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TIPS99

TI PUGET SOUND 99ERS

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NEXT MEETING

DATE : TUESDAY, December 16, 1986 TIME: 7:00 PM
PLACE: Kirkland Public Library, 406 Kirkland Ave, Kirkland

AGENDA:
* Small C demonstration
* Computer Christmas songs
* Demonstration/Lecture
* Disk Assembler demonstration
* Nominations are closed-fill out ballots
* Question and Answer session

JANUARY MEETING

DATE : Thursday, January 22, 1987
TIME : 7:00 PM
PLACE: Kirkland Public Library
406 Kirkland Ave, Kirkland

FEBRUARY MEETING

DATE : Thursday, February 19, 1987
TIME : 7:00 PM
PLACE: Kirkland Public Library
406 Kirkland Ave, Kirkland

IN THIS NEWSLETTER

SOME LOCAL BULLETIN BOARD NUMBERS

TITLE	PHONE NUMBER
PUGET SOUND 99ERS BBS-SEATTLE	784-4142
TIBBS NW-ED DURFFEE-BELLEVUE	641-5884
QUEEN ANNE COMPUTER SHOPPE	361-0895
NEW WORLD BBS	365-6938
BAINBRIDGE ISLAND	1-598-3228
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SHUTTLE	885-INFO
TROTHGUARD-BURIEN	824-6757
RADIO 1	878-0158
GEnie	1-800-638-8369

THE PRESIDENT SAYS
By Chuck Wynne

We greatfully greeted a visitor from down under last month. His name was Geoff Shipton of Adelade Australia. A kindly gentleman who brought with him some programs and newsletters from the Hunter Valley 99ers. One program most should be interested in is Funlwriter V3.4. This version has enhancements not found on the original. One is that you can hit FCTN 7 (Aid) at any screen and catalog a disk, even in the formatter! It also has many more menu options so you can add many utilities to it. Tom Wynne made the FunLWriter load many utlities such as Mass Transfer V3.9, Rediskit fast disk copier, DM1000, Fast-Term, the "C" compiler, PRBASE, and many more on the same DSDD disk and called it the Superdisk II. Make sure you know that these are payware programs and should be paid for individually to the author or there ain't gonna be no more! Rediskit is the fastest disk copier I've ever seen! It will beat the pants off of just about every copier! SSSD takes 40 seconds including formatting the target disk. DSDD takes 1 min. 23 sec. You must have two drives and copy whole disks.

I would like to wish everyone a Merry Christmas and happy holidays. May you TI one on with happy computing!

Hitachi has come up with an retrofit for its 5 1/4 inch disk drives that will allow them to store 100 Megabytes. It will require new type disks. It would however not work on the TI because of a limit at this time to 127 files per floppy. With a new controller it could work just fine. The drives will show up in machines next year.

We had a Software Saturday November 22nd. It was mentioned at the meeting only and used as a test for future ones. Don't feel left out, as it was small and future ones will be well announced. This allows membership to review other club newsletters, and make copies of articles they wish to keep for themselves. The club library was present also for obtaining or running to see if that's what you want. It was a small turnout, so lets plan another.

Elections are upon us. Be sure and vote by sending in the ballot. Your vote is needed, and counts toward a better club!

For those who are new to TI, remember that in Extended Basic you can use FCTN REDO. This will bring the previous line onto screen with the cursor on the line number. You

can change the line number, which duplicates that one somewhere in your program. This makes programming extremely easier, and is a function missed by most beginners! Another trick for those who are still using a tape recorder is to pull the MIC jack from the recorder and talk into the built in mike (if your recorder has one). This will play back through the TV speaker telling you just before the program what it is. Save that program right there after the speech. You can at times copy a cassette from one recorder to another directly using the EAR to MIC connection. Make sure the recorders are on full treble, then do some experimenting to see what volume works. If it says NO DATA, turn the volume up. If it says DATA ERROR, turn it down. You usually have no control over the input volume, just the output.

TRANSLITERATION
By Brian Woods, Hunter Valley 99ers (Retyped by Chuck Wynne)

The Transliteration command (.TL) allows you to combine multi-character printer control codes into a single character for the Text Formatter to read. It allows you to alter print styles to add emphasis etc. to your printout.

Transliterating the various control codes to a single character and using TI-Writer's Special Character Mode embeds a non-printed character in your text (in Text Editor mode) that appears on screen but not in the printout. When the Formatter encounters this character during printing it is recognized as a print command and acts accordingly.

