NORTHWEST OHIO
99'ER NEWS

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Northwood s, Oh. 43619   Maumee, OH 43537
(419) 666-4945   (419) 893-7962

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XXXXXXXXX   TICOMM BBS  385-7484   XXXXXXXXXXXX
        X    SYSOP>>>BUD MILLS<<<    X
        X  !!!!!!!! 24-HRS. !!!!!!!  X
        X SYSTEM OPERATING ON        X
        X CORCOMPS NEW !!!!!!!!!!!!   X
        X 9900 MICRO EXPANSION SYS X
        X + HORIZON RAM DISK          X
        XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
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THE NEWSLETTER STAFF

Kent Sheets   John Clulow
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WILLIAM SAGER
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MAUMEE, OH 43537

Quantity prices
on Horizon Ram disk
to users groups.
(see page 3+6)
Write for info.

WE WOULD LOVE
TO SEE YOU AT
YOUR TI USERS
GROUP MEETING

Dallas TI Home Computer Gp
1221 Mosswood Place
Irving, TX 75061

NEW HORIZON NEWS

by Bill Sager

The next two New Horizons meetings are February 15 and March 15, which are the third Saturdays of the month. It does follow our schedule of the Saturday following the second Friday of the month however.

We were pleased to see the interest members expressed in signing out the collections of other users groups newsletters. If you obtained one of these binders please be sure to return it at the Feburary meeting so that someone else may have the chance to take it home for a month. Our group is exchanging newsletters with other TI groups through out the US and two overseas countries. These newsletters, like our own, are full of hints, tips, product reviews, ideas, how to make it, where to get it, short programs, club news and more. Some of the best articles are reprinted by several groups, just as we do from time to time. There are more worthwhile articles than we can print so checking out a collection of these newsletters is your opportunity pick up some of this information. One can also see, from these newsletters, that the TI users groups are a major force in keeping our computers going strong and are probably to be credited for the lasting interest.

The winners in the computer selected prize drawing for paid members were: Mike Smith, Bill Sager, Charles Strobel, and Andy Andrews. My winnings will be turned back to purchase other prizes for another drawing. We welcome donations to the drawing from members. The club will supply or purchase a limited number of drawing gifts also. Future drawings will require that you attend the meeting to win.

If you know of some one who was a member in 1985 and did not renew, please ask them to consider 1986 membership. If you have a friend or neighbor with a TI, bring them to one of the meetings as a guest. Every-ones support is needed and appreciated.

The New Horizons group is greatful to Bud Mills for under-writing the costs to sustain the TI-COM BBS that members of both groups may use. While the equipment belongs to both clubs, Bud is paying for the on going expense of the BBS. Thanks Bud!

As requested at the last meeting, we will appreciate your cooperation in staying in that portion of the church we are using. Anyone who may have club library materials out must return them so that an inventory and audit can be conducted.

Our thanks to Don Turner, Mike Amundsen, and John Clulow for their fine presentations last month. It is always extra special to see the achievements of our own members demonstrated.

This month, Mike Roadruck will be demonstrating "Character Sets and Graphics Design", a program by Dave Rose. This program provides 47 different fonts, 165 small graphics, and 30 larger pictures, to be printed. The program also provides for all the fonts and graphics to be printed out super extra large size to make banners. Most of the things can be printed upside down or reversed or a negative (black becomes white, white becomes black) image produced.

wait! That's not all. You can also design your own fonts, graphics and pictures that can be saved and printed out any time you desire. Actually, the 47 fonts might well be thought of as 94 different fonts since each one can be printed in a normal and a "squeezed" version. You have seen a little of the printing in some of our recent newsletters. This is the only program of its type that I know of, and as you will see, is most professional. We may be able to take orders for the program if some are interested.

A second presentation is planned. There will be two or three new club disks for you to purchase at our usual "rock bottom" prices and we have a new shipment of blank disks. These will be available $6.60 for 10. Reason enough to attend!

Our next meeting will be the day after Valentine's Day, or February 15 for those who somehow will miss the bombardment of flowers, candy, greeting cards, and resturant promotions.

Unity Church, 2 PM as usual, 3535 Executive Pkwy, off Secor in the Westgate area. Love to see ya!

PRESIDENTS CORNER

by Roger Biddle
OH-MI-TI

At last months meeting there were appr. 25 in attendance. Two programs were offered on disk form the club which included Super/Loader more from PA Software, plus Cataloger both freeware. We planned on having the Extended Basic E/A but had problems with the disks that were copied. We will try to have this program available at the next meeting. This program was available at New Horizons last month.

This brings up another point, the people that are selling these programs for our clubs, both OH-MI-TI and NEW HORIZONS are being asked "is this the program that the other club selling?". The two clubs do not always know what the other club is selling or has sold in the past in way of programs. So please make sure you know what you are buying.

I would like to thank Bob Peters, and Don Turner on their presentations that they gave at last months meeting, which were the MBX system and Tutorial in Basic respectively. Don said he would be glad to exspand on his tutorial for next months meeting desire to understand basic. There is always something to be learned even for the seasoned programmer. Also Dave Weldy will give a presentation on a program he has written called MENU-PLANNER. I understand that this program will generate a shopping list after you input the meals you would like for the week.

Our bulletin board TI-COMM is now being operated by a Horizon Ram Disk. The BBS is now being funded and operated by Bud Mills with the equipment being on loan from the clubs. I undestand the BBS has not got much use lately, its a great way to share your thoughts and ideas and items for sale to other users area and nation wide. If you have any problem or suggestions concerning the board let Bud know.

Again if you talk to someone that owns a TI, let them know of our existence and what all is available for our perfect home computer. Please bring them to the meetings.

Our next meeting will be February 14,1986 at the Oregon Firestation #2 at 7:00. Hope to see you there.

Welcome to Former Cin-Day Members

Many of you may not have met two of our newer members, Rev. Lewis and Ellen Thompson. They were members of one of the older and larger TI users groups in the country, Cin-Day in Cincinnati. We asked Ellen to tell us a little about what it's like moving into a new area and becoming members of new TI computer club.

Our TI came into our living room (yes, a very prominent focal point in our home) January of 1982 and stayed in that room till we moved from Cincinnati. During that time we found the Cin-Day User Group so helpful and have their newsletters from February of '82 through March of '85. Our membership expired the month we moved.

We felt we could always call on of the officers or members if we had a problem or couldn't understand or figure out something with our TI. Before we moved, I called our Cin-Day President, Ed York, and asked him if he knew someone in the Toldo area we could call after we moved. He gave me Bill Sager's name and phone number. After we got settled in Whitehouse, I called Bill and he told us when the meetings were held and made us feel that we would be welcome.

We haven't been able to attend a lot of the meetings because of conflict in schedules, but each time we have been to the meetings we have always felt welcome and everyone tries to be so helpful if we have any questions. The lending library of programs is a great way for us to be able to us the computer without having to invest in a program until we really know we'd like to have it for our own.

When we've talked to people who have a computer other than TI and they don't have a users group they are in touch with, I feel they are missing a lot of th benefits we have by being a part of a II group. -- Guess my husband and I haven't learned as much as some who have a computer, but we have learned where to find, meet and make friends who have helped us in the past and I'm sure will continue in the future to help us with our TI computer.

