New Hampshire 99'ers Sept '86

New Hampshire 99'ers

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NH99ER USER GROUP

ODDS and ENDS

For those of you who don't read the newsletters from the other user groups, one interesting article you missed was by Gerry McCarthy in the June,86 issue of ONLINE. The article tells how to convert the line-by-line assembler (and the LINES program) from cassette to disk. Anyone who has the Mini-Memory and disk drives knows how much of a pain it is to drag out the cassette recorder and fight with it to get the program to load.

The short assembly language programs that handle the conversion work fine and allow you to load the program from disk with the Mini-Memory. Gerry also points out an error that was in the version of the line-by-line assembler that I had and could cause some grief.

I have received two programs for the library that many of you may find interesting. The first is a FAIRWARE disk from Harry Brashear of the Western New York 99'ers called "THE USABLE DISK CATALOGUER" that comes with documentation on disk and autoloads from X-BASIC. I haven't had a chance to fully check the package out but it is, according to the author, a data base that will help you keep track of your disk library. Some info is taken from the disk you are cataloging but other info you enter (such as catagory, keyword, how accessed, comments, etc.). There is a sort routine and you can get a printout for a permanent record.

The second FAIRWARE package is "DISK UTILITIES" by John Birdwell of Lombard, IL. This assembly language package allows you to compare two disks, sector-by-sector, printing out the sectors that differ; edit sectors; search an entire disk for a string, either HEX or ASCII; add comments that are imbeded in the directory sector for that file; get either a disk or file report; plus much more. I might add that the disk report gives starting and ending sector information of all files. If a file is fractured you can tell where all the pieces are from the report. The comments that print with the disk report could tell you how to load a program, when you updated the file, etc., whatever you wish to put in. I've already sent in my donation on this program!

I heard from Curtis that all the comments he received on his programs in the last newsletter were positive so I'm sure we'll see more of them in the upcoming issues. All the same I'll try to start sending in some routines in BASIC and X-BASIC. If I get positive responses, I'll continue. This months offering is in response to an article in TOPICS (from the L.A. user group), which I

By next month the library should have another FAIRWARE music disk by Bill Knecht who already has two disks of songs in our library. Any of you who have heard the previous disks will surely want this disk.

Also check out the rewiew of JOY PAINT 99 in MICROpendium!

*End of file Version 1.0

RIGHT TO ASSEMBLY

Curtis Alan Provance
New Hampshire User's Group

If you must save a branch and link address in your subroutines, try this: Instead of moving R11 into a data word and moving it back when you're ready, use LOAD IMMEDIATE. For example, this is typically how a save is done:

```
SAVRTN DATA 0
SUB    MOV  R11,@SAVRTN
       .
       .
       .
       MOV  @SAVRTN,R11
       RT
```

Instead, you can eliminate the need for an extra word (DATA) with LOAD IMMEDIATE:

```
SUB    MOV  R11,@SAVRTN
       .
       .
       .
SAVRTN EQU  $+2
       LI   R11,0
       RT
```

Every time this routine is accessed, the value in the LI R11 line will be replaced with the return address. Depending on the number of routines you write, this could save several bytes.

CLOSE ENOUGH part II

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Chick De Marti wrote an article entitled 'CLOSE ENOUGH' that was published in the July,'86 TOPICS. The routine in his article showed how you could check to see if some test number was within a certain percentage of a reference number. This is his routine.

```
100 CALL CLEAR
110 INPUT "A NUMBER ":TEST
120 PRINT : :
130 FOR I=20 TO 1 STEP -4
140 X=I/100 :: N=TEST-X
150 PRINT N
160 IF (N<TEST-.10) THEN GOS
UB 250 ELSE GOSUB 270
170 NEXT I
180 PRINT
190 FOR I=1 TO 20 STEP 4
200 X=I/100 :: N=TEST+X
210 PRINT N
220 IF N>TEST+.10 THEN GO
SUB 250 ELSE GOSUB 270
230 NEXT I
240 END
250 PRINT "SORRY"
260 RETURN
270 PRINT "CLOSE ENOUGH"
280 RETURN
```

I believe there is an easier way to implement this sort of check. Instead of using two separate checks to see if the number is greater than or less than some reference number, use the absolute value (ABS) of the difference and check to see if that is greater than some numeric value. All this can be done in one line (line 150 in my example) and has the general form: IF ABS(REFERENCE-TEST)>DIFFERENCE THAN GLOB1 ELSE GLOB2. GLOB1 and GLOB2 can be any legal command such as GOTO 250, GOSUB 899, PRINT "HELLO", etc., that makes sense in your progras. GLOB2 may be optional depending on your needs.

In the original routine the check is to see if the TEST number is a certain numeric value of the reference. This is not true percent. For example, 100 plus/minus .1 and 1 plus/minus .1 don't have the same percentage difference. To get true percentage difference which the original routine didn't do, you need to define DIFFERENCE as: PERCENT*REFERENCE/100. 100 plus/minus (10*100/100) and 1 plus/minus (10*1/100) both check for a 10% difference.

Run and experiment with my routine to see what you can do with this idea.

```
100 ! ++++++++++++++++++++
110 ! + CLOSE ENOUGH DEMO +
120 ! ++++++++++++++++++++
130 CALL CHAR(126,"0010107C1
010007C"):: DISPLAY AT(7,4)E
RASE ALL:"ANSWER MUST BE 20%
 .1"
140 FOR I=1 TO 300 :: NEXT I
 :: X=RND*.4+19.8 :: DISPLAY
 AT(11,4)BEEP:USING "##.##":
 X
150 IF ABS(20-X)>.1 THEN DIS
PLAY AT(11,10):"DIFFERENCE >
.1" :: GOTO 140 ELSE DISPLAY
 AT(11,10):"CLOSE ENOUGH!" :
 : GOTO 140
```

IS ANYONE OUT THERE?

Three recent issues of the New Hampshire Classified Guide carried free ads for our user group. If you can think of some other ways to spread the word and help our user group grow, come on, let's hear about them. More members mean more articles and more ideas. If WE can divide the work load YOU will have a better newsletter. Don't complain that there isn't enough in the newsletter if you haven't contributed.

