strange, but it saves much pain later. It should come up on the menu as if there is no module plugged in since there are no chips in it. If you turn it on and get a scrambled screen you have a short on the board. This means that when you cleaned out the holes you got solder going from one hole to another. Very carefuly with a magnifying glass check around each hole! Flick off the piece of solder and recheck it till it is ok.

Now you are ready to put just the individual components on. This includes the resistor, capacitor, one of the diodes. Your board should look like the one in fig. 1 if you are using the Munchman or similar board. Component placement is not critical, but I have found that this placement works good with the switch placement. When you have finished, check the board in the computer again for shorts.

Prepare the ram chip as you would for the regular Supercart, and solder it to the board. When it is on check it in the console again.

Connect the resistor, the diode and the two wires to the chip. The chip is now actualy in the circuit when plugged into the console. If you have a controller card that will allow you to peek and poke you can try to play with a few locations in it to see if it will respond.

Pin 14 is the chip select for the grom chip. Bend this pin out on all of

the groms that you will use. Take care not to break them! Stack the chips as in fig. 2, watch the order that you put them in. The first chip of the module must be on the bottom. I.E. Disk Manager II uses two chips. The lower numbered chip must be on the bottom and it's chip select pin connected to the toggle switch.

Add the wire to the chip select as in fig. 2. Solder the two stacks of chips to the board in the two areas nearest the ram chip. DO NOT USE THE LAST TWO!

Set the board aside to cool for awhile, and get the module case. Three holes must be made in it for the switches. The first one will be about on the TI Logo on the module. I used an old tip on my soldering gun to burn it through. I then installed it to measure the spot for the second one and so on. All three fit with not much room to spare. Another thing that must be modified is the cover. Inside the top cover are two legs that secure the board. One leg must be trimmed to allow room for the ram chip. Take off about 1/8 of an inch and test it for fit.

Remove and wire switch one and two as shown in fig. 3. Solder the wires comeing from the groms to the switchs. Install them in the module.

Now is a good time to check it in the computer again. The switches are active and you should be able to select any grom you want using different combinations of the switches.

If they all work, you can even try loading a program into the ram. It must have an Absolute Origin of >6000 to load into the module. If it runs then it will stay there till you shut off the computer.

Wire in the reset button as shown in fig. 4.

All that remains is the battery backup circuit (fig. 5) to be wired in and you're finished.

Remember any grom module can be put in it as long as there is not a rom chip in that module.

I have really enjoyed making and using this module. Combine this and the Widget and you may never have to change a module again.

Also there are many programs written for the 6000 ram area around. If you get really wild you can even add the second ram stacked onto the first one as some have in other articles. That is if you can find room for the switch!

If anyone can find a 3 position switch (ON-ON-ON) that will fit in the module let me know as this will make the possibility of the two rams and three grom possible.

