

THE GUILFORD 99'ER NEWSLETTER

VOL. 6 NO. 1

JANUARY 1989

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The Guilford 99'er Users' Group Newsletter is free to dues paying members
(one copy per family, please). Dues are \$12.00 per family, per year.
Send check to 3202 Canterbury Dr., Greensboro, NC 27408. The Software
Library is for dues paying members only. (George von Seth, Editor)

OUR NEXT MEETING

DATE: January 6, 1989, TIME: 7:30 PM PLACE: Glenwood Recreation Center
2010 S. Chapman Street.

The program will be given by Mac Jones. He will give a demonstration and
disussion of the popular "WHEEL OF FORTUNE" game. Be sure to bring a
blank disc with you to make a copy if you desire.

DECEMBER MINUTES

The December meeting of the Guilford 99er Users' Group was held on the 6th of December at the Glenwood Recreation Center
in Greensboro, N.C. There were 0 members present.

The meeting was called to order at 8:00 P.M. by President Scott Hughes.

OLD BUSINESS:

- 1. There was no old business discussed.

NEW BUSINESS:

1. There was quite a bit of discussion as to what members wanted to do about the future of the club. It was suggested
that we could continue meeting without dues and newsletter or keep our present dues amount of \$12.00 per year per member and
continue the newsletter. Most of those present expressed the desire to continue as a club with dues and a newsletter. The
newsletter Editor, however, voiced his intentions of cutting the letter down to 6 pages instead of the 10 we are now using.
The question was posed as to why the 10 page format was chosen in the first place. The answer to that was that it was the
maximum weight that could pass the first class postage rate. The savings in printing the 6 page letter versus the 10 page
however, will amount to quite a savings in printing costs over a year. This will offset the decline in membership dues.

- 2. The slate of officers for the coming year has been chosen from the floor and are as follows:

PRESIDENT: Scott Hughes- Burlington, N.C. Tel. (919) 227-2688
VICE PRESIDENT: Emmett Hughes- Burlington, N.C. Tel. (919) 584-5108
SECT./TREASURE: L.F. "Mac" Jones- Greensboro, N.C. Tel. (919) 288-4290

NEWSLETTER ED.: George von Seth- Greensboro, N.C. Tel: (919) 292-2035

LIBRARIAN: Herman Geschwind-Greensboro, N.C. Tel: (919) 299-0015

These officers will assume their duties at the January meeting.

3. Those attending paid their dues for the coming year 1989. They are as follows:

Bob Carmany, Emmet Hughes, Scott Hughes, George von Seth, and "Mac" Jones. Those that have already paid are: "Buddy" Cato and Tony Kleen. This makes a total of 7 members that want a club for 1989. Thanks to these members for wanting to keep the club active for another year. Hopefully, we will receive more dues before the end of January.

After the business meeting, all attending enjoyed a Christmas party and warm fellowship. The club wishes to thank Joanne Jones, Ginny von Seth, and Bob Carmany for the goodies which were enjoyed by all.

The meeting was adjourned at 10:15 P.M.

Respectfully submitted,

By: L.F. "Mac" Jones, Sect./Treas.

## RAMBLING BYTES

A lot of you members missed out on a good time when you passed up the Dec. meeting. There was much to eat and drink but most of all, you showed what interest you have in the future of your club. It seems that only a few of us are wanting the club to continue and that was very evident at the lack of attendance.

Over the past months I have heard all kinds of suggestions as to what we need to do to keep the club going, but I noticed that most of the ones who has most of the answers never seem to show up when they are really needed. Hopefully, they will see fit to come around in January.

As you read in the minutes, there were officers picked from the floor and if that was the reason some of you stayed away, you can rest easy now....you won't have to serve on anything. If I am stepping on anyone's toes, then submit an article to the newsletter and tell me so.

Bob and George have suggested we drop to a 6 page newsletter to save a little money on the printing costs and I agree. It is of no value to a newsletter to copy other newsletters if we swap with as they already have read what is printed and are looking for something new. You could let us know if you have any problems or if you have a certain game or program that is a good one. Give us a write-up on it and let others know about it.