HORIZON RAMDISK STATUS REPORT

by DAVID ROMER
HORIZON COMPUTER, LIMITED

During the months of December 1985 and January 1986, Horizon Computer, Limited sold thirty five ready to run Horizon Ramdisk cards as a test group for the unit and its operating system. The test group cards were purchased by people from all over the country; North Carolina, Florida, California, Missouri, among other places, and of course the Northwest Ohio area.

The members of the test group received the card they ordered along with Version 1 of the operating system and a preliminary manual. They were asked to thourghly test the operating system and report any problems they had with the manual, hardware or software. Of course, several software bugs surfaced and they were corrected with the release of Version 2 of the Ramdisk operating system. At the same time work was being completed on the Ramdisk Construction guide for those people who might be interested in building their own card. A few bare printed circuit boards were released to test the parts list and construction guide.

Presently, editing of the final version of the reference manual and some final software touches for Version 3 of the operating system are about finished. Members of the test group will be sent those items along with the full source code, documentation and development software. All units sold from now on will include those items.

Horizon Computer, Limited anticipates beginning regular sales of the Horizon Ramdisk about the middle of February. If you wish to receive ordering information directly when it is available send your name and address to:

Horizon Computer, Limited
Box 554
Walbridge, Ohio 43465

MODEMS: $21.14

Kent Sheets 2/86

OH-MI-TI

What is the reason you do not have a modem? Cost? The following article appeared in the BYTEMONGER newsletter of Lexington, KY.

LOW COST MODEMS STILL AVAILABLE

Don MacClellan ordered two of the modems which were advertised in Computer Shopper about September or October. He received two Mura Model MM-100 Minimodems for the TI-99. Total cost including shipping was $21.14 ea. Order from: The Wholesale Outlet, One Interstate Ave., Albany, NY 12205 (1 800 344-4387). You will need to make up a RS232, 25 pin connector cable, to use the modem.

C H E S S

Kent Sheets 2/86

OH-MI-TI

BYTEMONGER 1/86 Newsletter

On page two, a note appears that in the Databases of Compuserve there is a large file for CHESS. For those of you who don't have the Chess module, this might be the program you want. Maybe some of our members who use Compuserve have already downloaded it. Anyone used this Chess program? Is is any good?

MARK'S WORLD

by MARK F. LAMB

OH-MI-TI NEW HORIZONS
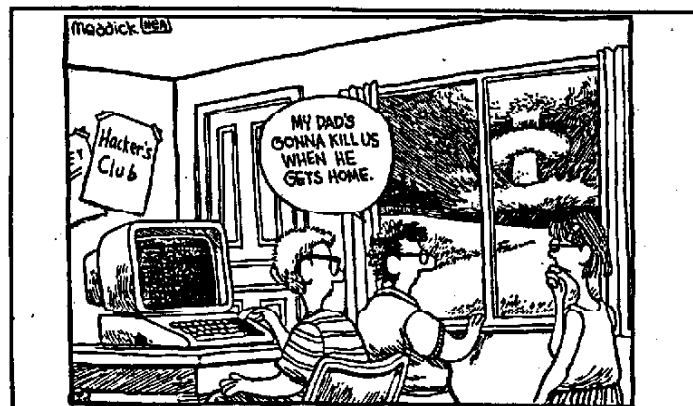
Graphic and Font Package

If my information is correct there should be a demo of Dave Rose's "CHARACTER SETS / GRAPHIC DESIGN" packages at the New Horizons' February meeting. Be it February or later do not, I repeat, DO NOT miss this one if you are into printing. The near fifty (50) array of fonts and approximate 200 graphic pics with menu driven programs available in the complete set wil give you capabilities fantastic!

A quick review of what you can do: 1. Make banners with any of the fonts in solid or block lines with or without graphics. 2. Make headers and/or footers for your letters. 3. Make your own birtday or holiday greeting card. 4. Put some flashiness in those short notes or announcements.

By the way guess where most of the fancy headings and many of the decorative pictures found in our newsletters were designed from. Hint! Hint!

E/A Notes

Last year a group of people got together to see what they could do with Assembly Language. This is no quick we'll learn all the language in a couple of sessions; then write a super fantastic program. In fact for some the first big accomplishment was typing in a program from a tutorial article and getting it to run. If you have typed in an Extended Basic program and known the frustration of debugging it then try comparing that to typing in a 30 line program and getting the message that the assembler has detected 120 errors.

Anyways, this basically same group is back together with a couple of new faces and for their next meeting their goal is to put the letter A on the screen and possibly have it do something such as blink or fill the screen or walk across the screen. If you think you are interested in learning about Assembly language programing there is room for more bodies and minds. The meetings are held at the members' homes. As yet the meetings are loose and unstructured. For additional info about the next meeting you may contact Mark Lamb at 419-531 4396.

Half Fast Term

There is a great program called FAST TERM which has some fantastic bells and whistles for modem users. However there have been some problems using it getting on the TI bbs and down loading from "Poor Richards" bbs. Regardless, it is slick and sharp for most communication uses. Based upon some glowing recomendations by a fairly knowlegable person I've ordered "4/a talk" which is supposed to overcome these problems. After my son Chris has burn tested this program I'll let you know "our" opinion.

Club Newsletters

The New Horizons club has packaged copies of newsletters from other clubs of TI users into notebooks. Members may check out one for their perusal. For example, I checked out a note book which contains newsletters from Iowa, Colorado, Indiana and Tennesee user groups. This gives members a chance to glean tidbits of informtion provided by other clubs which may have been overlooked for reprinting in our newsletter. So as they say in the big city -- check it out!

PRESENTATIONS

by Arthur Author
OH-MI-TI

At next months meeting February 14, 1986 don Turner will continue on his Basic tutorial from last months presentations. Also Dave Waldy will give a presentation on a program he wrote titled MENU PLANNER. Both of these presentations should be very interesting, plus disk sales and more.

BINARY SEARCH

by DAVID ROMER
NEW HORIZONS

One of the best uses of the power and speed of a computer is in the manipulation; storing, sorting and searching, of sets of information. Data base or file management programs are standard pieces of software for any computer system. Those kinds of programs, and others, always include some way to search the list of information or files to retrieve a particular item. The time required to execute a search depends greatly on the search method used, as certain methods are much faster than others. The speed of a search method is determined by the number of comparisons required to find a match or determine that a match

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does not exist. The fastest, most efficient method of searching a list is called a BINARY SEARCH.

Suppose, for a moment, that you are in a strange city (fairly small, just 50,000 telephones) and you find it is necessary to look up a phone number in the phone book. You open the phone book to find that there seems to be no rhyme or reason to the various entries; A's are mixed with U's, D's with B's. The entries seem to be in random order, certainly not the nice neat alphabetical by last name then first name listing you are used to seeing. (you conclude that this is due to the breakup of AT&T). At that point, to find the number you want, you must do a LINEAR SEARCH, the slowest search method. You must start at the beginning of the list and check EACH entry in succession until you find what you want. If you are lucky you will find what you want near the beginning of the list. However, it is entirely possible that you might have to make 50,000 comparisons to locate a match. You definitely will have to look at every entry to determine that there is NO match. Certainly a time consuming job.