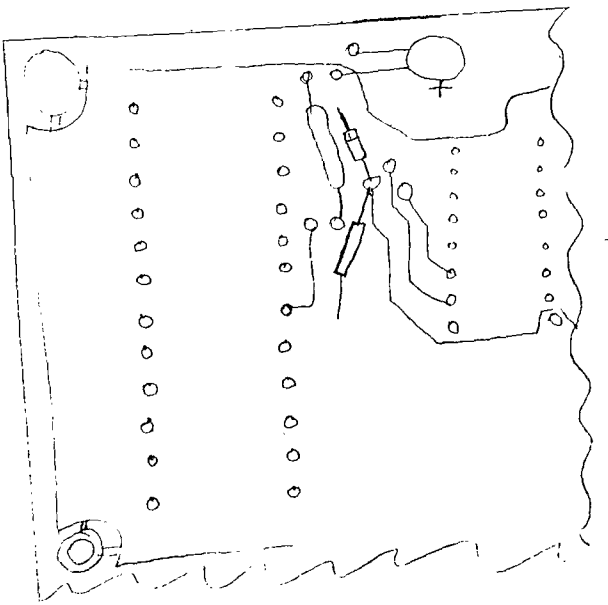


fig. 1

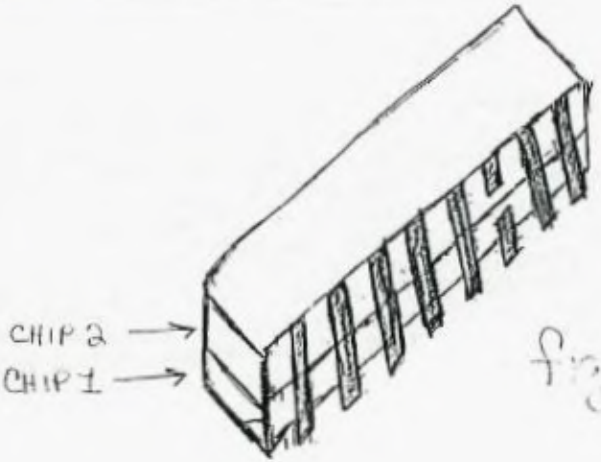

CHIP 2
CHIP 1

fig. 2

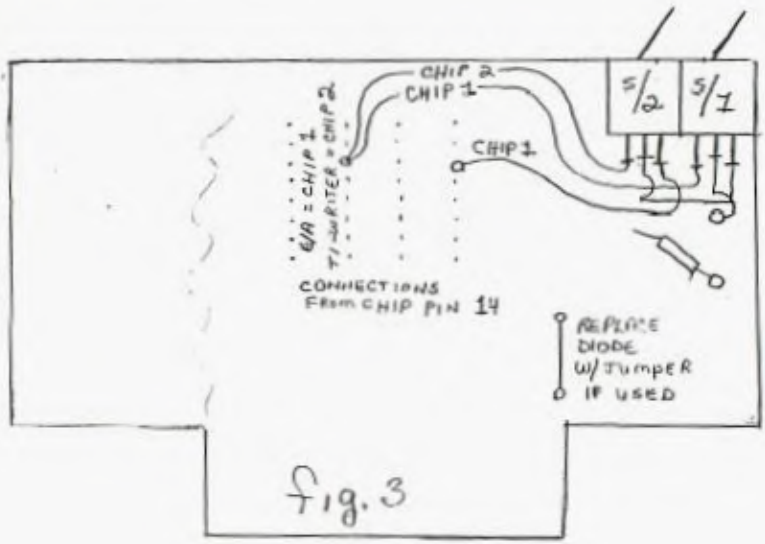

CHIP 2
CHIP 1
CHIP 1
S/2
S/1
6/R = CHIP 1
T/WRITER = CHIP 2
CONNECTIONS
FROM CHIP PIN 14
REPLACE
DIODE
W/ JUMPER
IF USED

fig. 3

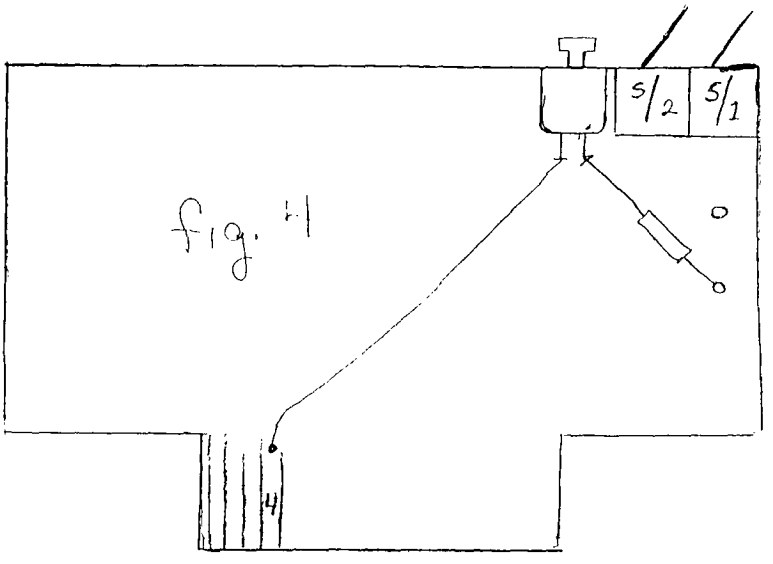


fig. 4

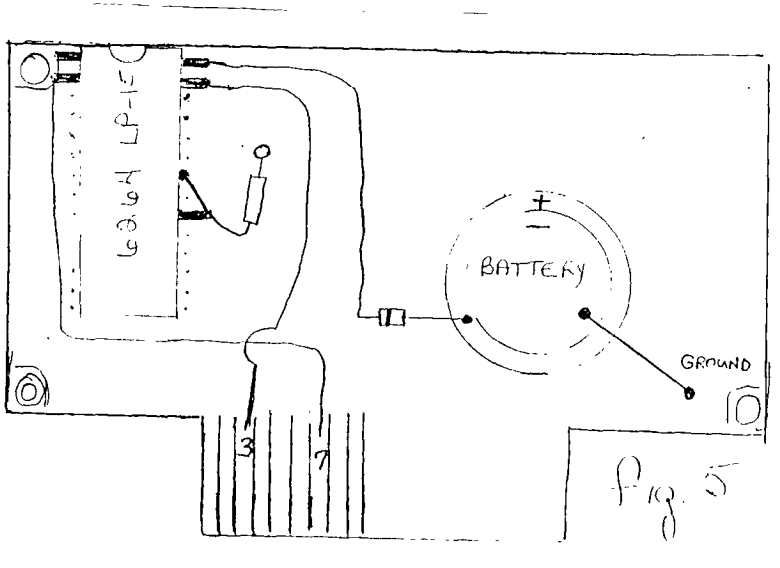


fig. 5

Tips for reducing eye strain from computers

By The Associated Press
From The Kankakee Daily Journal

Headaches? Blurring vision? Itching, burning eyes? Eye fatigue and flickering sensations?

Those symptoms may have something to do with the stress your home computer may be putting on your eyes, says the American Optometric Association.

The association lists some ways you can make home computers easier on the eyes:

Reduce room lighting. Use a desk lamp to illuminate reference material.

Be sure lamps do not reflect on the screen. Use shades or drapes to reduce glare through windows.

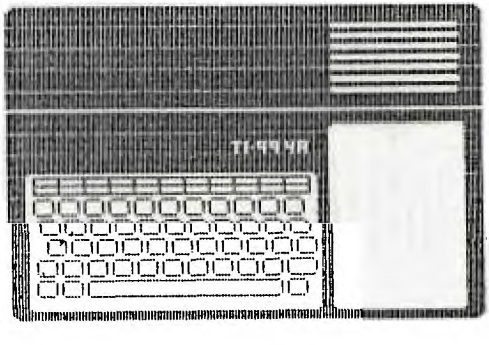
Adjust screen brightness to three or four times the brightness of room lighting.

Use home computer equipment that is adjustable for different head or body positions for different members of the family.

Place reference material the same distance from your eyes as the display terminal, to avoid having to change focus when looking from one to the other.

Take 10-minute rest or alternate task breaks every two hours or whenever your eyes feel tired. Prolonged concentration on a computer screen may contribute to nearsighted ness.

THE TI-99/4A COMPUTER



1Hex to Decimal Converter

```
100 CALL CLEAR :: DISPLAY AT
(1,1):"HEX-DECIMAL-HEX" :: D
ISPLAY AT(3,2):"CONVERTER"
110 DISPLAY AT(10,1):"STEPHE
N SHAW - 1982"
120 REM FROM CREATIVE COMPUT
ING   MAY 1982
130 REM ORIGINAL BY CHUCK
