NEW HAMPSHIRE 99'ERS

APRIL 1985

NEWSLETTER

((((RANDOM RAMBLINGS))))

First off, we would like to thank Mrs. Phyllis Tracy and the Manchester Union Leader for including our response to an inquiry in her ASK US column. The timing was perfect... we were "swamped" with phone calls and as a result there was SRO at the meeting. The club is also indebted to Mike Veprauskas (I may pronounce it incorrectly, but, I can spell it!) who has donated a number of public domain programs to the library and who has also fixed a few bugs which appeared in some of our own. I can't thank Dave Hendricks of the Lehigh Valley 99'ers enough for getting me out of the "frying pan"!

New authors this month: Phil Chouinard of Hudson begins his first in a series of articles on telecommunicating. Phil is really "into" 99/4A computing and currently oversees the TI section of the Londonderry ACCESS-80 BBS; Conrad Baranowski of Westford (MA) has owned his system for a year and a half. He needed a word processor for his business and chose the 4A because of the price cuts and promotions. He was impressed with the educational "canned" software packages and subsequently purchased a second computer for his 3 year old daughter. He averages 10 hours per week word processing and his article this month deals with a review of Dragonslayer's AUTO SPELL-CHECK. By the way, Conrad owns an Hitachi monitor which was used in programmable controllers. It requires RGB input signals. He has been unsuccessful in finding either circuits or hardware to convert the composite video output from the TI to RGB. Any ideas? Write to Conrad Baranowski - 22 Country Road - Westford, MA 01886 (617/692-7500).

Anyone know of an easy-to-use but inexpensive cassette-based word processor for the console BASIC unit? Contact Richard Morin - 32 Crown Street - Nashua 03060 (603/883-8756).

The Postal Service and kidney stones just ruined my track record! First I was side-tracked by a kidney stone, then a number of the club's master disks were "lost" in the mails. The disks have since been recovered (as have I). I apologize for the delay in your shipments.

DATA SOFT of NH has loaned the club, for review and demonstration, a FLIGHT, BOMBER, and ATTACK simulator (see their ad in this issue). We had hoped to demonstrate it at the March meeting, but there wasn't enough hours logged on it to give it a proper review. We hope to have it ready for the April 24th meeting. Thanks to Ken Stevens for allowing us to test fly this product.

The FORTH DEMO disk has been revised. Those who HAVE purchased copies from the club library may exchange an initialized disk for the newest version.

The COMPUTER SHOPPER and GRAPHX orders have been placed. Expect 4 to 6 weeks for delivery.

((((BULLETIN BOARD))))

LARRYVISION - PO Box 37702 - Jax, FL 32236. This company is run by Larry Schott who wrote "Uncle Larry's Fiddle Tunes" for 99'er Home Computer Magazine. Their current thrust is "to include tutorials and programming aids with their games to help TI users learn more about their machines and programming as they have fun". Anyone who sends $1 will receive their latest catalog, which also includes a program, and a logical-character-list programming aid. The dollar is refundable with any order. (see LARRYVISION'S free sample program in this issue).

UNISOURCE ELECTRONICS, INC. - PO Box 64240 - Lubbock, TX 79464 (1-800/858-4580). NH99UG members as of 2/85 should have received their copies of the spring price list. For those who haven't, it includes the $460 AMA Business Software package for $100; Multiplan $40; MiniMemory $40; Editor Assembler $30; +++.

CSI DESIGN GROUP - Box 50150 - St. Louis, MO 63105. Announce the release of CSI WINDOWS, a series of subprograms which will allow the user to write non-modal TI applications that use windows. Got that? $24.95. An additional $24.95 for source code and license to distribute object modules.

REDWICK - POB 441256 - Somerville, MA 02144. Announces the release of CARGO RUN, an economic adventure set in the galaxy of the future. As a galactic trader, you explore the worlds that make up the Galactic Traders Union, buying and selling various cargos and staying : a jump ahead of your creditors. A good eye, sharp wits, and an entrepreneurial spirit are required.

BOOKWRIGHTS - 1001 Elm Street - Manchester, NH 03101 (603/669-4915). I stumbled into Bookwrights while awaiting a table at the Cafe at the Atrium. I was suprised to find an extensive selection of computer-related magazines including HOME COMPUTER MAGAZINE. Although their selection of computer books is limited, they did stock the IBM version of Joseph and Susan Berk's book, FINANCIAL ANALYSIS (see 3/85 NH99'er Newsletter). If there is interest, they will stock the TI version. We hope to have a copy in our lending library by the end of the month. By the way, the luncheon was superb... the Cafe is a great place to appease your computer widow(er)s!

TREISMAN'S - 300 Hanover Street - Manchester, NH 03104 (603/669-5622). Treisman's still has a good selection of TI hardware/software available. Call or stop in.

MIDWEST MICRO-PERIPHERALS - 135 S.Springfield St - Saint Paris, Ohio 43072 (1-800/423-8215). The Bennetts', our newest members, were very pleased with the courteous attention, knowledge and service provided by MidWest Micro during their recent purchase of a Gemini SG-10. You will find their ads in the COMPUTER SHOPPER.