Now had that phone book been in the usual alphabetical order, you would have estimated about where in the book the name you want might be. Then, based on the ORDER of the alphabet, you would go forward or backward narrowing the pages then names to be searched until the name and number you want is found. In effect, you were performing a BINARY SEARCH.
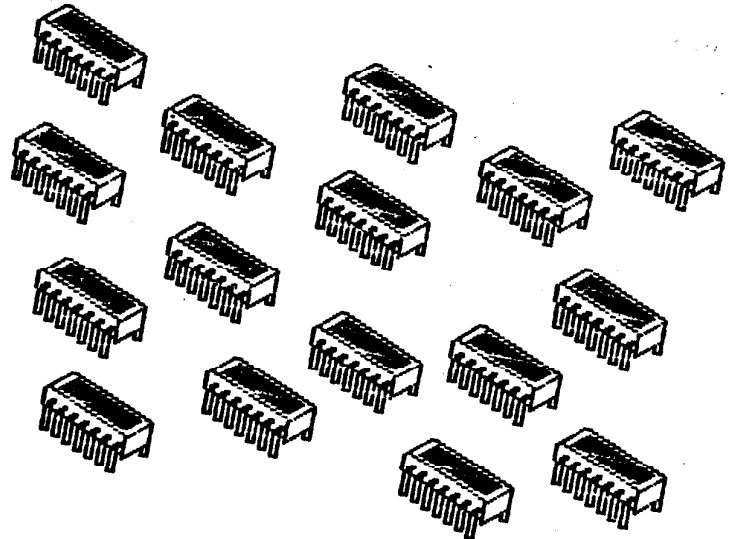
To use a binary search, the list to be searched must be in some kind of order. Alphabetical or numeric, ascending or descending is of no consequence as long as the order is known. If a computer is to perform a binary search you also need to know the number of items in the list. The basic concept of the binary search is to successively reduce the size of the list by eliminating, based on the order, large parts of the list were the item can not be until a match is found or the list is exhausted. The computer performs this task by dividing the list by 2 (thus the name binary) finding the midpoint. It then checks the item at the midpoint for a match. Based on whether a match is above or below the midpoint, the midpoint becomes either the start or the end of a new list HALF the length of the original. The same procedure is followed with the new list. This successive division of the list by 2 continues until a match is found or not found. Using this method any number in our imaginary 50,000 item phone book can be found by making a maximum of 17 comparisons.

DON'T JUST SIT
THERE,
HOP TO YOUR
NEXT TI

USERS GROUP
MEETING

REPAIR CENTER INVOICE

TEXAS INSTRUMENTS
INCORPORATED
P.O. BOX 2500
LUBBOCK, TEXAS 79408

Part #	Name	Price	Part #	Name	Price	Part #	Name	Price	Part #	Name	Price	Part #	Name	Price
1015960-0008	GROM.PHY F		1015960-0071	GROM WUMPU	3.80	1015960-0318	GROM. READ	9.90	1015960-0405	GROM.PLATO	3.60
1015960-0011	GROM.NUM.M	3.80	1015960-0097	GROM SOCCE	3.60	1015960-0319	GROM.NUM 1	3.80	1015960-0406	GROM.PLATO	3.60
1015960-0012	GROM.BEGRA	4.00	1015960-0098	GROM SOCCE	3.60	1015960-0320	GROM.NUM 1	3.80	1015960-0407	GROM.PLATO	3.60
1015960-0014	GROM.BEGRA	4.00	1015960-0101	GROM.MIND	4.00	1015960-0321	GROM.NUM 1	3.80	1015960-0408	GROM.PLATO	3.60
1015960-0015	GROM.H BUD	3.80	1015960-0102	GROM.P.R.E	3.80	1015960-0322	GROM.NUM 1	3.80	1015960-0445	GROM.FACEM	3.60
1015960-0022	GROM.CHESS	3.80	1015960-0103	GROM.P.R.E	3.80	1015960-0323	GROM.NUM 1	3.80	1015960-0446	GROM.FACEM	3.60
1015960-0023	GROM.CHESS	3.80	1015960-0104	GROM.P.R.E	3.80	1015960-0324	GROM.NUM 1	3.80	1015960-0447	GROM.SLYMO	3.60
1015960-0024	GROM.DEMO	4.00	1015960-0105	GROM.P.R.E	3.80	1015960-0325	GROM.NUM 1	3.00	1015960-0466	GROM.MOONM	3.60
1015960-0060	GROM.PER.R	3.80	1015960-0106	GROM.MUSIC	3.80	1015960-0326	IC.SNG/ELF	3.60	1015960-0467	GROM.MOONM	3.60
1015960-0061	GROM.PER.R	4.00	1015960-0107	GROM.MUSIC	3.80	1015960-0333	GROM.ALEAD	3.80	1015960-0468	GROM.MOONM	3.60
1015960-0062	GROM.PER.R	4.00	1015960-0108	GROM.MUSIC	3.80	1015960-0341	GROM.ALPIN	3.80	1015960-0469	GROM.MOONM	3.60
1015960-0063	GROM.PER.R	4.00	1015960-0111	GROM.PERRP	3.80	1015960-0342	GROM.ALPIN	4.00	1015960-0470	GROM.MOONM	3.60
1015960-0064	GROM STAT	3.60	1015960-0112	GROM.PERRP	3.80	1015960-0343	GROM.ALPIN	4.00	1015960-0490	GROM. STAR	3.60
1015960-0065	GROM.ST/SM	3.60	1015960-0115	GROM.EXT.B	4.00	1015960-0344	GROM.ALPIN	4.00	1015960-0491	GROM. STAR	3.60
1015960-0066	GROM STAT	3.60	1015960-0116	GROM.NUTRI	3.80	1015960-0345	GROM.DRAGM	9.90	1015960-0496	GROM. MASH	3.60
1015960-0067	GROM STAT	3.60	1015960-0117	GROM.NUTRI	3.80	1015960-0346	GROM.DRAGM	3.80	1015960-0497	GROM. MASH	3.60
1015960-0068	GROM STAT	3.80	1015960-0118	GROM.NUTRI	3.80	1015960-0347	GROM.MET M	3.80	1015960-0498	GROM. MASH	3.60
1015960-0069	GROM E/REA	3.80	1015960-0119	GROM.NUTRI	3.80	1015960-0348	GROM.MET M	3.80	1015960-1001	GROM.EARLR	3.60
1015960-0070	GROM E/REA	3.80	1015960-0121	GROM.AMAZI	3.60	1015960-0349	GROM.M/PLA	3.60	1015960-1002	GROM.EARLR	3.60
1015960-0072	GROM E/REA	3.80	1015960-0128	GROM.BLKJA	3.80	1015960-0350	GROM.M/PLA	3.60	1015960-1007	GROM.PHY F	3.80
1015960-0074	GROM.SECUR	3.80	1015960-0130	GROM.T.EMU	3.80	1015960-0351	GROM.M/PLA	3.60	1015960-1012	GROM.BEGRA	3.60
1015960-0075	GROM.SECUR	3.80	1015960-0131	GROM.SP/TE	3.80	1015960-0352	GROM.M/PLA	3.60	1015960-1013	GROM.BEGRA	3.60
1015960-0076	GROM.SECUR	3.80	1015960-0132	GROM.SP/TE	3.80	1015960-0353	GROM.M/PLA	3.60	1015960-1014	GROM.BEGRA	3.60
1015960-0077	GROM.SECUR	3.80	1015960-0134	GROM.A&S I	3.80	1015960-0368	GROM.DEC 1	3.80	1015960-1019	GROM.VGRAP	3.80