   CARPENTER FOR APPLE
140 DISPLAY AT(12,1)BEEP:"SE
LECT FROM THE FOLLOWING" ::
DISPLAY AT(13,1):"PRESS:"
150 DISPLAY AT(15,1):"1 FOR
HEX>DECIMAL" :: DISPLAY AT(1
6,1):"2 FOR DECIMAL>HEX" ::
DISPLAY AT(17,1):"3 TO RETUR
N TO BASIC"
160 CALL KEY(0,A,B):: IF B=0
 THEN 160 ELSE IF A<49 OR A>
51 THEN 160
170 ON A-48 GOTO 1000,2000,1
80
180 STOP
1000 REM HEX-DECIMAL
1010 H$="" :: T=0 :: CALL CL
EAR :: PRINT "ENTER YOUR HEX
 NUMBER":"MAX 4 DIGITS";:: I
NPUT H$
1020 IF H$="" THEN 1010 ELSE
 IF LEN(H$)>4 THEN 1010
1030 IF LEN(H$)=3 THEN H$="0
"&H$ ELSE IF LEN(H$)=2 THEN
H$="00"&H$ ELSE IF LEN(H$)=1
 THEN H$="000"&H$
1040 FOR I=1 TO 4
1050 D(I)=ASC(SEG$(H$,I,1))-
48 :: IF D(I)>9 THEN D(I)=D(
I)-7
1060 NEXT I :: D(1)=D(1)*409
6 :: D(2)=D(2)*256 :: D(3)=D
(3)*16 :: T=D(1)+D(2)+D(3)+D
(4)
```

```
1070 PRINT " ";H$;" =";T
1071 IF T<32768 THEN 1080
1072 T=(65536-T)*-1
1073 PRINT "E.G. CPU:";T:
1080 PRINT "  ":"MORE HEX-DE
CIMAL CONVERSIONSPRESS Y OR
N"
1090 CALL KEY(0,A,B):: IF B=
0 THEN 1090 ELSE IF CHR$(A)=
"Y" THEN 1000 ELSE IF CHR$(A
)="N" THEN 100 ELSE 1090
2000 REM DECIMAL TO HEX
2010 CALL CLEAR :: N=0 :: H$
="" :: H=0 :: PRINT "ENTER Y
OUR DECIMAL NUMBER   MAX FIV
E DIGITS"
2020 INPUT Z$ :: IF Z$="" TH
EN 2020 ELSE IF LEN(Z$)>5 TH
EN 2020
2030 FOR TT=1 TO LEN(Z$):: X
X=ASC(SEG$(Z$,TT,1)):: IF XX
<48 OR XX>57 THEN 2020
2031 NEXT TT
2032 IF VAL(Z$)>65536 THEN P
RINT "MAX 65536!" :: GOTO 20
20
2040 H,N=VAL(Z$):: FOR I=1 T
O 4 :: H1=INT(H/16):: D(I)=H
-16*H1 :: H=H1
2050 NEXT I :: FOR I=4 TO 1
STEP -1 :: H$=H$&CHR$(D(I)+4
8-7*((D(I)>9)))
2060 NEXT I
2070 PRINT " ";N;" = ";H$
2080 PRINT " ":"MORE DECIMAL
 TO HEX ":"CONVERSIONS?":"PR
ESS Y OR N"
2090 CALL KEY(0,A,B):: IF B=
0 THEN 2090 ELSE IF CHR$(A)=
"Y" THEN 2000 ELSE IF CHR$(A
)="N" THEN 100 ELSE 2090
2100 END
```

