Sackville N.S.
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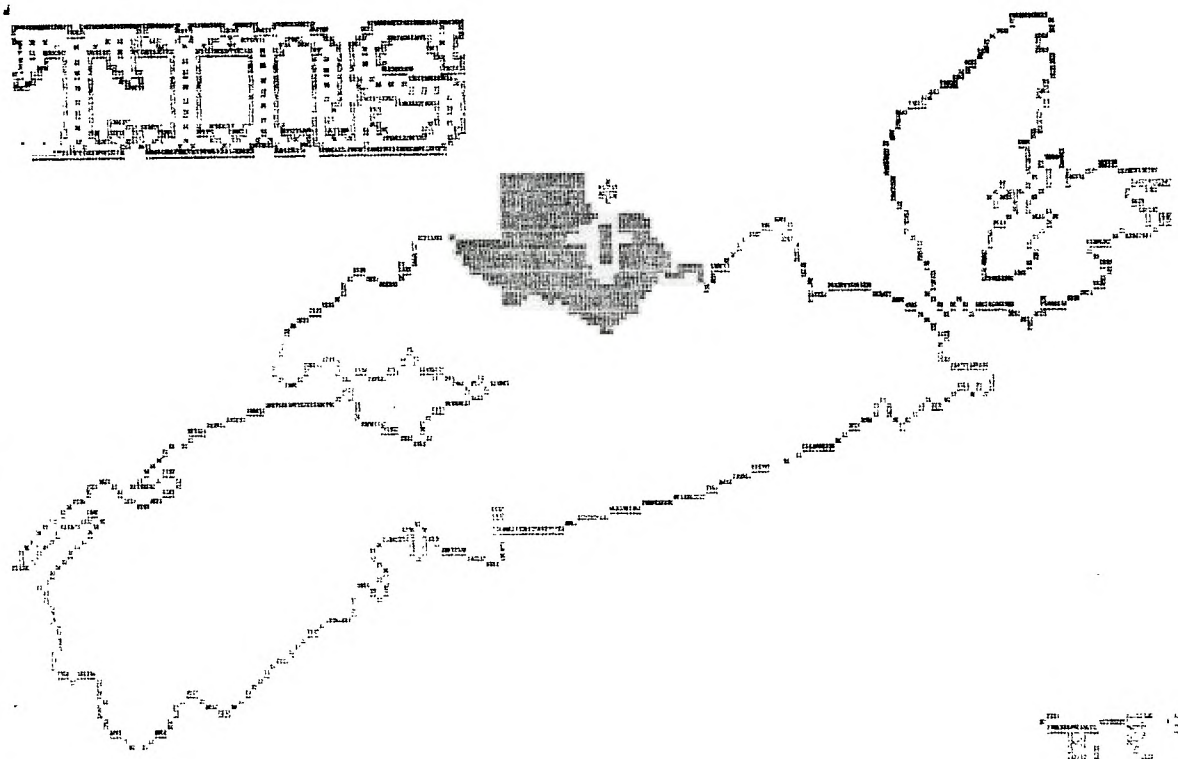
TIDS



FEB 86

Texas Instrument
Home Computer User Group of Nova Scotia

321 Iony Hill, Lr.Sackville,NS, B4E 1M6 Canada

TINS Newsletter

[redacted]

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The Nesletter is on sale to members for $1.00 per copy, non-members $1.50. The price of each issue is solely to defray publication costs and does not represent profit. Prices for annual subscription are $18.00.

Back issues of the Newsletter are available on written request from the editor, at $1 per issue. First 3 disks of "The Best of TINS" on disk is available at $3.00 per disk, contact editor.

All queries and newsletters should be forwarded to the address below, other correspondence should be directed to the Club at PO Box 3391, Dartmouth East, N.S. B2W 3G3.

[redacted]

Disk Library

[redacted]

The TINS disk Library is ever exspanding and will be continuing to do so as long as every one continues to support it. We have a good varity of programs set up into two(2) sections. The first an assortment of programs that have been around for a while, yet there are still some very nice programs here for anyone interested. Many of the programs here are suitable for members with only limited memory and a disk system.

For those with memory exspansion all the programs of the old Library section are avaible with the exception of a few which need the editor assembler modual in order to run them. Their are some basic and some extended basic programs. We have many of the programs from the HCM (magasine) on disk as well as learn extended basic and learn basic tutors.

The newer section of the Library contains mostly upgraded programs which require a full system to run. In this section we have many excelent programs like Funnelware the TI-Writer on disk with complete compatability with the features of the original modual, plus an extensive selection of utility programs run by menu on option 3 of the main program. A new version of Fast-term is now in the library giving you immage format on disk, loads quickly and uses the auto boot feature from extended basic. All features are loaded simutaniously, come to the next meeting and see these and many other varied and interesting programs. See Enhansed TI forth still not as good as Whycoe but it is better, extended basic II and meny other interesting programs.

I am looking at ways to make the library more accestable to members and to provide a better index with some discriptions of the programs, if anyone has any good ideas please come to the next meeting and advise me. Your sugestions will be welcome.

---Ron W.Weagle---

---Disk Libraian TINS---

Frank Geitzler

The parallel port on the TI has a 16-pin male DIP connector. I have found that TI has numbered the pins in a zig-zag fashion, with pin one being on your right hand, as far as possible from you, when you face the PEB from the front. Pin two is beside pin one (on your left hand). Pin 15, therefore, is on the right hand, towards the front of the PEB, and pin 16 is on the left hand, also at the front of the PEB. There is a keyway slot on the right side of the socket.

The parallel port in most printers contains a 36-contact D-shaped female connector known as a Centronics connector.

The following cable connections have been found to work on An Epson printer, a TI impact printer, and a Riteman printer. Please be aware that neither the Newsletter nor tha author can accept any responsibility for damage resulting from the use of this information.

So much for the theory. Now to put it into practice. required:

1 16-pin DIP socket,
1 Centronics Connector,
cable (minimum 12-conductor)

Parts can be obtained from Sector Software, for about $13. plus cable, or from Radio Shack for slightly more. The 16-pin socket is actually a 34-pin edge header, c in half with a hot knife soldering iron tip. The ribbo cable can be cut down from 25-conductor or 34-conductor cable, and should cost between $1. and $1.50 per foot.

The 34-pin header is insulation-displacement type. I suggest that you use a solder-type Centronics connector, rather than an insulation-displacement type, because the wires do not line up as neatly in the Centronics connector, and it is simpler to solder them.

