Spirit of 99

CENTRAL OHIO NINETY NINERS INC.

THE OFFICIAL NEWSLETTER OF THE CENTRAL OHIO NINETY-NINERS INC.

PUBLISHED MONTHLY IN COLUMBUS OHIO

10 JUN87

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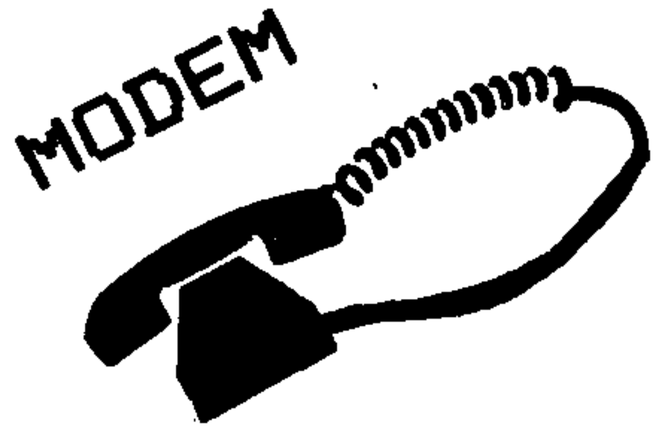

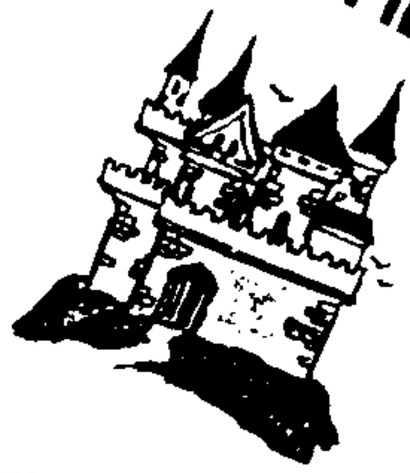

COME COMPUTE WITH C.O.N.N.I.

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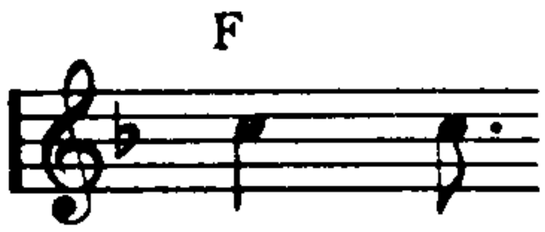

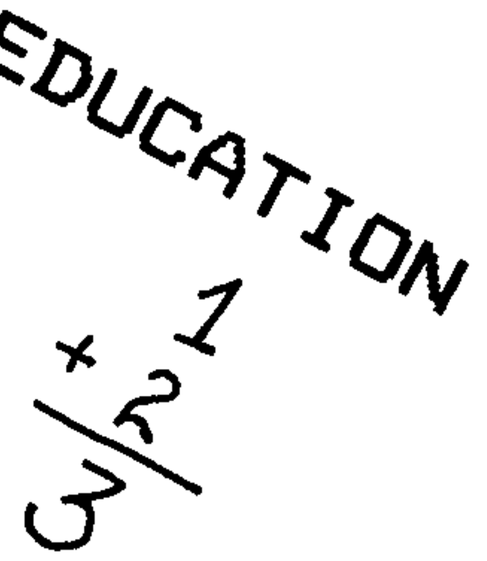

$1.50 VOL.5 NO.6 JUNE 1987

Spirit of 99

THE OFFICIAL NEWSLETTER OF CENTRAL OHIO NINETY-NINERS

Spirit of 99 is published monthly for Central Ohio Ninety-Niners Inc. by C.O.N.N.I. members and is the official news letter of C.O.N.N.I. USER GROUP.

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OPINIONS EXPRESSED HEREIN ARE THE AUTHORS AND ARE BASED ON VALID DOCUMENTABLE RESEARCH.THEY DO NOT NECESSARILY REFLECT THE OPINIONS OF THE PUBLISHER.

Central Ohio Ninety Niners Inc. is a non profit organization comprised of MEMBERS who own or use the TI99/4A computer and it's related products and have paid a yearly membership fee of $20.00 and whose main objective is the exchange of Educatioal and Scientific information for the purpose of computer literacy.

C.O.N.N.I. meetings are held the Second Saturday of each month at the Martin Janis Senior Center on East Eleventh Ave. at the Ohio State fairgrounds.

Meeting time is at 9:00 AM, Meetings are open to the public.

Membership dues $20.00) are payable yearly to C.O.N.N.I. and cover the immediate family of the member. (An application has been placed in this newsletter for your convenience) Please address it to:
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179 ERIE RD
COLUMBUS, OH 43214

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A ROSE FOR CAROLE

Dear C.O.N.N.I. MEMBERS,

Greetings from your new Spirit of 99 Newsletter editor. I have accepted this challange for one year and feel very fortunate to have Carole Parkins as an assistant. It would surely be difficult to walk in the path she has led this past year my myself. Carole's hard work: hours on the phone, prayers that promised articles would arrive on time, pasting up - using her ingenuity and creative abilities, trips to the printer, labeling -was that last address correct?, and those trips to the post office paid off in the end with the results ---12 great newsletters. Three cheers for Carole.

YEA!!!YEA!!!YEA!!!

Let's not forget John as he was a willing participant in this past venture of editing with Carole.

In my brief indoctrination, I have already gained a deeper appreciation for the word processing capabilities of the TI and the use of a good printer plus excellent programs to make it all happen. Please bear with me as I learn the ropes and I'll serve the C.O.N.N.I. members to the best of my ability - of course with YOUR assistance. It's OUR newsletter.

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xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Program*

MEETING AGENDA

SATURDAY
JUNE 13, 1987

9-9:50 AM Cassette and
Beginners' Group

10-11:30 AM Business
Meeting and

Visit our free Software and Publications libraries before and after the meeting.

Visitors welcome!

*TI-ARTIST demo. Ken Marshall will display finished products and show you how they were created.

*KEYBOARD demo. Fred Deaner will display his own keyboard modifications and explain how you can do the same to get more flexibility from your standard T.I. keyboard.

ALL MEETINGS, UNLESS STATED OTHERWISE, ARE HELD AT THE MARTIN JANIS SENIOR CENTER, E. 11TH AVENUE, COLUMBUS,OH.

LETTERS TO THE EDITOR

Mr. Jack Sughrue
Box 459
E. Douglas, MA 01516

May 10, 1987

Dear Mr. Sughrue:

This is in regard to your IMPACT-99! article that appeared in the May 1987 issue of Spirit of 99, the C.O.N.N.I. newsletter, in which you review the merits of GSGD. Your problem was regarding not knowing ahead of time what font characters are available for each set that you might want to use.

I ran into the same problem, and was likewise frustrated with it. I sat down and went through each char set and determined what was available in it. From that data I made the enclosed charts. You will note that sit is a quick-recognition type chart. It gives the height of char, upper case, lower case, numbers, and punctuation, which is shown at the top of the first page.

I am sure that there are other ways of presenting the data, but this is the one that I chose. Maybe it will be of some help to you also. I think that the program is another excellant one that is very versitile. I have ordered the FONTWRITER II, and am waiting for it to be sent to me.

I enjoy reading your articles, and appreciate the realistic attitude that you have in expressing your thoughts. Keep up the good work.

I am also sending a copy of this letter, with charts, to C.O.N.N.I. in case they might be interested telling their members about it.

Sincerely,

Allan Cox

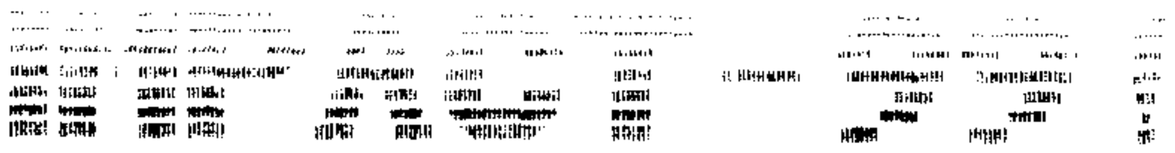
Encl:Charts
CC:C.O.N.N.I.

