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# SASKATOON TEXAS INSTRUMENTS COMPUTER CLUB

NEXT GENERAL MEETING AT:  
SASKATOON REGIONAL COMMUNITY COLLEGE,  
ROOM 114, 145 1ST AVE. N., 7:00PM  
FEB 4TH, 1985  
MAR 4TH, 1985  
APR 1ST, 1985  
MAY 6TH, 1985

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WE DISCUSS AND REVIEW NEW PRODUCTS FOR THE TI 99, WHILE PROVIDING TECHNICAL SUPPORT FOR ANY PROBLEMS THAT A MEMBER MAY HAVE. WE ALSO SUPPORT A SOFTWARE LIBRARY AND HAVE REGULAR CONTACTS WITH OTHER GROUPS IN CANADA AND THE UNITED STATES. OUR MEMBERSHIP FEES ARE VERY REASONABLE FROM \$10.00/SINGLE TO \$12.00/FAMILY. IF YOU WOULD LIKE TO BECOME A MEMBER OR REQUIRE MORE INFORMATION, CONTACT:

KEN READ 384-2844  
FRANCIS X. GASTON 978-0182  
HARRY CARUK 244-8379

NEWSLETTER EDITORIAL

HAPPY NEW YEAR, AND MAY THE REST OF THE NEW YEAR BRING YOU HAPPINESS AND JOY.

ONCE AGAIN, WE ARE CONTINUING WITH OUR MEMBERSHIP DRIVE. SO WE URGE YOU TO DETACH THE TITLE COVER, AND ATTACH IT TO WALLS AND BULLETINS ACROSS THE CITY AND THE SURROUNDING AREA. SCHOOLS, SHOPPING CENTRES, MALLS AND GROCERY STORES ARE JUST TO MENTION A FEW. ONCE AGAIN, FEEL FREE TO INCLUDE YOUR NAME AND PHONE NUMBER TO THE LIST.

THIS MONTHS EDITION, CONTAINS MANY TECHNICAL ASPECTS OF OUR COMPUTER. WE HAVE IN THE PAST PUBLISHED PROGRAMS ON BASIC AND EXTENDED BASIC, BUT AT THIS TIME, WE WILL BE WRITING A FEW ARTICLES ON THE LANGUAGE FORTH AND ALSO SOME ASSEMBLY LANGUAGE. FUTURE ARTICLES WILL ALSO PORTRAY OUR "ADVANCEMENT".

ANOTHER ON-GOING ENDEAVOR, IS OUR CORRESPONDENCE WITH OTHER TI GROUPS AROUND THE "WORLD". THEY HAVE PROVIDED US WITH MANY NEW PROCEDURES AND TECHNIQUES FOR OUR MACHINE. IT IS AT THIS TIME THAT A COMPILATION WILL BE PUBLISHED OF THEIR ASSISTANCE.

SO WE HOPE THIS IS HELPFUL TO YOU THE MEMBER. WE STILL RECEIVE MANY ARTICLES, PROBLEMS AND EVEN QUESTIONS THAT SOME MEMBERS HAVE DISCUSSED. KEEP THEM COMING!!!! WE STILL NEED YOUR INPUT!!!!

- FRANCIS X. GASTON -

TID BITS

THE FOLLOWING "TID BITS" ARE FROM USER GROUPS AROUND THE WORLD:

```
FROM TERRY ATKINSON OF NOVA SCOTIA: (REQUIRES 32K AND X BASIC)
10 CALL CLEAR:: CALL INIT
20 CALL LOAD(8196,63,248)
30 CALL LOAD(16376,67,85,82,83,79,82,48,8)
40 CALL LOAD(12288,255,129,129,129,129,129,129,129,255)
50 CALL
LOAD(12296,2,0,3,240,2,1,48,0,2,2,0,8,4,32,32,36,4,91)
60 CALL LINK("CURSOR") :: END
```

RUN

UNTIL A QUIT OR BYE IS GIVEN, THIS PROGRAM SHOULD STILL REMAIN DEFINED. IF YOU WISH OTHER PATTERNS, USE 8 DIFFERENT VALUES ON LINE 40 AFTER 12888. PATTERN IS BASED FROM HEX IN PATTERN IDENTIFIER TABLE AND CONVERTED TO DECIMAL.