I understand that this 12-wire connection will not work with an Okidata printer, since the cable required to connect the TI to an Okidata requires some active components (resistors, capacitors, and/or a chip). I have read several letters in Home Computer Magazine which suggest some components which 'may' work, but I have not yet had access to an Okidata printer to experiment. I'll let you know how it works out

TI Connector layout

2	1
4	3
6	5
8	7 key
10	9
12	11 Note that pin numbers are shown looking at the front,
14	13 than the cable side, of each connector.
16	15

Centronics connector layout

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36

TI pin	Function	Centronics pin	Printer Definition
1	Handshake OUT	1	Data Strobe IN (Pulse low)
2	Data, LSB	2	Data, 0
3	Data, 1	3	Data, 1
4	Data, 2	4	Data, 2
5	Data, 3	5	Data, 3
6	Data, 4	6	Data, 4
7	Data, 5	7	Data, 5
8	Data, 6	8	Data, 6
9	Data, MSB	9	Data, 7
10	Handshake IN	11	BUSY
11	Logic Ground	19	Signal Ground
12	10-ohm pull-up resistor to +5V	Not Connected	
13	Spare Input Bit	Not Connected	
14	Spare Output Bit	Not Connected	
15	1k pull-up resistor to +5V	Not Connected	
16	Logic Ground	16	0V

For those of you who prefer to let someone else do t work, I am prepared to wire up a 5-foot ribbon cabl connected as above, for $25. plus $2.50 tax, togeth with $2.50 to cover postage and handling (if required Please send your cheque or money order to:
Frank Geitzler,
5 Leamon Dr., Dartmouth B3A 2K4.

The following signals on the printer Centronics connector were not connected to the TI connector:

10	Acknowledge (OUT)	12	Paper Empty (OUT)
13	Select (OUT)	14	Auto Feed (IN)
15	Not Connected	17	Chassis Ground
18	+5V (OUT)	21-30	Ground
31	Input Prime (IN)	32	Fault (OUT)
33	Ground	34-35	Not Connected
36	Select In (IN)		

Compliments of TIBBS

Notes on the New Computer from the Chicago Faire

by J. Peter Hoddie Boston Computer Society TI User Group

As everyone is aware, Myarc is planning to introduce a new computer which is rumored to be based on the design of the ill-fated TI 99/8. In fact, Myarc even had a 99/8 to play with before it was cancelled in just two months before TI left the home computer market. The truth about the 99/8 was that is was somewhat incompatible with the 99/4A. Thus when Myarc decided to design a new computer they had to make major changes to the design of the 99/8 and the result of this work is a computer orignally named "Noah" (from the "arc" in Myarc . . .) and now in search of a number for a name. It was widely expected that Myarc would show this computer at the TI Faire in Chicago on November 2. But no dice. They brought along an empty shell of what the machine would look like and a mother board that they claimed was the machine. You may well ask then, why didn't they show it in operation. The answer is simple, although Myarc wouldn't admit it straight out. They blew a chip on the board when they were working on it the day before the show and were unable to replace it in time. But Lou Phillips, president of Myarc still gave a very clear picture of what this new, unnamed machine is all about.

First the basic information. It is expected to be release in the first quarter of '86 and sell for $499. The machine has an IBM key board complete with a slash key where the left shift key should be. There are 10 function keys but instead of being mounted on the left of the keyboard as on the IBM keyboard they are mounted across the top of the unit horizontally. There is also a numeric keypad like on the IBM, but instead of an oversized plus (+) key there is a large enter key to facilitate in numeric entry. The cartrige port has been moved to the upper left hand part of the machine above the first few function keys. It will come initially with 256K of CPU memory (expandable to a full 2 megs), 64K of VDP memory, 64K of ROM, a parallel outout, and an RS232 I/O port, two internal expansion slots, and a port to hook up a mouse. The mouse Phillips mentioned was the MS (Microsoft) Mouse which brings up the issue of IBM compatibility (more later). The internal ROM includes 48K of library routines, 8K of GPL interpreter and 8K (seems like a lot to me) of mouse support. When the machine powers up 16K of RAM is used for various internal tasks so that you are left with about 240K of space for your programs. And remember that all the routines, screen and graphics tables are kept in the 64K of VDP memory, so that you really have quite a lot of memory to work with. If you choose to expand the RAM of the system, it will have to be done externally using 3 off board RAM expansion banks. The current Myarc memory cards such as their 128 and 512K cards will work as memory expansion. The machine is built around the TMS9995 microproccessor which is a more advanced version of the TMS9900 inside your TI-99/4A. The 9995 is 2.3 times faster and comparable in speed to a Motorola 68000 that drives Apple's Macintosh. According to Mack McCormick the 9995 can run as fast as 12 mHz but it looks like it will only be running at an incredible 10.7 mHz due to some techincal considerations. The 9995 uses 16 bit parallel memory on the main board which allows it to go even faster then the 9900 which was a 16 bit processor doomed to forever run on an 8 bit bus thus working at only half speed (roughly...) The machine will be able to run nearly all program s written for the 99/4A through a bit on the gate array which when set will make the machine look nearly identical to a 99/4A. Thus all your software is still good. Almost. Myarc says 99% compatability. The exceptions they've found are programs that use non-standard methods to scan the keyboard. This is only two programs so far. No big deal. The reason for the problem is that the 99/4A has 48 keys and the new machine has 84 so that a different KSCAN routine obviously had to be used. The programs that don't work use their own KSCAN routine and thus will not work.

A few more comments on compatability. There will probably not be immediate support for speech. The machine can support it but there will be no port for you to plug it into the side of the machine. Myarc is planning to develop something like the Triple Tech card from CorComp to allow you to put the speech synthesizer inside the PE Box. There is worse new though for those of you with a P-Code card. McCormick said that that card is a techincal nightmare and that the increased development time and costs to allow it to work wouldn't be worth it. Besides, he added, P-Code is essentially dead as even its creator has abandoned it.

Now here's the bad news for everyone. You can use your current PEB but you will have to buy a card from Myarc to be able to do it. The reason is that the flex cable and card that connect your console to your PEB doesn't have the intelligence or connectors to allow the new machine to access the expanded memory in the PEB on a 16 bit bus or using the new PAB format (more later).