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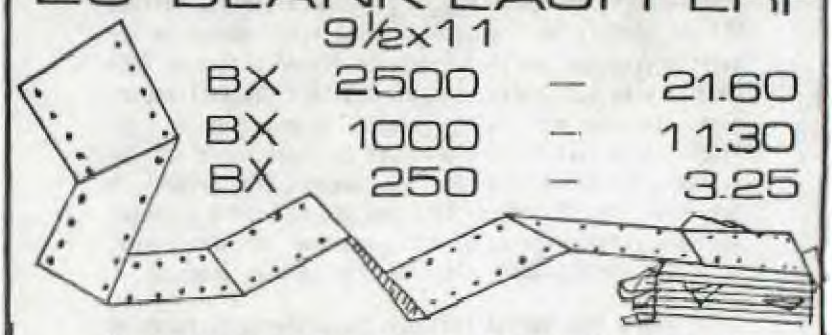
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#36

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```
*****************************
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*****************************
```

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For descriptions of these send a dollar for my catalog!

Some old business to take care of -

Tom Wible (? - handwritten signature), in the MANNERS NEWSLETTER for April, points out that I am all wrong in my comments about updating a FIXED SEQUENTIAL file. There is no such thing as a fixed sequential or fixed relative file, only fixed files accessed sequentially or randomly (relative). Sequential and relative are access modes, not file attributes. There is no reason to open a fixed file in anything other than RELATIVE mode, because if you do not specify the REC clause in your INPUT or PRINT, the computer defaults to sequential processing.

In one paragraph, that gentleman told me something about files I had'nt learned from the TI manuals and from the 2000+ newsletters on my shelf. File handling is apparently easy to understand for those who have had formal computer training, but it is a frustrating mystery to those of us who try to learn by hacking it. Won't somebody please write a series of articles, somewhere, in plain, non-computerese English?

And here is the last word on printing lines of more than 80 characters out of the TI-Writer Formatter, by W. Stewart Ash in a MANNERS newsletter of May-June 1986. It is only necessary to use the .FI command, and to set the right margin to the length you want, for example .FI;RM 120 for lines of 120 characters; and then use .TL or CTRL U commands to select a type font which will fit that many characters on a line (136 or 132 in condensed, depending on your printer; 96 in elite).

Here's a new way to make music, for you Basic-only users, music programmers and country music fans.

```
100 CALL CLEAR
110 PRINT "      WILDWOOD FLOWER": : :" on the hammered dulcimer": : : : : : : :"
        by Jim Peterson"
120 DIM S(26)
130 F=262
140 FOR N=1 TO 25
150 S(N)=INT(F*1.059463094^(N-1))
160 NEXT N
170 READ N
180 C=S(N)
190 D=S(N)
200 CALL SOUND(-350,S(N),0)
210 RESTORE 350
220 FOR J=1 TO 63
230 GOSUB 260
240 NEXT J
250 GOTO 200
260 READ N
270 CALL SOUND(-350,S(N),0)
280 X=1^100
290 CALL SOUND(-350,S(N),0,C,9)
300 X=1^100
310 CALL SOUND(-350,S(N),0,C,9,D,19)
320 D=C
330 C=S(N)
340 RETURN
350 DATA 5,6,8,8,10,13,5,5,6,5,3,3,5,3,1,1
360 DATA 5,6,8,8,10,13,5,5,6,5,3,3,5,3,1,1
370 DATA 8,13,17,17,17,15,13,13,8,8,10,10,13,10,8,8
380 DATA 1,1,1,3,5,5,8,5,3,3,5,3,1,1,1
```

Lines 120-160 set up a scale of two octaves, beginning with the frequency in line 130 - to change the key, just change that frequency. Lines 170-190 set up the initial values, line 200 prevents a pause while data is being restored. Then the routine reads the data and plays the music.

Note the dummy calculation in lines 280 and 300, which does nothing but create a brief pause while the value of X is computed. This is a good method for a delay because it can be adjusted so exactly by changing the exponent, but use a value of 1 to avoid a numeric overflow.

To write your own music by this method, just list the notes of a 2-octave scale from your starting frequency C C# D Eb E F F# G - etc. and number them 1 to 25.

Then, list the notes of your song by their number in the DATA statements. For a longer note, list it twice or more. Change the 10

value in line 22$ to your total number of notes, and RUN!

Here's one just to doodle around with. You can create a 3-dimensional maze, save it to tape or disk, or erase it and watch the computer draw it again.