I have used the Transliterate command to allow all of the print types available on an Epson-100 Printer to be accessed in TI-Writer by using CTRL U, a letter, CTRL U.

Below is a list of the TL commands used:

```
EMPHASIZED ON:          .TL 17:27,69
EMPHASIZED OFF:         .TL 23:27,70
ITALICS ON:             .TL 5:27,82,19
ITALICS OFF:            .TL 18:27,82,0
CONTIN. U/LINE ON       .TL 20:27,45,49
CONTIN. U/LINE OFF:     .TL 25:27,45,48
CONDENSED ON:           .TL 1:15
CONDENSED OFF:          .TL 18:18
DOUBLE WIDTH ON:        .TL 4:27,87,49
DOUBLE WIDTH OFF.       .TL 6:27,87,48
DUBLE STRIKE ON:        .TL 7:27,71
```

```
DUBLE STRIKE OFF:     .TL 8:27,72
SUPERSCRIPT ON:       .TL 26:27,83,48
SUPER/SUBSCRIPT OFF:  .TL 24:27,84
SUBSCRIPT ON:         .TL 3:27,83,49
ENLARGED ON:          .TL 22:27,14
ENLARGED OFF:         .TL 2:27,87
```

Now when I'm typing a document using the Text Editor, the first line is ".IF DSK1.CODE2", which is the filename of my TL commands, then when I need to use them I go into Special Character mode (CTRL U), type the letter that refers to my requirements, then CTRL U again. It's as easy as that.

Below is a list of the type fonts and the letter required to access them, based on the Transliterate commands above.

PRINT TYPES	IN	OUT
EMPHASIZED	Q	W
ITALICS	E	R
CONT U/LINE	T	Y
CONDENSED	A	S
WIDE	D	F
DBL STRIKE	G	H
SUPERSCRIPT	Z	X
SUBSCRIPT	C	X
ENLARGED	V	B

Type CTRL U, the letter and then CTRL U again where you want it to start or stop the type of print in your document. Remember, the transliteration will only work if the printer has this option available to it and the .TL commands are in the CODE2 file and the .IF DSK1.CODE2 is included at the top of your document.

The difference between enlarged and wide is that enlarged automatically turns off at the end of a line unless turned off before and wide continues printing in that mode until turned off.

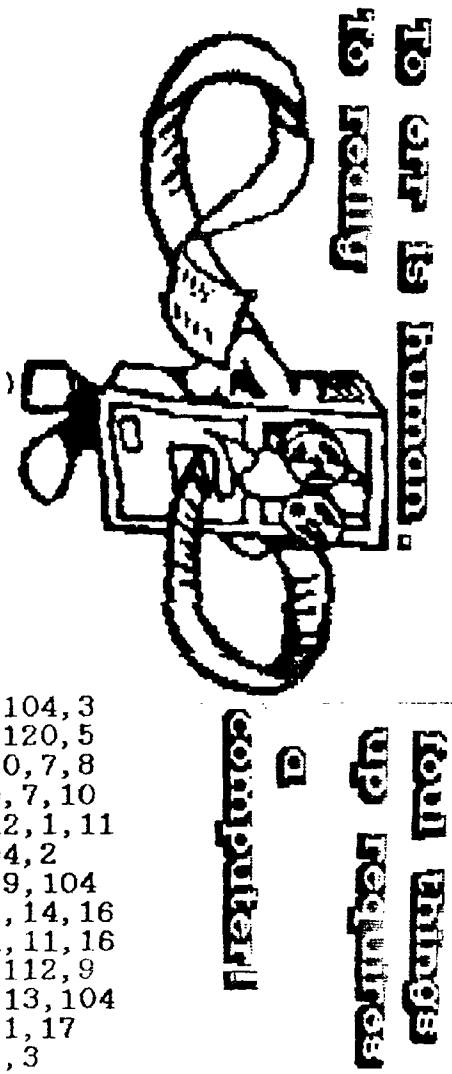
When using these codes, the symbol appearing on the screen is not printed, but remember to leave a space between the symbol and the next letter of text otherwise the two words will be joined.

By using these commands, it has made it easier to utilize the printer's capabilities and add a little interest to my printouts.