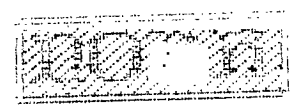
However having to buy the new card isn't all bad. It won't have as bulky a cable as the TI card so you can move the console around freely and it will have a time and date function built in so that you don't need a clock card. It is an added expense however. The communications chip is the same 9901 that is used in the 99/4A running at the same speeds. The graphics chip inside the machine is perhaps the single most impressive

component. Myarc is using the 9938, a chip TI developed and then abandonded (like all good things). It has 64 pins and is now being produced by the Japanese (who else?). It is fully compatable with 9918A inside the 99/4A but supports extra modes and features. Where the 9918A has 8 control registers for graphics characteristics, the 9938 has 32 which allows for an incredible amount of flexibility and power. The 9938 has two text modes. The first is identical to the text mode of the 9918A except that you can choose the foreground and background colors from a set of 512 colors instead of 16. Text mode two is 80 by 24 or 80 by 26 (which allows for a status line at the bottom like on the IBM) with 6 x 8 characters and a choice of two colors from the same 512. Multicolor mode is still there as well as graphics mode one. Graphics mode two allows definition of 768 different patterns and a choice of 16 colors from the 512. Graphics mode three is the same as mode 2 except that instead of only being able to have four sprites on a horizontal line at a time you can have up to ten on a horizontal row. Graphics mode four is similar but has 256 x 212 resolution and graphics five can support up to 512 x 424 using interlacing but this mode can only be displayed on an RGB monitor. Graphics mode six has 512 x 212 resolution and 16 colors. Each pixel can have its color individually defined. This mode requires the full 64K of VDP memory for storing the screen. Graphics mode seven has the same resolution but uses a full byte of memory to define the color for each pixel which means that each pixel can be one of 256 colors! This mode requires additional VDP memory to use and Myarc has made provisions for up to 196K of VDP RAM to be put in the console. One of the control bits on the 9938 allows for what Phillips calls "animation tricks." He says that it can do screen swapping which essentially provides for automatic animation controlled by the 9938. The machine will support the old PAB (Peripheral Access Blocks) format in VDP memory so that, in theory, all peripherals manufactured to TI specifications will work. There is some question as to whether or not the CorComp disk controller will work but Myarc seemed to imply that it would. A new PAB format will also be supported. It will be identical to that developed for the 99/8 and will resice in CPU memory for faster speed. It will also allow for logical record lengths of up to 4096 characters instead of the 255 on the 99/4 and will have a full byte reserved for error codes which means there can be 256 error codes instead of 8 as in the old PAB format.

Including support for both the new and old PAB formats is one of the major changes from TI's 99/8. TI was planning to abandon the old PAB format which would have made your PEB 100% useless. Myarc has made provisions so that you don't have to buy a whole new system. Phillips said that the first two peripherals that would be released would be the new PEB interface (described above) and a new disk controller card that will fit in the internal expansion slot for people who don't have (and don't need to buy) the PEB. This disk controller will supportquad density disks which means almost a full megabyte of storage on a single floppy. Phillips said that they already have a version of this controller working and will probably release a version of it for the 99/4A as well. After those two cards are complete Phillips says that the next thing he plans to work on is a card that will allow for IBM compatability. He commented that the reason for choosing the keyboard that they are using was so that it could be made into a PC compatable computer easily. He also said that 3.5 inch drives were a definate possibility in the not too distant future. The computer will come with Extended BASIC built in. But not TI Extended BASIC. Instead it will use an advanced version of Myarc's Extended BASIC II. Phillips said that XB II is very similar to GW Basic from Microsoft and is somewhere between 2 and 4 times faster then TI Extended BASIC. A complete description of XB II, which is now available for use on the 99/4A when using Myarc's 128/512K memory expansion card, will be given elsewhere as it is too long to fit here. The additions to XB II that will be included in the new computer include full mouse support, advanced event driven control keys (which means that you can set your program to automatically branch to a certain line number when a given key is pressed), and support for the new PAB format. "Phillips has promised to release a reference manual for the machine similar to the one released by IBM for the PC. In other words, the machine will have an open architecture and no hidden secrets like TI kept with GPL. This should help enormously in getting new software written and hardware built for the machine by third party companies which can fully utilize the incredible power of Myarc's new machine. Phillips has promised to release the machine and claims that Myarc has sufficient capital to allow it to bring the computer to market. He did however admit that they are expecting a "hard, up-hill battle" for the first year.

When asked about other languages, Phillips said that Pascal would probably not be next but that C would be. His reasoning is that C is what isreally in vogue now and it would make new software development easier. Listening to Phillips talk about this new machine made a few things very clear. First, that Myarc really has a machine nearly ready to release. Second, that the machine is state of the art and really something that could compete in the current market. Third, that Myarc is thinking long term and has big plans. Now whether or not a small engineering company from New Jersey working with a computer developed by TI that lost TI millions, can actually succeed is another question. I think that if anyone can, Myarc will. But there is no way to findout except to wait.

A few notes concerning this file: This file was



written on November 4, 1985 by J. Peter Noddie, co-director of the Boston Computer Society TI 99/4A user group. It is based on several pages of notes I took at the TI Faire in Chicago on November 2 during a talk given by Lou Phillips of Myarc. This file is not complete in that I have lots more information on the product and many more editorial comments to make. However in the interest of getting this information to you as quickly as possible I have tried to keep this to a bare minimum. A complete article along with a full description of the faire, the products, people, and talks will be completed in time for the November 20 BCS meeting. It should be well over 10 pages in length. If you want a copy come to the meeting or send $1 to the address below. This file is a rough draft. You may distribute it or publish it in part or in whole as you wish but please include the author's name as well as information as to where the final version can be obtained. Thanks!

Boston Computer Society,
TI-99/4A User Group,
1 Center Plaza, Boston,MA 02018

FORTI Music System for TI

From Dartmouth TIBBS: Jan 86.

The FORTi MUSIC SYSTEM allows a TI99/4A computer to produce synthetic music that was never before possible. Far more flexible than MUSIC MAKER, it allows control over the attack, sustain, resonance, and decay characteristic of generated sounds. It also allows generation of very low notes not possible from MUSIC MAKER or TI BASIC. In addition, percussion effects can be generated. To complete the list of new capabilities that the FORTi MUSIC SYSTEM adds to a TI99/4A, up to 12 separate voicelines may be generated on either 2 or 4 channels for playing on a stereo system.

The system consists of a PERIPHERAL EXPANSION SYSTEM BOARD with 4 TMS9919 sound generators, a music editor function, and a music player function. The editor and player functions are disk based 9900 assembler language programs which are accesed from a menu.

To expand the flexibility of the system and reduce data input required to program FORTi, the player supports several unique features. Sequences of notes are encoded as text strings specifying the note letter and duration. The sound characteristics are encoded as text strings defining the amplitude envelope to beused. A conductor function then is programmed, using simple text strings, to assign an envelope and note sequence to ay of the twelv musicians (voices), keep time, and cue in specific musicians at specific times.

To use the FORTi MUSIC SYSTEM requires some music reading skills and very limited familiarity with computers. Hardware required is a TI9/4A, PERIPHERAL EXPANSION SYSTEM, 32K MEMRY EXPANSION, DISK MEMORY SYSTEM, the FORTi BOARD, EDITOR/ASSEMBLER CARTRIDGE, AND A STEREO SYSTEM WITH TWO AUX INPUTS.