```
1$$ CALL CLEAR :: CALL CHAR(
128,"FF$$$$$$$$$$$$$$FF8181818
181818181818$$$$$$$$$$$$FFFF8
$$$$$$$$$$$$81")
11$ CALL CHAR(132,"81$1$1$1$
1$1$1FFFF$1$1$1$1$1$1$181$$$
$$$$$$$$$$81")):: T=1 :: DIM K
$(15)
12$ DISPLAY AT(3,7):"GORDIAN
 KNOT": : :TAB(12);"by Jim P
eterson"
13$ DISPLAY AT(9,1):" Use ar
row keys to create a":"3-dim
ensional maze."
14$ DISPLAY AT(12,1):" You m
ay at any time press":"Q to
clear the screen, or P";"to
save a manually created":"sc
reen."
15$ T=1 :: DISPLAY AT(17,1):
"Choose - ";" (1) Manual":"
(2) Automatic":" (3) Retrace
":" (4) Load"
16$ ACCEPT AT(17,11)VALIDATE
("1234")SIZE(1)BEEP:Q :: ON
Q GOTO 17$,22$,29$,4$$
17$ GOSUB 44$
18$ CALL KEY(3,K,ST):: IF ST
=$ THEN 18$ ELSE D=POS("EDXS
QP",CHR$(K),1)+1 :: ON D GOT
O 18$,2$$,2$$,2$$,2$$,19$,36
$
19$ CALL CLEAR :: GOTO 15$
2$$ D=D-1 :: IF ABS(D-D2)=2
THEN 18$ :: GOSUB 51$ :: IF
D<>D2 THEN GOSUB 45$
21$ GOSUB 49$ :: GOSUB 52$ :
: GOTO 18$
22$ GOSUB 44$ :: RANDOMIZE
23$ D=D+1+(D=4)*4 :: CALL KE
Y($,K,ST):: IF ST=$ THEN 25$
24$ IF K=8$ THEN 36$ ELSE IF
 K=81 THEN CALL CLEAR :: GOT
O 15$
25$ T=INT(4*RND+2)*2-INT(2*R
ND)
26$ FOR J=1 TO T :: IF D<>D2
 THEN GOSUB 45$
27$ GOSUB 49$ :: CH=128-(D=1
)-(D=3):: CALL GCHAR(R,C,6):
: IF G<>32 THEN IF INT(2*RND
+1)<>1 THEN CH=G
28$ GOSUB 53$ :: NEXT J :: G
OTO 23$
29$ IF LEN(K$(1))=$ THEN DIS
PLAY AT(24,1):"CAN'T DO THAT
" :: GOTO 16$
3$$ CALL CLEAR :: GOSUB 44$
:: FOR J=1 TO T :: FOR JJ=1
TO LEN(K$(T)):: D=POS("EDXS"
,SEG$(K$(T),JJ,1),1)
31$ IF D=$ THEN 35$ :: IF D<
>D2 THEN GOSUB 45$
32$ GOSUB 49$ :: CH=128-(D=1
)-(D=3):: CALL GCHAR(R,C,6):
: IF G=32 THEN GOSUB 53$ ::
GOTO 35$
33$ K=ASC(SEG$(K$(T),JJ+1,1)
):: IF K<>67 AND K<>79 AND K
<>85 THEN JJ=JJ+1 :: GOTO 33
$
34$ GOSUB 48$ :: GOSUB 53$
35$ NEXT JJ :: NEXT J :: GOT
O 16$
36$ IF LEN(K$(1))>$ THEN 37$
 :: DISPLAY AT(12,1)ERASE AL
L:"CAN'T DO THAT!" :: GOTO 1
5$
37$ DISPLAY AT(12,1)ERASE AL
L:"Save to - ":" (1)Cassette
":" (2)Disk" :: ACCEPT AT(12
,11)VALIDATE("12")SIZE(1):S
:: IF S=1 THEN OPEN #1:"CS1"
,INTERNAL,OUTPUT,FIXED 192 :
: GOTO 39$
38$ DISPLAY AT(16,1):"Filena
me DSK" :: ACCEPT AT(16,13):
F$ :: OPEN #1:"DSK"&F$,INTER
NAL,FIXED 192,OUTPUT
39$ PRINT #1:T :: FOR J=1 TO
 T :: PRINT #1:K$(J):: K$(J)
="" :: NEXT J :: CLOSE #1 ::
 GOTO 15$
4$$ DISPLAY AT(12,1)ERASE AL
L:"Load from -":" (1)Cassett
e":" (2)Disk" :: ACCEPT AT(1
2,13)VALIDATE("12")SIZE(1)BE
EP:L :: IF L=1 THEN OPEN #1:
"CS1",INTERNAL,FIXED 192,INP
UT :: GOTO 42$
41$ DISPLAY AT(16,1):"Filena
me? DSK" :: ACCEPT AT(16,14)
BEEP:F$ :: OPEN #1:"DSK"&F$,
INTERNAL,FIXED 192,INPUT
42$ INPUT #1:T :: FOR J=1 TO
 T :: INPUT #1:K$(J):: NEXT
J :: CLOSE #1 :: GOTO 3$$
43$ CLOSE #1 :: GOTO 3$$
44$ CALL CLEAR :: CALL COLOR
(13,5,11):: R,R2=12 :: C,C2=
14 :: D2=3 :: CH=129 :: CALL
 HCHAR(R2,C2,CH):: RETURN
45$ CH2=128+((D2=1)*(D=2)*3)
+((D2=1)*(D=4)*5)+((D2=3)*(D
=2)*2)+((D2=3)*(D=4)*4)+((D2
=2)*(D=1)*4)+((D2=2)*(D=3)*5
)
46$ CH2=CH2+((D2=4)*(D=1)*2)
+((D2=4)*(D=3)*3):: CALL HCH
AR(R2,C2,CH2):: RETURN
47$ CALL KEY(3,K,ST):: IF ST
=$ THEN 47$ ELSE IF POS("COU
",CHR$(K),1)=$ THEN 47$
48$ GOSUB 51$ :: IF K=67 THE
N CH=134 :: RETURN ELSE IF K
=85 THEN CH=6 :: RETURN ELSE
 RETURN
49$ R=R+(D=1)-(D=3):: IF R<3
 OR R>24 THEN R=R2
5$$ C=C+(D=4)-(D=2):: IF C<3
 OR C>3$ THEN C=C2 :: RETURN
 ELSE RETURN
51$ IF G<>1 THEN RETURN ELSE
 K$(T)=K$(T)&CHR$(K):: IF LE
N(K$(T))<193 THEN RETURN ELS
E T=T+1 :: RETURN
52$ CH=128-(D=1)-(D=3):: CAL
L GCHAR(R,C,6):: IF G<>32 TH
EN GOSUB 47$
53$ CALL HCHAR(R,C,CH):: R2=
R :: C2=C :: D2=D :: RETURN
```

I think that educational programs should teach, not just test. This one makes up the kind of problems we all hated in school, but if you get the answer wrong it will show you how to work it.

```
1$$ CALL CLEAR :: RANDOMIZE
11$ DATA LUMBERJACK,CUT,CORD
S OF WOOD,BOY,PICK,QUARTS OF
 BERRIES,ELEPHANT,EAT,BALES
OF HAY,COW,GIVE,GALLONS OF M
ILK
12$ FOR J=1 TO 4 :: FOR L=1
TO 3 :: READ M$(J,L):: NEXT
L :: NEXT J
13$ A=INT(5*RND+2):: IF A=A2
 THEN 13$ ELSE A2=A
14$ B=INT(9*RND+2):: IF B=B2
 THEN 14$ ELSE B2=B
15$ C=INT(9*RND+2):: IF C=C2
 THEN 15$ ELSE C2=C
155 X=B/C/A :: IF LEN(STR$(X
))>4 THEN 13$
16$ D=INT(4*RND+1):: IF D=D2
 THEN 16$ ELSE D2=D
17$ DISPLAY AT(3,1)ERASE ALL
:"IF";A;M$(D,1);"S CAN ";M$(
D,2);B;M$(D,3);" IN";C;"DAYS
,"
18$ DISPLAY AT(6,1):"HOW MAN
Y ";M$(D,3);" CAN 1 ";M$(D,1
);" ";M$(D,2);" IN 1 DAY?"
19$ ACCEPT AT(9,1)VALIDATE(N
UMERIC)BEEP:Q
2$$ IF Q<>X THEN 3$$ :: DISP
LAY AT(11,1):"CORRECT!"
21$ DISPLAY AT(23,1):"PRESS
ANY KEY" :: CALL KEY($,K,ST)
:: IF ST=$ THEN 21$ ELSE 13$
3$$ DISPLAY AT(11,1):"NO -";
"IF";A;M$(D,1);"S CAN ";M$(D
,2);B;M$(D,3);" IN";C;"DAYS,
"
31$ DISPLAY AT(15,1):"THEN";
A;M$(D,1);"S CAN ";M$(D,2);B
;"/";C;M$(D,3);" IN 1 DAY";B
;"/";C;"=";B/C
32$ DISPLAY AT(19,1):"SO 1 "
;M$(D,1);" CAN ";M$(D,2);B/C
;"/";A;M$(D,3);" IN 1 DAY";B
/C;"/";A;"=";X :: GOTO 21$
```

Here's a new way to put a title on the screen -