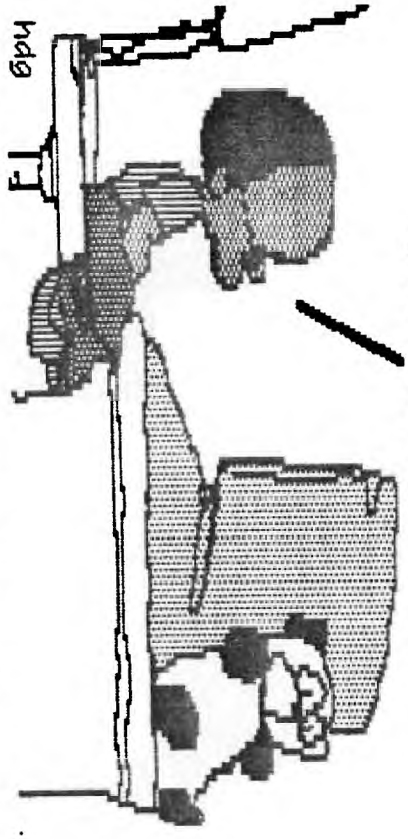
Santa and Deck the Halls
From the BUG News and Hunter Valley user groups

We have combined two Christmas programs together. A Santa Clause picture from the Brea 99ers users group from Whittier, California and a music program from the Hunter Valley users group from Australia. Enjoy and Merry Christmas!

```
100 REM <<SANTA>>
110 REM BY R.W.  AUGUST
120 REM FROM BUG NEWS DECEMBER 1986
130 CALL CLEAR
140 CALL SCREEN(5)
150 A$="FFFFFFFFFFFFFFFF"
160 CALL CHAR(104,A$)
170 CALL CHAR(112,A$)
180 CALL CHAR(120,A$)
190 CALL CHAR(128,A$)
200 CALL CHAR(42,"FFFFC3C3C3C3FFFF")
210 CALL CHAR(96,"FFFFFFE7E7FFFFFF")
220 CALL CHAR(43,"0000183C3C18")
230 CALL CHAR(129,"FF818181818181FF")
240 CALL COLOR(2,2,7)
250 CALL COLOR(9,6,2)
260 CALL COLOR(10,7,1)
270 CALL COLOR(11,16,1)
280 CALL COLOR(12,10,2)
290 CALL COLOR(13,2,16)
300 READ R,C,CH,L
310 IF R=0 THEN 520
320 CALL HCHAR(R,C,CH,L)
330 GOTO 300
340 DATA 2,16,112,1,3,15,104,3,4,15,104,3
350 DATA 5,14,104,5,6,14,112,5,7,14,120,5
360 DATA 7,15,96,1,7,17,96,1,8,13,120,7,8
370 DATA 16,104,1,9,9,112,2,9,13,120,7,10
380 DATA 9,112,2,10,13,112,7,10,16,42,1,11
390 DATA 9,104,2,11,14,112,5,12,9,104,2
400 DATA 12,13,104,7,12,15,112,3,13,9,104
410 DATA 12,13,16,112,1,14,10,104,12,14,16
420 DATA 43,1,15,11,104,11,16,11,104,11,16
430 DATA 16,43,1,17,11,104,11,18,12,112,9
440 DATA 18,16,129,1,19,12,104,9,20,13,104
450 DATA 3,20,17,104,3,21,13,104,3,21,17
460 DATA 104,3,22,13,112,3,22,17,112,3
470 DATA 23,11,128,5,23,17,128,5
480 DATA 0,0,0,0
490 REM
```



```
500 REM *** DECK THE HALLS ***
510 REM
520 CALL SOUND(360,523,1,440,1)
530 CALL SOUND(120,466,1,392,1)
540 CALL SOUND(240,440,1,349,1)
550 CALL SOUND(240,392,1,330,1)
560 CALL SOUND(240,349,1,294,1)
570 CALL SOUND(240,392,1,330,1)
580 CALL SOUND(240,440,1,349,1)
590 CALL SOUND(240,349,1,262,1)
600 CALL SOUND(120,392,1,330,1)
610 CALL SOUND(120,440,1,349,1)
620 CALL SOUND(120,466,1,392,1)
630 CALL SOUND(120,392,1,330,1)
640 CALL SOUND(360,440,1,349,1)
650 CALL SOUND(120,392,1,294,1)
660 CALL SOUND(240,349,1,262,1)
670 CALL SOUND(240,330,1,262,1)
680 CALL SOUND(480,349,1,262,1)
690 CALL SOUND(360,523,1,440,1)
700 CALL SOUND(120,466,1,392,1)
710 CALL SOUND(240,440,1,349,1)
720 CALL SOUND(240,392,1,330,1)
730 CALL SOUND(240,349,1,294,1)
740 CALL SOUND(240,392,1,330,1)
750 CALL SOUND(240,440,1,349,1)
760 CALL SOUND(240,349,1,262,1)
770 CALL SOUND(120,392,1,330,1)
780 CALL SOUND(120,440,1,349,1)
790 CALL SOUND(120,466,1,392,1)
800 CALL SOUND(120,392,1,330,1)
810 CALL SOUND(360,440,1,349,1)
820 CALL SOUND(120,392,1,349,1)
830 CALL SOUND(240,349,1,262,1)
840 CALL SOUND(240,330,1,262,1)
850 CALL SOUND(480,349,1,262,1)
860 CALL SOUND(360,392,1,330,1)
870 CALL SOUND(120,440,1,349,1)
880 CALL SOUND(240,466,1,392,1)
890 CALL SOUND(240,392,1,330,1)
900 CALL SOUND(360,440,1,349,1)
910 CALL SOUND(120,466,1,392,1)
920 CALL SOUND(240,523,1,440,1)
930 CALL SOUND(240,392,1)
940 CALL SOUND(120,440,1,349,1)
950 CALL SOUND(120,494,1,392,1)
960 CALL SOUND(240,523,1,392,1)
970 CALL SOUND(120,587,1,392,1)
980 CALL SOUND(120,659,1,392,1)
```



```
990 CALL SOUND(240,698,1,440,1)
1000 CALL SOUND(240,659,1,392,1)
1010 CALL SOUND(240,587,1,349,1)
1020 CALL SOUND(480,523,1,330,1)
1030 CALL SOUND(360,523,1,440,1)
1040 CALL SOUND(120,466,1,392,1)
1050 CALL SOUND(240,440,1,349,1)
1060 CALL SOUND(240,392,1,330,1)
1070 CALL SOUND(240,349,1,294,1)
1080 CALL SOUND(240,392,1,330,1)
1090 CALL SOUND(240,440,1,349,1)
1100 CALL SOUND(240,349,1,262,1)
1110 CALL SOUND(120,587,1,349,1)
1120 CALL SOUND(120,587,1,349,1)
1130 CALL SOUND(120,587,1,349,1)
1140 CALL SOUND(120,587,1,349,1)
1150 CALL SOUND(360,523,1,330,1)
1160 CALL SOUND(120,466,1,392,1)
1170 CALL SOUND(240,440,1,349,1)
1180 CALL SOUND(240,392,1,330,1)
1190 CALL SOUND(980,349,1,262,1)
1200 FOR DELAY=1 TO 900
1210 NEXT DELAY
1220 GOTO 520
```