The FORTi MUSIC SYSTEM is delivered as a peripheral board, a system diskette, and a manual which includes both tutorial and reference material. In testing the FORTi MUSIC SYSTEM we have found that those who already read music and simply work through the manual from front to back quickly master the system and begin developing their own music scores for the system. SPECIFICATIONS:

Voices	- 12
Output channels	- 2 or 4
Voice pitch range	- bass 1 octave below bass clef - treble 1-1/2 octaves above treble clef
Percussion voices	- up to 4 combined bass and percussion voices may be defined within the 12 total voices
Envelope control	- amplitude updated 60 times/second range 0-15
Visual feedback	- amplitude and pitch of all voices dynamically displayed. Current measure may also be diplayed.
Editor display	- 64 column (monitor recommended) by 16 rows

Disk Cataloging Library

From Dartmouth TIBBS: Jan 86.
A review by Herman Geschwind.

For many of us with a sizeable program library the perennial problem is how to manage this library most efficiently: To find a program quickly or to find a diskette with sufficient free space.

There are a number of disk cataloging programs on the market to assist in this chore which can be classified by (1) the program language used, Basic/Extended Basic or Assembler, and (2) the method that is being used, Snap-Shot or Perpetual Inventory. Disk cataloging programs based on Basic or Extended Basic commonly have two defects: (1) the number of disks that can be cataloged is restricted by memory limitations to fifty or sixty and the number of files to 500 or so. Unless the program does a good job of error trapping the danger always exists that the last file that was read in was one file too many and the whole system crashes. (2) Disk catalogers written in Basic tend to be slow and as memory fills up, these programs really slow to a crawl. A sort of file names which should be part of such a program can take as long as an hour for 500 files.

To manage a disk library of more than a few disks really calls for Assembler. If a program is well written up to 1000 file listings can be accommodated without straining the capacity of memory or disk. Likewise, internal processing is fast and sorts are a matter of minutes rather than an hour.

In terms of organization, a "Snap-shot" program means that all disks have to be read in in order to obtain a sorted listing of files and disks. A "Perpetual" program means that the entire library will be recorded in a disk file and from then on it is only a matter of deleting and reading back in those disks where changes have taken place. The disacvantage of the "Snapshot" method is that for one it is rather tedious to read in disk after disk and then it puts quite a strain on the disk drive mechanism to have disks inserted and removed in rapid succession . For ease of use the "Perpetual" method certainly is preferable .

Until now, even though there are any number of disk cataloging utilities, either commercial programs or "freeware" around, they were either of the "Basic" variety with their language constraints, or of the "Snapshot" variety with its drawbacks.

A new "Freeware" program "CATALOGING LIBRARY" by Martin Kroll, Jr. admirably succeeds in overcoming all these limitations: It is an Assembler program of the "Perpetual" type.

The opening menu of CATALOGING LIBRARY gives an indication of the many features that Martin managed to pack into this program:

A Add Disk to Catalog
B Delete Disk from Catalog
C Delete all "T"emporary Disks
D List Disk Summary
E List all Programs (Files)
F Search for and List a Disk
G Search for and List a Program
H Print Disk Summary
I Print all Programs
J Print all Programs-No page division
K Search for and Print a Disk
L Change Printing Options
M Sort and Save Data
N Terminate Program

As can be seen by this menu, there is hardly an option not covered by this program: Any information desired is available either as printer hardcopy or as screen output. Printer setup is very flexible and not restricted to either PIO or RS232. Since all the information is memory resident, searches for either file or disk information are completed almost instantly.

If Martin can be faulted at all it is that there is no documentation for this program.

Thus there is no telling what the capacity limitations of this program are. I have tested it with 90 disks and 630 files without problems. Another limitation of this program is that it requires the "Load and Run" option of either Editor Assembler or Mini Memory. We can only hope that Martin will re-compile this program in Program image format so that it will be usable with an XB loader for a wider TI community.

A "cute" feature of this program is that whenever it branches to a sort, the message "By The Way..Have you sent $10 to.." appears on the screen rather than the more traditional "Now Sorting...". Certainly a nice way to remind the "free-loaders" among us that all programming efforts deserve their financial rewards.

All in all, CATALOGING LIBRARY is the best catalog program that I have seen yet, an I have tried many only to be frustrated either by lack of capacity, lack of speed or complex handling. Martin is to be commended for this excellent product for the modest price of only $10. For further information or a copy, write to:

Martin Kroll, Jr.
[illegible] Kaplan Ave.
[illegible]

TIBBS Dartmouth

The Orphan Chronicles
From Dartmouth TIBBS: Jan 86
A review by Herman Geshwind.

Christmas Eve turned out to be quite a day. Not only did UPS deliver the eagerly awaited GRAM KRACKER from Millers Graphics, but the mailman also brought The Orphan Chronicles, likewise published by Millers Graphics.

It turned out to be a long night, watching the KRACKER writing my extensive and precious cartridge collection to disk and avidly reading The Orphan Chronicles more or less at the same time. In either case it was a lot of fun.

With his book Ron addresses two types of TI users, those like myself who stayed with the TI and remained active in the TI users community and on the other hand those who were more easily discouraged and gave up.

For those of us who are still active, Ron's book makes fascinating reading with an amazing amount of detail as to why certain things happened and what is going on now.

When Ron describes how he and a number of others heard about The Black Friday, their personal reactions to the "bad news" and what they did in the first few days thereafter is certain to strike a responsive chord. For myself I can only say, "Gee, so I was not the only one that felt that way..or reacted in such a fashion."

The book not only covers the corporate history and machinations of TI and the 99/4 - 99/4A, but it also covers in great detail such ancilliary players as the IUG and 99er Magazine.

Ron comes down particularly hard on Charles LaFara and the IUG and here is where Ron and I might disagree in our judgment. Certainly, I was an IUG member right from the moment when I bought my first console and I renewed my membership almost up to the point when the IUG went under. I never had any illusions that the IUG was anything but a commercial venture much the same as the book club of which I am a member is not a "Club" and the automobile association is not an "association". I still feel that for my membership fee I received good value and I learned a lot from the programs that I obtained from the IUG library for what I thought was a very reasonable amount of money (let us remember what outrageous price TI was charging in those days to see that $3.00 per program seemed to be quite a bargain!).

The "Enthusiast" magazine made good reading, particularly Paul Gronos' column, even though the subject matter that he covered was way over my head (then). While the IUG might not quite measure up to Ron's standard of user group purity, I for one am not sorry for the money that I spent and I did not begrudge Charlie the fact that he made a living that way. But that is my opinion.