Mr. Allan Cox
728 Jefferson
Tarrant, AL 35217

CSGD CHAR SET DATA

FILE	HT.	UP.	LO.	NO.	.	,	"	!	@	-	;
3D	4	X		X	X	X	X	X	X	X	X
ABC	3	X									
AMBROSA	4	X	X	X	X	X	X	X	X	X	X
ATHEN	2	X	X	X	X	X	X	X	X	X	X
BANNER	5	X		X	X	X	X	X	X	X	X
BOLD	2	X		X	X	X	X	X	X	X	X
BSBOLD	4	X									
BWAY	2	X		X	X	X	X	X	X	X	X
CASLON	3	X		X	X	X	X	X	X	X	X
CHOCHO	3	X		X	X	X	X	X	X	X	X
CURSIVE	4	X	X	X	X	X	X	X	X	X	X
FANCY	3	X		X	X	X	X	X	X	X	X
FAREAST	4	X		X	X	X	X	X	X	X	X
FAST	2	X		X	X	X	X	X	X	X	X
FAT	4	X		X	X	X	X	X	X	X	X
FBLOCK	3	X									
FILM	4	X		X	X	X	X	X	X	X	X
FROZEN	4	X									
GOTHIC	4	X									
GOTHIC2	4	X		X	X	X	X	X	X	X	X
HEBREW	4	X		X	X	X	X	X	X	X	X
HOLLOW	5	X	X	X	X	X	X	X	X	X	X
HOLLOW2	3	X		X	X	X	X	X	X	X	X
IBM	3	X		X	X	X	X	X	X	X	X
LBLOCK	3	X		X	X	X	X	X	X	X	X
LED	4	X									
LEDGER	4	X		X	X	X	X	X	X	X	X

MACBETH	4	X									
MONOGRM	3	X		X	X	X	X	X	X	X	X
NBOAT	3	X		X	X	X	X	X	X	X	X
NINETY	4	X		X	X	X	X	X	X	X	X
OBLONG	5	X		X	X	X	X	X	X	X	X
OFFBEAT	1	X		X	X	X	X	X	X	X	X
OLDENG	4	X	X	X	X	X	X	X	X	X	X
OLDENG2	4	X		X	X	X	X	X	X	X	X
OLDENG3	4	X	X	X	X	X	X	X	X	X	X
PCSET	1	X									
PCSET1	1	X		X	X	X	X	X	X	X	X
PCSET2	2	X		X	X	X	X	X	X	X	X
PCSET3	3	X		X	X	X	X	X	X	X	X
PCSET4	2	X	X	X	X	X	X	X	X	X	X
PLAIN	2	X		X	X	X	X	X	X	X	X
PLANE	3	X		X	X	X	X	X	X	X	X
PLAYBIL	4	X									
PSET	3	X									
RCSET1	1	X	X	X	X	X	X	X	X	X	X
RCSET2	1	X	X	X	X	X	X	X	X	X	X
RCSET3	1	X	X	X	X	X	X	X	X	X	X
RCSET4	1	X	X	X	X	X	X	X	X	X	X
RCSET5	1	X	X	X	X	X	X	X	X	X	X
RCSET6	1	X	X	X	X	X	X	X	X	X	X
RCSET7	1	X	X	X	X	X	X	X	X	X	X
RODEO	2	X		X	X	X	X	X	X	X	X
RODEO2	3	X		X	X	X	X	X	X	X	X
ROMAN	1	X		X	X	X	X	X	X	X	X
ROUND	1	X		X	X	X	X	X	X	X	X
SBLOCK	3	X		X	X	X	X	X	X	X	X
SCRIPT1	3	X		X	X	X	X	X	X	X	X
SCRIPT2	2	X		X	X	X	X	X	X	X	X
SCRIPT3	2	X		X	X	X	X	X	X	X	X
SCRIPT4	4	X	X	X	X	X	X	X	X	X	X
SCRIPT5	3	X		X	X	X	X	X	X	X	X
SHADOW	5	X		X	X	X	X	X	X	X	X
SHADOW2	4	X		X	X	X	X	X	X	X	X
SHELBY	4	X									
SLANT	1	X		X	X	X	X	X	X	X	X
SQUARE	1	X		X	X	X	X	X	X	X	X
STENCIL	3	X		X	X	X	X	X	X	X	X
STRIPE2	4	X		X	X	X	X	X	X	X	X
TECH	3	X		X	X	X	X	X	X	X	X
TECH2	1	X		X	X	X	X	X	X	X	X
VETICA2	3	X	X	X	X	X	X	X	X	X	X



F R E E ?

FREEWARE has grown many limbs since its original releases on the 99er public. It is a concept whose time should have come but probably didn't.

The owners of the 99 needed software and experimentation and risk-taking on the part of many persons who were dedicated to this superb machine. It also needed supporters of these people. And although 99 owners generally paid from 1/3 to 1/2 less than other computers for the same or similar pieces of software (and in recent years considerably less than that: LOGO and Multiplan being excellent examples), it did not seem low enough for many owners. So the prices continued to drop. Now $39 cartridges sell for as low as $2.95. So it is little wonder that new developers of materials for TI hesitate putting in that initial investment of time and money. The low selling prices to a demanding audience, coupled with the immense amount of piracy, has simply been too much for the commercial companies to try and make a go of it. (A few exceptions of commercial enterprises that sell excellent, unprotected, inexpensive software would be companies like Asgard and Disk Only Software.)

ENTER THE FREEWARERS! This is a small group of dedicated programmers and distributors who want the TI to remain in robust competition with the lesser machines (which had the broader commercial base). Thus DM1000, PRBASE, FUNLWRITER, DFS, SCREEN DUMP, PRINTIT, etc.

A new and exciting era for the 99 buff had arrived! But every silver lining has its dark cloud.

Gather round the fire, get yourself a glass of hot, mulled cider, and let me tell you a story.

When I was a young man in the hearty spring of '86 I met a genius in person with whom I had carried on a small correspondence. His name is Barry Traver, and he had just begun a diskazine for the TI. It was (and remains) a unique and wonderful venture. We met at a TI Faire in Lexington, Massachusetts. He happened to have with him FUNLWRITER. We had all heard of this wonderful program developed by Will McGovern and his father Tony in Australia and how it included Bruce Caron's Canadian *DM1000*. We didn't know at the time how profound an environment it was and is.

That night and the next I stayed up until four (though I had to be up at 5:30 to get ready to teach school). I could not resist playing and testing and changing and adapting this incredible environment. It was something I had not dreamed would be possible for the 99.

Within a week I had begun to devise a companion for this masterpiece: a single master word-processing disk, a 360 disk which would include automatic IFing by containing templates. It would have to have new codes and a master catalog and a desk calendar program and a screen dump and a banner program and lots of printer-oriented programs (like Pig Latin and Key Graphics and and and and). And probaly a display-type program explaining all these sources. And some quickref charts and some mnemonic coding for quick understanding. And a complete operation manual ready to be printed off disk. And some more and and ands.

Was this possible with the already-condensed *FUNLWRITER*? Well, taking out the docs on my backup gave me 80 sectors. But my Banner and Calendar programs alone were over 130 sectors. No good. And my Load/Cataloguer was 43! The Minidump was 14 (not TOO mini). *And on and on.* Plus I wanted a whole pile of new files and templates and codes that would access the control keys PARTICULARLY the TL key which I had been using in a mnemonic way for three years and had never set up a template for IFfing. Four sectors was the maximum I was going to allow for ANY coding, ANY screen dump, and basic graphic-key structuring. It seemed an impossible task but after a few late nights I got into the groove. I thought of creating and condensing the environment during every free moment. I produced and reduced all the above to 2 or 3 sectors. Now my coding and basic templates were done and running smoothly.

The Load/Cataloguer - essential if I were going to continue operating within the given environment - was next. I scrunched it down to 11. Just about 1/4 of the original.

(I might pause here and mention that my original programs and the original *FD programs* I used did not have to be restricted when they were all on separate disks. So each of them operated okay. But slower than the final results. And slower, still, because of all the disk switching and hunting for the right program from the right disk.) But not the new versions! Surprising as it seems, as I reduced I added more and more features. I didn't realize how inefficient and sloppy my files had been until space became an essential if I warted an enhanced and very advanced word-processor. (And I did!) And still have access to my DM1000 and Editor/Assembler and my Danny Michael's screen dump through load interrupt. And a Debugger. And, I suppose Forth and c99 (though I have yet to use either and would probably have an even more efficient disk without either and certainly one that would operate everything with greater speed while providing greater space for more TIW files).

I keep a log of my time actually working on the computer (not of the thinking, reading, note-taking, etc. off the

computer). To date I have put in just over 550 hours (actual computer time) to get the version I want and use. (MY version is new again today! Tony McGovern sent me another complimentary copy of his further updated version of 3.4 (which includes 3.5 DM1000).) I have been updating my own *FUNLPLUS!* files anyway, so I immediately reduced this new McGovern disk to just the word processor and DM and removed all the docs and even the E/A. (This is for my own personal use, remember.) This gives me immense room for two disk sides of favorite files. The one I released to FAIRWARE, however, because it contains free distribution of the complete *FUNLWRITER*, absolutely needs the docs (so the buyer doesn't get as many of the files which he or she probably would not use with the frequency I use them, but they are nice to have). (The PD "Gothic"-type program, for example, or the three-column condensed envelope cataloguer.)

I called the multi-filed environment FUNLPLUS! and sent copies out to acquaintances and friends and user-groups for debugging, help, improvements, criticisms; including, of course, one to the McGoverns and one to Ottawa. The feedback was excellent, and I made Version 4. (I had sent #3, had worked on and changed #1 and 2 alone.) I sent out the Freeware requests to user groups by mail and to which I spoke showing examples. I left copies with some user groups and was given space on "send postpaid mailer and initialized blank disk. If you like the full two-side flippy of files send $7 to author."

I never received a single cent from the user groups where I left a copy in the library after demonstrating it. (Though I found out it was dubbed by many members and even used as demos and workshops because of its popularity.)