There is one thing that may not be clear to members...and that is the cost of the newsletter. You do not have to pay to belong to the group..only to get the newsletter. Perhaps some of you did not know that. If you feel that you do not want to keep getting the newsletter, don't stop coming to meetings, you can keep the \$12. and still be a member. You just will not get a copy each month. I have also decided that since some newsletters that we exchange with only send them certain months, we will follow suit. That will be a savings in printing and postage also. I feel it only fair that we send a letter for a letter. Those things can get a little one-sided otherwise. Don't get me wrong, I am not condemning these clubs, only explaining why they will not be getting a newsletter each month unless one is sent.

I was surprised that we had no Christmas music this past meeting, as we have in the past had quite a few programmers submitting their products for our appraisal. It must be that time is passing so fast that most folks just don't have the time anymore to enjoy doing things. I find that even tho I am retired, I still don't have time to do everything that I am wanting to do. Are the days just getting shorter or what? It seems like you come home from church and in a couple days, it's Sunday again! Where does it go?!

It is still a few days before Christmas, but I wanted to go ahead and upload my material so Bob could get it as Christmas will be busy this year. My middle daughter and her husband will be driving in from Houston to be with us and I am sure they will bring my two grand-dogs with them! So you can bet there will be no time for writing with those dogs scooting everywhere. At least my oldest daughter gave me a grandson, but with him and the two dogs going, it's a mess!

I hope by the time this gets to your home that you have had a wonderful Christmas and a very happy new years eve. I also hope that 1989 will bring you all the good things you have always wished for. Let's start the new year off with a bang and all show up for the January meeting. Until then...enjoy the good times.

BY: "Mac" Jones

## WHEEL OF FORTUNE

I want to tell you about a real great game, one that I think you will enjoy with the family. This is the WHEEL OF FORTUNE game by Terry Staph. I am sure you will find right away that there is no Vana White, but you will soon be so engrossed in the game that you won't notice.

The game is FREeware and is very well written by Terry. I had tried several times to think of a way to do what he has

done so well with the spinning wheel, but I never could figure out how to do it. Terry even gives you a chance for a \$5000. chance after the second screen.

At the beginning, you are told the keys that you need to use for the five options of the game. Space Bar starts your wheel spinning. The "B" key allows you to buy a vowel providing you have enough money to do so. There is a "free spin" that you may stop on and if so, you may use it whenever you please by using the "F" key. If you are smart enough and think you can, you may solve the puzzle by pressing the "S" key. Also, if you are like me and have trouble remembering the letters that have been guessed, just press F/AID or 7 and the letters that have been used will show up while the keys are being held down. I find this very helpful.

Another thing you are asked at the start is how many players will be playing. Up to 3 can play at a time, or you might like to play by yourself, either way, it will ask the names of the players and will use those names when it shows the amount won and who's time it is to play.

There are several categories which include song titles, places, persons, things, and sayings. Oh yes, I think I left out food, which can be some very hard guesses. You have to play for a long, long while before you may see the same choice appear in the same game. By then you will have forgotten it anyhow. After the third screen, whoever has the highest amount of money will be asked to play the bonus round. You are asked for 5 constants and one vowel. The bonus round will be one of the above mentioned selections and if answered correctly, will give a fanfare of music and a voice will say, "You win!". Of course you must have the speech plugged in for this and I would recommend that you do, as you also have other speech in the program.

If you wish to play again, you are given the option of pressing F/REDO or quitting the game. I guarantee you will not get by with just playing one time as it is habit forming! This will give you a chance to get away from the TV for awhile and get back to family togetherness for a change. I would rate this game a gold star as my family and I have had many enjoyable times playing it. If only the money were real!!!

I plan on demoing this game at the January meeting, so come on to the meet and get you a copy if you don't already have it. It will fit nicely on a SSSD including the loader. See you there and if you see Vana, bring her along!