```
1$$ !SCATTERPRINT by Jim Pet
erson
11$ CALL CLEAR :: M$="TIGERC
UB SOFTWARE" :: L=LEN(M$)::
IF L>28 THEN 11$ :: C$=SEG$(
"ABCDEFGHIJKLMNOPQRSTUVWXYZ[
\",1,L)
12$ FOR J=1 TO L :: RANDOMIZ
E :: X=INT(LEN(C$)*RND+1)::
Y=ASC(SEG$(C$,X,1))-64
13$ DISPLAY AT(2,13-L/2+Y):S
EG$(M$,Y,1);:: C$=SEG$(C$,1,
X-1)&SEG$(C$,X+1,255):: NEXT
 J
14$ GOTO 14$
```

This one is very basic, but if you have Terminal Emulator II, Speech Synthesizer, and a preschool child, it's a fine way to learn the alphabet, the keyboard, to spell his name, or just to have fun with - try a string of KK's for a train chugging uphill.

```
1$$ OPEN #1:"SPEECH",OUTPUT
11$ CALL KEY(3,K,S)
12$ INPUT M$
13$ PRINT #1:M$
14$ GOTO 12$
```

Memory full - Jim P.

TIPS FROM THE TIGERCUB

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```
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*                            *
******************************
```

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For descriptions of these send a dollar for my catalog!

I'm going to mail out the July and August Tips at the end of June, and go fishing. Imagine, a TI publication AHEAD of schedule! However, in the unlikely event that anyone should send me an order, it will receive my usual one-day service.

Here's another tune for the dulcimer player in the last Tips. Change the TD value to 94 -

```
35# DATA 9,11,13,13,13,13,13
,16,16,13,13,11,11,11,11,11,
11
36# DATA 16,18,14,21,18,18,1
6,13,9,11,9,9,9,9,9
37# DATA 21,2#,18,18,16,13,1
6,16,9,11,13,11,13,14,13,13
38# DATA 21,2#,18,18,16,13,1
6,16,9,13,11,9,8,6,4,4
39# DATA 9,11,13,13,13,13,13
,16,16,13,13,11,11,11,11,11
49# DATA 16,18,14,21,18,18,1
6,13,9,11,9,9,9,9,9
```