Part #	Name	Price	Part #	Name	Price	Part #	Name	Price	Part #	Name	Price
1015960-0135	GROM.A&S I	3.80	1015960-0189	GROM.RDGFU	3.80	1015960-1020	GROM.CHESS	3.80	1015960-2010	GROM.FOOTB	3.80
1015960-0136	GROM.A&S I	3.80	1015960-0190	GROM.RDGFU	3.80	1015960-1021	GROM.CHESS	3.80	1015960-2032	GROM.SPEEC	3.80
1015960-0137	GROM.A&S 2	3.80	1015960-0191	GROM.RDGFU	3.80	1015960-1026	GROM. DEMO	3.60	1015960-2127	GROM.T.EMU	3.80
1015960-0138	GROM.A&S 2	3.80	1015960-0192	GROM.RDGFU	3.80	1015960-1035	GROM.V.GAM	3.80	1015960-3115	GROM.EXT.B	3.60
1015960-0139	GROM.A&S 2	3.80	1015960-0210	GROM.RDGFU	3.80	1015960-1036	GROM.V.GAM	3.80	1015960-5224	GROM.STY M	3.60
1015960-0140	GROM. MULT	3.80	1015960-0211	GROM.INVAD	3.80	1015960-1060	GROM.PER.R	3.80	1015960-5225	GROM.STY M	3.60
1015960-0141	GROM. MULT	3.80	1015960-0212	GROM.ZEROZ	3.80	1015960-1061	GROM.PER.R	3.80	1015960-5227	GROM.MOONS	3.60
1015960-0142	GROM. MULT	3.80	1015960-0214	GROM.HANGM	3.80	1015960-1062	GROM.PER.R	3.80	1015960-5237	GROM.SEWER	3.60
1015960-0153	GROM.YAHTZ	3.80	1015960-0215	GROM.MINME	3.80	1015960-1063	GROM.PER.R	3.80	1015960-5253	GROM.MCH.M	3.60
1015960-0156	GROM. 4A 2	3.80	1015960-0216	GROM.RDROU	3.80	1015960-1071	GROM.E/REA	3.80	1015960-5254	GROM.MCH.M	3.60
1015960-0157	GROM. 4A 2	3.60	1015960-0217	GROM.RDROU	3.80	1015960-1073	GROM.E/REA	3.80	1015960-5281	GROM.TREAS	3.60
1015960-0168	GROM.TILOG	4.20	1015960-0218	GROM.RDROU	3.80	1015960-1092	GROM.T.I.R	3.60	1015960-5282	GROM.TREAS	3.60
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1015960-0170	GROM.TILOG	4.20	1015960-0220	GROM.RDROU	3.80	1015960-1094	GROM.T.I.R	3.60	1015960-5286	GROM.PIRAT	3.60
1015960-0171	GROM.TILOG	4.20	1015960-0221	GROM.MUNCH	4.00	1015960-1095	GROM.T.I.R	3.60	1015960-5287	GROM.PIRAT	3.60
1015960-0180	GROM P-COD	3.60	1015960-0222	GROM.SPELL	3.80	1015960-1113	GROM.T.I.R	3.60	1015960-5288	GROM.PIRAT	3.60
1015960-0181	GROM P-COD	3.60	1015960-0223	GROM.SPELL	3.80	1015960-1114	GROM.EXT.B	3.60	1015960-5289	GROM.PIRAT	3.60
1015960-0182	GROM P-COD	3.60	1015960-0224	GROM.SPELL	3.80	1015960-1120	GROM.EXT.B	3.60	1015960-5290	GROM.PIRAT	3.60
1015960-0183	GROM P-COD	3.60	1015960-0226	GROM.SPELL	3.80	1015960-1122	GROM.NUTRI	3.80	1015960-5296	GROM.CONGO	3.80
1015960-0184	GROM P-COD	3.60	1015960-0229	GROM.T.DOO	3.60	1015960-1129	GROM.EXT.B	3.60	1015960-5297	GROM.CONGO	3.80
1015960-0185	GROM P-COD	3.60	1015960-0230	GROM.T.DOO	3.60	1015960-1155	GROM.T.EMU	4.00			
1015960-0186	GROM P-COD	3.60	1015960-0231	GROM.T.DOO	3.60	1015960-1204	GROM.ED/AS	3.80			
1015960-0187	GROM P-COD	3.60	1015960-0232	GROM.T.DOO	3.60	1015960-2006	GROM. DIAG	5.40			
1015960-0188	GROM. TOMB	3.80	1015960-0233	GROM.T.DOO	3.60	1015960-2009	GROM.FOOTB	3.60			

Part #	Name	Price	Part #	Name	Price
1015960-0234	GROM.DSKMG	3.60	1015960-0280	GROM.M/ADD	3.80
1015960-0235	GROM.DSKMG	3.60	1015960-0283	GROM.M/DIV	3.60
1015960-0236	GROM.DIV 1	3.80	1015960-0284	GROM.M/LAW	3.80
1015960-0237	GROM.DIV 1	3.80	1015960-0286	GROM.M/FRA	3.80
1015960-0238	GROM.DIV 1	3.80	1015960-0287	GROM.M/FRA	3.80
1015960-0239	GROM.DIV 1	3.80	1015960-0289	GROM.M/DEC	3.60
1015960-0247	GROM.RDGFL	3.80	1015960-0290	GROM.M/PER	3.80
1015960-0248	GROM.RDGFL	3.80	1015960-0295	GROM.PARSE	3.80
1015960-0249	GROM.RDGFL	3.80	1015960-0296	GROM.PARSE	3.80
1015960-0250	GROM.RDGFL	3.80	1015960-0297	GROM.PARSE	3.80
1015960-0251	GROM.RDGFL	3.80	1015960-0298	GROM.ALLMI	3.80
1015960-0252	GROM. MATH	3.80	1015960-0299	GROM.ALLMI	3.80
1015960-0253	GROM. MATH	3.90	1015960-0303	GROM.MINUS	3.80
1015960-0254	GROM. MATH	3.80	1015960-0304	GROM.MINUS	3.80
1015960-0255	GROM.LOGO1	3.60	1015960-0305	GROM.RDRAL	3.80
1015960-0256	GROM.LOGO1	3.60	1015960-0306	GROM.RDRAL	3.80
1015960-0257	GROM.LOGO1	3.60	1015960-0307	GROM.RDRAL	3.80
1015960-0258	GROM.TCHTY	3.80	1015960-0308	GROM.RDRAL	3.80
1015960-0259	GROM.TCHTY	3.80	1015960-0309	GROM.RDRAL	3.80
1015960-0260	GROM.TCHTY	3.80	1015960-0313	GROM.4A AR	4.20
1015960-0261	GROM.CHISH	3.80	1015960-0314	GROM. READ	3.60
1015960-0262	GROM.MTH-G	3.80	1015960-0315	GROM. READ	3.60
1015960-0263	GROM.MTH-G	3.80	1015960-0316	GROM. READ	3.60
1015960-0278	GROM.M/COM	3.60	1015960-0317	GROM. READ	3.60