WINNIPEG U.G. SUGGESTS CALL LOAD(12888,0,0,0,0,0,0,0,0,252) FOR A FLAT LINE. DELETION OF LINE 40 PROVIDES AN INVISIBLE CURSOR (\* - OUCH!!!)

COLUMBUS OHIO U.G. SUGGESTS CALL LOAD(12288,48,48,63,255,254,124,24,12). YOU WILL SURELY LIKE

THIS ONE.

THIS ONE FROM NEARLY EVERYBODY. REQUIRES 32K AND X BASIC.

CALL LOAD(-31806,N) WHERE IF N=0 - RESTORES TO NORMAL MODE; IF N=16 DISABLES FUNCTION QUIT; IF N=32 DISABLE SOUND; IF N=48 DISABLE QUIT AND SOUND; IF N=64 DISABLE SPRITE MOTION; IF N=80 DISABLE SPRITES AND QUIT; IF N=96 DISABLE SPRITES AND SOUND; IF N=128 DISABLES ALL THREE

CALL LOAD(-31748,N) WHERE IF N=0 CURSOR BLINK IS OFF, AND SOUND IS OFF; IF N=1 NORMAL SPEED; IF N=100 VERY FAST BLINK AND TONE.

CALL LOAD(-31804,0,36) IS THE SAME AS "BYE".

CALL LOAD(-31878,N) DISABLES "N" SPRITES.

CALL LOAD(-31888,63,255) DISABLES DISK DRIVES.

CALL LOAD(-31888,55,215) RESTORES DRIVES IF FOLLOWED BY RUN, NEW, OR EDITING.

CALL LOAD(-31962,255) REBOOTS TO "LOAD" PROGRAM.

CALL LOAD(-31868,0,0) DISABLES 32K MEMORY.

CALL LOAD(-31868,255,231) RESTORES 32K MEMORY.

CALL LOAD(-31931,0) DISABLES X BASIC PROTECTION.

CALL LOAD(-32699,0) DISABLES X BASIC PROTECTION.

CALL PEEK(-28672,A) IF A=96 THEN SPEECH IF A=0 THEN NO SPEECH ATTACHED.

CALL PEEK(-31808,A,B) PROVIDES RANDOM INTEGERS IN A AND B BETWEEN 0 AND 254.

CALL PEEK(-31878,A) A= HIGHEST NUMBERED SPRITE.

CALL PEEK(-31952) IF A=55 THEN 32K OFF ELSE 32K ON.

FROM THE WINNIPEG U.G. : REQUIRES E.A.

CALL POKEV(-32768,0) NORMAL MODE

CALL POKEV(-32352,0) SCREEN TRANSPARENT.

CALL POKEV(-32272,0,"",-30945,0) 40 COLUMN SCREEN.

CALL POKEV(-32280,0) MULTIPLE COLORS.

CALL POKEV(-32766,0) BIT MAP MODE.

FROM STRATHROY U.G.: MUSIC TIP VICTORY REFRAIN. 10 T=250 20 G=392 30 E=330 40 HE=459 50 HG=784 60 V=5 70 CALL SOUND(T,196,V,G,V,HG,V) 80 CALL SOUND(T,262,V,523,V,1047,7) 90 CALL SOUND(T,E,V,1319,V) 100 CALL SOUND(T,G,V,HG,1568,V) 110 CALL SOUND(125,110,30) 120 CALL SOUND(125,E,V,HE,V,1319,V) 130 CALL SOUND(500,G,V,HG,V,1568,V)

FROM JIM PETERSON OF TIGERCLUB SOFTWARE: ARCADE EFFECTS:  
CALL SOUND(D,N,V,N\*1.01,V)