Here's one for those who like graphics, and those who make a living designing floor tiles. It borrows a bit from a Renko & Edwards program -

```
1## CALL CLEAR :: F=2 :: BC=
16 :: RANDOMIZE :: DISPLAY A
T(2,1#):"ESCHER ART": :TAB(1
4);"by": :TAB(9);"Jim Peters
on"
11# DISPLAY AT(12,3):"Press
Q for new pattern":"
R to change colors":"
 C for new colors": :"
  Any key to start"
12# CALL KEY(#,K,S):: IF S=#
 THEN 12# ELSE CALL CLEAR
13# DATA ########################FF#
################################1#1#1#1#1#1#1#
1################FF
14# DATA 2#2#2#2#2#2#2#2#####
#FF##############4#4#4#4#4#4#4#
4#############FF####
15# DATA 1#1#1#1#1#1#1#1#####
###FF##########8#8#8#8#8#8#8#8
########FF######
16# DATA C#C#C#C#C#C#C#C#FFF
F###############3#3#3#3#3#3#3#
3##############FFFF
17# DATA F#F#F#F#F#F#F#FFF
FFFFF##########F#F#F#F#F#F#F#
F#########FFFFFFFF
18# DATA B#4#2#1#8#4#2#1#1#
2#4#B1#2#4#8#8#4#2#1#8#4#2#
1#1#2#4#81#2#4#8#
19# DATA 1#1#2#C##########8#8
#4#3##############################3#4#8#8
#########C#2#1#1#
2## DATA FFFEFCF8F#E#C#8#FF7
F3F1F#F#7#3#1#1#3#7#F1F3F7FF
FB#C#E#F#F8FCFEFF
21# DATA F#F#F#F##########F#
F#F#F#################F#F#F#
F########F#F#F#F#
22# DATA B#C#A#9#888482FFFF8
2848898A#C#8#FF4121111#9#5#3#
1#1#3#5#9112141FF
23# DATA 8142241818244281814
2241818244281814224181824428
18142241818244281
24# DATA #8#8#8#8FF#8#8#81#1
#1#1#FF1#1#1#1#1#1#FF1#1#1#1
#########FF#8#8#8#8
25# DATA AA55AA55AA55AA5555A
A55AA55AA55AAAA55AA55AA55AA5
555AA55AA55AA55AA
26# DATA F#F#F#F#F#F#F#F#F#
F#F#FF#F#F#F#F#F#F#F#F#F#F#F
F#F#F#F#FF#F#F#F#
27# CALL CHAR(B4,RPT$("#",64
)):: FOR CH=88 TO 14# STEP 4
 :: READ CH$ :: CALL CHAR(CH
,CH$):: NEXT CH :: CALL SCRE
EN(5)
28# A=INT(6*RND+3):: H=INT(2
4/A):: HC=INT(28/A):: W=ABS(
HC/2=INT(HC/2)):: DIM M(B,8)
:: FOR P=1 TO A
29# D(P)=INT(15*RND+21)*4
3## NEXT P :: GOSUB 37#
31# CALL KEY(3,K,ST):: IF K<
>81 THEN 33#
32# CALL SOUND(5#,5##,5):: F
OR J=1 TO 4 :: FOR JJ=1 TO A
 :: M$(J,JJ)="" :: NEXT JJ :
: NEXT J :: GOTO 28#
33# IF K<>67 THEN 36# :: F=I
NT(15*RND+2)
34# BC=INT(15*RND+2):: IF BC
=F THEN 34#
35# FOR S=7 TO 14 :: CALL CO
LOR(S,F,BC):: NEXT S :: GOTO
 31#
36# IF K<>ASC("R")THEN 31# :
: T=F :: F=BC :: BC=T :: GOT
O 35#
37# ON A-2 GOSUB 38#,39#,4##
,41#,42#,43# :: GOTO 52#
38# RESTORE 44# :: RETURN
39# RESTORE 45# :: RETURN
4## RESTORE 46# :: RETURN
41# RESTORE 47# :: RETURN
42# RESTORE 48# :: RETURN
43# RESTORE 5## :: RETURN
44# DATA 1,2,1,2,3,2,3,1,3
45# DATA 1,2,2,1,2,3,3,2,3,4
,4,3,4,1,1,4
46# DATA 1,2,3,1,2,2,3,4,3,2
,3,4,5,4,3,4,5,1,5,4,5,1,2,1
,5
47# DATA 1,2,3,3,2,1,2,3,4,4
,3,2,3,4,5,5,4,3,4,5,6,6,5,4
,5,6,1,1,6,5,6,1,2,2,1,6
48# DATA 1,2,3,4,3,2,1,2,3,4
,5,4,3,2,3,4,5,6,5,4,3,4,5,6
,7,6,5,4
```

```
490 DATA 5,6,7,1,7,6,5,6,7,1
,2,1,7,6,7,1,2,3,2,1,7
500 DATA 1,2,3,4,4,3,2,1,2,3
,4,5,5,4,3,2,3,4,5,6,6,5,4,3
,4,5,6,7,7,6,5,4
510 DATA 5,6,7,8,8,7,6,5,6,7
,8,1,1,8,7,6,7,8,1,2,2,1,8,7
,8,1,2,3,3,2,1,8
520 FOR J=1 TO A :: FOR JJ=1
 TO A :: READ M(J,JJ):: NEXT
 JJ :: NEXT J
530 X=A+1 :: FOR J=1 TO A ::
 FOR JJ=1 TO A :: M$(1,J)=M$
(1,J)&CHR$(D(M(J,JJ)))
540 M$(2,J)=M$(2,J)&CHR$(D(M
(JJ,X-J))+1)
550 M$(3,J)=M$(3,J)&CHR$(D(M
(X-J,X-JJ))+2)
560 M$(4,J)=M$(4,J)&CHR$(D(M
(X-JJ,J))+3)
570 NEXT JJ :: NEXT J
580 CALL CLEAR :: FOR R=1 TO
 A*H STEP A :: FOR C=1 TO A*
HC STEP A
590 CALL KEY(0,K,ST):: IF K=
81 THEN 320
600 V=V+1+(V=4)*4 :: FOR T=1
 TO A :: DISPLAY AT(R-1+T,C)
:M$(V,T):: NEXT T :: NEXT C
:: V=V+W+(V=4)*4 :: NEXT R
610 RETURN
```

This routine will search a disk file for up to 10 keywords in one pass - more if you DIM K$( ) - and you may elect to find all records which contain the keyword or only those which contain it in combination with one of 1 or more secondary keywords.

```
100 CALL CLEAR
110 Y=0 :: DISPLAY AT(3,5):"
TIGERCUB KEYSEARCH" :: DISPL
AY AT(6,1):"Filename? DSK" :
: ACCEPT AT(6,14)BEEP:F$ ::
OPEN #1:"DSK"&F$,INPUT
120 DISPLAY AT(8,1):"Output
to":" (1)Screen":" (2)Printe
r":" (3)Both" :: ACCEPT AT(8
,11)VALIDATE("123")SIZE(1)BE
EP:Q
130 IF Q>1 THEN DISPLAY AT(1
3,1):"Printer name?" :: ACCE
PT AT(13,15):P$ :: OPEN #2:P
$
140 DISPLAY AT(15,1):"Search
 for":" (1)First match":" (2
)All matches" :: ACCEPT AT(1
5,13)VALIDATE("12")SIZE(1)BE
EP:S
150 DISPLAY AT(12,1)ERASE AL
L:"Press ENTER when all key-
":"words have been entered."
160 DISPLAY AT(17,1):"Press
ENTER if none -"
170 Y=Y+1 :: DISPLAY AT(15,1
):"Keyword? ";CHR$(127):: AC
CEPT AT(15,10)SIZE(-28)BEEP:
K$(Y):: IF K$(Y)=CHR$(127)TH
EN 190
180 W=W+1 :: DISPLAY AT(19,1
):"With? ";CHR$(127):: ACCEP
T AT(19,7)SIZE(-21)BEEP:W$(Y
,W):: IF W$(Y,W)=CHR$(127)TH
EN W=0 :: GOTO 170 ELSE GOTO
 180
190 Y=Y-1
200 LINPUT #1:M$
210 FOR J=1 TO Y :: IF POS(M
$,K$(J),1)=0 THEN 290
220 IF W$(J,1)=CHR$(127)THEN
 250
230 W=W+1 :: IF W$(J,W)=CHR$
(127)THEN W=0 :: GOTO 290
240 IF POS(M$,W$(J,W),1)=0 T
HEN 230
250 IF Q>1 THEN PRINT #2:M$
260 IF Q<>2 THEN PRINT M$
270 IF S=1 THEN 310
280 IF W$(J,W)<>CHR$(127)THE
N 230
290 NEXT J
300 IF EOF(1)<>1 THEN 200
310 CLOSE #1 :: DISPLAY AT(2
4,1):"FINISHED - PRESS ANY K
EY" :: CALL SOUND(200,500,5)
320 CALL KEY(0,K,ST):: IF ST
=0 THEN 320 ELSE CALL CLEAR
:: GOTO 110
```

You can set up a keyfile in TI-Writer - just remember that each 80-character line is a separate record, and keep the Alpha Lock down!