JINGLE BELLS

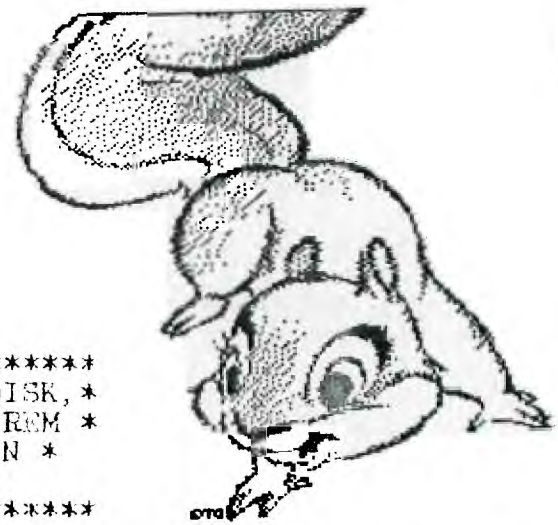
Singing Computer-from Holland via Tony McGovern
Taken from the Hunter Valley 99'ers News-Australia
Newsletter No. 6

The following program requires that you run it in TI BASIC with the Terminal Emulator II plugged in. The computer will sing 'Jingle Bells' and even with a slight Dutch-American accent! The program reads the data statements and uses the Alphon function of the TEII to sing. This program takes a while to start running, for it has to read all of the data statements. If you want to speed it up, remove the REM's in lines 1130 to 1170. Doing this will save the data to disk as JINGLEDAT. When you have done this you will only have to run the second program following this one and it will load the data and sing. If you do not want to type in all those DATA statements, we have the program in our library.

```
10 REM **********************
20 REM *      JINGLE BELLS    *
30 REM *         for          *
40 REM * Terminal Emulator II *
50 REM *         and          *
```

```
150 REM *Speech Synthesizer*
160 REM *   Robert Kat     *
170 REM *      (1985)      *
180 REM **********************
190 DATA 252,34,93,38,81,70,126,86,34,74,120
200 DATA 127,93,38,81,70,126,86,34,74,120
210 DATA 127,93,38,81,252,29,70,252,39,126,31,73
220 DATA 252,36,126,124,20,252,34,83,58,127,127
230 DATA 252,32,126,127,43,117,84,27,112,115,69,78
240 DATA 127,38,112,38,120,252,34
250 DATA 112,68,82,49,88,127,48,78,252,35,36
260 DATA 252,36,84,27,78,117,42,82,100
270 DATA 24,252,34,109,20,78,252,36,120,73,58
280 DATA 127,252,29,117,58,127,127
290 DATA 252,34,93,38,81,70,126,86,34,74,120,127
300 DATA 93,38,81,70,126,86,34,74,120
310 DATA 127,93,38,81,252,29,70,252,39,126,31,73
320 DATA 252,36,126,124,20,252,34,83,58,127,127
330 DATA 252,32,127,43,117,84,27,112,115,69,78
340 DATA 127,38,112,38,120,252,34,112,46,82,49,88
350 DATA 127,4,78,20,127,252,29,84,27,78,126
360 DATA 117,31,82,120,126,252,32,43
370 DATA 252,36,109,20,20,78,126,252,39,120,73,58,127
380 DATA 127,252,46,82,49,252,34,88,38,81
390 DATA 252,36,124,82,68,252,39,124,20
400 DATA 252,46,120,78,67,127,127
410 DATA 48,78,20,84,3,78,252,34,118,42,120,126
420 DATA 252,36,43,252,39,109,20,78,126
430 DATA 252,43,120,73,58,127,127,127
440 DATA 43,82,126,252,32,95,20,126
450 DATA 252,34,115,54,112,120,126,252,36,83,25
460 DATA 126,2 52,40,91,67
470 DATA 127,127,127,252,29,73,26,26,26,116,38,81
480 DATA 252,32,31,73,126,124,20,126
490 DATA 252,34,83,58,127,127,127
500 DATA 252,46,86,34,75,120,252,34,31,78