While Ron comes down hard on the IUG, he is comparatively lenient in his evaluation of HCM. To inject a personal note again, I feel a lot more negatively about HCM than the IUG. When the 99er Magazine failed to appear in December, and then again in January, February and March, and then made its debut as the HCM I really felt let down and cheated. For me it was downhill with the HCM ever since. I still have a subscription to this magazine but it is very unlikely that I will renew. To me it seems that Mr. Kaplan and his crew went into a deep sleep as far as the 99/4A goes starting with the fall of 1983 and judging by their coverage nothing of importance has happened since.

For the second group of readers Ron offers an excellent "Survival Manual" for what to do to get the most value out of your computer investment in spite of the fact that the machine might be an orphan. The tips and recommendations that Ron gives are excellent, the only problem being of how to reach the thousands of "closet computer" owners with this book.

Again, as a survival manual it does an excellent job of listing sources of supply, both hardware and software plus many bulletin boards (reasonably complete) and users groups. Appendix B is a brief annotated bibliography of books relating to the TI 99/4A. Since many bookstores now have cut back on computer books in general and 99/4A related books in particular, this listing is a great aid to find those titles needed for the TI library while chances are good that the book might still be in print. What adds to the value of this listing is that Ron and Barry Traver briefly review each title which is a great assist in separating the wheat from the chaff. As I said, The Orphan Chronicles make fascinating and stimulating reading and we should thank Ron Albright for putting it all together in 172 pages. We also should give Craig Miller a vote of thanks for making this book available to a much wider audience than Ron ever intended. The first printing does suffer a few laoses in grammar and spelling in places but a second printing should take care of that.

The Orphan Chronicles
Ronald G. Albright, Jr. M.D.
ISBN 0-931231-01-05

Published by:
Millers Graphics
5-75 W. Cypress Ave.
San Dimas, CA 91773
$9.95 + $2.00 S+H

The Question

Barry Comer
What Can We Do For You?

In the last few days the club has received many of the newsletters from the clubs that we trade with. After reading these newsletters I find myself being asked "What do these people want from this club?". Do you just want some place to get cheap software? Do you want to feel that you are not the only one in the world with a "TI"?

After much thought I have decided to ask you people directly **"What do you want?".** Send your answers to us and let me know what you want. Please be direct and honestly express your desires ,don't write down what you think we want to hear!

This is the only way that we can make this the best computer club in Halifax and Dartmouth. If there is anything that you dislike about the way that the club is run write it down. Also if there is something that you like let us know.

We can really bring this club together, and prove to ourselves that the "TINS" User's Group is the best of all. Thank you for your time. If you do nothing else this year, please answer this plea.

What do I want from "my" club?

(address inside front cover)

Two Cents Worth!

Kevin Fleming
Sec/Treasurer

Hello Fellow TI Enthusiasts:

We have been having great luck thus far, obtaining equipment for the club. Just recently, we obtained an expansion system for the club use, and this next meeting, we are acquiring a 32k memory expansion for it.

Our membership drive is off to a fine start. At the last meeting, we had 14 renewals, and 2 new memberships. At the present time, we would like to see more new members join the club. As I said last time, put out feelers to all the people you know who have TI gear that they may be interested in using. Our group is here to help others gain proficiency in the use of their hardware. We are also here to distribute public domain software, and tips on how to upgrade their software so that they may gain more out of it.

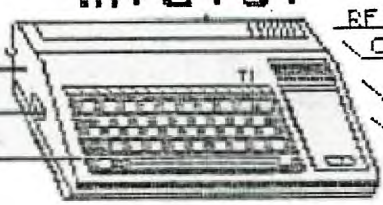
Our group is still growing, and learning. Your task is to help others by setting an example. We can gain much by sharing our expertise with others. As Paul is so fond of saying, write something for the newsletter. If you don't have a contribution to it, then write a program in your favorite language, that you are willing to donate to the library. Your programming skills will be sharpened by some constructive criticism from the group as a whole. This is an excellent test bed for your ideas, and skills to be sharpened in.

Give it a try. You have nothing to lose, and everything to gain.

Your Sect/Treas

Kevin Fleming

M.C.S.



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Kevin Fleming

This article presents a few utility words that will improve your Wycove Forth system, and allow easier movement of screens on the disk, or between disks. I also present here, a utility word that will allow the user to review source screens of code. This utility works by adding 2 bytes of header to the word header, which stores the screen number where the source for the word lies. This allows the recall of the screen by the simple route of typing "VIEW XYZ". XYZ's source screen will be fetched from disk, and the EDITOR environment is automatically entered.

Rather than keeping a listing beside the computer of where your words lie on the screen file, this utility allows you to simply call it from the disk by name. After you have fully developed your application, you will no longer require the VIEW header in the dictionary, so the use of the screen move utility words comes into play, by allowing you to move the screens from one disk to another. The target disk system will of course, be the standard Forth system, without the view capability. This will save memory space if the application is large, and will also ready the application for further work before distribution.

The following code is the screen move utility.

```
( ?EMPTY ERASE-SCRN COPY-SCRN MOVE-SCRN )
: ?EMPTY ( SCR#- ABORTS IF TEXT
  ON SCREEN )
      DUP BLOCK )400 -TRAILING
      SWAP DROP
       IF CR LIST ABORT
       ELSE DROP
       ENDIF ;

: ERASE-SCRN ( SCR#- ERASE SCRN)
   BLOCK )400 BL FILL UPDATE ;

: COPY-SCRN ( SOURCE DEST- )
  DUP ?EMPTY SWAP BLOCK
  SWAP BUFFER )400 CMOVE
  UPDATE ;

: MOVE-SCRN ( SOURCE DEST- )
      OVER SWAP
      COPY-SCRN
      ERASE-SCRN ;
( ??? TO )MOVE-SCRNS )

? VARIABLE FROM ( SOURCE SCR#)
? VARIABLE TO  ( DEST SCR# )

  : )MOVE-SCRNS ( START END DEST -
    BLOCK MOVE OF SCREENS BEGINNING
    TO END)
    TO ! OVER FROM !
    SWAP - 1+ ( # OF SCRNS TO MOVE)
    0 DO FROM ? TO ? 2 SPACES
    ( PRINT SCREEN #'S )
     FROM  TO  MOVE-SCRN
     1 FROM +! 1 TO +!
     ?TERMINAL
    LOOP ;
( (MOVE-SCRNS ( STARTS AT END OF
RANGE FOR BLOCK MOVE )
: (MOVE-SCRNS ( START END DEST- )
    TO ! OVER FROM !
    SWAP - ( OFFSET TO END RANGE)
    DUP TO +! DUP FROM +!
    1+ ( # SCRNS TO MOVE )
    0 DO FROM ? TO ? 2 SPACES
       FROM  TO  MOVE-SCRN
       -1 FROM +! -1 TO +!
       ?TERMINAL
      LOOP ;

( MOVE-SCREENS COPY-SCREENS PICK)

 : PICK  2 * SP + ;

 : MOVE-SCREENS ( START END DEST- )

    DUP 4 PICK
     ( IF )MOVE-SCRNS
        ELSE
          (MOVE-SCRNS
       ENDIF
       FLUSH SP! ;

 : COPY-SCRNS ( START END DEST- A
   BLOCK COPY )

    TO ! OVER FROM !
    SWAP - 1+ ( # OF SCR'S TO COPY )
    0 DO FROM ? TO ? 2 SPACES
    FROM  TO
     COPY-SCRN
     1 FROM +! 1 TO +!
     ?TERMINAL
   LOOP
   FLUSH SP!  ;

( ERASE-SCREENS )

 : ERASE-SCREENS ( START END - BLOCK
ERASURES OF SCREENS )

  DUP
  DO I ERASE-SCRN I . 2 SPACES
   ?TERMINAL
```

```
    LOOP
    FLUSH SP! ;
```