SEARS - Mall of NH - Manchester, NH 03103 (603/669-8280 EXT.257). Only a few PEB's remain, but there are over 30 internal drives still in stock. You can construct external disk drives with these. All you will need is to purchase an additional housing with a power supply and an on/off switch (see John T. Worthington's article in the 10/84 MANNERS). The case and power supply are NOT available at SEARS. Look through the COMPUTER SHOPPER... I found some as low as $32.

((((WRAP-UP))))

Our meetings are generally held on the last Wednesday of the month. The next meeting will be held in the function room of PABLO'S at 7:30 p.m. on WEDNESDAY, APRIL 24th. The May meeting has been tentatively scheduled for 5/29.

HOPE TO SEE YOU THERE!

Helene

There is a software package available from The Dragonslayer American Software Company which compliments the TI-WRITER word processing program for the TI/994A. This software package is the "99/4A Auto Spell-Check". I am a terrible speller so I was very excited when this software became available. I purchased this software from the Triton Company for $49.95. When I received the software it came with two disks and a small instructions pamphlet. I encountered problems backing up Disk "A". I was unable to backup the program "Seedgen". Next " Util1" would not work properly. During the execution of Disk "A" the program would return to the main menu and lock up the keyboard. I wrote to Dragonslayer and they promptly sent me a new disk and requested that I return the defective disk. I still had a small problem which I solved by experimentation. In addition to the programs " Util1" and "Seedgen" the program " Util2" has to get added to your working disk for the TI-WRITER.

This software requires the following hardware: TI99/4A, 32K memory, 1 or more disk drives, either TI-WRITER or TI EDITOR / ASSEMBLER. I found the instructions satisfactory and concise. My only complaint is that the execution time is very slow. A single page letter takes over 5 minutes to check all the spelling. I find that I rarely use the software because of that. If I really need to check my spelling I do use the software. This article was spell checked with this software. Execution time took 6 minutes and 35 seconds.

Both the "A" and "B" Disks carry a total library of 20,000 commonly used words. The user can use his own "User Dictionaries" which hold approximately 2000 words each. This is done with the "Seedgen" program. After Disks "A" and "B" and the User Dictionary Disk are used to scan the user's text for spelling mistakes, it displays on the screen words it didn't recognize. The user has the following options: 1) Disregard word; 2) Add word to User Dictionary; 3) Correct Word; 4) View word in context; 5) Step back one word; or 6) Step forward to next word. All of these options work correctly. Corrections are made in two ways: 1) If the word correction does not increase the total length of the word, the correction takes place normally; 2) If the corrected word is longer than the original word then the misspelled word is deleted from the text and the correct word is placed on the next line. You have to go back into the TI-WRITER Editor and Reformat. The revised text after spelling corrections are made can be saved to any file name. Its usually a good practice to save to a scratch pad for reviewing. After the corrections are made, the new words identified are added to the User Dictionary.

I rate this software as being marginally acceptable. It is simply too slow. All disks are serialized. Dragonslayer has sold at least 1336 units. $50 x 1336 = $66,800... Nice little business!

THE FORTH PAGE

```
SCR #41
   0   ( DEMO FROM 99ER ASSOCIATION NEWSLETTER VOL 1 #12 12/84
   1     IF THE OPTIONS LISTED ON LINE 8 AREN'T ON THE DISK
   2     YOU HAVE THIS SCREEN, LOAD THEM FROM THE SYSTEM DISK
   3     BEFORE LOADING THIS SCREEN AND DELETE LINE 8.
   4                       MODIFIED BY:
   5     RICHARD J. BAILEY, 68A CHURCH ST., GONIC, N.H. 03867
   6                 NH 99ERS USER GROUP                        )
   7
   8     -GRAPH -SYNONYMS -TEXT -GRAPH2
   9   : TRND DECIMAL 255 RND 191 RND 255 RND 191 RND ;
  10   : SCRN DRAW GRAPHICS2 14 RND SCREEN ;
  11   : TLINE 30 0 DO TRND LINE LOOP 12 SCREEN ;
  12   : MYLINE 6 0 DO SCRN TLINE LOOP ;
  13     MYLINE TEXT
  14   ." THAT'S ALL FOLKS                            "
  15     FORGET MYLINE
```
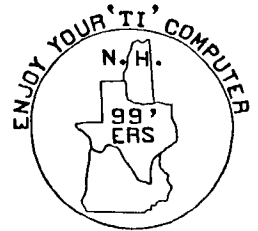
Jim Jagielski has found an error in his FORTH SYSTEM disk. To verify that you have the same error in yours, LIST SCREEN 58 (decimal). If line zero contains the date 20OCT83 then you have the SYSTEM DISK with the ERROR.