However, this is the program that I plan to use to set up a keyfile index of all the newsletters you have sent me, if I ever find the time -

```
100 DISPLAY AT(3,10)ERASE AL
L:"TIGERCUB": :"  KEYWORD I
NDEX WRITER" !by Jim Peterso
n
110 DISPLAY AT(8,1):"Filenam
e? DSK" :: ACCEPT AT(8,14):F
$ :: OPEN #1:"DSK"&F$,APPEND
 :: CALL KEY(3,K,S)
120 P$="******" :: Y=00 :: M$
="**" :: P=00
130 DISPLAY AT(12,1):"NEWSLE
TTER? ";P$ :: ACCEPT AT(13,1
)SIZE(-28):P$ :: IF SEG$(P$,
1,3)="END" THEN CLOSE #1 ::
STOP
140 DISPLAY AT(14,1):"YEAR?"
;Y :: ACCEPT AT(14,7)VALIDAT
E(DIGIT)SIZE(-4):Y
150 DISPLAY AT(14,13):"MONTH
? "&M$ :: ACCEPT AT(14,20)SI
ZE(-9):M$
160 DISPLAY AT(16,1):"PAGE?"
;P :: ACCEPT AT(16,7)VALIDAT
E(DIGIT)SIZE(-3):P
170 DISPLAY AT(18,1):"ARTICL
E? " :: ACCEPT AT(19,1):A$
180 DISPLAY AT(20,1):"AUTHOR
?" :: ACCEPT AT(21,1):AU$
190 DISPLAY AT(22,1):"KEYWOR
DS?" :: ACCEPT AT(23,1):K$
200 PRINT #1:P$&" "&STR$(Y)&
" "&M$&" "&STR$(P)&" "&A$&"
"&AU$&" "&K$
210 GOTO 130
```

Here's one to have fun with, from an ingenious German programmer. I just couldn't resist adding a tuba to his band.

```
100 !BY TORSTEN NIEMIETZ, MA
RBACHER WEG 3,D-2800 BREMEN
1,WEST GERMANY
110 FOR J=1 TO 10 :: READ T(
J)
120 NEXT J :: E=330 :: A=440
 :: H=494 :: C=554 :: K=659
:: F=740 :: G=831
130 DISPLAY AT(3,8)ERASE ALL
:"S - O - L - O": :TAB
(10);"MIT OOMPAH": :RPT$("="
,28): : :"BY":" TORSTEN NIEM
IETZ": :"mit Oompah by Tiger
cub"
140 DISPLAY AT(18,1):"MAKE U
P YOUR SOLO WITH":"KEYS 1 TO
 9 ... COME ON !!!"
150 FOR S=1 TO 2 :: CALL SOU
ND(200,E,3,H,3):: CALL SOUND
(200,E,3,H,3)
160 CALL SOUND(200,E,3,C,3):
: CALL SOUND(200,E,3,H,3):: 
NEXT S
170 M=E :: N=H :: O=C :: D=8
 :: GOSUB 210 :: M=A :: N=K
:: O=F :: D=4 :: GOSUB 210 :
: M=E :: N=H :: O=C :: GOSUB
 210 :: M=H :: N=F :: O=G ::
 D=2
180 GOSUB 210 :: M=A :: N=K
:: O=F :: GOSUB 210 :: M=E :
: N=H :: O=C :: GOSUB 210 ::
 M=H :: N=F :: O=G :: GOSUB
210
190 FOR X=10 TO 3 STEP -1 ::
 CALL SOUND(200,E,3,H,3,T(X)
,0)
200 NEXT X :: CALL SOUND(800
,E,3,H,3,K,0):: GOTO 150
210 FOR X=1 TO D :: FOR Y=1
TO 2 :: GOSUB 280
220 CALL SOUND(200,M,3,N,3,T
(R-48-(R=48))*.9375,30,-4,0)
230 NEXT Y :: GOSUB 280
240 CALL SOUND(200,M,3,O,3,T
(R-48-(R=48))*.9375,30,-4,0)
:: GOSUB 280
250 CALL SOUND(200,M,3,N,3,T
(R-48-(R=48))*.9375,30,-4,0)
260 NEXT X :: RETURN
270 DATA 587,659,784,880,988
,1175,1319,1568,1760,44733
280 CALL KEY(0,R,S):: IF S<>
0 AND R>48 AND R<58 THEN RET
URN ELSE R=57 :: RETURN
```

```
1 !ONE-LINER universal calen
dar for day of week of any d
ate since 1985 - by Dennis H
odgson in Sydney News Digest
2 !input day, month, year as
 for instance 30,4,1986
100 A=1 :: INPUT D,M,Y :: FO
R T=A TO M-A :: H=H+29+VAL(S
EG$("2821212121",T,A)):: NE
XT T :: J=H+(Y/4<>INT(Y/4)AN
D M>2)+INT((Y-A)*365.25)+D :
: PRINT SEG$("SASUMOTUWETHFR
",(J-INT(J/7)*7)*2+A,2):: RU
N
```

Yes, there are legitimate uses for GRAM copiers and track copiers and such - but there is no way to get these utilities into the hands of the few who will only use them honestly, without also getting them into the hands of the many who will use them as burglar tools. And so, a few more nails are driven into the coffin...

MEMORY FULL

Jim Peterson

RAMBLINGS

by Helene M. LaBonville
for the NEW HAMPSHIRE 99'ers USER GROUP

All of us try to get the most out of our computer dollar. For many of us that is how we started "the habit" in the first place... the $49 TI99/4A. I, myself, caught "the bug" on a TI99/4. That was over six years ago and the CPU plus Monitor cost over $1100! As with all electronic equipment, however, prices have dropped... Boy, what I could do with that $1100 today!!!

Now, we are being tantalized by super close-out prices on peripherals such as printers. Let the buyer beware! We have had many calls from owners of these inexpensive units who have either not been able to get them to interface, not been able to find replacement ribbons, or have not been able to find parts (such as tractor feed attachments), or they would like to dump graphics to their printer and find incompatibility.