Because of the flyers and newsletter ads I received 43 blank disks (not all initialized and not all with sufficient return postage and *not all usable*!). I sent FUNLPLUS! to all, paying costs myself when needed.

Dear, Patient Reader, I must pause here to tell you a little about how I put out FUNLPLUS! Because I am a full-time teacher and husband and father involved in lots of things: town politics, local educational committees, user groups, writing conference and workshops, garden, dogs, and so on (a normal life, in other words) - it is not always easy to get out these FUNLPLUS! disks. It takes about an hour to complete each disk. First, I have to make a flippy. Then I load up my system and make a verified initialization. I don't want disks returned by frustrated users because of some fault that could have been avoided.

Then I [did] write a personal note to the user to show the buyer he or she is not dealing with a machine; take out my paper from the printer and load up the labels and load up my label program and make a label for the disk; prepare the mailer with another label and with (in indelible marker) a "Magnetic Media: Do NOT Xray or Bend" statement; put in the disk and the letter and seal it with brown package tape; I put on my return address label and the stamps; and mail it off.

The process takes about an hour for each. The cost for everything (disks, electricity, labels, mailer, notepaper, stamps, permanent marker, etc.) is about $3.10 per disk, according to my accountant son.

Thus, I spent 43 hours and $133.20 and got nothing in return on that one particulary batch. This does not count the 550+ hours it took me to create and edit and put together the flippied disk for the environment in the first place; nor does it count the disks I sent to supporters, nor the dozen copies I sent out to area newsletters for reviews, nor the copies I left in user-group libraries. So I'm out about $220. (I had a dream that I would make enough on this companion to possibly purchase a GENEVE, if and when it came out.) Eleven months later I still haven't gotten a single comment or penny from the unflippied disks sent to me with the (in many cases insufficient) return postage. Nor from any that I gave away (except to other FAIRWARE programmers, who have been tremendously supportive).

This is bad. Not good for my ego or pocketbook.

I decide to make up a flyer and charge $8, including mailing and buying the disk and flippying. That way, at least, I'll receive the money and be able to buy the disks and labels and stamps beforehand to prevent the mounting debt. I make up 500 flyers: $24.20.

I go to my regular user group (M.U.N.C.H.) in Worcester and demonstrate *FUNLPLUS!* Positive response and 6 people buy at $7 (reduced for members). Now I'm feeling better and my debt is back to about $200.

I pass out the flyers at an October 99er Fair in Pawtucket, RI. A friend allows me to sell these FAIRWARE disks at his table. One man gets angry. "How can you call this Freeware?" (I had long since stopped calling it Freeware.) I said, "Just $7 for a 720-sector disk is hardly Unfairware." He picked up the disk, looked at it disgustedly, and threw it back on the table and walked away. He was not the last to give me the "Freeware pitch," though I told each hostile antagonist that I thought what I was doing was more than fair.

I sell two (to other programmers), trade one, give four away to programmer friends with whom I correspond but only get to meet at fairs (They, in turn, have readily sent their FAIRWARE items to me.), and hand out lots of flyers which later results in sales.

Meanwhile, I send the disk to a friend who owns a software company. After looking over my disk to see that it was legitimate and did all it claimed in the flyer, he willingly distributes my flyers FREE (He knows I'm a teacher with three kids in college at the moment.) with his orders. This means that I would get the orders directly. If any.

If any! Wow!

The $8 checks start coming in from the real, dedicated 99 crowd I felt was out there somewhere: Montana, New

Jersey, Ottawa, Belgium, Ohio, Texas, Australia, Massachusetts, Louisiana, Iowa, Minnesota, Michigan. On and on. With supportive letters. Within weeks many of these same people send an ADDITIONAL $5 or $10, with very positive comments. Some even buy for relatives or friends. *And this is a program that is totally unprotected.* I also send MICROpendium a copy. They write a short FREEWARE review. Very positive. And the checks started flowing from <u>that</u> direction, too.

The comments have been the greatest reward (though the reduction of that debt isn't so bad, either?)

I guess I would really prefer FAIRWARE or SHAREWARE or PAYWARE or CHEAP-THOUGH-GOOD-WARE or GREATSTUFFWARE or <u>anything</u> to FREEWARE.

People really believe it is Free and they are WRONG! Nothing is Free! Everything costs somebody something! So, hurry to your nearest box of disks - the ones you use frequently - and pull out the ones you got "free" and look up the author and, if you've never sent a donation and an encouraging note, whip out checkbook and pad and go to it. It may be one of the best investments you could ever make.

* * *

[NOTE: This rewrite is done in March, 11 months after I wrote and edited the *FUNLPLUS!* companion and three months after I wrote the original draft of this article. I received two $8 checks today. I am now completely out of debt and have made a total profit of $26 and lots of new friends. I may get that GENEVE yet.

Would I do it all over again? Yup. But not the same way. I'd do it as I'm doing now. No more free in advance. I'd do it over because of the wonderful friends I've made, because of the things I have learned about computing, because of the fun of putting together something a lot of people like. Very rewarding. For my <u>next</u> project ....]

* * *

Please send comments about FAIRWARE/FREEWARE or any of <u>your</u> FAIRWARE materials you'd like me to review to Jack Sughrue, Box 459, E.Douglas MA 01516.

* * *

BY THE WAY...

<u>Except for the heading</u> (which was done with *CSGD III*), all of this article was written with the *FUNLPLUS!* companion to *FUNLWEB* v 3.4. All of the italics and block lines and super/sub-script (as in $^{2}/_{5}$) and the switching from 132-column condensed to 80-column elite is all done automatically through IFfing the FORMATter with the *FUNLPLUS!* codes and templates.

this

to this

to this

to this

and even

<u>to this combination</u>

is but a matter of keystrokes within the editor. Not many processors (even those costing hundreds) allows you the flexibility we're given with *FUNLWRITER*.

* *I was asked by a FAIRWARE friend in Florida to write this column* about our frustrations. Done. As a result of a lot of requests I will soon take up the whole step-by-step process of IFfing (it may take two columns), and list all the coding to let you begin immediately. **<u>THEN</u>** I'll continue on with the two series on graphics and construction programs

* * *

ARCHIVER

A Software review
by
Dick Beery

A friend recently complained that when people talked about "unpacking" files, he felt completely at a loss. This prompted me to review the perhaps most widely known and utilized program of this type, to briefly
outline procedures for using it, and to mention some others that are currently available.

Since I am most familiar with Archiver, version 1.2 by Barry Traver, I will go into the greatest detail concerning its application.

People who are unfamiliar with archival-type programs are often puzzled as to the need and advisability of using one. My personal reasons are twofold: I am a frequent user of computer bulletin boards, which often send part of their downloads in "packed" form, and I frequently "pack" related programs and files for storage.

Why do the operators of BBS's use "packed" versions of downloads? Because in this way they can offer the user one large file instead of many small ones, thus eliminating the need for the downloading of many files, one after the other, in the case of long and complex programs. Examples might be games or utilities comprised of several programs and/or files, music programs and files by one programmer such as Bill Knecht or those identified with a single performer such as Chuck Berry, etc.

Why do I sometimes "pack" related programs and/or files for storage? For those of you who, like I, use disks with storage capacity greater than the SSSD variety originally provided by T.I., this can be a great boon. My disks can be, and often are, double-sided and double-density, which means that 1440 sectors of storage are available per disk. When I have a game or utility which contains several programs and/or files whose names do not all begin with the same letter of the alphabet, these, when catalogued by the disk manager, will be scattered all over the disk. I regret to say that, at a later date, I often don't remember all these names, or even how many parts there were in the program. If I "pack" the entire contents of the program for storage (not for use--it cannot be directly addressed in "packed" format), then at any time I wish to transfer it to another disk or share it with someone (assuming it to be public-domain or Fairware,of course), I have everything in one place and easily accesible.

Surely, you say, this must be a complex procedure! Not so. I find it to be one of the easiest programs to use of any that I know. And one of the most reliable.

One common misconception is that "packing" is used to conserve disk storage space, to "squeeze" the program into a smaller area on the disk. With the exception of Combiner, mentioned below, which claims to do this, I do not know of any such claim for most archival-type programs, including the one currently being discussed here.

This version, 1.2 of Archiver, is free to subscribers of Genial Traveler, and is Fairware to all others. It may be obtained from some BBS's and many users' groups, or by writing to:
Barry A. Traver
835 Green Valley Drive
Philadelphia,PA,19128.

Some versions require the use of Editor/Assembler. This one loads directly from Extended Basic. The first screen gives details of title, authorship and the Fairware notice, plus the prompts for:
1.Store files("Pack")
2.Restore files("Unpack")

Since most first-time users will want to use option 2 to get at some tempting program they have received but cannot access in its present format(D/F128), we will concentrate on that use. Once you have mastered "unpacking", "packing" is easy to figure out.

Ok, you've pressed "2". You now see screen 2 which says:
Restore files("unpack")
Input file? DSK .

After you have entered the drive number and exact filename, the drive you indicated will turn on, and you will see:
Output drive(1-6) ?

Enter that drive number and you will see:
Calculating. . . ., and the indicated drive will turn on.