The error lies in line 10. The line presently reads:

        VDPMDE @ 4 (IF SMTN 80 0 VFILL 300 ! SATR ! ENDIF

The FIRST exclamation point (pronounced STORE) in the line should be replaced with an ' (pronounced TICK). After making the correction the line should read:

        VDPMDE @ 4 (IF SMTN 80 0 VFILL 300 ' SATR ! ENDIF

Without this correction one would probably have a difficult time placing SPRITES in AUTOMATION.

```
SCR #37
   0       ( LINE GRAPHICS DISPLAY - BY Jim Jagielski )
   1       ( Load screen, then type 'LINES' <ENTER> to run program. )
   2
   3       : RUN1 250 7 DO I 190 I 190 RND LINE 14 RND 2 + 16 * DCOLOR !
   4         LOOP ;
   5       : RUN2 250 7 DO I 190 RND I 190 RND LINE 14 RND 2 + 16 *
   6         DCOLOR ! LOOP ;
   7       : RUN3 192 0 DO 256 RND I 0 I LINE 14 RND 2 + 16 * DCOLOR !
   8         2 +LOOP ;
   9       : RUN4 192 0 DO 256 RND I 256 RND I LINE 14 RND 2 + 16 *
  10         DCOLOR ! LOOP ;
  11       : RUN5 60 0 DO 256 RND 192 RND 256 RND 192 RND LINE
  12         14 RND 2 + 16 * DCOLOR ! LOOP ;
  13       : E- GRAPHICS2 ;
  14       : LINES GRAPHICS2 RANDOMIZE RUN1 E- RUN2 E- RUN3 E- RUN4 E-
  15         RUN5 KEY SP! TEXT ABORT ;
```
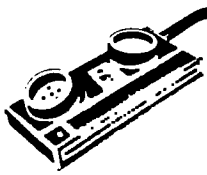
TELECOMPUTING — AN INTRODUCTION
By Phil Chouinard

Telecomputing is a strange word. Many of us are becoming more familiar with the idea though. This article is presented here to fill in some of the things you'll need to know to start and then I'll add a few technical points which could come in handy later.

The TI99/4A is hanging in there. Many people now have expanded systems. This is the first step to going "ON LINE". Telecomputing requires only one piece of hardware that is unique to this function and that is a MODEM. The good news is that there are many for sale at less than $100.00. The MODEM connects to the serial port of the RS232 card. You'll probably have to get a special cable or make a "pig-tail" to get the pins lined up right. This isn't too much trouble and you need not be afraid to buy a non-TI MODEM. A direct-connect MODEM will be the best and will give you the least amount of errors. This could be important when you are transferring a program over the phone.

Now that you have considered going "ON LINE", do you want to? I think you do, or at least you will. If you read magazine articles about telecomputing you'll hear about COMPUSERVE, THE SOURCE, DOW JONES, etc., etc. You'll want to get involved with them sometime but first see what's in the neighborhood. I'll give you a few numbers at the end of this article. The big information services will eventually be of great value to you once you know how to get the most out of them. They can be expensive if you are not ready. Once you finally connect to these services your "little TI" will now become a main frame computer capable of things you never imagined possible. Sounds pretty dramatic, huh! But you'll have to pay. It will cost around $6 to $18 an hour and maybe more. When you're ready though, you'll be able to get what you want from these services pretty fast. The local systems can be a real treat. Most cost nothing, but many of the best may cost $15 to $20 a year to help with the phone costs. The ones I've tried have been more than worth the small expense. Because they are local calls or at least a neighboring state, you won't be breaking the bank every time you decide to telecommunicate. You'll get info about TI computers and about other types as well. You'll find out about software, what's good and what's bad, first hand from the people that are using them. If they didn't say enough about it you can ask for more details with confidential E-MAIL that can only be read by you or in a bulletin for all to read. You can sell stuff and buy stuff in a classified ad. The possibilities are unlimited. Probably the best part about these small bulletin boards is that you can become part of the system and can create a direction for the entire system by stimulating discussions or giving or receiving advise. All in all it can be very rewarding.

Once all your hardware is taken care of you'll need software, as usual. I'll mention a few here.

TEII... stands for TERMINAL EMULATOR II. If you think about it, the name says it all. Your software is supposed to emulate a terminal, i.e., let it talk to any other computer. The TEII command module used to be your only choice. For the first few years of the TI99/4 development, the expansion system cost over $1000 so TI didn't seem to want to develop much for the system. The TEII protocols are different from any other so you don't see much with TI protocols. COMPUSERVE and THE SOURCE both have special sections for the TI so you can use all the features. Remember, this is only for transferring files, you will be able to communicate fine with any other system. One area that bothers me is sending info to the printer. You may have a good screen display but the output is one screen full from the buffer. You can adjust the display a little using the arrow keys, but sometimes it doesn't work very well. The solution to this is to save to disk then use TI-WRITER or E/A to edit the file, then print it. TEII is complete with color, sound, speech and graphics. Most of these features you probably won't get a chance to use because nobody else is. There are a few TIBBS around that are set up around the TEII and they are a real pleasure to use. The PRO99er in North Reading, MA is one of them.