HUNTER ELECTRONICS
604 S.FAIRVIEW AVE. 312-832-6558
ELMHURST,ILL.60126 OPEN APPT.

NEW ADDITIONS:

"GENEVE" MODEL 9620 COMPUTER
MYARC FINALLY ANNOUCED THEIR NEW 99/4A COMPATIBLE
640K RAM,2-3 TIMES FASTER,IBM KEY.
SUGG.RET.PRICE-$495(CALL FOR OUR PRICE,AVAILBLE THIS FALL)
SEND A $100 CHECK TO RESERVE YOURS, TODAY!!!!

HARDWARE

DESCRIPT.	PRICE	DESCRIPT.	PRICE
NX10 PRINT.	$259	RS232 CARD	$81
M.DISK CONT.	159	MBX SYSTEM	39
RS232 ST.AL.	99	TRIPLE TECH	125
128 MEM.CARD	189	DISK(MIN.10)	.75
MODULE/FILE	16	WICO JOYST.	32
TAC-2 JOYST.	15		
VOLKS 300 MOD.	39	VOLKS 1200	149
COMPUSERVE KIT	29	POW.SUPPLY	18
PAPER TRACTOR	9	CASE/SUPPLY	59
PARALLEL CAB.	25	MONITOR CAB.	7
JOY.AD.CABLE	7	EX.DK.DR.CAB.	12
DUAL DR.CAB.K.	30	STAR RIBBON	3
CASSETTE CABLE	6	SPEECH SYN.	35
SIG.PWR.SUPPLY	10	COMPUT.COVER	6
CARTRIDGE EXP.	24	1/2 HT DRIVE	99
14"COLOR MON.	135		

GAME SOFTWARE

MUNCHMAN	6		
SOUNDTRACK TR.	10	T.I.INVADER	4
MS PAK MAN	9	TUNNEL/DOOM	10
SEWERMANIA	10		
MIND CHALLENG.	8	BIG FOOT	10
METEOR BELT	10	HUSTLE	9
CAR WARS	4	JAWBREAKER	6
POPEYE	15	AMAZING	8
ADVENT.HINTS	8	SUPER DEMON	10
TOMBSTONE CITY	4	OTHELLO	9
BURGER TIME	10		
BASEBALL(MBX)	10	ENTRAPMENT/DK	14
TOWER AIR TRA.	15	WIZARD'S DOM.	16
ALL STAR BASE.	16	GAME/50 STATE	1
MINER 49'er	14	ZERO ZAP	9
MICROSURGEON	12	ADVENTURE	10

MYARC EXTENDED BASIC II-$79

PACKAGE DEAL-128K CARD W/EXT.BA.