In this version, you will then see a numbered listing of the names of all the programs and files contained in the "packed" file. You will be asked whether you wish to unpack one file or all files. Normally you will unpack all files. The option of unpacking one file is very useful, however, when you are writing to a disk that already contains other programs. If Archiver finds the same filename on the output disk as the one it is unpacking it will skip that file and unpack only those whose filenames are different. In that

way, your earlier file by the same name does not get overwritten. It's also convenient for unpacking a documentation file first so that you can see whether the program would be of sufficient interest for you to want to unpack the rest.

Once you have chosen "All" you can sit back and watch the program read one disk and write to the other. When the unpacking has been completed, you will see a message to that effect, and be asked whether you have other files you wish to unpack. Press "Y" to continue or "N" to return to Extended Basic.

Easy, wasn't it?

If you have only one disk drive available, get a copy of Unpacker from any of the sources listed above. It is also by Barry Traver, is a companion program to Archiver, and *functions in exactly the* same way, except that you are given prompts for inserting the Master and Copy disks. It will allow you to unpack a whole SSSD disk.

Version 2.1 is also available, and because of its being written in assembly language, is faster. It does NOT allow you to unpack only one file--a drawback, but does allow you to catalog your disk, which the earlier versions do not, and this is a real boon, as it is easy to forget the exact filename. It also does not list the filenames in the packed file, which I consider a drawback, in that I like to write the names on the disk sleeve together with the packed-file name, so that I know what all the parts are. It was written by Barry Boone, is said to be compatible with Barry Travers' Archiver program, is Fairware, and can be obtained from the above-mentioned sources or by writing directly to:
Barry Boone
Box 1233
Sand Springs,OK,74063

You will find most Extended Basic versions to be compatible and very similar. Usually, the newer versions fix problems in the earlier ones or in some way enhance these.

Another *popular version is* 2.1, *but I am unfamiliar with it*, though I feel sure its use if roughly the same as that described above.

A program titled Combiner, written by Nick Iacovelli,Jr. is available, I believe, either from the author, from the TI-West BBS or from users' groups or elsewhere. I have seen but not used it, though I am aware that one of its claims is the saving of disk space through compresssion. It is NOT compatible with any of the other programs mentioned in this article. That brings up an important point: check to see which archival-type program was used in packing.

This is sometimes indicated in the filename: those ending with /ARC or /PAC are associated with Archiver, and those with /DC with Dcopy. Also, most packed programs indicate this in the information you will receive prior to, or at the time of, obtaining the program.

I was unable to obtain the full name of the author of Dcopy. The docs that accompany it list him as Howie R., and give his Compu-Serve ID as: 74216,1640

Some of the programs you get will be packed using this instead of Archiver, so you might want to have both available for use.

Its files are in I/F128 format instead of D/F128,and so are not compatible with Archiver. I have not used this program, but have been told that it will work with many programs written in FORTH.

I hope this is more helpful than confusing. As I stated earlier, Archiver, the main focus of this article, is very user-friendly. I think you will enjoy using it.

P.S. Just had a chance to look at the new Genial Traveler (Vol. 1 No. 6)and
thought it might be appropriate to include a quote here from that disk:

"ARCHIVERII is Barry Boone 's assembly language version of my ARCHIVER, a pack/un pack storage utility *now used as a* standard on Compu Serve, GEnie, the Source, Delphi, and many local TIBBS's." Barry (Traver)goes on to comment on the lightning speed at which it operates and then mentions the draw backs I have already indicated above. Just thought you might find this information to be of interest. Meanwhile, enjoy your pack ing and unpacking!

COME COMPUTE
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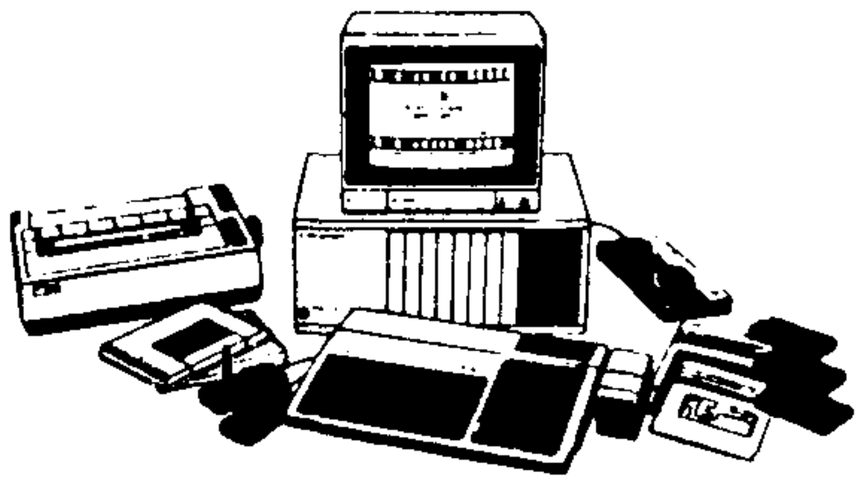

FROM THE PRESIDENTS'
COMPUTER DESK
BY IRWIN HOTT

This month my article is about the CALL KEY routine as implemented in TI Basic and Extended Basic.

CALL KEY is particularly useful if you need to press a single key and do not want to have to press the enter key. Here is a program that will run in either Basic or Ex-basic. I will use this as a base to build upon for my next examples.

```
10 CALL CLEAR
20 PRINT "CALL KEY DEMO"
30 PRINT "PRESS 1 2 OR 3"
40 CALL KEY(0,K,S)
50 IF S=0 THEN 40
60 IF K=49 THEN 90
70 IF K=50 THEN 110
80 IF K=51 THEN 130 ELSE 40
90 CALL SOUND(100,400,1)
100 GOTO 10
110 CALL SOUND(100,500,1)
120 GOTO 10
130 CALL SOUND(100,600,1)
140 GOTO 10
```

This is the simplest and most inefficient of CALL KEY routines. By pressing 1 2 or 3 you will get a tone of a specific frequency.

The next sample will also run in Basic or Ex-basic.

```
50 IF (S<1)+(K<49)+(K>51)THE
N 40
60 ON K-48 GOTO 90,110,130
```

This replaces lines 50 and 60 in the original program. lines 70 and 80 may be deleted.

BEFORE YOU MODIFY THE ORIGINAL PROGRAM, RUN IT AGAIN AND HOLD DOWN THE 1 KEY. NOTE THAT THE TONE REPEATS AT REGULAR INTERVALS. NOW TYPE IN THE NEW LINES AND TRY THE SAME THING.
Note that the tone is heard only once.
The three variables in the CALL KEY statement (OKS) are as follows:

The first covers the type of CALL KEY statement that is called for:
0 uses the mode from the last CALL KEY.
1 accepts input from the left side of the keyboard.
2 accepts input from the right side of the keyboard. These are useful in some types of 2-player games.
3 returns upper case values only.
4 is pascal mode.
5 returns upper and lower case values.

If no other CALL KEY has been issued 5 is the default.
K is the ascii code of the key pressed.
S has three possible values.
If s=0 then no key has been pressed. Hence the IF S=0 THEN 40
If s=-1 then the same key was pressed the last time a CALL KEY was encountered. Hence the if s<1 in the last sample.
It is quite common to see if S=0 THEN XX. If you will be encountering another CALL KEY routine almost immediately after the first one you may have a problem if a key is held down too long.

Now back to the last example:
I used relational operators in line 50 so that IF S<1 or K<49 or K>51 THEN 40 Otherwise the ON GOTO is encountered. The same thing may be accomplished in Ex-basic by IF S<1 OR K<49 OR K>51 THEN 40.

In the next example I use a subroutine to get the CALL KEY value.

```
30 PRINT "PRESS A B C OR a b
 c"
40 GOSUB 1000
50 IF K<65 OR K>67 THEN 40 E
LSE ON K-64 GOTO 90,110,130
1000 CALL KEY(0,K,S):: IF S<
1 THEN 1000 :: IF K>96 AND K
<123 THEN K=K-32
1010 PRINT CHR$(K):: RETURN
```

One of the disadvantages in using the CALL KEY(3,K,S) is that any other input from the keyboard will be in upper case. You may put in a dummy CALL KEY(5,,K,S) before an input prompt to restore things to normal, but I find that this method is much better.
This adds lines 1000-1010, replaces 30-50 and you may delete line 60.
You will see that in line 1000 if K is from 97-122 then K is decreased by
This takes any lower case letter and makes it upper case.
The subroutine has the added advantage of being available anytime I need a CALL KEY routine. Instead of printing the CHR$(K) as is done in line 1010 I send it to speech.
The final example shows how efficient the program can be.

```
10 CALL CLEAR
20 PRINT "CALL KEY DEMO"
30 PRINT "PRESS 1 2 OR 3"
40 CALL KEY(0,K,S):: IF S<1
THEN 40 :: IF K=49 THEN CALL
 SOUND(100,400,1)ELSE IF K=5
0 THEN CALL SOUND(100,500,1)
ELSE IF K=51 THEN CALL SOUND
(100,600,1)
50 GOTO 40
```

In this example we are back to the original program. Lines 90-140 are deleted. If you remove the
IF S<1 THEN 40 :: from line 40 and hold one of the keys down you'll see just how fast CALL KEY can be.