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Part #	Name	Price
1053555-0107	T/C BIEGE SCREW	.36
1056412-0101	T/C BIEGE SNAP	.38
1053554-0107	B/C BIEGE SCREW	.30
1056411-0101	B/C BIEGE SNAP	.34
1015923-0007	MODULE DOOR BIEGE	.06
1015923-0001	SPRING	.05
1015921-0004	PCB	3.60
1037200-0004	PCB	1.94
1501701-0122	CAP .1UF 50V	.14
1500773-0033	RES. 100 OHM	.02
1010685-0034	SCREW	.02

TI99/4A IS ALIVE & WELL
Kent A. Sheets
1673 S. North Curtice Rd.
Curtice, Ohio 43412

THE JOYS OF HAVING A HORIZON RAMDISK!

by Bill Sager
NEW HORIZONS

As I write this, I have only had my own Horizon RAMDISK for a few days so this is not intended to a be a review. Instead, I just want to share with you some of the "joys" that one can expect once they slide one of these terrific little boards into the TI expansion box.

The speed of operation is truly amazing! And with speed comes convenience. Just setup the "resident memory" DM-1000 to do many of the ordinary and computer housekeeping chores very rapidly. With the Horizon Ramdisk you receive the most recent version of Disk Manager 1000 and a DM-1000 printed manual. Simply type <CALL DM> and this famed disk manager package is loaded in 1-3 seconds, ready to perform all those necessary tasks. You can't switch modules that fast! By the way, no module is required, just do this in TI BASIC or EXTENDED BASIC.

Of course, programs that access a disk are going to be big beneficiaries of the speed factor. Some games that build new screens at each level operate really slick from the RAMDISK.

Another joy is the battery backed feature. Turn on the system, and have immediate access to everything on the RAMDISK, such as DM-1000 or TI-Writer. It's all there, just like you left it. There is no reloading or extra plug in transformers that are subject to power failures or glitches. The rechargeable batteries mounted on the card are reportedly capable of lasting from five to ten years with only limited system use.

One of the other great joys is the ability to name the Horizon RAMDISK as any drive from 1-6. Again, this is done with a simple <CALL DN(n)>, where n is the number of the drive. Those with the TI disk controller card are no longer limited to three drives. Your ramdisk can be drive four. That is because the ramdisk is not a disk drive but a solid state device and software combination that emulates what a disk drive and diskette would do. When you designate the ramdisk with a drive number it will disable that mechanical disk drive automatically when it is referred to by number. BUT, the

ability to use that drive remains. Just refer to the name of the disk in the drive to load, run, and save from or to it.

If anyone has any fears that use of the Horizon RAMDISK requires anything other than ordinary user knowledge, rest assured it does not. The preliminary manual is throughly written, well organized and another one of the joys. The final manual should be nothing less than superb.

For the hackers, programers, experimenters, and others who wish to explore the potential of this device, the source code for the operating system will be included. Assembly language programmers can write their own CALL routines. Surely, all of the worthwhile enhancements from Horizon RAMDISK users will circulate to RAMDISK owners. Because of the full disclosure of information and architecture, there very likely will be an abundance of "new" developments in months rather than years.

Those of us in the New Horizons group have had the privilege of seeing the RAMDISK and it's forerunners at many of the meetings over the past months. By the time you read this the Horizon Ramdisk should be available to order either as a finished unit or as a bare board with manual and software (you buy other parts, assemble and solder; instructions included but prior experience building electronics projects is assumed). Fully built and warranteed units are available in 360 or 720 sector sizes ("single" or "double" sided). Prices, subject to change, are $50 for the build-it-yourself option, $180 for the single-sided unit and $230 for the double-sided unit.

The $50 price does not include parts. If you choose to build your own RAMDISK, you have to buy the parts separately. The parts needed for the single sided kit will cost about $75. The eleven extra memory chips required to go from 360 to 720 sectors cost about $33. A list of sources for parts will be included. Anyone interested in building the kit locally, contact David Romer for an order form. Individuals not in this area may write to: Horizon Computer Limited, Box 554, Walbridge, OH 43465.

Earlier I mentioned that the most recent version of DM-1000, maintained and overseen by The Ottawa TI-99/4A Users Group, was included along with every Horizon Ramdisk. What better example of the talent and cooperation that exists among TI users groups than this unique effort. Here are two groups, located hundred of miles apart, in different countries, giving our TI-99/4A's new life. Just like so many of us humans, our TI's may be getting older - but they are also getting BETTER!

NEWSLETTERS

by Roger Biddle
Oh-MI-TI

I have a box full of other clubs newsletters full of information. I will have these newsletters at the next meeting. These newsletters are available to any club member to take home and read over, but they have to be returned at the next meeting. Many of them have very good articles covering hints,tips,reviews on hardware and software.

LAWS & MAXIMS
compiled by:
Bill Tiep

New Horizons

TOLEDO HIGHWAY LAW:

Highways in the worst need of repair naturally have low traffic counts, which result in low priority for repair work.

CUSHMANS LAW:

A fail-safe circuit will destroy others.

FROUD'S LAW:

A transistor protected by a fast acting fuse will protect the fuse by blowing first.

SATTINGLER'S LAW:

It works better if you plug it in.

WESCOTT'S POSTULATIUMS AD AD NAUSIA:

On Creating Programs; Pick your program as you would your nose. Remember, never in so deep that it becomes uncomfortable and whatever comes out is not of interest to others.

GOING FORTH

Part 2

by Les Koth

If we piqued your interest in FORTH from the last newsletter article then you may have some questions about FORTH like where do I get the software and how do I start up? The Wycove version of FORTH can be obtained from most of the software houses that still support the TI-99 and usually carries a price tag of $40 to $50 which is well worth it considering that this version is fully supported on both disk and cassette and comes with all kinds of documentation as well as a number of documented extensions of the language which aid in building your own applications. The TI version of FORTH is certainly not as well supported nor is it as "user friendly" as the Wycove version but it is still a tremendous bargain which can be obtained from any of the "officially recognized" TI users groups for nothing more than the cost of the disk it comes on. The TI version also has some very useful extensions which parallel the Wycove version. It should be possible to put the TI version on cassette (this is one of the projects I'm working on--it will enable me to carry TI FORTH anywhere I take my memory-expanded console).

The following may seem redundant if you already have a FORTH system but I thought I would reveiw it anyway for the benefit of those who may be considering it and haven't taken the plunge yet. Hardware-wise you will need as a minimum:

    32K memory expansion
    Either Editor/Assembler,
    Mini-Memory or Extended
    BASIC command module and
    SSSD disk drive capability.