TE3 was being developed by TI when they decided to throw in the towel. How good it is depends on which version you have (Ed. note: the NHUG Library has one of the latest). It was released to public domain and had to be finished by TI hackers. One of the features include a 20K buffer which can be used to download text files and print them with no problems. Unlike TEII which requires you to save the text one screen at a time, you can fill the buffer then print it all later. TE3 has other advantages too. It can operate at 1200 BAUD or even 9600 BAUD if you are connecting your TI to another type of computer with a direct connect cable (no MODEM involved).

There are other terminal software availble, such as TERMEX, P/TERM, and AMA-LINK. I've even heard a rumor of terminal software written in FORTH. We'll just have to keep our eyes open for those.

Here are the numbers I promised you:

Nashua ACCESS-80.............. (603) 888-6999 or (603) 424-3815

Londonderry ACCESS-80................ (603) 434-6225   Outpost BBS........................... (603) 886-1371
North Reading PRO99ER TIBBS......... (617) 664-5988   Burlington TIBBS..................... (617) 273-3262

If you call any of these, you'll be able to find many more numbers to call. I've listed these because I've used them and they're good.

********** HAPPY TELECOMPUTING **********

MORE HARDWARE / SOFTWARE AVAILABLE!
By Edward R. Aho

At the March meeting it was requested that a member from New Ipswich check out the new business, the "TI Store & More", located there. Being from New Ipswich I have stopped at the TI Store & More and had an interesting chat with the owner. Here are my results.

The TI Store & More is owned by Priscilla E. Brown and her store is open on Monday, Wednesday and Friday between 10:00 am and 4:00 pm. The phone number at the store is 878-3299 and her home phone is 654-9427 where she can be reached if you cannot call during store hours and you need something. The TI Store & More is located on the second floor of the 1808 HOUSE resturant on the main drag, Route 123, in the middle of town. Priscilla E. Brown both owns and operates the store which is also the center for her bookkeeping business which she runs on a TI99/4A. Incidentially she would be a good source of information if you are looking for business software. Priscilla has tried serveral sets of business software, converting her data from one set of software to another. She would be able to tell you much about the software she has tried.

The TI Store & More currently has TI99/4A consoles and software in stock. Also for sale is some used systems and software. Priscilla tells me that she may give members of our club a discount, so if you shop there be sure to mention that you belong to the club. One of the items I must mention, that she has in stock, are new copies of the Extended Basic module. If you haven't been able to obtain one try the TI Store & More. Many things that she does not have she can get for you pretty quick, she has received orders from her supplier within two days. Other items of hardware that she carries are the MBX expansion system, TI cassette cables, and a speech synthesiser. As to prices theres too many items to list and prices can always change, so, the best thing is to check them when you are ready to buy. But remember, in any case, always compare prices before you buy.

**NEW HAMPSHIRE 99'ERS
USER GROUP, INC**

USING SPEECH WITH
HOOSIER XBFORTH

Richard J. Bailey
68A Church Street
Gonic,N. H. 03867

The XBFORTH disk being distributed by the Hoosier Users Group has speech but there are no instructions to let you know how to utilize it. Seeing I have two whole weeks experience with FORTH, what I'm about to relate may not be the best way to use the speech capabilities of XBFORTH, but it works.

You will need the Editor/Assembler manual which has the speech synthesizer resident vocabulary and the ROM addresses of words on pages 422-427. First autoload XBFORTH and when you get the welcome screen and the prompt, type -SPEECH <ENTER> . When this finishes loading type HEX <ENTER>. To use speech in the immediate mode find the speech synthesizer ROM address of the word you want to say like GOODBYE. Its address is >3148 so type 3148 SAY <ENTER> and the computer will say 'GOODBYE'. To say TEXAS INSTRUMENTS HOME COMPUTER, you type 6696 SAY 363E SAY 2034 SAY <ENTER>.

To use speech in·a screen you can define FORTH words which are entire english sentences. : TIHC 6696 SAY 363E SAY 2034 SAY ; will say TEXAS INSTRUMENTS HOME COMPUTER when it encounters TIHC. You can define the FORTH words to be as brief or as explicit as you want.

I hope there is someone out there with superior knowledge of FORTH who will write an article on utilizing speech and sound (which may be similar). At least I've presented some ideas on how to use speech.

Distributed by Tigercub Software to TI-99/4A Users Groups for promotional purposes and in exchange for their newsletters. May be reprinted by non-profit users groups, with credit to Tigercub Software.

The entire contents of Tips from the Tigercub Nos. 1 through 14, with more added, are now available as a full disk of 50 programs, routines and files for just $15.00 postpaid!

Nuts & Bolts is a diskfull of 100 (that's right, 100!) XBasic utility subprograms in MERGE format, ready for you to merge into your own programs. Contents include 13 type fonts, 14 text display routines, 12 sorts and shuffles, 9 data saving and reading routines, 9 wipes, 8 pauses, 6 music, 2 protection, etc., and now also a tutorial on using subprograms, all for just $19.95 postpaid!