Case in point: We have been working on a problem that a member (he wasn't a member back then... but is now) encountered after purchasing a CorComp 9900 expansion system and a SCM FASTEXT-80 printer in May of this year. Perhaps this problem would have never surfaced here, but as it happens, TRITON (the supplier) was out of cables when the printer was originally ordered. Our club was selling cables for standard Centronics interfaces, so, assuming that the FASTEXT was standard, he purchased one of our cables. It didn't work. At that point, he didn't know if the problem was with the cable, CC9900, or the FASTEXT. Well, to make a looong story short (somewhat... I do ramble!), the problem can be traced in this case to all three variables!

The CC9900 Expansion System comes with it's own power supply which plugs into a grounded wall outlet. The PS is connected to the 9900 via a 5 pin DIN plug, which looks as though it has been chewed by mice. This was done, I suspect, to enable it to hold "somewhat" securely within the 5 pin jack!?! I had trouble securing it... I must be awfully weak, though, as Curtis got it to hold!

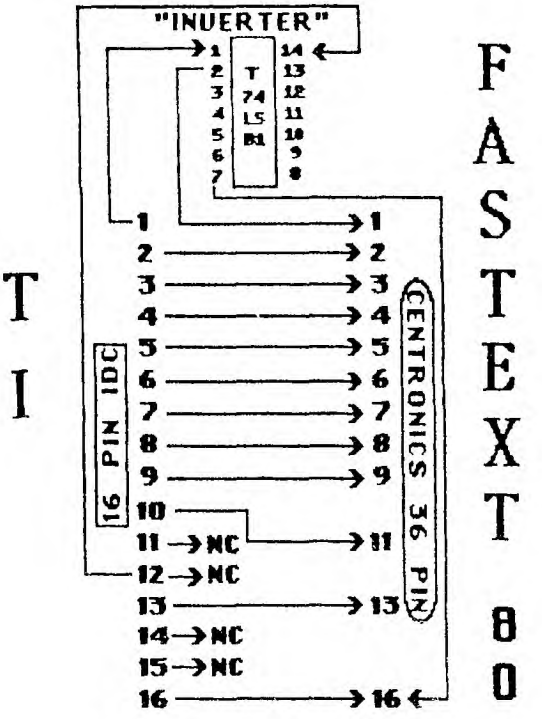
The pinouts for the FASTEXT are the same as those of my S615, but, upon closer inspection of the manual one finds that the STROBE signal of the FASTEXT is inverted. I will leave this subject open to the more technically inclined, but, what it means to us "users" is that the cable requires an "inverter". In this case a 74LS14 chip which is wired as per Diagram 1. A further potential "glitch" with this printer involves the ON LINE button which is not a lighted switch. It must be depressed for the printer to be ON LINE. It is apparently difficult for the neophyte to notice this problem.

The CABLE. As mentioned above, we realized that we needed an inverted signal. The GLP/MX/RX/GEMINI/S6/etc. cable wouldn't do. As it happens, our local K-MART had a SCM #17970 Computer Cable available. This cable, the FASTEXT-80, and a CENTRONICS 737 printer were all carted to the August meeting for testing. (We knew that the Centronics 737 & 739 series of printers also required the inverted signal). The printers were tested on the club's system which at the time had a TI RS232 card. The Centronics 737 performed flawlessly; the FASTEXT printed, but missed Carriage Returns. (There is only one Dip Switch to contend with, and it was tried in both positions). I brought the FASTEXT home with me to try on my COCO (with parallel interface) and it performed flawlessly. THE PRINTER DOES WORK!

Shortly thereafter, I received a call from friend Wayne Kay of the Delaware Valley UG who had also been experiencing problems with interfacing his FASTEXT-80. He had been in constant contact with Smith Corona concerning the problem and had them send me a service bulletin relative to the 17970 Cables:

SUBJECT: SMITH-CORONA COMPUTER CABLE (17970)
FOR TI 99/4A WITH PARALLEL INTERFACE

Due to a change in the TI 99/4A Parallel Interface, Smith-Corona Cable (17970) will not work with all TI 99/4A computers. One version of TI's Parallel Interface has the Data Strobe signal inverted, but the other version does not. SC Cable (17970) works with the inverted Data Strobe Interface. It also can be modified to work with the non-inverted Data Strobe interface.



PARALLEL CABLE PIN-OUTS FOR SCM FASTEXT 80

The Bulletin goes on to advise us on how to identify the interface and how to modify the cable. The TI Card, CorComp Card, and CorComp 9900 Expansion System that we checked, tested the same and required the "inverter".

During this time Wayne was testing out SCM cables purchased from a K-Mart in Delaware. All but one tested fine on his 9900 System. The one had a dirty contact and worked after cleaning. He hand delivered one to me (how's that for service!) for testing with "our" FASTEXT. Frustrated, the owner of the FASTEXT had also ordered another cable from TRITON. In order to fully test the FASTEXT and cables, I brought the CorComp 9900, FASTEXT, and cables to Curtis Provance's where we could also test them on a TI RS232 Card and CorComp RS232 Card:

The cable without the inverter did not work with either the TI Card, Cor Comp Card or 9900 System.

The SCM Cable from the Manchester K-Mart, did not work with the 9900 System, it did work on a TI Card but did not recognize CR'S, but did work on the Centronics 737.

Wayne's SCM Cable, which worked on his own 9900 System, did not work on ours, but did work with the TI and CorComp Cards.

The Cable purchased from TRITON did work on our 9900 System and the TI and CorComp Cards. (It was not tested in Delaware).

I have only presented you with half of the saga. The story does not end here, however, as I have been advised that the Fastext's owner has yet to get the printer to work at home!?! Wayne also promised a report from SCM. I have just received TRITON's newest fall catalog and it is interesting to note that they no longer carry the FASTEXT 80....

!!

SPECIAL NOTE TO GLENN H.: The parallel port on the club's RS232 Card does indeed work. We used it in the above testing.

!!

On another note, Wayne showed me some TI Dual Cassette Cables which were mislabelled. Remember, CS1 has three plugs while CS2 only has two. He also had an RS232 Y-Cable which was mislabelled.

!!