FROM TOM HALL AND MICHAL JAEGERMAN OF EDMONTON U.G.:  
DISPLAY/VAR 80 (TELI CAPTURE OR TI WRITER) TO A MERGE FILE  
FORMAT (D/V 163): (NOTE - IF LINE ENDS ON COL 79 OR 80, BUT IS NOT THE LAST WORD ASSOCIATED WITH THAT LINE, THEN INSERT A BLANK CHARACTER ON THE NEXT LINE). IF LINE ENDS EXACTLY ON COL 79 OR 80, THEN ADD A BLANK LINE ON THE NEXT LINE. ONCE YOU OBTAIN A MERGE FILE, YOU THEN REMOVE THE REMARK(!) STATEMENT IN FRONT OF EACH LINE.

```

1 DISPLAY AT(5,4)ERASE ALL:"INPUT FILEP::
TAB(10);PDSK1."::TAB(4);"OUTPUT FILE P::TAB(10),"DSK1." 2
ACCEPT AT(7,13)SIZE(-12):IS:: ACCEPT AT(11,13)SIZE(-12):OS ::
OPEN #1:"DSK"&IS:: OPEN #2:"DSK"&OS,VARIABLE 163 3 LINPUT
#1:L$ :: IF LEN(L$) >78 THEN LINPUT #1:L$:: IF LEN(L$) >78 THEN
LINPUT #1:M$:: L$=L$&M$ 4 S=POS(L$," ",1):: ON ERROR 7 ::
N=VAL(SEG$(L$,1,S)) :: ON ERROR 6:: A=INT(N/256):: AS=CHR$(N-A
*256):: PRINT :: L$ 5 PRINT #2:CHR$(A);A$;
CHR$(131);SEG$(L$,S+1,255) : CHR$(0):: GOTO 3 6 PRINT
#2.CHR$(255); CHR$(255):: CLOSE #2:: END 7 ON ERROR 6 ::
RETURN 3

```

FROM BARRY COMER, NOVA SCOTIA U.G.. HI RES GRAPHICS:

```

100 CALL CLEA 110 CALL COLOR(13,9,1) 120 FOR A=128 TO 135
130 READ BS 140 CALL CHAR(A,BS) 150 NEXT A 160 FOR G=1 TO 24
170 FOR B=128 TO 135 180 CALL HCHAR(G,1,B,32) 190 NEXT B 200
NEXT G 210 CALL CLEAR 220 GOTO 160 230 DATA
FF,FFFF,FFFFFF,FFFFFFFF,FFFFFFFFFFFF,FFFFFFFFFFFFF
,FFFFFFFFFFFFFFFFFF,FFFFFFFFFFFFFFFFFF

```

FROM WINNIPEG U.G.: HELPLINE - A SERVICE OF AMNION STONEWARE  
HELPLINE IS A FREE SERVICE PROVIDING INFORMATION ON  
HARDWARE, SOFTWARE, AND PROGRAMMING PROBLEMS; BE IT TI OR THIRD  
PARTY. GUY ROMANO, PH.D IS THE RESIDENT AUTHORITY AND PROVIDES  
HIS SERVICE ON A VOLUNTARY BASIS.

USERS CAN CALL (415) 753-5581 FROM 9AM TO 3PM (PACIFIC)  
MON-SAT OR WRITE SASE: 116 CARL STREET, SAN FRANCISCO, CA 94117

ANOTHER FROM WINNIPEG U.G.: MEMORY RELEASE - TURN CONSOLE ON  
FIRST THEN PEB; WILL RELEASE 2K OF RAM AND PROVIDE ACCESS TO  
RS232. ONLY PROBLEM IS THAT THE DISK DRIVES ARE DISABLED  
(APPROPRIATE FOR TAPE SYSTEM).

FROM MILLERS GRAPHICS: (XBASIC)

```

CALL SCREEN(6):: FOR I=0 TO 12:: CALL COLOR(I,16,1):: NEXT I
:: ACCEPT AT (1,1):A. PRESS ENTER THEN FUNCTION CLEAR. CAN TRY
DIFFERENT VALUES IN SCREEN, FOREGROUND VARIABLES, AND LOOP
VALUES

```

WELL, THAT IS ALL FOR NOW. ENSURE YOU CHECK OUR ARCHIVE  
LIBRARY FOR MORE TID BITS.