And I have about 140 other absolutely original programs in Basic and XBasic at only $3.00 each!(plus $1.50 per order for casette, packing and postage, or $3.00 for diskette, PPM) Some users groups charge their members that much for public domain programs! I will send you my descriptive catalog for a dollar, which you can then deduct from your first order.

Come on now, folks, don't you support your local schools? And don't you support those who support

you? There are thousands of schools which have TI-99/4A computers in the classroom, usually without disk drive and without Extended Basic. They could use some educational programs in Basic on casette. They could probably use some of the public domain software in your library. Maybe they could use some of the educational programs I sell for just $3 (and I authorize schools to copy them for use within the school). There is probably such a school in your area - is your group supporting it? In the last Tips, I asked the members of 101 users groups to give me the addresses of schools that had TIs, so I could send them a free catalog. How many addresses did I get? Zero to the power of zero times zero!

More on the pestiferous asterisk bug in TI-Writer. Dr. Guy-Stefan Romano has confirmed and explained it. If you are printing out of the Formatter mode and your text contains an asterisk followed by two or more numeric digits - the asterisk and two digits will disappear! For instance, A*256 becomes A6, and I've noticed that A6 in programs published in several newsletters recently.

The TI-Writer program misinterprets the asterisk and two digits as an instruction to input data from a "value file" (see Alternate Input on p. 111 of the manual).

The solution to this bug is to type two asterisks followed by two dummy digits, then the actual digits. For instance, instead of A*256 type A**25256. Trouble is, the bug usually shows up in a program which has been LiSted to disk and then

MERGEd into TI-Writer, and is usually not noticed. The solution? Run the program through my 28-Column Converter (see Tips #18!).

Dr. Romano informs me that there is an even worse bug in the Transliterate command coding, erratic and sometimes destructive. It is triggered by certain sequences of characters, but these have not been documented.

Dr. Romano says that he does not use transliteration.

I would suggest that you also avoid the use of the & and @. The & will only underline a single word, unless you tie words together with the ^ sign. If you tie words together, the Fill and Adjust will leave gaping blanks in your lines and if you tie too many together the line will extend beyond the right margin! Also, the underlining is a broken line. It is better to use the escape codes CTRL U, FCTN R, CTRL U, SHIFT -,CTRL U, SHIFT A, CTRL U, which will give a solid underline until you turn it off with CTRL U, FCTN R, CTRL U, SHIFT -, CTRL U, SHIFT @, CTRL U.

The @ is handy to emphasize a single word, but if you want to double-strike a whole sentence or paragraph it is better to use the escape code CTRL U, FCTN R, CTRL U, SHIFT G, and turn it off again with CTRL U, FCTN R, CTRL U, SHIFT H.

The period bug is another killer - the Formatter thinks that any line which begins with a period is a formatter command, and deletes the whole line! If your text contains a decimal value such as .11 and the wraparound puts it at the beginning of a line, the

line disappears! There are two ways around this - put a 0 in front of all your decimals, as 0.11, or transliterate all your periods.

In all, the TI-Writer formatter is a temperamental and unpredictable piece of software, prone to unwanted line feeds and unexpected paper-wasting form feeds. I like to use it to right-justify text back to the disk, but from then on I prefer to print it out of the editor mode, or out of my own program.