Control and function keys will return values with CALL KEY. Remember not to hit function = unless quit is disabled.
The values of keys pressed are different in Pascal mode. There is more about Pascal mode in the Users Reference guide.

There are a couple of methods so that you may return more than 1 character by using CALL KEY.
You may put the call key statement within a FOR NEXT LOOP. After the last character is pressed the loop is exited. Within the loop you would need
A$=A$CHR$(K)
I have not really seen any benefit to this in my programming.
Another use of CALL KEY is for a check to see if a key has been pressed.
As I am writing this article I have a routine that looks for a press of the spacebar. If the bar is pressed the line is spelled. The routine looks something like this:
10 LINPUT A$

```
20 CALL SOUND(1,1400,1)
30 CALL KEY(0,K,S)
40 IF K=32 THEN 50 ELSE 10
```

Line 50 would be the spelling routine. If the spacebar is not depressed the program goes back to line 10.

The opposite may be done to produce a pause in a program.

```
10 CALL CLEAR :: CALL SOUND(
1,512,10):: PRINT "PRESS P T
O PAUSE"
20 CALL KEY(0,K,S):: IF K<>8
0 THEN 10
30 PRINT "PRESS ANY KEY TO C
ONTINUE"
40 CALL KEY(0,K,S):: IF S<1
THEN 40 ELSE 10
```

Well that's it for this month.

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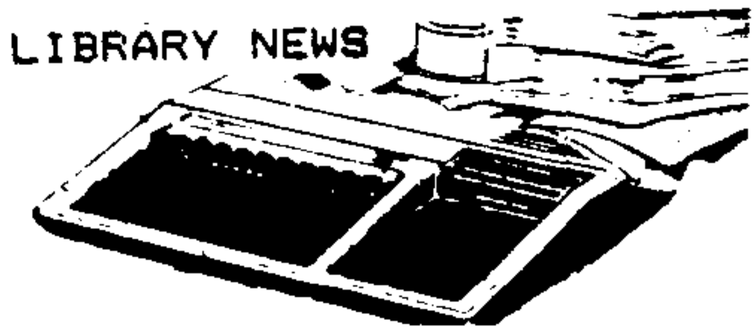
<DOC>#0



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LATER <CHUCK>

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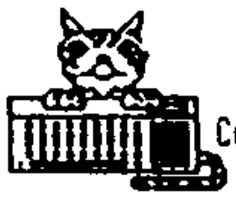

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The READFILE subprogram on my Nuts & Bolts #2 disk has a backward parentheses in line 21161. This is the corrected line -

```
21161 DISPLAY AT(17,1):"OPEN
 PRINTER #":"NAME? " :: ACCE
PT AT(17,15)VALIDATE(DIGIT)S
IZE(-3):P :: ACCEPT AT(18,7)
:P$ :: OPEN #P:P$ :: GOTO 21
163
```

When Texas Instruments developed Extended Basic, they took away the ability of Basic to redefine or color the characters in sets 15 and 16, ASCII 144 to 159, in order to make room in memory for sprites (they did let us have color set 0 instead. That is why Basic programs which use sets 15 and 16 will crash if you try to run them in XBasic.

Finally, John Behnke published in the Chicago Times newsletter an amazing routine which gave us back those missing sets. His routine was 13 sectors long. Recently, Richard Heath published in the L.A. newsletter a shortened version. And, without having any idea how it works, I have managed to scrunch it down to only 4 sectors -

```
1 CALL BXB
29999 !BXB by Jim Peterson,
adapted from VDPUTIL2 by Joh
n Behnke/Richard Heath
30000 SUB BXB :: CALL INIT :
: CALL LOAD(8194,37,194,63,2
40)
30001 CALL LOAD(16368,80,79,
67,72,65,82,37,58,80,79,75,6
9,86,32,37,168)
30002 !
30003 FOR J=1 TO 136 :: CALL
 LOAD(9529+J,ASC(SEG$(]{\[]$
,J,1))):: NEXT J :: SUBEND
30004 SUB CHAR(A,A$):: CALL
LOAD(9500,A):: CALL LINK("PO
CHAR",A$):: SUBEND
30005 SUB COLOR(A,B,C):: CAL
L LOAD(9492,B,15+A,(B-1)$16+
C-1)
30006 CALL LINK("POKEV"):: S
UBEND
```

Note than line 30002 is missing. That's because there is no way to key it in. Once again we need a program that writes a program -

```
100 FOR J=1 TO 136 :: READ A
 :: M$=M$&CHR$(A):: NEXT J
110 OPEN #1:"DSK1.BXBDATA",V
ARIABLE 163,OUTPUT :: PRINT
#1:CHR$(125)&CHR$(0)&"][\[]$
"&CHR$(190)&CHR$(199)&CHR$(1
36)&M$&CHR$(0)
120 PRINT #1:CHR$(255)&CHR$(
255):: CLOSE #1
130 DATA 2,224,37,20,3,0,0,0
,2,5,48,48,2,6,37,2,205,133,
2,134,37,17
140 DATA 17,252,4,192,2,1,0,
1,2,2,37,1,2,3,18,0,212,131,
4,32,32,20
150 DATA 208,4,9,80,2,32,3,0
,2,1,37,2,2,2,0,8,2,7,11,0,2
,8,7,0,193
160 DATA 1,192,193,193,180,9
7,133,145,135,21,1,113,136,6
,198,145
170 DATA 135,21,1,113,136,21
0,70,10,198,177,137,220,198,
2,131,37,10
180 DATA 17,240,4,32,32,36,1
6,6,2,224,37,20,3,0,0,0,4,32
,32,32,4
190 DATA 192,216,0,131,124,2
,224,131,224,4,96,0,112
```

RUN that to create a file BXBDATA on the disk. Then load the BXB program, and enter MERGE DSK1.BXBDATA. The unprintable line will pop into place. SAVE this completed BXB routine in MERGE format, and merge it into any Basic-only program. If you want, the result can be run through a Compactor program and turned into multi-statement program lines for more speed.

Or, you can write an Extended Basic program using all 16 character sets for graphics and color - actually 17, because set 0 is also available. Even the characters 24 through 31 can be redefined! Craig Miller has warned against fooling around in that area of memory, but there seems to be no problem with redefining the cursor (30) or the edge character (31).

Sprites can only use characters between 32 and 143 and their color cannot be changed with CALL COLOR(#,_). I have not found any other bugs, but have not had time for much experimenting.