By: "Mac" Jones

## XB-HINTS

By: Bob Carmany

Over the past year there have been a number of programs that have appeared both in this column and others throughout the newsletter. Very few of them were written with the idea of saving bytes of memory and optimizing code. Usually, there isn't much incentive to maximize memory usage. After all, how many of you have ever gotten a "memory full" message with XB and 32K (or more) attached?

Besides simply conserving memory, compact code can have an added effect -- the program will run quicker and more efficiently. That can be a definite advantage when you rate the performance of that "revolutionary" application that you just finishing writing.

Tony McGovern's fine set of XB tutorials explain how to conserve bytes of memory by replacing variables with constants, using subroutines to replace frequently used code, etc. There are, however, some more subtle methods for conserving memory that will actually speed up program execution.

One of the first things that I learned when I started programming in XB was to squeeze as many statements as I could on each program line. This saves memory by eliminating line numbers and speeds execution by similarly eliminating the need for the program to process extra lines of code.

By looking at what XB does when you press <ENTER>, we can easily see one way to conserve space and add a few more characters in each line. It doesn't matter if you have bothered to add a space between the last character in a statement and the statement separator (ie. "::"). When you press <ENTER>, XB automatically adds the space for you! So, when entering the code for multi-statement lines, there is no need to space between the statement and the double colon ("::") -- you can get more characters in each line that way.

Another way to fill up program lines to their full potential is to take advantage of <FDTN-B> (REDO) when you are typing in your lines of code. In one recent publication, there was a plaintive "letter to the editor" complaining that the program lines in the magazine were too long and wouldn't fit the same way that they were listed. Hoqwash!!

Try this with a long bit of text --- or more simply, just do the following:

Enter XB and type in "NUM 100".

When the line number appears, type in "DISPLAY AT(1,1):"

From this point, just hit the 'X' key until you get that obnoxious "honk" at the end of line 4.

Press <ENTER>. You will get an error message. Then press <FCTN-B> and the line that you just typed in will re-appear.

Use the cursor keys to go to the last 'X' and continue typing --- you now have another half line available!

That is one more subtle way to get the maximum use out of XB. It is just of of the things that TI "forgot" to tell us. It works every time!

Here are some "PEEKs" and "LOADs" that might be of interest to you.

CALL PEEK(8194,A,B,C,D)::(C-A)6+D-B

Free space in low memory after CALL INIT or CALL LOAD(DSKx,xxx")

CALL PEEK(-31866,A,B)::A6+B- 41023

Free program space in high memory.

CALL PEEK(-31936,A,B)::A6+B-2487

Exact amount of free stack space while the program is running.

CALL LOAD(-31873,x)

Start printing at column x (x=3 to 30)

CALL LOAD(-31877,x)

32= Sprite coincidence, 64= 5 Sprites on a row.

CALL LOAD(-32187,9)

0 line number.

That about, does it for this month's column. Next month we will look at some more XB hints and a couple of short XB programs. Tif then . . .

## COMMENTS

By Bob Carmany

It was almost 6 years ago that a group got together to form the 'Carolina 99/4A Users Group' at a TV repair/sales place at the corner of Battleground Ave and Cone Blvd. There were a couple dozen people present and they decided to print a newsletter several months later -- that first one was only 3 pages long. Well, both the group name and the newsletter have changed immensely since that first one was sent out in the summer of 1983. The club is now the 'Guilford 99'ers' after having gone through a couple of intermediate names and the newsletter is one of the longest continuously published ones in the country. The fact is, there aren't very many Users Groups in the world that have been putting out a monthly newsletter for as long as we have been. And, believe it or not, we haven't missed a single one in all that time!

After almost 6 years, it is about time to make some changes. For the past year or so, we have been trying to get our postal money's worth by first going to condensed print and pushing the number of pages up to the weight limit that can be mailed with a single stamp. Well, we are still going to run the newsletter in condensed print (more material per page) but the length is going to vary more significantly. We are going to try to "localize" the content a bit more than we have in quite some time as well. Priority is going to be given to articles authored by members and material gleaned from the various BBS's and such will be used only as necessary. With this in mind, we would like to encourage each of our members to submit just one article per year! It can be about anything TI-related that you wish --- good results with a program (or one that really stinks!), programs (in any programming language), or experiences that you have had while working with your TI are also welcome. It sure would make the Editor's job easier!