Designing downloadable characters for the Gemini printer (see page 115 of the manual) is a bit tricky because it is hard to visualize how the expanded pattern will appear in print. The following program will enable you to experiment with designs, dump them directly to the printer for viewing, then save them as a file. When you later dump this file into printer RAM for use, you must activate the download characters with the escape code - CHR$(27);CHR$(36);CHR$(1).

```
100 CALL CLEAR :: CALL SCREE
N(4):: CALL CHAR(128,"FF8181
81818181FF",129,RPT$("F",16)
):: CALL COLOR(13,2,16)
110 FOR R=9 TO 15 :: CALL HC
HAR(R,11,128,9):: NEXT R
120 X=1 :: FOR R=9 TO 15 ::
DISPLAY AT(R,7)SIZE(2):STR$(
X):: X=X*2 :: NEXT R :: FOR
C=9 TO 17 :: DISPLAY AT(8,C)
SIZE(1):STR$(C-8):: NEXT C
130 DISPLAY AT(2,9):"TIGERCU
B'S" :: DISPLAY AT(4,1):"GEM
INI CHARACTER DOWNLOADER" :p
rogrammed by Jim Peterson fo
r the Public Domain
140 DISPLAY AT(17,1):" Move
cursor with W,E,R,S,D,":"Z,X
and C keys. Toggle on":"and
off with Q key. Press":"Ent
e finished.": : :"Pres
```

```
$ any key"
150 CALL KEY(0,K,ST):: IF ST
=0 THEN 150 :: CALL HCHAR(17
,1,32,224)
160 R=9 :: C=11 :: CH=128
170 CALL HCHAR(R,C,32):: CAL
L HCHAR(R,C,CH):: FOR D=1 TO
 10 :: NEXT D :: CALL KEY(3,
K,ST):: IF ST=0 THEN 170
180 ON POS("QWERDCXZS"&CHR$(
13),CHR$(K),1)+1 GOTO 170,31
0,230,220,210,200,190,260,25
0,240,330
190 R=R+1
200 C=C+1 :: GOTO 270
210 C=C+1
220 R=R-1 :: GOTO 270
230 R=R-1
240 C=C-1 :: GOTO 270
250 C=C-1
260 R=R+1
270 R=R-(R(9)+(R)15):: C=C-(
C(11)+(C)19):: IF CH=128 THE
N 300 :: CALL GCHAR(R,C-1,GX
):: CALL GCHAR(R,C+1,GZ):: I
F (GX<>129)*(GZ<>129)THEN 30
0
280 DISPLAY AT(22,1):"You ca
n't have two in a row":"hori
zontally!" :: FOR D=1 TO 50
:: NEXT D :: DISPLAY AT(22,1
):" ":" "
290 CH=CH-1
300 CALL HCHAR(R,C,CH):: GOT
O 170
310 CH=CH+1+(CH=129)*2 :: IF
 CH=128 THEN 320 :: CALL GCH
AR(R,C-1,GX):: CALL GCHAR(R,
C+1,GZ):: IF (GX<>129)*(GZ<>
129)THEN 320 ELSE 280
320 CALL HCHAR(R,C,CH):: GOT
O 170
330 FOR C=11 TO 19 :: X=1 ::
 FOR R=9 TO 15 :: CALL GCHAR
(R,C,G)
340 IF G=129 THEN A=A+X
350 X=X*2 :: NEXT R
360 FOR J=1 TO LEN(STR$(A)):
: CALL VCHAR(15+J,C,ASC(SEG$
(STR$(A),J,1))):: NEXT J ::
M$=M$&CHR$(A):: A=0 :: NEXT
C :: A=0
370 DISPLAY AT(20,1):"Print?
 Y/N Y" :: ACCEPT AT(20,12)V
ALIDATE("YN")SIZE(-1):Q$ ::
IF Q$="N" THEN 470
380 IF F=1 THEN 390 :: F=1 :
: DISPLAY AT(20,1):"Printer
name?" :: ACCEPT AT(20,15):P
$ :: OPEN #1:P$
```

```
390 DISPLAY AT(20,1):"ASCII
to redefine?" :: ACCEPT AT(2
0,20)VALIDATE(DIGIT)SIZE(3):
CH
400 DISPLAY AT(20,1):"Descen
der (0 or 1)? 0" :: ACCEPT A
T(20,21)VALIDATE("01")SIZE(-
1):D$ :: D=VAL(D$)
410 M$=CHR$(27)&CHR$(42)&CHR
$(1)&CHR$(CH)&CHR$(D)&M$
420 PRINT #1:M$ :: PRINT #1:
CHR$(27);CHR$(36);CHR$(1);
430 PRINT #1:RPT$(CHR$(CH),7
2):: PRINT #1:CHR$(14);RPT$(
CHR$(CH),36)
440 DISPLAY AT(20,1):"Save (
Y/N)? Y" :: ACCEPT AT(20,13)
VALIDATE("YN")SIZE(-1):Q$ ::
 IF Q$="N" THEN 470
450 IF F3=1 THEN 460 :: F3=1
 :: DISPLAY AT(20,1):"Filena
me? DSK" :: ACCEPT AT(20,14)
:F$ :: OPEN #2:"DSK"&F$
460 PRINT #2:M$
470 M$="" :: DISPLAY AT(20,1
):"Another (Y/N)? Y" :: ACCE
PT AT(20,16)VALIDATE("YN")SI
ZE(-1):Q$ :: IF Q$="Y" THEN
100
480 CLOSE #1 :: CLOSE #2 ::
END
```

Micropendium ran a contest to improve on a brief ingenious organ program. The winner was Michael Christianson, who wrote a superb program. You'll have to buy the January issue of the magazine to get it (you should be subscribing, anyhow!). I didn't enter the contest, of course, and my version is not nearly as good, but have fun -

```
90 CALL CLEAR
95 PRINT TAB(5):"MICROPENDIU
M ORGAN":::::::::"Pl
ay bass with left hand": :"o
n left side of keyboard,": :
"melody on the right": : :
100 REM - MICROPENDIUM ORGAN
 modified by Jim Peterson
110 OPTION BASE 0
120 DIM NOTE(20)
130 FOR A=0 TO 20
140 READ NOTE(A)
150 NEXT A
```

```
160 DATA 40000,220,247,262,2
94,330,349,392,440,494,523,5
87,659,698,784,880,988,1047,
1175,1319,1397
170 CALL KEY(1,K1,S)
180 CALL KEY(2,K2,S)
190 CALL SOUND(-1000,NOTE(K2
+1),0,NOTE(K2+1)*1.01,5,NOTE
(K1+1)*3.75-ABS(K1+1=0)*1100
00,30,-4,0+ABS(K1+1=0)*30)
200 GOTO 170
```