ONLY $240(add $84 to 512k)

FOLLOWING ARE FOR ADVENTURE

STRANGE ODDES.	6	THE COUNT	6
THE GOLDEN VOV.	6	SAVAGE ISLAND	6
MYSTERY FUN H.	6	MISSION IMPOS	6
ADVENTURELAND	6	GHOST TOWN	6

B.BUSINESS/HOUSEHOLD SOFTWARE

FLIGHT SIMUL.	25	WINGING IT	13
NIGHT MISSION	17	EXPLORER	17
EXTENDED BAS.	59	T.I.ARTIST	17
3D WORLD	30	EXPAND.GRAPH.	45
SCREEN DUMP 2	23	QUICK COPER 2	29
BANNER MAKER	17	DISPLAY MAST	
		MEMOREASE	12
MEMOWRITER	12	B@K BUS.PAK	25
T.I.LOGO II	23	EDITOR ASSEM.	25
T.I.WRITER	39	ACORN 99 DBM	42
MULTIPLAN	35	BUS.GRAPHS 99	20
PAINT N PRINT	24	SUPER DUPER	25
CONSOLE WRIT.	17	HOMEWORK HELP.	24
SPEED READING	25	SPRITE EDITOR	20
MUSIC EDITOR	18	DATA BASE MGT	39
4A TALK(COMM)	17	PERS.REAL EST.	6
TOUCH TYPING	15	HOME DECISIONS	4
TERM.EMIN II	15	AUTOSPELLCHEK	34
ADVANCED DIAG.	17	EXTENDED BAS.	59
DISK FIXER	29	PER.DIAG.MOD.	28

C.EDUCATIONAL

AT THE ZOO	19	BEG.GRAMMAR	8
EARLY LEARING	8	EARLY READING	10
READING FUN	9	READ.ROUNDUP	9
READING ON	9	READING RALLY	12
READING FLIGHT	9	HANGMAN(spell)	9
SCH.SPELL 3-6	12	MULT.I	6
DIV.1	10	METEOR MULTL.	10
NUMBER MAGIC	8	NUMBERATION 1	13
NUMBERATION 2	13	TINY LOGO	8
MILL.SUBTRACT.	9	MINUS MISSION	9
MILL INTEGERS	6	MIL.MEA.FORM.	6
MIL.EQUATIONS	7	LAWS OF ARITH.	9
SPACE JOUR.(%)	6	PYR.PUZZ(MULT)	9

DataBioTics Inc.-MINIWRITER 2-
For people with only a ba-
sic system and want word
processing-$31

MINIWRITER 3-same as 2 but
but with direct interface
cable connection-$39

STAR MICRONICS-NX10 now avail-
able(NLQ,TOUCH CONTROLS
NEW FEATURES-5K BUFFER, @
FRONT CONTROL
PRICE-$249(thru Aug31))

FANS:MAKE YOUR EXP.BOX QUIET
ONLY $20

IN STOCK ITEMS(we ship also, just
add $2 for software orders
up to $100,$3 to $200,$4
to $300-hardware-call for
amount if "heavy items"
(Illinois-add 6 1/4% tax)

IN STOCK-GRAM KRACKER/ONLY $172.50

T.I.LIBRARIES

HOME FIANCIAL MANAGER-$9
SPEAKING MATH TEACHER-$15
COMP.INTRODUCT.PACKAGE-$9
EDITOR ASSEMBLER-$25
LOGO II-$23

USED ITEM SALE-
PANASONIC COLOR MON.-$150
SIGNALMAN MODEM-30
CONGO BONGO-6
ACOUSTIC MODEM-OFFER
DEMO 99/4A COMPUTER-85

AUGUST SPECIALS:
MYARC DISK CONTROLLER-$149
STAR NX 10 PRINTER-$249
FREE ADV.GAME W/ADVENTURE
ACORN DATA BASE-$40
MULTIPLAN-$25
T.I.LOGO II-$19
T.I.WRITER-$25
FREE BOX OF DISKETTES WITH
1/2 HT DR.PURCHASE-$99
(DD/DS-TANDOM)

TI FAIRE

The Chiicago TI Fair Will be held at Triton College on the first Saturday of November.

The current list of vendors include:

COMPETITION COMPUTER PRODUCTS
MICRFORMAT
TIGERCUB SOFTWARE
DATABIOTICS
RYTE DATA
HORIZON COMPUTER
DATA SYSTEMS
HUNTER ELETRONICS
L. L. CONNOR ENTERPRISES
C & G DRIVES

This is the fourth year of the faire and it has gotten better every year. If you can at all make it please try!

Guest speakers will be there along with new hardware and software.

You must see it to believe it!

Last years there were 2,000 visitors from across the USA and Canada!

More information con be found by contacting:

Sandy Bartels
Fair Chairwoman
PO Box 578341
Chicago, Il.
60657