## TI-WRITER TIPS

By: Bob Carmany

TI-Writer, FUNLWEB, and the other TI-writer clones are probably the most under-rated word processors around. In fact, you really don't know what you have until you work with one of the high-priced word processors for "Brand X" computers. The problem is that TI-Writer (et. al.) are usually never used to their full potential. Most of the tips and tricks that trickle down to newsletters fall into two categories: 1) obvious but overlooked; or 2) obscure and easily overlooked.

With this in mind, let's look at some examples of each. One of the most powerful functions of TI-Writer is the

(R)eplace(S)tring function. Most of the time, it is simply used to replace a misspelled word or phrase --- which is a very obvious function. The fact that it can replace one string with another is really quite elementary. Let's take it a step further. If, for example, you were writing a rather long document about Greensboro (or some other city) or just a document with numerous occurrences of a rather long string you can cut down on a bunch of keystrokes. In this case, we are going to use GSO (airline designation) in place of Greensboro in the text of our document. By doing so, we save 7 keystrokes per occurrence. When we are done, we use (R)eplace(S)tring and enter '/GSO/Greensboro/' at the appropriate prompt. If you have more than a couple occurrences in your text, it is certainly much easier to press FCTN-2 to reformat a couple of times than to have to type the entire word 50 times or so. Think about it --- obvious but overlooked.

Here's a tip that is rather a bit more obscure but it saves typing just the same. Everyone should know that there are some symbols and characters that the 'ol TI just refuses to recognize in a filename. The period "." is one that is illegal to use and the space is another. The reason that the space cannot be used is that the TI scans a filename until it reads the delimiting character --either punctuation or a SPACE. So, when you are typing in a filename to load, you don't have to delete extra characters --- use use a space. The same is true for saving a file from TI-Writer. How many times have you deleted all those 'extra' characters when loading or saving a file to disk under a shorter second name? Not obvious but overlooked just the same.

## HARD DRIVE CONTROLLER

By: Jim Kwiatkowski

The first week: Nothing but frustration. Not new for me. Let me tell you about my system. Expansion box with foundation 128K card, 512k HRD, Triple Tech card, Grae Kracker, 2 TEAC half height drives. Now a HFDC card with a Seagate 225-20 meg. No box for the seagate, powered by a borrowed power supply from an \*\*\* 63.5W, both sitting by themselves. Not the best config for a hard drive setup.

I had some problems the first couple of days. Didn't know how to configure the hard disk. I was using MDMS 1.27 that I downloaded from GENIE and reading the manual for 1.21. So there were some differences, the only problem that I had with that was it seemed to take too long. Just around 10 min. to format WDS interlace of 7 and what ever the other one is at 7 also. I think its interleaving. Maybe not. Whatever it is both at 7. Seemed to slow so I tried some others. Right now it's set at 4,3 and I don't seem to be having any problems.

So what kind of problems was I having. Well copying floppy to hard I was getting errors on the hard. Some of that may have been my fault when it would give me a write error I would press (C) to continue. (big mistake). The real frustration came when I tried to use the (EMULATION) feature of the HFDC. It emulates DSK1 (that's great). No it isn't, not if your only copy of MDMS loads from DSK1. Think about it. It wasn't pretty, I'm glad I was alone. Well I won't use Emulate for a while. I'm one of those guys that likes to try all the features of a piece of software to make sure they work. How did I fix it? Well it is probably unorthodox but this is what I did. Power everything up and then turn off the Hard Disk, loaded MDMS from DSK1 and then turned the hard disk back on. It probably shouldn't have worked but it did.

The second time I crashed MDMS while it was formatting (big mistake). Took the better part of 2 hrs. to get the hard disk back up and running. I was really sweating by this time. I kept saying to myself (got to screw around don't you.) How did I do it? Well the way I fixed it the first time I got MDMS loaded but every time I tried to format the hard disk MDMS would give me a not found error. So I ended up turning off the hard drive until I was all the way through the formatting sequence. Until you type in format and press enter, of course. It worked don't ask why.