A sprite routine that doesn't do anything but look pretty. I call it Patches.

```
50 CALL CLEAR :: CALL SCREEN
(5)
100 A$=RPT$("AA55",16):: B$=
RPT$("F",64):: CALL MAGNIFY(
4):: RANDOMIZE
110 FOR CH=40 TO 136 STEP 8
:: CALL CHAR(CH,A$,CH+4,B$):
: NEXT CH
120 C=2 :: S=40 :: R=1 :: FO
R T=1 TO 24 STEP 2 :: COL=15
0*RND+50 :: CALL SPRITE(#T,S
,C,R,COL,#T+1,S+4,C+1,R,COL)
:: S=S+8 :: C=C+1 :: R=R+15
:: NEXT T
140 FOR T=1 TO 50 :: CALL CO
LOR(#INT(24*RND+1),INT(16*RN
D+1)):: NEXT T :: GOTO 120
```

This is one that I fancied up, based on a sprite routine written by a youngster named Andrew Sorenson, published in the Sydney Newsdigest from Australia.

```
100 ! WILL O' WISP
        by Jim Peterson
        based on
        Andrew Sorensen's
        sprite routine
110 CALL CLEAR :: CALL SCREE
N(2):: CR=48
120 FOR CH=48 TO 63 :: FOR L
=1 TO 4 :: RANDOMIZE :: X=IN
T(16*RND+1)*2-1 :: X$=SEG$("
0018243C425A667E8199A5BDC3DB
E7FF",X,2):: B$=B$&X$ :: C$=
X$&C$ :: NEXT L :: CALL CHAR
(CH,B$&C$):: B$,C$="" :: NEX
T CH
130 FOR N=1 TO 28 :: CALL SP
RITE(#N,CR,INT(14*RND+3),8*N
+20,120,5,0):: NEXT N :: IF
```

```
CR=64 THEN CR=48 :: T=T+1+(T
=2)*2 :: CALL MAGNIFY(T)
140 X=(INT(3*RND)-1)*4 :: Y=
(INT(3*RND)-1)*4
150 IF INT(10*RND+10)<>10 TH
EN 170
160 CR=CR+1 :: GOTO 130
170 FOR N=1 TO 28 :: CALL MO
TION(#N,-Y*20,X*20):: NEXT N
 :: GOTO 140
```

Here are a few more enhancements to my Menu Loader, published in Tips #15. Delete line 150 and add

```
101 OPTION BASE 1 :: DIM P6$
(127):: ON WARNING NEXT :: G
OTO 110
105 @,A,A$,B,C,D$,FLAG,I,J,K
,KD,KK,N$,NN,P$,P6$(),Q$,S,S
T,T$(),TT,VT,X
CALL INIT :: CALL LOAD :: CA
LL LINK :: CALL PEEK :: CALL
 KEY :: CALL SCREEN :: CALL
COLOR :: CALL CLEAR :: CALL
VCHAR :: CALL SOUND :: !@P-
```

The pre-scan will speed up run time by a worthwhile amount. The warning default will prevent a screen scroll on an erroneous Enter.

When you're finished printing strip labels, cut off the strip BEHIND the platen and roll it FORWARD! You'll waste a few labels that way, but if you try to roll backwards and get a gummy label stuck in the works, you've got trouble!

MEMORY FULL

Jim Peterson

the Tigercub

BACKGROUND NOISE WITH THE RF MODULATOR

When experiencing background noise, such as humming or buzzing, with the RF Modulator, internal adjustment of the Modulator will usually alleviate the problem. This can be accomplished by following the steps below and referencing the figure A. Note: This procedure DOES NOT apply to the older version TI900 Video Modulator.
   <<<Materials required: one small, flat, thin-bladed screwdriver>>>