Here's an easy Tigercub challenge - run this one in Basic, not Extended Basic.

```
>LIST
100 DISPLAY AT(1,1):0
>RUN
  0
  0
  Why did it print the  zero
twice?

  I  wrote  this  next  one
primarily for blind users.
It converts each PRINT or
DISPLAY directly to speech
output and also provides a
speech prompt for INPUTs.

100 !PRINT SPEAKER by Jim Pe
terson - to add OPEN #1:"SPE
ECH",OUTPUT and convert PRIN
T and DISPLAY statements to
PRINT #1
110 !Also writes a PRINT #1
for INPUT prompts
120 !Program to be converted
 must first be SAVEd in MERG
E format. Recommend it be RE
Sequenced before SAVEing, to
 make room for INPUT lines
130 PS$=CHR$(156)&CHR$(253)&
CHR$(200)&CHR$(1)&"1"&CHR$(1
81)
140 DISPLAY AT(3,1)ERASE ALL
:"INPUT FILENAME?":"DSK" ::
ACCEPT AT(4,4):IF$ :: OPEN #
1:"DSK"&IF$,INPUT ,VARIABLE
163
150 DISPLAY AT(5,1):"OUTPUT
FILENAME?":"DSK" :: ACCEPT A
T(6,4):OF$ :: OPEN #2:"DSK"&
OF$,OUTPUT,VARIABLE 163
160 PRINT #2:CHR$(0)&CHR$(1)
&CHR$(159)&CHR$(253)&CHR$(20
0)&CHR$(1)&"1"&CHR$(181)&CHR
$(199)&CHR$(6)&"SPEECH"&CHR$
(179)&CHR$(247)&CHR$(0)
170 LINPUT #1:M$ :: P=POS(M$
,CHR$(156),3):: A=POS(M$,CHR
$(162),3):: Z=POS(M$,CHR$(18
1),3)
180 I=POS(M$,CHR$(146),1)::
IF I=0 THEN 210 :: IF Z=0 OR
 Z<I THEN PRINT #2:M$ :: GOT
O 240
190 M2$=SEG$(M$,1,1)&SEG$(M$
,2,1)&PS$&SEG$(M$,I+1,Z-I-1)
&CHR$(0):: PRINT #2:M2$
200 PRINT #2:SEG$(M$,1,1)&CH
R$(ASC(SEG$(M$,2,1))+1)&SEG$
(M$,3,255):: GOTO 240
210 IF P+A=0 THEN PRINT #2:M
$ :: GOTO 240
220 M=MAX(P,A)
230 M$=SEG$(M$,1,2)&PS$&SEG$
(M$,M+1,255):: PRINT #2:M$
240 IF EOF(1)<>1 THEN 170 EL
SE CLOSE #1 :: CLOSE #2
250 DISPLAY AT(12,1)ERASE AL
L:"Type NEW and Enter" :: DI
SPLAY AT(15,1):"Type MERGE D
SK";OF$ :: END
****************************
      MOLLY DARLING
100 CALL CLEAR :: CALL SCREE
N(5):: FOR SE=1 TO 12 :: CAL
L COLOR(SE,16,5):: NEXT SE
110 DISPLAY AT(3,8):"MOLLY D
ARLING": :" Written and perf
ormed by": :TAB(9);"Eddy Arn
old" :: DISPLAY AT(24,1):"Pr
ogrammed by Jim Peterson"
120 FOR D=1 TO 200 :: NEXT D
 :: DISPLAY AT(12,1):"Just a
 moment.....": :".....look
ing for my music..."
130 DIM N(100),N2(100),A(250
),B(250),C(250):: F=110 :: F
OR J=1 TO 80 :: N(J)=INT(F*1
.059463094^(J-1)+.5):: NEXT
J
140 DATA 16,11,8,16,8,11,16,
4,11,18,11,8
150 DATA 20,16,11,23,11,16,2
5,21,16,28,16,21
160 DATA 23,20,16,23,16,20,2
3,11,16,23,16,11
170 DATA 20,11,16,20,16,11,2
0,8,11,20,11,8
180 DATA 20,11,16,25,16,11,2
3,11,16,20,8,4
190 DATA 18,16,10,18,10,16,1
8,16,10,18,11,16
200 DATA 18,15,11,18,9,15,18
,11,9,18,9,3
210 DATA 28,8,1,28,13,8,28,8
,13,28,13,4
220 DATA 27,20,18,27,18,20,2
0,18,12,20,12,18
230 DATA 25,21,16,25,16,21,2
5,13,16,25,16,13
240 DATA 27,23,21,27,21,23,2
7,23,18,27,18,21
250 DATA 28,23,20,28,20,23,2
8,20,16,27,16,20
260 DATA 30,21,13,28,13,21,2
7,21,13,25,13,21
270 DATA 23,20,16,23,16,20,2
0,11,16,20,16,11
280 DATA 30,23,13,28,13,23,2
3,20,13,20,13,16
290 DATA 25,21,16,25,16,21,2
5,21,16,27,16,21
300 DATA 28,23,20,20,16,11,1
8,15,11,20,11,15
310 DATA 16,11,8,16,8,11,16,
9,1,16,1,9
320 DATA 16,11,8,16,8,11,16,
1,8,16,13,1
330 DATA 25,21,16,25,16,13,2
5,13,9,25,9,4
340 DATA 23,20,16,23,16,11,2
3,11,8,23,8,4
350 DATA 21,18,11,21,11,9,21
,9,6,20,6,3
360 DATA 21,16,11,20,16,11,2
0,11,8,20,8,4
370 DATA 18,13,10,18,10,6,18
,6,1,20,13,10
380 DATA 22,18,13,28,22,18,2
7,18,22,25,22,18
390 DATA 23,18,15,23,15,11,2
3,11,6,23,6,3
400 DATA 23,21,15,23,15,11,2
3,11,9,23,9,6
410 DATA 16,13,8,16,8,13,16,
13,8,18,13,9
420 DATA 20,11,8,21,8,11,20,
11,8,18,11,6
430 RESTORE 140 :: T=16 :: G
OSUB 480 :: RESTORE 140 :: T
=4 :: GOSUB 480 :: RESTORE 1
80 :: T=12 :: GOSUB 480 :: R
ESTORE 140 :: T=16 :: GOSUB
480
440 RESTORE 210 :: T=28 :: G
OSUB 480 :: RESTORE 170 :: T
=4 :: GOSUB 480 :: RESTORE 2
50 :: T=4 :: GOSUB 480 :: RE
STORE 280 :: T=4 :: GOSUB 48
0 :: RESTORE 190 :: T=8
450 GOSUB 480 :: RESTORE 140
 :: T=16 :: GOSUB 480 :: RES
TORE 290 :: T=48 :: GOSUB 48
0 :: RESTORE 140 :: T=16 ::
GOSUB 480 :: RESTORE 410 ::
T=8 :: GOSUB 480
460 RESTORE 310 :: T=8 :: GO
SUB 480 :: GOTO 490
470 GOTO 490
480 FOR J=1 TO T :: X=X+1 ::
 READ A(X),B(X),C(X):: A(X)=
A(X)+12 :: B(X)=B(X)+12 :: C
(X)=C(X)+12 :: NEXT J :: RET
URN
490 DISPLAY AT(10,1):"Contro
l volume of 3 voices":"using
 1, 2 and 3 keys for":"loude
r and Q, W and E for":"softe
r.":""
500 DISPLAY AT(15,1):"Contro
l speed using 'F' for":"fast
er and 'S' for slower."
510 DISPLAY AT(18,1):"Change
 key using 'A' for":"higher
and 'D' for lower."
520 DISPLAY AT(21,1):"Press
'Z' for minor key, 'X'":"for
 major key." :: V1,V2,V3=10
:: F,P,Y=0 :: X=200
530 FOR J=1 TO 192 :: CALL S
OUND(-999,N(A(J)-Y),V1,N(B(J
)-Y),V2,N(C(J)-Y),V3):: FOR
T=1 TO X/50 :: P=J^X :: NEXT
 T
540 CALL KEY(0,K,S):: IF S<1
 THEN 710 :: ON POS("123QWEF
SADZX",CHR$(K),1)+1 GOTO 710
,550,560,570,580,590,600,610
,620,630,650,670,690
550 V1=V1-1-(V1=0):: GOTO 71
0
560 V2=V2-2-(V2=0)*2 :: GOTO
 710
570 V3=V3-2-(V3=0)*2 :: GOTO
 710
580 V1=V1+2+(V1=30)*2 :: GOT
O 710
590 V2=V2+2+(V2=30)*2 :: GOT
O 710
600 V3=V3+2+(V3=30)*2 :: GOT
O 710
610 X=X-20-(X(2)*20 :: GOTO
710
620 X=X+20 :: GOTO 710
630 IF F=1 THEN GOSUB 700
640 Y=Y-1-(Y=-20):: GOTO 710
650 IF F=1 THEN GOSUB 700
660 Y=Y+1+(Y=6):: GOTO 710
670 IF F=1 THEN 710 :: GOSUB
 680 :: GOTO 710
680 F=1 :: Y=0 :: FOR W=3 TO
 27 STEP 12 :: N2(W)=N(W)::
N(W)=N(W-1):: N2(W+5)=N(W+5)
:: N(W+5)=N(W+4):: N2(W+10)=
N(W+10):: N(W+10)=N(W+9):: N
EXT W :: RETURN
690 IF F=0 THEN 710 :: GOSUB
 700 :: GOTO 710
700 F=0 :: FOR W=3 TO 27 STE
P 12 :: N(W)=N2(W):: N(W+5)=
N2(W+5):: N(W+10)=N2(W+10)::
 NEXT W :: RETURN
710 NEXT J :: J=192 :: FOR V
=10 TO 30 :: CALL SOUND(-999
,N(A(J)-Y),V,N(B(J)-Y),V,N(C
(J)-Y),V):: NEXT V :: FOR D=
1 TO 500 :: NEXT D :: GOTO 5
30

      MEMORY FULL

       Jim Peterson
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TURBO OR NOT TURBO

by
DAVE WAKELY

(This article has been taken in part from the Chicago Times - April 1987 issue - a publication of the Chicago User Group)

Turbo or not Turbo: It was just after the last meeting that the Triton Turbo XT I have written about and ordered back in January finally arrived. By now many of you have seen the brochure and have some questions, and what you want to know is, "What can it do for me?" Well, as advertised, it does indeed let you run an IBM PC/XT clone from your TI-99/4A keyboard. In fact, some of this column has been written using it. As I noted a few months back in the initial comments about it, the key to this system is the "bridge box", a small peripheral, about the width of two speech synthesizers and slightly longer, which plug into the side of the 4A console. What this unit essentially does is convince the Turbo XT that your 99/4A console is actually an IBM compatible keyboard. I haven't taken it apart, but the information I have says that it does this "through software and hardware control inside the "bridge box".

I suppose this is also as good a place as any to begin a review. Those of you with absolutely no interest in this unit or IBM compatibility in general can feel free to skip down to the last paragraph or two of this column. Meanwhile, those of you remaining who are familiar with IBM keyboards are either chuckling to yourselves or shaking your heads in wonder. This is because IBM keyboards typically have between 96 and 102 keys, while the TI has 48 (or 49 if yours has been modified like mine). So how do they do it? With "switches" which give you no less than four "different" keyboards, that's how. The start-up default is the "standard" TI keyboard, sort of. Everything is as you know it, except that FCTN 3 now "end" instead of "erase", FCTN 4 is "PgUp" instead of "clear", etc., as well as a few others on the top row. Cursor movement is by the usual FCTN S,D,E, and X, and the alphanumeric keys are still the alphanumeric keys. All those other IBM keys, however, can only be accessed by switching to the OPT1 or OPT2 or OPT1 OPT2 keyboards.

By holding down the FCTN key while hitting the SHIFT key, for example, a small section of the bridge box lights up which says "OPT1". In this mode, there are no longer any number keys. Pressing "1" now gives me "Delete" directly, with no need to hold down FCTN, "2" is now "Insert", etc. All other keys are unchanged. The main function of this mode however, is to give the user access to keystrokes such as SHIFT DEL or CTRL DEL, which may be required by an IBM application program. For example, if for some reason I needed to execute SHIFT DEL 5, here is the sequence on the TI: 1) hold down FCTN while hitting SHIFT (to get to OPT1); 2) hold down SHIFT while hitting "1" (which is now "DEL"); 3) again hold down FCTN while hitting SHIFT (to toggle back to the default keyboard-OPT1 light goes out); 4) hit "5". Easy, right? And on an IBM keyboard: 1) hold down SHIFT while hitting DEL; 2) hit "5". Luckily, these kind of sequences don't come up terribly often, except in applications like word processors, which of course happens to be what I most frequently use. If you are not yet completely confused, consider that we are only half way through the keyboard options. Onward:

Holding down FCTN while hitting ENTER gets you to the OPT2 keyboard. Here the changes are substantial. A different light on the bridge box goes on, and it appropriately says "OPT2". The number keys from 1 to 0 are now IBM F1 through F10 Function keys directly, that is, without the need to hold down the FCTN key on the TI. The TI key labeled "1" is now IBM F1, etc. Similarly, any TI key which formerly required FCTN is now directly accessed, for example, ? or ' or ", etc., but of course there are thus no alphanumeric keys in this mode. There are a few other good things about OPT2 mode, such as the ability to use the arrow keys (S,D,E,X) without holding down the FCTN key, but I am already getting tired of talking about the keyboards, so let me wrap this part up by noting that if you execute FCTN SHIFT FCTN ENTER this turns on both OPT1 and OPT2 lights. In this mode the TI number keys become the IBM key pad keys with NUM LOCK on. I could go into boring detail as to what this means, but trust me that there are rare times and programs where you will want and need to do this. Some of you IBM users who are more observant and still awake may be wondering about the IBM ALT key. By any chance did I neglect to mention that in any mode if you hold down FCTN while hitting CTRL that a small light on the bridge box goes on which says "ALT", and that this means that the CTRL key is now the ALT key? I didn't, did I? I knew it.

I can't leave this topic, however, without quoting the Bridge Box Users Manual. "The various XT keyboard modes are harder to describe than they are to use. After you have used them a few times, we believe that you will find them quite easy." Well, yes and no. There is some truth to this, but it also sounds suspiciously like what they initially told me in high school about Latin. To be fair, however, I should point out that the unit comes with a triple-height overlay strip for the top of your TI keyboard which sort of indicates most of the changes above, with one row for each different "keyboard", as well as some other useful information. Overall, it is invaluable. For example, given my above comments about the ALT key, Really observant IBM users will want to know how to reboot, which is CTRL-ALT-DEL. If you hold down FCTN and hit CTRL to get ALT, how do you

simultaneously hold down CTRL itself, not to mention DEL? According to the keyboard overlay the answer is "Reboot XT - FCTN CTRL =" That is, the old TI FCTN = (quit), with CTRL thrown in. This information is nowhere else in the documentation, and I know this because the overlay strip is the last place I looked for it. This also provides me with a segue to the documentation which comes with the Turbo XT.

After I had unpacked the two boxes which arrived, I located a total of 5 different manuals. I did not order the disk operating system (DOS) with my unit, so all of the manuals were hardware manuals. It was evident from this collection just what Triton has done. This entire system has been "assembled" by Triton from available components. Of the five manuals, only one appears to have been prepared by Triton. This is the "Triton Turbo XT" manual. This is an approximately 130 page, IBM style 3-hole punched guide to the main system unit. In this manual there is absolutely no mention or reference to the TI-99/4A or to the bridge box. Triton normally sells the Turbo XT with a keyboard as a straight IBM clone, and this is the manual for it. As such, it is adequate as far as it goes. It has no index, but does have a fairly detailed table of contents. Its chapters cover "Setting up", "Getting started", "The keyboard" (NOT the bridge box TI version), "Introduction to the Disk Operating System", etc. It is nowhere near the quality of IBM documentation, or the volume of information I received with my Zenith clone, but it will get you started easily if you have some experience with MS-DOS computers.

Packed with the bridge box unit was the "Triton Turbo XT Bridge Box Users Manual". Perhaps it is because of previous information in the TI community that Miller's Graphics was involved in the bridge box design, but this 19 page manual looks to me like some of the manuals for MG software. It is similarly clear (as clear as possible given the keyboard mess described above), and guides the user as to the hook up procedures. There is a short table of contents, adequate to find something you may need to look up after installation. After a few hours use I have found that I am relying more on the keyboard strip and less on the detailed keyboard pictures in this manual to find the correct keys on the TI, but it is nice to know they are there. The manual also provides some trouble shooting information in case of problems, and provides clear information on how to change default modes. For example, like all TI "intelligent peripherals", the bridge box has its own CRU Base address (default=1900), which should not interfere with existing and known TI peripherals, nut which is user changeable to a different address via a set of DIP switches. Likewise, and perhaps more useful, the bridge box default is to start up in XT mode, that is, when everything is turned on you will be in the MS-DOS environment. Via another switch this can be changed so that the system "comes up" to the familiar TI title screen instead. More on this later. Finally, there is a one page addendum which notes that other tutorial information on the keyboard which comes with the system is incorrect because it is based on the XT keyboard. The addendum gives the correct keys for the TI board.

Next,there was a 28 page "Turbo - 640 Mainboard User's Manual", which is exactly what it says it is. This manual is about, and only about, the XT motherboard which is on the bottom of the Turbo XT case. On the first page is the information that this board is manufactured by Datatech Enterprize Co., Ltd. It also contains "installation" instructions, including power supply, speaker, and RAM chips, as well as information on the configuration switches. All of these, of course, were pre-set when the unit was shipped to me, but it is vital to have this information when you want to change or upgrade the system. The manual also showed what Triton opted not to include. For example, the manual notes that "this motherboard supports both a software switch and a hardware switch for changes between Normal and Turbo modes." Turbo mode is 8 MHz clock speed,Normal mode is the standard IBM 4.77 MHz speed. On the motherboard is a block of four pins and a single jumper. When the jumper is over one set of pins a software Turbo switch is enabled by means of CTRL-ALT--(minus), while when the jumper is over the other set of pins a hardware switch is enabled. Only there is no hardware switch. It turns out there are other sets of jumpers on this board as well. From later in the manual: "Under ideal conditions, your system unit will have all the indicators and switches shown below." The illustration which follows shows a small panel which contains a keylock, a power-on LED, a Turbo switch, a Turbo LED, and a reset (reboot) switch. While on the one hand the Triton Turbo XT has none of these, the manual makes it fairly clear how they could be added. The last few pages of this manual are a technical description of the DMA and I/O channels. The 12 page Color/Graphics Adaptor manual gives no information as to the manufacturer, although it is printed in a different style than the other manuals. It contains information on the adapter's machine-level programming, the registers, and the memory map, and includes a fold-out 17" by 12" schematic. I didn't find it especially inspiring, in fact I found it confusing. This manual states that of the two composite adapters on the back of the board that the top one has color output, while the one below it is monochrome only. According to the bridge box manual it is just the opposite. On the other hand, the parallel printer card manual is an 18-page documentation

classic. It is titled "The Parallel Printer Card", and on the first page gives the only identifying information, that this is the "PTC-880". This is one of those foreign manuals that we have all run across at one time or another. It was either translated into English by someone in Japan with an English dictionary, or a manual was translated here by someone with a Japanese dictionary. Or maybe it was Korean. Here is an actual, unretouched paragraph from this manual:

This PTC-880 printer adapter can be adjust the port address by changing the jumper near the lefe down corner there is a block "PORT ADDR", Jumpers can be select the correct address.

Well, that certainly says it all for me. Come to think of it, perhaps the manual was written by Nick Iacovelli. Besides other such words of wisdom, the manual does contain an illustration of the pin-outs on both the adapter and printer ends of the interface, and this is about all I usually want from a printer interface manual anyway.

I guess that leaves the hardware and just how this whole thing works together. The bridge box, now that I look at it here, is probably one of the more interesting kludges for the 99/4A. It is no less than 5 plugs in the back, interconnecting the TI console, the Turbo system unit, and the monitor. Also, I've been saving for you the information that the bridge box requires its own 9 volt power supply adapter. Yes, one more thing to plug in. I will spare you the details of just which plug goes where. The box does what they say it does, I just wish it had done more. For example, it was obvious from the initial documentation that the bus information on the TI system can never communicate with the XT bus, and vice versa. That is, no sharing of disk drives, memory, etc. It probably would have been much more difficult to manage this, but probably worth it to TI owners to have two truly integrated machines. As it is, this is a keyboard and monitor sharing device, nothing more. So why even bother? There are some good reasons I can think of which may be familiar to some of you, and maybe some alternate ways to achieve them.