The VIEW utility words follow:

```
( VCREATE  VIEW )

( FOR FORTH 3.0 ONLY!!!!!)

: VCREATE ( NEW CREATE WITH EXTRA
  BYTES )
     HERE 2 ALLOT ( 2 BYTES FOR
SCR# )
     (CREATE)
     BLK  ( GET SCR# )
     )7FFF AND SWAP ! ; ( STORE
INTO WORD HEADER )

' VCREATE  CFA 'CREATE !
( PUT CFA INTO VECTORED WORD )
( NOTE THAT THIS COULD ALSO READ
' VCREATE  CFA 'START-UP !
WHICH WOULD ALLOW AUTOMATIC USE OF
VIEW IN THE DICTIONARY )

: VIEW ( (name)- )
    [COMPILE] ' ( GETS PFA )
    LFA 2- ( GETS SCR# )
  ( NOTE FOR 2.0 OR FIG-FORTH USE
NFA VICE LFA )
     EDIT ; ( CALL UP SCREEN )
            ( GO INTO EDITOR )
```

For version 2.0 users the procedure is somewhat more involved, and takes up more dictionary space. I have decompiled the create word, and added the necessary code into it, which will allot the necessary bytes, and allow the use of the VIEW word.

```
( VCREATE  VER 2.0 )

: VCREATE
   HERE 2 ALLOT
     -FIND
     IF DROP NFA ID.
      4 MESSAGE SPACE
     ENDIF
   HERE DUP C WIDTH
   MIN 1+ =CELLS ALLOT
   DUP )A0 TOGGLE
   HERE 1-  )80 TOGGLE
   LATEST  ,  CURRENT
     !  HERE  2+  ,
     1-  )7FFF AND SWAP ! ;
```

/FI:AD

After rewriting CREATE, you must overwrite the first 2 bytes of the old CREATE's CFA, and then insert the new CFA of VCREATE into that spot. The view word changes slightly, as follows.

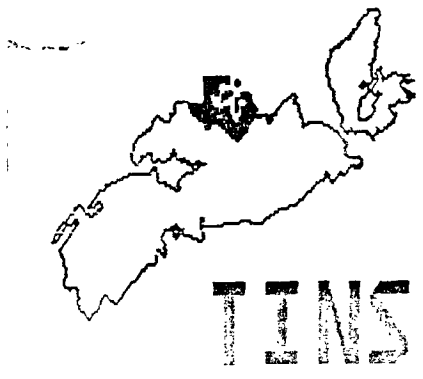
```
( VIEW  VER 2.0 )

   : VIEW
       [COMPILE] ' ( GET CFA )
       NFA 2-     ( GET SCR# )
        EDIT  ;
```

This concludes the code swap shop for Forth today. I will give credit where credit is due. The screen move utility words were placed in the public domain by Mr T. Bushell, and were re-written to operate on the TI under Wycove Forth by myself. The VIEW utility word is an idea from Leo Brodie, which has been adapted for use on the TI under Wycove Forth.

I will also mention the fact that this VIEW utility will not allow you to call up source screens for words that were installed in the dictionary **before** the VIEW words were written into the system.

All comments in the words tell you how they operate, and what stack arguments are expected. The author places this code in the Public Domain. The above mentioned persons credited with the



Enhancement Package

Michel.A1402 Montreal

```
**************************************
*Display Enhancement Package (D.E.P.) *
*requires :                           *
*  - Memory expansion unit            *
*  - Disk system                      *
*  - either X-BASIC or E/A module     *
*  - a lot a patience                 *
*optional :                           *
*  - nerve pills                      *
*  - a cold beer or a warm cup of tea *
**************************************
```

Let's face it! Displaying on a 28 col. is kind of boring and not very convenient when you have to display on the screen a lot a information, graphics or figures. The only remedy found by TI was a 40 col. display in some of their programs such as TI-WRITER. Even then, if you had your computer connected on a TV set instead of a monitor, you couldn't see the columns on the sides of the screen because these charming programs were using the full width 32 col. of the screen. Not practical, I tell you. And then comes DEP from Heavens..(or Hell as we will see...). DEP permits you to display, if wanted, in a 40 col. mode using the width normally used for 28 col. So keep your TV set... D.E.P. is an utility program produced and sold by OAK TREE SYSTEMS (25 $ US). It comes on a SSSD disk.

This disk contains the program needed to use the DEP, a very explicit demo program (who gives you the impression that DEP is sooo eeaasssyyy to use...) and the instructions. Let's face it! This program is NOT a module that you just plug in and permits you to display permanently on a 40 x 24 screen... So here begins the fun part! DEP comes also with a 30 PAGES brochure ... the instructions...So do not expect this article to discuss in detail these instructions, we will still be here next year . Just remember the first time you use extended basic and discovered the ACCEPT statements? This statement comes with options like BEEP,VALIDATE(..), SIZE, etc... and might had seemed kind of scary the first time you used it. Well, so is D.E.P.

How to use it...

D.E.P. is a DISPLAY program and can only be used while running a program. So you will still write your own programs in the 28 columns mode...It is recommanded to load the D.E.P. at the beginning of your program. For this, you can use these sample instructions : (Note : if you're using the !@P- statement in X-BASIC, don't forget to declare the CALL INIT, CALL LOAD and CALL LINK statements at the beginning of your program...)

```
MINI MEMORY
10 CALL INIT
20 CALL LOAD("DSK1.DISPEN")

E/A module
10 CALL INIT
20 CALL LOAD("DSK1.BSCSUP")
30 CALL LOAD("DSK1.DISPEN")

X-BASIC
10 CALL INIT :: CALL("DSK1.LOADER")
20 OPEN#1:"DSK1.DISPENFX",INPUT,VARIABLE 254
30 FOR A=1 TO 33 :: LINPUT A$ :: CALL LINK("LOAD",A$)
:: NEXT A
40 CLOSE #1
```

And then you are ready to use, at any time in the program, the 40 col. mode. You are NOT automaticly in the 40 col. mode. You must call this mode by the very simple instruction CALL LINK("MODE40"). But there is some restrictions to the use of this mode and some operations such as CALL CHAR and RND can perform only in 28 col. mode. So in your program, it is important to make these operations when still in the 28 col. mode ; if it's not possible, you can come back at in any time in the 28 col. mode by calling CALL LINK("MODE28") in your program...