- FRANCIS X. GASTON -

S.T.I.C.C.  
BBS

There is a new BBS in town. It is the S.T.I.C.C BBS run by myself. This BBS is run on a TI-99/4A with Extended Basic and machine language subroutines. To reach this system, call 384-2844. The BBS runs 24 hours a day 7 days a week. You may notice that this number is the number given in the newsletter to reach me. It is now a data line. To reach me by voice, call 382-2527.

Some of the features this BBS has are:

- (A) lter TI screen color
- (B) ulletins
- (C) hat with SYSOP ! ie. me
- (E) nter messages
- (K) ill message
- (L) ocal Systems
- (M) essage count/System Status
- (O) ut of Province BBSs
- (R) etrieve messages
- (S) earch/Scan Messages
- (X) pert User Mode on/off

When entering messages, you may specify private or public. I have noticed that (S)earch/Scan messages does not work too well but most people prefer to (R)etrieve messages anyway. To (K)ill message, a message will be sent to me to delete it for you. This is to ensure that the BBS is kept clean. If everyone behaves, there will be no problem. Feel free to use the BBS anytime. Its major purpose is to allow communication without the hassle of always phoning back. I hope you enjoy it.

Ken Read (sysop BBS)

### Double Duty

For those of you who have a color monitor and a VCR, there is a way to put your monitor to double duty. It can be used as a monitor for your VCR. No more fighting over which channel to watch. Simply hook up a cable from the video out of the VCR to the video in of the monitor. Then hook up corresponding leads for audio. It is best to use a signal switcher for the video signal and two speakers for the audio. One speaker is used for the computer and the other for the VCR audio. This can be quite usefull during long computer runs. Personally, I can monitor the BBS and watch TV at the same time. Such double duty can prevent a lot of boredom.

Ken Read

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SUBFILE99  
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COMPILATION BY DENNIS HANCOCK  
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\* The following material is excerpts from SUBFILE99 which is contained in user publishing on THE SOURCE. To access the service on the SOURCE, type PUBLIC at command level, next menu select PUBLISHING CATEGORIES, then select SUBFILE99. \* It can also be reached by typing, PUBLIC 181 DIRECT at command level.

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\* \* \* THE FOLLOWING REQUIRES THE LANGUAGE "FORTH" \* \* \*

SINGLE-DRIVE FORTH CLONER  
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BY POPULAR REQUEST

In our last issue we featured a simple clone program that ran in FORTH. It was quite a hit! The only complaint was that it required two drives. As many readers pointed out, most of us don't have the luxury of two drives. Below is a version of FCLONE, called FCLONE/1D, that only requires one drive.

Be sure to check out the new version of our FTRAN program, FTRAN/1D! Yes, it only requires one drive, too! (See SF99 really does listen to it's readers!)

( FCLONE/1D SINGLE-DRIVE CLONER 15NOV84 SF99 )

```
BASE- R DECIMAL -SYNONYMS 0 VARIABLE BIG 15358 ALLOT
: ?# EMPTY-BUFFERS 0 BLOCK 10 + @ 256 1024 */MOD SWAP 0= 0= + ;
: PK CR ." PRESS ANY KEY " 52 GPLLNK KEY DROP CR CR ;
: MD CR ." LOAD MASTER DISK" PK ; ; CD ." LOAD COPY DISK" PK ;
: FCLONE/1D CLS 0 0 GOTOXY MD 0 DISK_LO ! ?# DUP DUP
DISK_SIZE ! DISK_HI ! CD ." FORMATTING..." 0 FORMAT DISK
0 DO CLS 0 0 GOTOXY MD I
15 0 DO DUP I + DUP . CR BLOCK BIG I 1024 * + 1024 CMOVE
LOOP
CLS 0 0 GOTOXY CD
15 0 DO DUP I + DUP . CR BLOCK BIG 1024 * + SWAP 1024
UPDATE FLUSH
LOOP
DROP 15 -LOOP 1 DISK_LO ! ; R BASE
```

SST Software, makers of the SST BASIC COMPILER has released

an "add on" utility package for the EXPANDED COMPILER. The new commands focus on the TI's High Res graphics mode and include PLOTLINE, SCREENDUMP, INPUT and PRINTAT in HRG, and the availability of CALL SOUND in HRG. Also, the new commands include the ability to set the screen to TEXT mode and use all the normal screen I/O routines in the original SST COMPILER.