If you get the Wycove version you can use any of the three command modules in conjunction with cassette or disk-drive. The TI version manual says you need Editor/Assembler to load and run from disk but I have been using one of the versions available to our group which is on "HORIZON-22" and is the XBASIC version; i.e. it requires the XBASIC command module to load and run. Horizon disks #9 and #10 have the assembler source code for TI FORTH also.

Regardless of which system you get you should cover the write-protect notch of your orgininal disk and MAKE A BACK-UP COPY IMMEDIATELY! Then put your write-protected orignal somewhere safe and use the copy! The virtual memory system which FORTH uses will automatically write out to your system disk whether you want it to or not if you start editing screens--and its very easy to put errors on a screen and have it over-write your formerly error/free master-disk! This usually happens when you inspect a screen by editing rather than listing and make an error with the cursor keys or the escape sequence and instead of getting the desired result you leave an extra "D", "S" or some other strange character in place of correct code on the screen. FORTH then diligently assumes that you wanted this new code to be written out to disk as the updated copy of the screen.

Anyways, assuming that you have obtained one of the FORTH versions and are ready to start up here goes! For the TI FORTH version on the XBASIC disk you just put it in drive 1 and go into XBASIC from the title screen. The load program automatically loads "FORTHXB" and "_DSRLNK" and links to the "BOOT" program. You just sit back and watch the screen which will first inform you that it is booting and will then welcome you to TI FORTH. After this you will get a menu which will say something like the following:

```
-SYNONYMS -EDITOR -COPY  -DUMP
-TRACE    -FLOAT  -TEXT  -GRAPH1
-MULTI    -GRAPH2 -SPLIT -VDPMODES
-GRAPH    -FILE   -PRINT -CODE
-ASSEMBLER-64SUPPORT -BSAVE
-CRU
```

Although it is not at all obvious to the beginner, each of the above words in the menu will load whatever screens are needed to perform that set of functions. Appendix F of the TI FORTH instruction manual details all of the words that are added to the dictionary when each set of these screens is loaded. If you are starting out I would recommend that you load the following:

```
-EDITOR   -DUMP   -VDPMODES
```

This will allow you to explore some of the features of TI FORTH. All you do to load these is type them in just as you see them, from the keyboard and make sure that you leave a space

between each word. Then press "enter" and let TI FORTH load the words into your dictionary.

If you have Wycove FORTH just follow the very complete instructions in the manual which comes with your software. Incidentally, it takes 3 minutes 26 seconds to load from cassette using the E/A option and less than 2 seconds to load from the Horizons RAM disk! When FORTH is properly loaded you will see the Wycove copyright and a very fast blinking cursor (which you can control the shape and blink rate of).

Wycove does not provide you with a menu as TI FORTH does but the distribution disk includes sufficient words already loaded into the dictionary to get you started exploring.

As I mentioned in the last article, using FORTH is like using TI BASIC in command mode. You type in words separated by spaces and then "enter". The word or words which you typed in are then executed in the order that you typed them in. If you are familiar with TI LOGO it is exactly the same type of execution. Also, like TI LOGO, you can define procedures or words by combining other words into what is called a "colon definition". Colon definitions add words to the dictionary and can then be executed like any other word already in the dictionary. So what is this dictionary? Let's see whats in the dictionary by executing a FORTH word. If you have loaded -DUMP in TI FORTH or started up the Wycove version from the distribution disk or cassette you can now type in the word VLIST and "enter". In Wycove your screen will fill with a lot of different words, some of which may look familiar and some will seem strange (if you are unfamiliar with FORTH). In TI Forth essentially the same thing will happen except that you may only get one word and then it will stop. If this happens press any key and the listing of the dictionary will continue. Both versions have a "pause" feature similar to the pause feature of Disk Manager 2 when cataloging a disk. The listing starts and continues until any key is pressed at which point it pauses and awaits the next key-press to resume listing. I have found that sometimes in the TI version that the enter key gets read as a key-press immediately following the word VLIST and listing pauses after printing only the top word in the dictionary. It will resume

at the next press of any key. In both versions if you press FCTN 4 the listing process will abort and leave you with "ok". You will get the "ok" prompt each time FORTH has finished executing a command. If you entered no command but pressed "enter" you will still get an "ok" which signifies that FORTH has checked to see if any words needed to be executed or numbers were present to be put on the stack and it has completed those tasks.

There are several good introductory books on FORTH (some of which I have listed as references at the end of this article) most of which start the beginner with some kind of exercise making simple graphics on the terminal screen, using asterisks or letters and numbers. This is not a bad way to get your feet wet in FORTH programming so I thought we might take on the ambitious project of developing a FORTH word which will automatically clear the screen and print something like:

```
TTTTTTTTT          IIIIIIIII
    T                    I
    T                    I
    T                    I
    T                    I
    T                    I
    T                    I
    T              IIIIIIIII

  999                999
 9   9             9   9
 9   9             9   9
 99999             99999
    9                  9
    9                  9
 9999              9999
```

This will give us an introduction to top-down design bottom-up programming, colon definitions, printing ASCII characters and depending on how brave you are—screen editing.

If you are familiar with TI LOGO then you probably already understand top-down design bottom-up programming (TDDDBUP for short). You decide what your overall end-goals are and then break them into sub-goals and sub-sub-goals etc. Then you start by programming the smallest piece and testing it out. As you complete each small piece you combine them and test the larger pieces until you have completed and tested the whole application. This keeps things simple and still lets you build powerful complex applications whose reliability you can have confidence in. One key difference between LOGO and FORTH is that FORTH requires

bottom-up programming. If you start by defining your top level words in terms of lower-level words that are not yet in the dictionary FORTH will make them unavailable to you because it wont know how to compile them into the dictionary (in LOGO you can define top-down or bottom-up and LOGO wont mind unless you try to execute an undefined procedure).

Let's start by looking at the above design. It represents our overall end-goal. One intermediate goal is to produce the individual 'T's and 'I's. FORTH has two words which are very similiar to the "TO" and "END" words in LOGO. They are : (colon) and ; (semicolon). The : is used to tell FORTH that any input following it is to be compiled into the dictionary for future use and the ; tells FORTH to stop compiling. To make a colon definition for a word we start by entering a colon, a space andthe name of the word that we will use to refer to our procedure or definition. Follow the name with another space and then any combination of words (which are already in the dictionary) separated by spaces and finally a space and semicolon. Now when you press "enter" the FORTH interpreter compiles the definition into the dictionary under the name that you used immediately following the colon This name can be up to 31 characters long and may be any combination of the 255 ASCII characters--including names that are already in the dictionary (although usually you don't want to use a name that is already in the dictionary--FORTH uses the most recent one).