Operating Restrictions:

You will have to forget the use of sprites (big deal) and you will also restricted to the use of only one foreground and one background color at the time (but you can change these colors anytime).

Basicly, the D.E.P. redefines ALL the PRINT and INPUT statements related to the use of the screen. So statements such as :

```
INPUT  PRINT  ACCEPT     DISPLAY
DISPLAY AT    ACCEPT AT  CALL HCHAR
CALL VCHAR    CALL GCHAR CALL CLEAR
CALL SCREEN   CALL COLOR CALL CHAR
```

cannot be used while in the 40 columns mode. Same thing for statements such as ON ERROR, CALL SOUND, CHR$ and RND that you cannot use in the 40 col. mode.

For example :
CALL HCHAR(ROW,COL,CHAR,REP) will become in the 40 col. mode :
CALL LINK("HCHAR",ROW,COL,CHAR,REP) Easy, isn't it?...

ACCEPT AT(X,Y)VALIDATE(DIGIT)SIZE(35)BEEP:U$ becomes
CALL LINK("ACCEPT",X,Y,35,"BEP",U$,STAT)

35 : the possible lenght of U$

"BED" : B for BEEP, E for ERASE THE FIELD and D for DIGIT.

STAT : the key code who will terminated the data entry (13=ENTER)

As I said before, D.E.P. display basicly as a word processor will do. It means D.E.P. is not very bright and cannot make the difference between a number and a strinf (ooppss! my denture...) I mean a STRING. In the example above, the value will be put in the string "U$". To convert U$ in a value, just add this line :

B=VAL(U$)

Same process can be use to display variable ; you must display a string. So simply add this line preceeding the display line :

U$=STR$(B)

If you are not familiar with STR$ and VAL, consult your TI X-BASIC BOOK, steal one or call the TI ANONYMOUS (24 hours 613-738-0617).

Data Storage Operating Modes:

The DATA storage consist of 96 lines of 40 characters (3840 bytes) . This DATA can be displayed in 3 different modes :

SCROLL MODE : when the screen is full, lines moves up to make place for next line, like the PRINT basic statement.

SCROLL MODE WITH LOCKED AREA : a certain number of upper lines can be locked while you scroll up or down the rest of the screen. Either part can be cleared or written separatly at any time.

PAGE MODE : data (text or graphics) is divided in 4 "pages" that can be displayed (instantly), modified or cleared indepondently.

Tips Tricks:

When I bought the program, I was very excited and I couldn't wait to see my new 40x24 screen. Of course, I had a TV set and I couldn't even read the sides of my screen using my TE-II, TI-WRITER or FORTH. Of course, I was upset when I realised that using DEP was a little more complicated then loading TI-WRITER. But I immediatly tried to convert my favorite 400 lines program with the DEP... 3 days later I was still there...crying...

Before trying to convert any of your programs, practice the different modes on a little home-made program (10-20 lines). ALWAYS SAVE A COPY OF YOUR PROGRAM PRIOR TO TESTING IT. A bug in the 40 col. mode while running your program will occur in a nice, colorful but very strange display on the screen (perfec for the christmas season).

D.E.P. has its own ERROR suboutine and will warn yo politely about some of the mistakes it can recognize an this, without stopping the execution of your program.

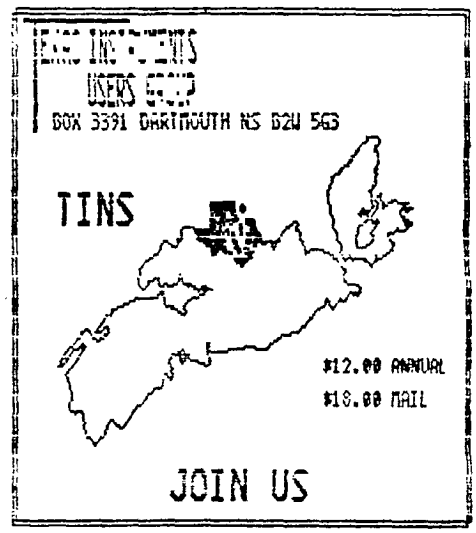
Conclusion:

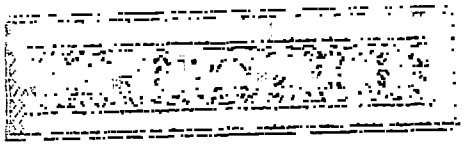
A lot more can be say about the possibilities o D.E.P, possibilities that I didn't explore yet. Let' say that D.E.P. is a very powerful tool if you need t display a lot of information on a same screen and does wonderful job with the graphic/explanation display.

D.E.P. can help you if you have a T.V. set but th T.V. set cannot still help you with program such a TI-WRITER or FORTH. This is one of the reason why bought a monitor. Models such as ZENITH (sold a EXCELTRONIX for about 123$) gives you the wonderfu possibility to control the width and the hight of th portion of your screen you want to use. It means yo can create the ILLUSION of a permanent 40 col. mode In my case, the buy of the monitor gave what I wanted get rid of these big huge letters on my screen fo something cute. Now, you can imagine the combine effec of the monitor AND the D.E.P. Cute....very cute Exactly as I like it...

A last word to say that D.E.P. comes also with othe OAK TREE SYSTEM products such as the new DATABASE ADDR 99 which use it. So if you plan to buy the DATABASE i question, D.E.P. will automaticly come with it (thes people are so nice...)

Good display...





P.A. Meadows

MCS MARKET PLACE

These listings are proviced from the market section of MCS BBS (Techie).

For additions or purchases, contact Paul Meadows at 865 4641 voice or at 864 2582 (BBS).

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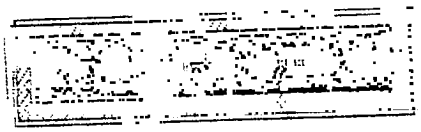


Paint 'N' Print

Ron Wemple

This is a review of the extended Paint 'N' Print package by Navarone Industries. This review is part 2 of the review on the main moqual as presented in the TINS newsletter of Dec./85.

You require memory expanion and the Paint 'N' Print mocual to run this package which comes on disk. The program in general I found quite good especially the kaleidescope feature.