1) Turn the volume of the television all the way down.
2) Select the Master Title Screen on the computer (<FCTN> <=>, if necessary).
3) Using the title screen color grid, fine tune the TV to the best color picture.
4) With the screwdriver, pry off the top lid of the Modulator box by lifting under one edge of the lid near the indentations holding it on.
5) Lift off the lid (don't lose the slide switch!) and turn the volume up to half (50%).
6) Insert the blade of the screwdriver into the slot of the small box labelled CV1 (see fig.) and turn it slightly until the background noise is at a minimum (should take less than 1/8th of a turn).
7) Replace the slide switch if it fell out, then snap the lid back into place.
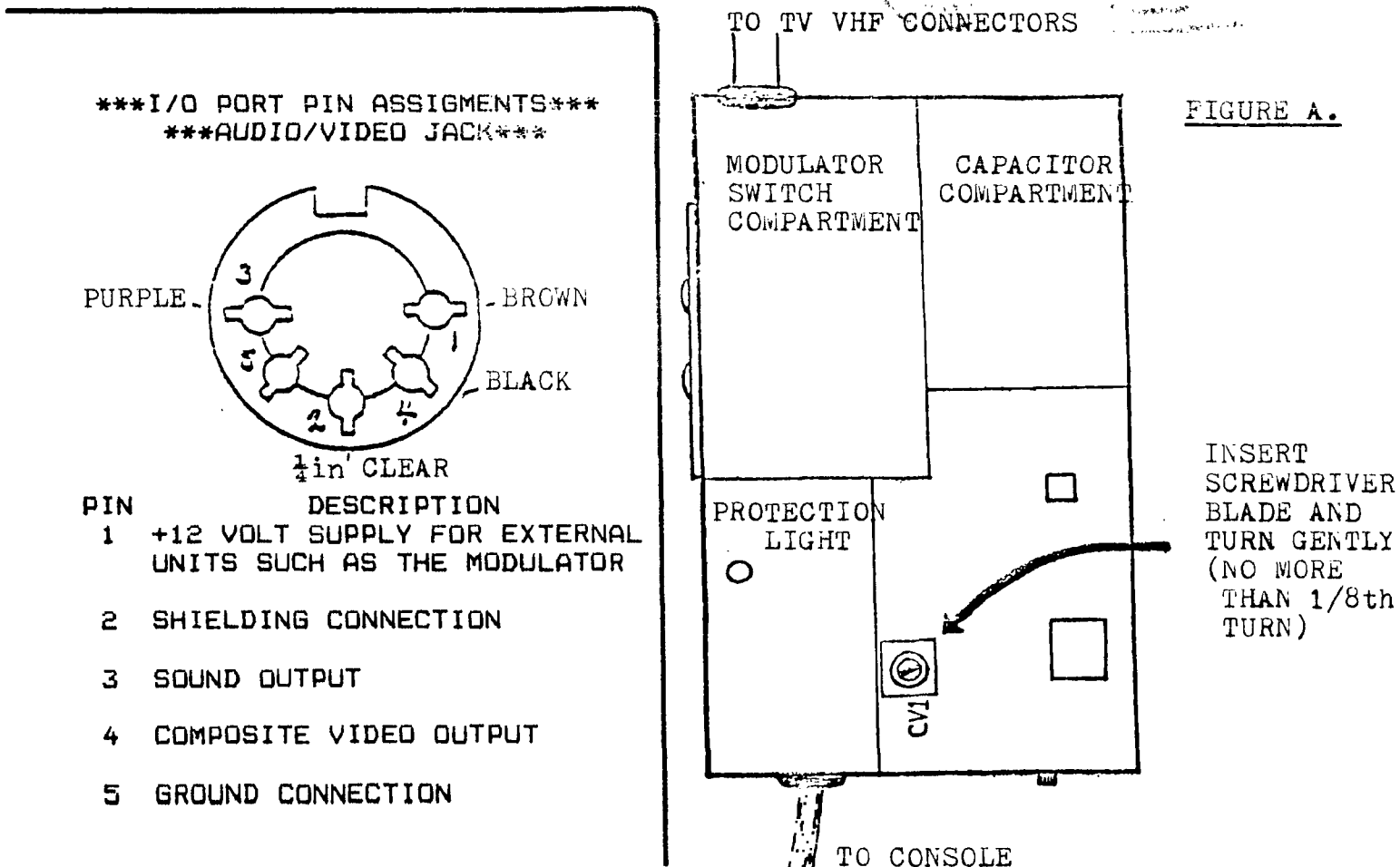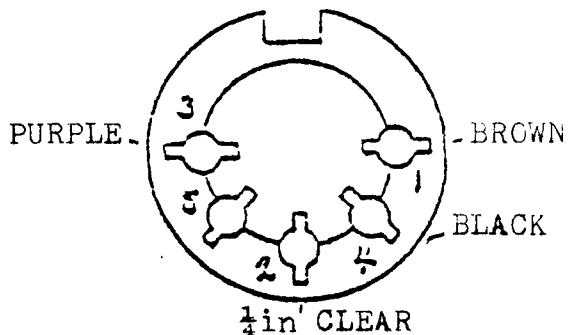
The system is now ready for optimum usage.

FIGURE A.

I/O PORT PIN ASSIGMENTS
AUDIO/VIDEO JACK

PURPLE — 3   BROWN

                BLACK

¼in' CLEAR

PIN	DESCRIPTION
1	+12 VOLT SUPPLY FOR EXTERNAL UNITS SUCH AS THE MODULATOR
2	SHIELDING CONNECTION
3	SOUND OUTPUT
4	COMPOSITE VIDEO OUTPUT
5	GROUND CONNECTION

TO TV VHF CONNECTORS

MODULATOR SWITCH COMPARTMENT

CAPACITOR COMPARTMENT

PROTECTION LIGHT

CV1

INSERT SCREWDRIVER BLADE AND TURN GENTLY (NO MORE THAN 1/8th TURN)

TO CONSOLE

Tom Sutliffe secured this info from the TI SERVICE CENTER in Waltham.

PABLO'S RESTAURANT

7:30 P.M.

APRIL 24th

WEDNESDAY

NEXT MEETING

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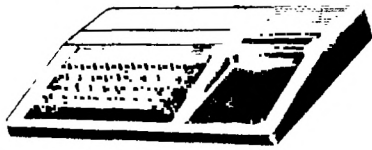
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