Getting back to our project it would be nice to have a word which would print a capital 'T'. FORTH has a word called EMIT which enables any of the 255 ASCII characters to be printed on the terminal screen. This word takes whatever number is on the stack and prints its ASCII representation on the screen. The ASCII decimal number for 'T' is 84 and for 'I' is 73. Try typing in the following:

    : T 84 EMIT ; <enter>

If you are successful FORTH will say "ok". If you made an error (by leaving out a space for instance) FORTH will instead print the name or word it didn't understand followed by a "?". If FORTH printed a word and a ? you will need to remove it from the dictionary. This is done by typing in:

    SMUDGE FORGET T <enter>

The word SMUDGE is used only with words that were compiled incorrectly. If you type the word in and get the word followed by a ? and then VLIST and find it in the dictionary then it has been compiled incorrectly. Another way of checking for a correctly compiled word is to use:

    ' WORD <enter>

If the word is compiled correctly then you will get "ok". Otherwise the word will be echoed back with a ?.

```
SCREEN # 67
 0 ( Screen to print TI 99 )
 1
 2 : T 84 EMIT : : TOP1 10 1 DO T LOOP ;
 3 : TOP2 10 SPACES ;     : "I 73 EMIT ;
 4 : TOP3 10 1 DO "I LOOP  ;
 5 : TOP 12 EMIT  TOP1 TOP2 TOP3  ;
 6 : MID 7 1 DO 4 SPACES T 18 SPACES  "I CR
 7   LOOP 4 SPACES T 14 SPACES TOP3 ;
 8 : PRINT9 57 EMIT ;
 9 : 3PRINT9 4 1 DO PRINT9 LOOP ;
10 : 6PRINT9 SPACE 3PRINT9 15 SPACES 3PRINT9
11
12 : 4PRINT9 PRINT9 3 SPACES PRINT9 13 SPACES
13       PRINT9 3     SPACES PRINT9 CR ;
14 : 10PRINT9  6 1 DO PRINT9 LOOP 13 SPACES
15   6 1 DO PRINT9 LOOP CR ;
16 : 2PRINT9 4 SPACES PRINT9 17 SPACES PRINT9
17    CR ;
18 : 8PRINT9 5 1 DO PRINT9 LOOP 14 SPACES
19   5 1 DO PRINT9 LOOP ;
20 : PRINT99 CR 6PRINT9 CR 4PRINT9 4PRINT9
21   10PRINT9 2PRINT9 2PRINT9 8PRINT9 CR ;
22 : TI99 TOP MID CR CR PRINT99 CR CR CR ;
23
24
25
```

FORGET can be used (without SMUDGE) to remove any word from the dictionary but it also removes all other words between itself and the most recent dictionary entry. If you type VLIST you will see that the first word following VLIST (pause the screen if necessary) is the one you just typed in. Now lets try our word. Type:

        T <enter>

You should get a second T right after the one you typed in and then "ok".

Next it would be nice to have FORTH repeatedly type out T's so we can make the top part of the 'T' figure. Type in:

: TOP1 10 1 DO T LOOP ;   <enter>

This is an example of a 'DO' loop control structure in FORTH which allows us to repeat the word or words between DO and LOOP however many times the index values preceding DO indicate. In this case 10 is the starting number and execution will cease when we reach 1. This will print 9 T's (not 10). When the index reaches the lower limit the loop is exited. Try typing in:

        TOP1 <enter>

and see what you get. If your screen is cluttered by now, type:

        CLS <enter>

This EMITs an ASCII form-feed (FF) to the terminal and places the cursor in the upper left corner of the screen. If you successfully entered TOP1 you should be able to print 9 T's in a row. Now type in:

    : "I 73 EMIT ; <enter>

We use "I rather than 1 because I is already defined in the dictionary. Now type in:

    : TOP2 10 SPACES ; <enter>

This will print 10 blank spaces on the screen. Finally type:

    : TOP3 10 1 DO "I LOOP ; <enter>

This will print a row of 9 I's when you type in TOP3. We can now combine all of our work into one word:

    : TOP 12 EMIT TOP1 TOP2 TOP3 ;

This word (TOP) should clear the screen and print 9 T's, 10 spaces and 9 I's when you type in the word TOP. If you have gotten this far , you have basic experience in FORTH colon definitions and DO loops as well as the ability to see what you have put in the dictionary. Following this article is a FORTH screen listing of the rest of the definitions necessary to produce the TI 99 graphic. If you have successfully entered TOP (line 5) then continue with line 6 and enter and test each definition.

Finally, after entering line 22 type in TI99 <enter> and see what you get. Next time we will discuss how to put these definitions on a "screen" so you don't have to type them in every time.

FORTH References:

"Starting FORTH", Leo Brody, FORTH Inc., Prentice Hall,1981

"Wycove FORTH for the TI 99/4a home computer", Tim MacEachern, Wycove Systems Ltd, P.O. Box 499, Dartmouth Nova Scotia, b2y 3y8 Canada. 1984

"The Complete FORTH", A.F.T. Winfield, Sigma/WIley, 1983

"Learning FORTH", Margaret A. Armstrong, John WIley Sons, 1985

MORE TI-WRITER TRICKS

Thanks to Jim Peterson in his tips #26 for the information and the idea for these tricks for use in the EDITOR: On page 139 of your 6EMINI-10X USERS MANUAL it mentions "Other Function Codes", which Jim explains is a way to tell your printer to print the special characters built into it. To print those characters shown below in parenthesis, enter CTRL U FCTN R CTRL U SHIFT > followed by the character in the last column. For example, to print a left arrow enter CTRL U FCTN R CTRL U SHIFT > &. To stop this feature, enter CTRL U FCTN R CTRL U SHIFT > &. The columns listed are: Gemini ASCII code, constant of 128, TI-WRITER ASCII code, printer character, and character to enter.

[ASCII character code reference table: each entry lists a Gemini ASCII code (33, 35, 37 … 127 in the upper block; 32, 34, 36 … 126 in the lower block), the constant 128, and the resulting TI-WRITER ASCII code (161, 163 … 255 in the upper block; 160, 162 … 254 in the lower block), together with the corresponding printer character.]

- PRINTING WITH MULTIPLAN -

By Homer Crabtree

When I give my opinion of Microsoft Multiplan used with the 99/4A, I say it is as good as with any other computer except you do not have printer control. For an example, you can not have enlarged header with emphasized titles. Well, things have changed thanks to the User Notes in Micropendium.

The trick is accomplished by creating a spreadsheet, saving it as SYLK file, and then use DISKO to insert the printer control commands into the SYLK file. Then by copying the command to other spreadsheets, you can change fonts, pitch, and other features your printer has.

I will have a copy of my printer control file with me at the next meeting if you want a copy. It controls a Gemini.

The following steps show how this is done:

With multiplan, create a spreadsheet with "ABC" in cell R1C1.

Use the NAME command to name this cell "cond" for condensed.

Press T then O and select Symbolic.

press T then Save to a newly initialized disk.

With DISKO, look in sector 22 for "ABC" or Hex >41 >42 >43 and change it to >1B >42 >33.

Go to multiplan and Transfer, Option (Symbolic), Transfer Load file, then T, O (normal). T, S to new file name.

Now you are ready to use it:

Load any spreadsheet (e.g. SPENCER).

In an empty cell press Xtern, Copy, enter name of printer control file, Tab (CTRL 2), enter cond (name of cell to copy).

Print your spreadsheet. It should be condensed.

The above works for a Gemini. The control codes vary with each printer and should be listed in the printer reference manual.