1. Comand A=Area Fill this feature worked as descriped tho in oder to gain some versitility in other areas like tecture mode they let suffer the blocking on the fill as is indicated on their DOCS. The fill works well, a small cross appears on the screen and you place it where you want and the area fills with push of fire button in any color you choose. Note exact fill with some colors do not stay contained exactly in their area, a shame but it fill quite quickly and is nice to use. Note by going to magnification mode you may be able to corect this quite easily.

2. Comand @=Circle this feature will produce a complete and acturate circle. I did find it a bit awckward to use at first but with practice it operates quite nicely in my opinion. On pushing the '@' key the cursur changes and a small cross appears, you place the cross where you want the centre of the circle. Then push the fire button and circle is enlarged as you move the joystick. It moves quite fast so it takes practice to get the correct size circle, once it is formed you press the fire button and the circle is formed in any color you have choosen. If the centre is not as you like it press d to return to pen mode instead of pressing the fire button and try it again. The circle may be filled with the fill option as mentioned above.

3. Comand I/M=Invert/Mirror this feature I found very usefull it allows you to present any object drawn in an inverted mode or a mirror immage. What you do is flip the picture 180 degrees on the y axis for invert and 180 degrees on x axis for mirror effect. the whole picture or any portion may be edited in this manor The trick being that the area to be inverted or mirrored must be enclosed in a window. Once the area is enclosed in the area you simply press I or M for the required feature I=invert M=mirror. Note: if a picture is stored in memory mode as opposed to disk this feature will most like destroy it as it uses expanded memory to activate this feature. It is all described in the manual.

4. Comand T=Tecture this feature allows you to draw with any brush or color and with the fill or circle options. It does take a little longer to draw or fill as the activity of this feature is more complex. It fuctioned very well and made for some nice and very usefull effects on the drawings my children and attempted. You simple toggle between solid and tecture modes by depressing the ';' key.

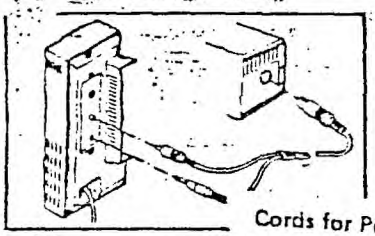
5. Command V=Color Swap this feature allows you to change any one color in a picture to another. The main disadvantage of this feature is it works on the whole picture. For example if the tree and a post were brown and you wanted to change the post to red you would have to have a red tree. The feature still works well and is usefull. To change a color you simply press 'V' then 'c' for the color you want to change then placing the small cross on a pixal of the color you want changed press 'u'. Next press the fire button for a selection menu for the number or letter of the new color you want. This color will replace the old one in the entire picture.

6. Command K=Kaleidescope this I found to be the most interesting and unick feature of the lot. When you depress 'K' a shaded menu appears across the top of the screen, you simply use your joystick to advance the shaded field to the feature you require. In fact what it does is divide the screen into sections of 2,4, or 8 areas. What you draw in one is mirro'ed into the others (the no. dependent on the option choosen). The 5 icon positions shown on the screen indicate the choise on the menu. The first blank is regular drawing mode. The 2n is a horizontal bar which divides the screen horizontally. The 3rd is a vertical bar which divides the screen up vertically. The 4th is a horizontal and vertical bar intersecting which divide the screen into 4 quadrents any thing drawn in one section appears symmetrically in the other 3. The 5th option shows intersecting horizontal, vertical, and angled lines or bars which divide the screen into 8 sections. Any line drawn in one section is symmetrically duplicated in the other 7 areas.

This feature works well with all brush types and all colors. the shapes and patterns developed alone make this package worth the money in my opinion. The last report I saw sold the extended package for $19.95 American but this price may have changed.

In conclusion the Paint 'N' Print package with extended graphics is a worth while purchase. It has limatations as all softwere pachages do, but I think it certainly adds to anyones library of software if they in truth have a use for a good drawing package. This is especially true if you dump drawings to a printer. Their is only one draw back with this package as I see it and that is you must enter it for the configuration of your printer type(The moqual not the extended package)

tho I beleave Navarone are trying are trying to overcome this problem. The ovious trouble is if you change printers, will the modual still work? This is not a problem with the extended package loaded as it offers you a new print selection menu allowing a wide range of printer options. In closing overall I like it.



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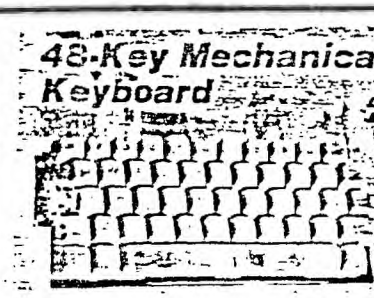
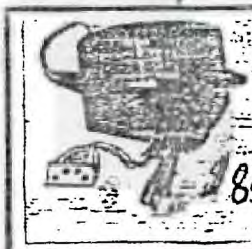
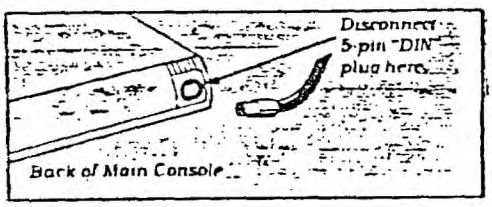
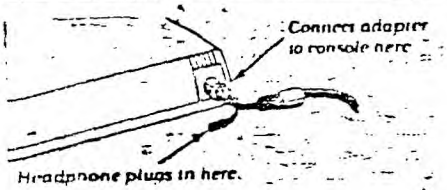
$6.25
Dual Cassette Cable
Model No. PHA2000
$3.00 for Singles
For Use With One or Two Cassette Recorders

MODEL: AC-9500
120 V.AC 60Hz.—40W.
Output Sortie: 18 V.AC.—18VA with & 8.5V.AC.—1.28V.A. av
Fiche de Sortie: Douille à 4 Tr
Output Plug: 4—Holes Jack
$8.95

TI SWITCHING POWER SUPPLY
TI # 1053214-2
COMPACT, WELL REGULATED SWITCHING POWER SUPPLY DESIGNED TO POWER TEXAS INSTRUMENTS COMPUTER EQUIPMENT
IN 14VAC—25 VAC AT 1A
OUT +12VDC AT 350MA
+ 5VDC AT 1.2A
- 5VDC AT 200MA
SIZE 4¾" x 4¾" x 1¾" $5.00 EACH
Bloc d'alimentation T-I-1053214—2
pour les ordinateurs Texas-Instrument
4-3/4"X4-1/4"X1-1/4" $7.50

Texas Instruments
Home Computer Accessory
Audio Adapter
Model PHA2020
FOR USE WITH ¼" PLUG HEADPHONES
$6.95

Disconnect 5-pin "DIN" plug here
Back of Main Console
Connect adapter to console here
Headphone plugs in here.