SST is also offering updates to the earlier versions of the SST EXPANDED COMPILER and a backup copy. For more info contact SST at:

SST Software Inc.  
PO Box 26  
Cedarburg, WI 53012  
(414)771-8415

#### INNERMOST SECRETS REVEALED

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COMPUTER SHOPPER'S TI GURU, Randy Holcomo has just release reprints his top-flight articles on the "innards" of the TI Home Computer in a book entitled "Innermost Secrets of the TI 9900A."

To get your copy of this much talked about book, send \$5.95 to:

INNERMOST SECRETS  
COMPUTER SHOPPER  
PO BOX F  
TITUSVILLE, FL 3261

#### WRITE YOUR OWN TI ADVENTURE

-----

SF99 has been given a reference for a program that can be used to write an adventure file that operates with the TI Adventure Module. Although we have not yet seen a copy, all info received so far says that it's GREAT. Below is the address we received:

MARKUS WEIAND  
FRIEDRICHSTRASA 49  
D-5300 BONN 1  
WEST GERMANY

#### M AND T UTILITYWARE

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A new software company, M and T UTILITYWARE of Muskegon, Michigan, has just released a disk-reading utility called DISK MAPPER. Also in the works are DISK MANIPULATOR, DISASSEMBLER and TE-128K. SF99 has received a copy of DISK MANIPULATOR and will be reviewing it in our and will be reviewing it in our upcoming issue.

For more info contact:  
M AND T UTILITYWARE  
3507 MURL AVENUE  
MUSKEGON, MI 49442  
(616) 773-4504

## CORCOMP ANNOUNCES DSDD UPGRADES

In an effort to quell the tide of quality control complaints, CorComp has made available an upgrade of the DISK MANAGER program and announced two hardware alterations that will J DSDD Card. TI users to access their

For owners of pre-1981 consoles, CorComp offers a new PROM (Programmable ROM) that will help make the DSDD Card run smoother. Also, it has been advised that an has made available an upgrade of the Also, it has been advised that an additional "heat sink" be installed to cut down on possible overheating.

CorComp's new version of the DISK MANAGER program has a number of minor bugs removed and includes the TI FORTH boot file that allows the user to load TI FORTH without the ED/ASM Module in place.

For more info contact:

CORCOMP, INC.  
1255 NORTH TUSTIN AVENUE  
ANAHEIM, CA 92807



# CHANGE XBASIC EDIT SCREEN COLORS

There's lots of possible uses for the thing including games, but the real feature of this program is that it changes the color of the EDIT Mode screen as well! Yep, no more black on cyan if you don't want to!

## HOW DOES IT WORK?

The color change is inserted into the USER-DEFINED INTERRUPT and is constantly "re-performed" every 1/60 of a second. This makes it seem like the EDIT Mode screen has been changed. In order to return control of the color commands CALL SCREEN and CALL COLOR, you must load the User-Defined Interrupt with zeros.

## DEMO PROGRAMS

Along with the program that loads in the original routine, below are two demo routines to show off you new screen colors.