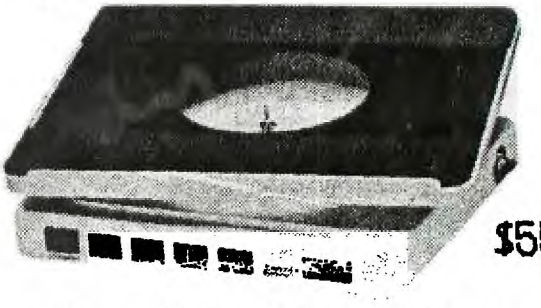
The fall edition of the TRITON (POB 8123 - San Francisco, CA 94128 [1-800-227-6900] catalog features TI EXTENDED BASIC (Cartridge #AEBA); TI WRITER (Cartridge & Disk #AEAG); MICROSOFT MULTIPLAN (Cartridge & Disks #AEAH); and the TI SPEECH SYNTHESIZER (ITEM #XXBJ) for $29.95 each (plus S/H). Please do not consider the printers which they are also "featuring"!

!!

HAC LABS LTD.

HELENE M. LaBONVILLE
121 Camelot Drive RFD5
Bedford, NH 03102
603/472-3369

I have been extremely busy of late... but not with HAC LABS... so my stock is fairly well depleted. I still have a couple of Mini-Memory batteries @ $4 ea. (these are the TI direct replacements); Printer Cables (PIO for EPSON/GLP/STAR) @ $15 ea; Atarisoft DONKEY KONG cartridges @ $3 ea.; and a FASTEXT 80 tractor attachment @ $10. My favorite item is pictured below.



$55

TILT & SWIVEL POWER CENTER

Set this under your monitor and you have not only the convenience of a tilt/swivel monitor base, but 5 individually switched outlets with EMI/RFI surge protection, a Master Switch and a UL 15 amp resettable Mini breaker. What's more the switches are illuminated! Size: 11 X 10 X 3/4". Carries a on year Pico Products warranty. Suggested retail is $79. Yours for only $55 postpaid!

!!

I received a wonderful note from Al Katsberg, regarding his progress in finding a Word Processor for a non-expanded TI:

I bought the Miniwriter III from Tenex Computer Express for $39.95 and a cable for $19.95. It cost $5.95 to have the items shipped to me. I ordered a Legend 808 printer for $159.00 but was told that it was no longer being carried because of poor service and other problems. Lechmere had a sale on Panasonic KX-P1080 printers just at the right time. I bought one for $219.98...

The Miniwriter III will show a 40 character picture and accepts an 80 character line scrolling off the left side. It allows adding or deleting characters except

that the line will not take more than 80 characters by moving to the next line. Whole lines can be moved or deleted. It does have word wrap and the screen can be scrolled up, down, left and right. It provides eight screen/text color combinations... It consists of a cartridge with a cable facing out the back to connect with the printer. It does not have all the functions and versatility of a full blown word processor but it does my letters very well and saves to tape. Cheap too.

The printer is very nice and much like the Epson that I used in Scotland. It has three modes of type, Draft, NLQ and Compressed. I think you will agree that the NLQ is very good (I do!). It has both tractor and friction feed and will print up to three sheets maximum. It prints 96 ASCII characters in Pica, Elite and Italic plus 32 International characters used in 11 countries.

Now my friends are getting letters that I refused to write before because my handwriting is terrible and my typing just a bit better. I love to write on my computer, that is just plain fun.

I attended the last Club meeting (August) but left at the break. I think that the members who attend are Hackers who love to improve their computer and enjoy games. There is nothing wrong with that, but it is not very interesting to a stick-in-the-mud like me. I just want to make use of the computer for whatever I find useful and now I have it.

Al's son has some Digital Equipment which he would like to sell. It consists of: 3 LA-36 Printers; 1 PDP 11-05 Computer; and 1 Dual Drive Tape Recorder. For more info call Mr. Kastberg @ 1-617-249-9482 (evenings).

!!

Due to the planned closing of the Northeast Trade Center in Woburn, the 9th Boston Micro Show & Sale is being held Sunday December 14th at the Sheraton Hotel Conference Center in Boxborough, MA (I-495, Exit 28 @ Route 111). Hours are from 10 AM to 4 PM. General admission is $7.

!!

We would like to thank George Olesen for renewing his ad with the NH99UG Newsletter. You couldn't deal with any finer people than the folks at OBIS, Co. They bend over backwards to accomodate your needs AND they have the best prices on computer paper in the state! If you can't make it down to "the store" they will deliver your order FREE (within 50 miles)!! OBIS Co. is located on the corner of Beech and Merrimack Streets in Manchester (in the same building as the NH Lung Association). Call them at 603/668-4245. Pass the word!

!!

More printer woes!... Yes, this time the problem was with my in-warranty S615. The print on the right margin became nearly intelligible despite new ribbons and cleaning the print head. Star Micronics has yet to respond to my queries concerning the problem but I believe that I have it solved, thanks to Norman at COMPUTER PLUS in Littleton, MA. Somehow the adjustment on the carriage stay loosened. To tighten, remove the cover, pull the gap adjustment lever all the way "open", then turn the black knob on the right of the carriage stay about a quarter clockwise. Re-assemble, and self-test the print. Adjust accordingly.

To clean the print head, I used a couple of thicknesses of industrial strength hand towels as "paper", removed the ribbon, and self-tested the printer until clean.

!!

Last, but surely not least, I would like to remind all of you of the super deals available from your own club.

NASHUA
5.25" DSDD DISKETTES
$7.75
per box of 10 /w WP tabs & Envelops

RIBBONS

GLP/MPS 803.....$3.00 ea
EPSON MX/RX/FX70,80
TI IMPACT.....$5.00 ea
OKIDATA / STAR MICRONICS
88-82-83 / SD/56/SR 10 & 15
92 & 93 / GEMINI 10 & 15 .....$2.50 ea
CENTRONICS 700 (ZIP PACK)
QUANTEL 5003 & 5004
TANDY LP I, II, IV .....$2.00 ea
EPSON LX80 & LX90
HOMEWRITER 10 .....$5.00 ea

LABELS & WP TABS.....$100 ea
PKG OF 24 LABELS/20 WPT

TI99/4A
SINGLE CASSETTE CABLE .....$3.00 ea

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Sure... you can purchase diskettes cheaper... by the hundred! The ones we sell are boxed, factory-fresh, DSDD, come with sleeves and labels, and are available at each meeting! The ribbons are equally value-priced. Remember, whatever proceeds are realized from the sale of these materials go back to the club so you benefit twice with each purchase.

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December 1

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