Now that it is up and running, more problems!!!! Not with the hard disk. Now I have problems with the HRD and floppies. Real problems trashing disks. Maybe using DM1000 has something to do with it. Hate to throw out DM1000. MDMS is kind of cumbersome, not like DM1000. Especially when formatting using box format. MDMS is slow in formatting. It automatically verifies. (Rats) Hate to spend my life waiting for verification. I used MDMS 1.22 once. I broke it at 12000 sectors. (life is too short and nothing is that important.) Besides my backup system only has 1 sdd drive. Sure glad MDMS 1.27 arrived so soon. As far as operation the HFDC works great. Fast! Fast! Fast! Can't really tell the difference between it and the HRD. The HRD isn't as noisy.

All I need now is a Power supply. I've thought about buying the RYTE Data 99AT Expansion System. I'll have to look into that a little more. I move like a snail sometimes and after I've made my mind up I want it here yesterday. But isn't that the American way.

# XB PROGRAM LOADER

Here is one of the simplest and very best programs to create an on-disk menu for your XB programs. The beauty of this little "oem" is that you don't need a mountain of documentation to run it. Just load MAKELOADER and follow the on-screen prompts. The result is a neat 10-sector auto-load menu that will take care of loading your XB programs with a single keypress.

```

100 REM *****
110 REM * *
120 REM * POOR MAN'S *
130 REM * PROGRAM LOADER *
140 REM * BY *
150 REM * RICE ROTHSTEIN *
160 REM * *
165 REM *****
170 CALL CLEAR :: DISPLAY AT
(2,4):"PROGRAM LOAD CREATER"
:" PRESS ANY KEY"
175 CALL KEY$(0,K,S):: IF S=0
THEN 175
180 PRINT "PROGRAM STATUS..."
...WORKING" :: CL$="CLEAR"
:: DIM A$(20):: OPEN #1:"DSK
1."INPUT ,RELATIVE,INTERNAL
190 DEF LN$(N)=CHR$(0)&CHR$(
N)
200 DEF DI$(R)=CHR$(162)&CHR
$(240)&CHR$(183)&CHR$(200)&C
HR$(LEN(STR$(R)))&STR$(R)&C
R$(179)&CHR$(200)&CHR$(1)&S
R$(COL)&CHR$(182)&CHR$(181)
210 DEF IF$(N)=CHR$(132)&"K@
"&CHR$(190)&CHR$(200)&CHR$(2
)&STR$(N)&CHR$(176)&CHR$(169
)&CHR$(199)&CHR$(LEN(A$(I-64
))+5)&"DSK1."&A$(I-64)
220 FOR I=0 TO 20
230 J=J+1 :: INPUT #1:A$(I).
B,C,D :: IF I=0 THEN 240 ELS
E IF J)=127 OR LEN(A$(I))=0
THEN 250 ELSE IF ABS(B)<>5 0
R A$(I)="LOADER" THEN 230
235 DISPLAY AT(12,9):A$(I)::
DISPLAY AT(14,1):"KEEP IN T
HIS LOAD CAT?>>Y<<" :: ACCEP
T AT(14,25)SIZE(-1)VALIDATE(
"YN"):KEEP$.
236 IF KEEP$<>"Y" THEN 230
240 NEXT I
250 CLOSE #1 :: EN$=CHR$(181
)&CHR$(199)&CHR$(25)&"PRESS
<BACK> FOR EX/BASIC"&CHR$(0)
:: COL=1 :: L=I-1
255 DISPLAY AT(12,1):" INPU
T NAME FOR LOAD FILE":",", "
ANY BUT 'LOAD'> MLOAD" :: AC
CEPT AT(14,19)SIZE(-10):FILE
$
256 DISPLAY AT(12,1):" TITLE
FOR MENU SCREEN": : : : AC
CEPT AT(14,1):MLTS$
257 OPEN #2:"DSK1."&FILE$.VA
RIABLE 163
260 PRINT #2:LN$(1)&CHR$(157
)&CHR$(200)&CHR$(5)&CL$&CHR$(
0)
268 COL=INT(((28-LEN(MLTS$))
/2)+1)
270 PRINT #2:LN$(2)&DI$(1)&C
HR$(199)&CHR$(LEN(MLTS$))&ML
TS$&CHR$(0)
280 COL=8 :: FOR I=1 TO L ::
PRINT #2:LN$(I+2)&DI$(12+I-
INT(L/2))&CHR$(199)&CHR$(3+L
EN(A$(I)))&CHR$(I+64)&"- "&A
$(I)&CHR$(0):: NEXT I
290 PRINT #2:LN$(L+3)&CHR$(1
62)&CHR$(240)&CHR$(183)&CHR$(
200)&CHR$(2)&"24"&CHR$(179)
&CHR$(200)&CHR$(1)&"1"&CHR$(
182)&CHR$(238)&EN$
300 PRINT #2:LN$(L+4)&CHR$(1
57)&CHR$(200)&CHR$(3)&"KEY"&
CHR$(183)&CHR$(200)&CHR$(1)&
"0"&CHR$(179)&"K@"&CHR$(179)
&"S@"&CHR$(182)&CHR$(0)
310 PRINT #2:LN$(L+5)&CHR$(1
32)&"S@"&CHR$(190)&CHR$(200)
&CHR$(1)&"0"&CHR$(176)&CHR$(
201)&LN$(L+4)&CHR$(0)
320 FOR I=65 TO L+64 :: PRIN
T #2:LN$(L+I-59)&IF$(I)&CHR$(
0):: NEXT I
330 PRINT #2:LN$(2*L+6)&CHR$(
132)&"K@"&CHR$(190)&CHR$(20
0)&CHR$(2)&"15"&CHR$(176)&C
HR$(157)&CHR$(200)&CHR$(5)&C
L$&CHR$(130)&CHR$(139)&CHR$(0
)
340 PRINT #2:LN$(2*L+7)&CHR$(
134)&CHR$(201)&LN$(L+4)&CHR
$(0):CHR$(255)&CHR$(255):: C
LOSE #2 :: DISPLAY AT(23,21)
BEEP:"COMPLETE" :: END