Back when I got started with the original 99/4, I used the old writing desk that had been passed down to me by my family. It was fine for a 99/4 console and a tape recorder. It wasn't too long before I was out purchasing a length of 12" deep shelving board because my side-car peripherals literally would not fit on the desk top. I rigged up a system where they dangled off the end of the desk on the lengtn of shelf, "walking the plank" so to speak. The PE Box changed all that, until I got a second drive, modem and telephone, flip 'n file box, etc., such that the desk was once again full, even after the printer got booted onto an old typewriter stand. When I got my original IBM clone I purchased a computer desk, realized it too wouldn't hold two full systems, and then added a corner adapter and side desk, making one large "L"-shaped table. The Zenith clone, monochrome monitor, IBM disks and software and six outlet plug are on one table, and the TI console, PE Box, TI monitor, TI flip 'n file, modem and telephone are on the other. The printer is on the corner adapter. If I had a mouse for either computer I would literally have no surface on which to write anything. In short, I WANT MY DESK BACK!

There are probably some of you out there saying, "See, you don't stick with TI, this is what you deserve." I understand this, but unfortunately they wouldn't purchase a full 99/4A system for me in the hospital where I work, and my work all but requires me to do some things at home. This also means I need full IBM compatibility, and the Turbo XT promises this. The system unit itself looks about as close to the original IBM XT as you can get. This rather large unit is enclosed in a metal, slide-off type case, and when it is removed reveals what appears to be a standard clone motherboard. One pleasant surprise was the finding that the power supply, which various Triton employees told me was rated either 120 Watt or 135 Watt (depending on which one picked up the phone), was actually a 150 Watter. The documentation stated 8 full-size expansion slots, but I see it as 6 full and 2 half-card slots, probably still more than enough. The reason for this is that the unit can accomodate up to 4 half-height disk drives (hard or floppy), and came with one floppy installed. The power supply in fact has four output plugs to drive them. The two left drives, if installed would prevent the last two expansion slots from holding full length cards. In just about every other respect, this unit has the chips, the jumpers, the connectors, and the sockets in the same place as the IBM. This may not be very original, but there is some comfort in its predicability. I'm no expert on these things, but the board looks to be well made, the connectors have a "solid" feel to them, and the board traces appear uncommonly "clean". I have run PC-Write, Microsoft Flight, Simulator, Multiplan, a graphics drawing program, etc., without difficulty. There are lots of clones which also have the above characteristics, and this one also has a 30-day satisfaction return and 1 year parts and labor warrantee, which many of them don't.

Problems? The only one so far is that I am not getting any color out of the color/graphics adapter with my TI composite color monitor. As I noted earlier, there is some confusion about this in the manual. When I called Triton I discovered that the employees seem much more knowledgeable about the Turbo now than they did back

in January. I was given a technical person named "Lynn", and she has offered several suggestions I am in the process of trying out. After my initial phone call she called back twice to check on my progress with this problem. I like that. I was also reassured that if this proves to be a problem with the board or system unit that Triton "will take care of it". I like that too.

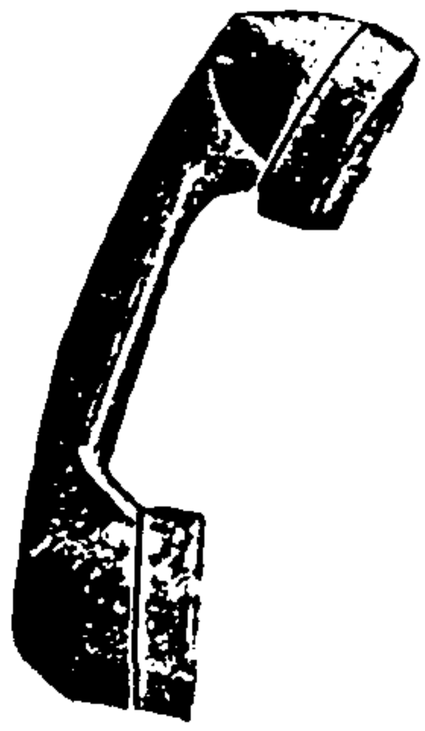
I saw the TI/Turbo XT as a way to at least get down to one keyboard and one monitor, giving my desktop a fighting chance. Unfortunately, the bridge box system doesn't give ergonomics (roughly translated "human comfort") a fighting chance. What are the two most important elements in a computer system from a comfort standpoint? Although I am willing to consider the computer chair as equally important, my candidates are the keyboard and the monitor. These happen to be just the areas where the bridge box connection fails. The documentation says something like, Yes, you can use a color composite monitor with a MS-DOS computer if you turn the color down." My response to this is: "NO YOU CAN'T!"

What about the ability to "switch" between computers? Yes, when in the middle of an application on the Turbo XT you can press FCTN-CTRL-ENTER and the bridge box will switch to 4A mode. You can then run whatever you want on the TI as usual, and when you quit (FCTN =) you will be immediately returned to the Turbo rather than the color bar screen. The issue of "concurrent processing" in the Turbo brochure is actually a bit much. Yes, whatever you were doing with the Turbo will still be there when you return to it, but NOT the other way around with the TI, since the keyboard and console are busy emulating an XT keyboard. At this point the manual states, "The Bridge Box was designed to allow for concurrent processing by the Triton Turbo Xt.", but I would ammend this to read, "The Bridge Box was designed to sell Turbo XTs to 99/4A owners.", but also, as it states in another part of the manual, does technically allow them to use the 4A keyboard and monitor with both systems.

There are a surprising number of ways to remedy some of the problems with this system, as well as my own space problem. One of them is to obtain the Rave 99 keyboard. This is an IBM-like keyboard which replaces the 99/4A board. I am aware that the Rave board itself has several "modes", and is it possible that one or more of them will work well with the bridge box, eliminating the need for the OPT1, OPT2 switching? I will be testing this possibility soon, which would also let me move the TI console off the table altogether. Of course, the Real-Soon-Now to be released Geneve already comes with an IBM board, but where do you plug in the bridge box?

On the monitor end, there was a Mack McCormick article in MICROpendium recently quite favorable to the Dijit Systems RGB modification to the TI console. Would such a modification allow me to use one RGB monitor with both the TI and Turbo XT? How would I manage this given that the bridge box expects the TI DIN plug monitor cable? Doesn't the Geneve have a RGB output? Or is that an analog RGB, while the Turbo is digital RGB?

For a TI newsletter, all this IBM equipment review and speculation has gone on long enough, but many of you wanted more info on the Triton Turbo System, and you now probably have more than you care to. One last option that I am considering is to send back the bridge box and have Triton send me a Turbo keyboard instead. I am thinking of building a keyboard cable switch box to use with a Rave-modified console. I will then manually switch the keyboard when I want to use the other computer. I would also then get a RGB/Composite monitor (Magnavox makes an inexpensive one) and manually switch modes depending on the computer. I care less about automatic switching than I do about ergonomics and desk space. Whether I do this or not depends on how crazy the bridge box and desk clutter drive me in the next few weeks. To help with the clutter I am thinking of standing my PE Box on end. Has anyone done this? I will keep you posted on these developments, but I also promise in the future to keep IBM stuff out of this column as much as possible if there are no new developments along those lines in the TI world. Is that clapping I hear out there?



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SECRETARY'S NOTES

C.O.N.N.I. BUSINESS MEETING
MARTIN JANIS SENIOR CITIZENS CENTER
MAY 9, 1987 SATURDAY A.M.

MEETING OPENED 10:04 A.M.
MEETING ADJOURNED 10:42 A.M.

Meeting was called to order by President Irwin Hott, assisted by Vice President Jim Seitz.

Treasurer's Report: Mrs. John Cummings III gave a report of finances and Everett Wade announced there were 80 paid members as of this date.

Announcement: John Parkins reported two new applications for member ship, one from New York and one from Pennsylvania.

Jere Singleton, new secretary, read the minutes of the April meeting. They were approved as read.

President Irwin Hott gave the updates on the BBS, followed by a discussion on upload credits. The committee recommended a five dollar contribution per year for downloads for those who do not care to upload. Motion carried unanimously.

Vic President Jim Seitz gave report on posters for club membership and these were distributed to members.

Librarian Chuck Grimes reported twelve new disks added to the library, bringing the total to 129 disks. He also gave the details on the contents of May Disk of the Month.

A motion to authorize payment of $25.00 to the Martin Janis Center carried unanimously.

Vice President Jim Seitz initiated a discussion on the suggestion to combine the August meeting with a flea market. Suggestion was tabled to next month's meeting.

Jim Peterson gave the club updates on new hardware and software available.

Demonstration: Chuck Grimes demonstrated functions of the Gram Kracker.

Secretary

Jere Singleton

MEETING DATES
FOR
1987-1988

13 JUN 1987
11 JUL 1987
08 AUG 1987
12 SEP 1987
10 OCT 1987
14 NOV 1987
12 DEC 1987
09 JAN 1988
13 FEB 1988
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WHAT IS YOUR PROFESSION/VOCATION _____
HOW LONG HAVE YOU OWNED YOUR COMPUTER _____
DATE OF APPLICATION _____ ACCEPTED BY _____