510 DATA 252,36,86,31,86,252,39,112,58,73,120
520 DATA 252,46,82,38,81,127,127
530 DATA 76,58,252,34,106,38,81,126
540 DATA 252,36,120,109,38,252,39,82,38,112,120
550 DATA 252,43,86,82,49,112,127,127,43,126
560 DATA 252,32,84,3,112,126,252,34,115,69,78
570 DATA 126,252,36,38,112,126,252,29,38,120
580 DATA 126,112,14,126,120,38,81,126,20
590 DATA 126,252,26,120,73,58,126,252,29,85,38,81
600 DATA 252,32,120,31,81,126,252,36,112,44
610 DATA 126,252,39,78,49,112,127,127
620 DATA 252,29,85,34,34,34,34,34,34,34,34,34,34,34
630 DATA 252,34,93,38,81,70,126,86,34,74,120
```

```
640 DATA 127,93,38,81,70,126,86,34,74,120
650 DATA 127,93,38,81,252,29,70,252,39,126,31,73
660 DATA 252,36,126,124,20,252,34,83,58,127,127
670 DATA 252,32,126,127,43,117,84,27,112,115,69,78
680 DATA 127,38,112,38,120,252,34
690 DATA 112,68,82,49,88,127,48,78
700 DATA 252,35,36,252,36,84,27,78,117,42,82,100
710 DATA 24,252,34,109,20,78,252,36,120,73,58
720 DATA 127,252,29,117,58,127,127,252,34,93,38,81,70
730 DATA 126,86,34,74,120,127,93,38,81,70
740 DATA 126,86,34,74,120,127,93,38,81,252,29,70
750 DATA 252,39,126,31,73,252,36,126,124,20
760 DATA 252,34,83,58,127,127,252,32
770 DATA 127,43,117,84,27,112,115,69,78
780 DATA 127,38,112,38,120,252,34,112,46,82,49,88
790 DATA 127,4,78,1,127,252,29,84,27,27,27,27,78,126
800 DATA 117,31,31,31,82,120,127,252,32,43
810 DATA 252,36,109,20,20,20,20,78,126,127
820 DATA 252,39,120,73,58,127,127,118,58,127
830 DATA 127,118,58,127,58,126,58
840 DIM A$(255)
850 CALL CLEAR
860 PRINT "    PATIENCE PLEASE..":::
870 PRINT " Scraping my throat....":::::::
880 FOR I=1 TO 219
890 READ A
900 A$(I)=CHR$(A)
910 C$(1)=C$(1)&A$(I)
920 NEXT I
930 RESTORE 400
940 FOR I=1 TO 219
950 READ A
960 A$(I)=CHR$(A)
970 C$(2)=C$(2)&A$(I)
980 NEXT I
990 RESTORE 630
1000 FOR I=1 TO 219
1010 READ A
1020 A$(I)=CHR$(A)
1030 C$(3)=C$(3)&A$(I)
1040 NEXT I
1050 REM ************************
1060 REM * TO SAVE DATA TO DISK,*
1070 REM * REMOVE FOLLOWING REM *
1080 REM * STATEMENTS AND RUN *
1090 REM * THE PROGRAM.  *
1110 REM ************************
1120 REM
1130 REM OPEN #2:"DSK1.JINGLEDAT",OUTPUT,INTERNAL,FIXED 220
```



```
1140 REM FOR I=1 TO 3
1150 REM PRINT #2:C$(I)
1160 REM NEXT I
1170 REM CLOSE #2
1180 CALL CLEAR
1190 PRINT " JINGLE BELLS":::::::::::::
1200 OPEN #1:"ALPHON",INTERNAL
1210 PRINT #1:C$(1)
1220 PRINT #1:C$(2)
1230 PRINT #1:C$(3)
1240 CLOSE #1
1250 CALL CLEAR
1260 PRINT "One more time? Press ENTER"
1270 CALL KEY(0,K,S)
1280 IF S=0 THEN 1280
1290 GOTO 1200
```