## A SIMPLE CALL LOAD WILL DO IT

Of course, you don't need a program to change to screen colors once the original file is loaded. All you have to do is poke a single byte value into CPU address 9460 This value is found by doing the following:

Foreground color(0-15)\*16  
plus  
Background color (0-15)

```
100 ! ***** 110 ! * * 120 ! *
SCREEN COLOR * 130 ! * * 140 ! *****
150 ! 160 ! 11 84 170 ! 180 ! SUBFILE99 190 ! 200 CALL
CLEAR :: CALL INIT 210 MEM=9459 220 ! 230 ! *LOAD IN PROGRAM*
240 ! 250 FOR I=1 TO 50 260 READ X 270 CALL LOAD(MEM+I,X) 280
NEXT I 290 ! 300 ! *START UP PROGRAM* 310 ! 320 CALL
LOAD(8194,37,38,"",-31804,36,246) 330 END 340 ! 350 ! *PROGRAM
DATA* 360 ! 370 DATA 244,0,2,1,0,135,208,96,36,244,216 380
DATA 1,140,2,6,193,216,1,140,2,2,1,0,72 390 DATA
216,1,140,2,6,193,216,1,140,2,2 400 DATA
0,0,32,216,32,36,244,140,0,6,0 410 DATA 22,251,4,91
```

## PROGRAM #2: CLRDEMO1/X

```
100 ! ***** 110 ! * * 120
! * COLOR CHANGE * 130 ! * * 140 ! *
DEMONSTRATION * 150 ! * * 160 !
***** 170 ! 180 ! 11/84 190 ! 200 !
SUBFILE99 210 ! 220 ! * 210 ! 220 !
*-----* 230 ! NOTE: 240 ! YOU MUST HAVE 250 !
```

```

ALREADY LOADED & 260 ! RUN "SCRNCOLR/X"! 270 !
*-----* 280 ! 290 CALL CLEAR :: RANDOMIZE :: DIM
C$(15) 300 M$="Screen Color Change Demo" 310 ! 320 FOR C=0 TO
15 :: READ C$(C):: NEXT C 330 ! 340 ! 350 DISPLAY AT(1,1):M$
:: DISPLAY AT(2,1):RPTS("-",LEN(M$)) 355 DISPLAY
AT(10,1):"FRGRND COLOR:" 356 DISPLAY AT(16,1):"BKGRND COLOR:"
360 ! 370 FC=INT(RND*15) 380 BC=INT(RND*15) 390 DISPLAY
AT(10,14):C$(FC) 400 DISPLAY AT(16,14):C$(BC) 410 ! 420
CVAL=FC*16+BC 430 CALL LOAD(9460,CVAL) 440 ! 450 GOTO 370 460
! 470 DATA Transparent,Black,Medium Green,Light Green 480 DATA
Dark Blue,Light Blue,Dark Red,Cyan 490 DATA Medium Red,Light
Red,Dark Yellow,Light Yellow 500 DATA Dark
Green,Magenta,Gray,White

```

PROGRAM #3. CLRDEMO2.X

```

100 ! ***** 110 ! * * 100 !
***** 110 ! * * 120 ! * COLOR
CHANGER * 130 ! * * 140 ! ***** 150
! 160 ! 11/84 170 ! 180 ! SUBFILE99 190 ! 200 !
*-----* 210 ! NOTE: 220 ! YOU MUST HAVE 230 !
ALREADY LOADED & 240 ! RUN "SCRNCOLR/X"! 250 !
*-----* 260 ! 180 ! SUBFILE99 190 ! 200 !
*-----* 210 ! NOTE: 220 ! YOU MUST HAVE 230 !
ALREADY LOADED & 240 ! RUN "SCRNCOLR/X"! 250 !
*-----* 260 ! 270 CALL CLEAR 280 M$="SCREEN COLOR
CHANGER" 290 I$="# ##### ## #####" 295 BC=5 ::
FC=1 300 ! 310 DISPLAY AT(1,1):M$ :: DISPLAY
AT(2,1):RPTS("-",LEN(M$)) 320 ! 330 FOR I=1 TO 8 340 READ
C1,M1$,C2,M2$ 350 DISPLAY AT(3+(2*I),1):USING I$:C1,M1$,C2,M2$
360 NEXT I 370 ! 380 DISPLAY AT(22,1):"BKGRND:";BC :: ACCEPT
AT(22,9)VALIDATE(DIGIT)

```

17E 551  
 EDWARDS  
 1701  
 11/84