Now, if you put one control code in one cell, you can see you could have many codes in one spreadsheet, then copy a cell as needed.

This is a list of printer control codes in my print control spreadsheet:

CC	Abbr.	Printer Function
AS	FNTASC	ASCII FONT
IT	FNTITL	ITALIC FONT
PC	PITCOND	PITCH CONDENSED
PE	PITELITE	PITCH ELITE
PL	PITLARGE	PITCH ENLARGED
PN	PITNORM	PITCH NORMAL
PP	PITPICA	PITCH PICA
DS	DBLSTK	DOUBLE-STRIKE
CD	CANDBLSTK	CANCEL DOUBLE-STRIKE
EM	EMPH	EMPHASIZED
CE	CANEMPH	CANCEL EMPHASIZED
BS	SUBSCP	SUBSCRIPT
PS	SUPSCP	SUPER SCRIPT
CS	CANSUBSUP	CANCEL SUB/SUPER SCRIPT
UL	UNDLIN	UNDERLINE
CU	CANUNDLIN	CANCEL UNDERLINE
BD	BIDIR	BI-DIRECTIONAL
UD	UNIDIR	UNI-DIRECTIONAL
EJ	EJECT	EJECT PAGE
L6	LPI6	LINES PER INCH-6
L8	LPI8	LINES PER INCH-8
M5	LMAR5	LEFT MARGIN 5
M10	LMAR10	LEFT MARGIN 10
M15	LMAR15	LEFT MARGIN 15
IN	INIT	INITIALIZE PRINTER

NOTES

MODIFY EARLY MODULES

Kent Maxwell found a way to be able to print the Weight Control & Nutrition Module and the Tax Investment Record Keeping Module to a parallel printer. (*Editor's Note: TI produced these modules prior to the availability of an RS232 card with a PIO output, so the menus did not provide for same.*)

The procedure is as follows:

1. When setting up your files, tell the computer that you will not be using a printer, then create your data files accordingly.

2. When reviewing the files, put in any fictitious printer call up (i.e., RS232/8) and the computer will indicate *DEVICE NOT FOUND*. At this time, enter in PIO, and the computer will allow access to a parallel printer.

The procedure may vary slightly between the various early modules, but the key is to avoid a printer identification in the data unit, process, then put it in later when recalling and reviewing the previously entered data.

Kent Maxwell is an avid TI enthusiast who is employed with the VA Hospital in Sepulveda, California on the security force, and is also a member of Tex-Comp's technical consulting group.

TURNER'S GET NEW UNIT

CONGRATULATIONS to Don and Joan Turner on the birth of their new son. Michael John was born January 15 and weighed in at 6 lb 1 oz.

We understand Don has been busy teaching Michael John the first two introductory lessons to BASIC, and are happy to see the next generation of 99/4A users getting off to a good start!

SUPPORT YOUR NEWSLETTER -- WIN A PRIZE!

John Clulow
New Horizons

Over the past three years someone has had to struggle each month with getting the newsletter together. This month it happened to be me. As the deadline rolled around, I realized we didn't have very many articles.

Luckily, Kent Sheets came through again with lots of very good material. While many people have made contributions to the newsletter over the past three years, Kent has taken the time to submit material month after month.

We're all greatful for Kent's continuing support of the newsletter. If you read and enjoy it, why not consider submitting something yourself? You don't have to do it every month like Kent. Even one contribution a year would be good. We all pay our dues, but that doesn't "buy" the newsletter. It pays for the paper, copying, and mailing costs, but somebody has to provide the content. If we all waited each month for the newsletter to arrive, it wouldn't.

Everyone has an excuse why they can't contribute something. Some people don't think they know enough about the computer. Some people think they can't write well. And nobody has enough time.

Your contributions to the newsletter can take several forms. Suppose you run across an interesting article in another group's newsletter -- why not share it with our members? If you hear an interesting piece of information about our computer, jot down a few sentences about it and drop it in the mail. If your into programming, you could help other interested members learn by writing a few program lines and explaining how they work. If you find a useful piece of hardware or software, let the rest of us know. How about a good computer cartoon or some printer graphics? If you're having a problem with any aspect of TI use, let us know and we'll find out the answer and share it with everyone else.

NEWSLETTER PRIZE

For the month of March only, you have the opportunity to get a free program disk or tape if you make a contribution to the newsletter. This will be some special programs not available on club disks.

The only requirement is that we receive your contribution by March 1. If, as we fully expect, EVERY MEMBER commits themselves to submit something, we should have enough material for several months.

FOR SALE

Ed Menasian has the following items for sale. If you are interested in any of them, Ed will be at the next OH-MI-TI and New Horizons meeting or you can call him at 693-2167.

$45 each	Two new beige consoles, version 2.2	
$40	new TI Extended BASIC module	
$10	Space Bandits - use w/Milton Bradly MBX	
$ 5 each	Game Modules - Chisolm Trail, Hangman, Connect 4, Video Games 1 2 and 3, Tombstone City	
$15	Music Maker Command Module	
$15	Tax Investment Record Keeping	
$10	Parsec	
? Offer	Back Issues of several magazines... Home Computer, Family Comp., Compute	

TI-WRITER AIDS

TI-WRITER MNEMONIC (MEMORY) TRICKS

This handy memory aid to TI-Writer commands appeared in the October issue of ROM, Users Group of Orange County.

CTRL	MNEMONIC	FUNCTION	ALTERNATE
A	ADVANCE DOWN	ROLL DOWN	FCTN 4
B	BACK UP	ROLL UP	FCTN 6
C	COMMAND MODE	COMMAND MODE	FCTN 9
F	FLYAWAY CHARACTER	DELETE CHARACTER	FCTN 1
G	GET A HOLE FOR CHAR	INSERT CHARACTER	FCTN 2
H	HOP BACK TO LAST	LAST PARAGRAPH	CTRL 4
I	INDENT	TAB	FCTN 7
J	JUMP TO NEXT	NEXT PARAGRAPH	CTRL 4
K	KILL TO END OF LINE	DELETE TO LINE END	-
L	LEAP HOME	HOME CURSOR	-
M	MAKE NEW PARAGRAPH	NEW PARAGRAPH	CTRL 8
N	NO MORE LINE	DELETE LINE	FCTN 3
O	OPEN BLANK LINE	INSERT BLANK LINE	FCTN 8
P	PAGE BEGINNING	NEW PAGE	CTRL 9
R	REFORMAT	REFORMAT	CTRL 2
T	TAB BACK	BACK TAB	-
V	VEER TO LEFT	CURSOR TO LINE START	-
W	WORD TAB	WORD TAB	CTRL 7
Y	YANK MARGIN CONTROL	LEFT MARGIN RELEASE	-
Z	ZIP BACK	OOPS!!	CTRL 1
.	-	SCREEN COLOR	CTRL 3
-	-	DUPE LINE	CTRL 5
-	-	NEXT WINDOW -->)	FCTN 5
-	-	WORD WRAP	CTRL 0
-	-	LINE NUMBERS ON/OFF	FCTN 8

Note: The arrow keys work the same with either the Function key or the Control Key.

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by Kent A. Sheets OH-MI-TI   01/01/86