The following program loads the data that was saved from the program above and sings. Notice that there are only three strings required for the whole song! C$(1), C$(2), and C$(3) contain all of the data required!

```
100 REM ****************
110 REM * JINGLE BELLS *
120 REM *  LOAD DATA *
130 REM ****************
140 REM
150 CALL CLEAR
160 PRINT " JINGLE BELLS":::::::::::::
170 OPEN #1:"DSK2.JINGLEDAT",INPUT ,INTERNAL,FIXED 220
180 FOR I=1 TO 3
190 INPUT #1:C$(I)
200 NEXT I
210 CLOSE #1
220 OPEN #2:"ALPHON",INTERNAL
230 FOR I=1 TO 3
240 PRINT #2:C$(I)
250 NEXT I
260 CLOSE #2
270 PRINT "AGAIN? PRESS ANY KEY"
280 CALL KEY(0,K,S)
290 IF S=0 THEN 280 ELSE 150
```

Pausing the Computer-a solution

By Tom Wynne

Remember back in the September 1986 TIPS 99 newsletter when I put a program that attempted to pause your modules? Well, unfortunately it did not work all of the time. After

that was published, I recieved a letter from the Calgary 99ers. Here is what they sent:

INSTALLATION OF RESET AND HOLD SWITCHES

One item missing from the 99/4A that seems to be found on most other computers is a simple reset switch. At the present time, if hardware or software problems cause the console to lock up, it is necessary to power down the console to return to the main screen. Instead of adding a switch, TI used function "quit" to return to the master screen, but this did not work after a lock up. A solution to this problem is to wire a STSP momentary normally open switch (Radio-Shack 275-47 or equivilent) to pin 6 of the 9900 chip and any board ground on the main processor board. Mount the switch at any convenient location (I have mine on the upper back of the console directly behind the GROM port (there's room there for 3 or 4 items).

The hold switch I installed is a useful extra. What it does is put the computer on "HOLD", that is it stops whatever is happening on the computer until it is released. It does not kill the program, it just pauses it until you are ready to continue. One use I found is to (besides stopping a game to answer the phone) is to change printer functions midway through a printout (I can change fonts, etc. at the printer). All that needs to be done to add this super pause switch is to connect a SPST switch (Radio Shack 275-624 or equivilent) across the pins 1 and 64 of the 9900 processor chip (see below). I mounted this switch beside the reset switch previously described.

Both of these modificaitions require removing the main board from the computer so if you decide to do one, you might as well do them both at the same time. To connect the wires to the processor, I just soldered each connection right to the leg of the chip on the top of the board. The whole project shouldn't take any more than a hour to complete.