```

```

100 !*****
*
110 !
120 !      SHRINK
130 !
140 ! BY MELVIN ROSENFELD
150 !
160 ! 401 YANKEE FARM RD
170 ! SANTA BARBARA, CALIF
180 !      93109
190 ! PHONE 805-687-9720
200 !
210 !*****
*
220 !
230 ! THIS PROGRAM CONDENSES
240 ! A PROGRAM BY:
250 !
260 ! 1 REMOVING ALL REMARKS
270 !
280 ! 2 SHORTENING VARIABLE
    NAMES -- FOR EXAMPLE
    REPLACING
    "LASTENTRY" BY "B"
290 !
300 ! 3 REPLACING THE NUMBER
    "1" BY THE SYMBOL "e"
310 !
319 ! *****
    THE SAVINGS ARE:
-----
320 !
    N+3 BYTES FOR EACH LINE
    THAT IS A REMARK N BYTES
    LONG.
329 !
330 ! 2 BYTES FOR EVERY
    OCCURRENCE OF "1"
340 !
350 ! J-1 OR J-2 BYTES FOR
    EVERY OCCURRENCE OF A
    VARIABLE NAME.
360 !
370 !*****
380 !
390 ! HOW TO USE PROGRAM:
395 !
400 !
410 !
420 ! SAVE THE PROGRAM TO BE
    CONDENSED ON A DISK WITH
    THE MERGE FEATURE.
430 !
440 ! RUN THE PROGRAM CALLED
    SHRINK. WHEN THE PROGRAM
    ASKS, GIVE THE NAME OF
    THE PROGRAM YOU ARE COND-
    ENSING.
450 !
452 ! IT IS ASSUMED THAT THE
    PROGRAM TO BE CONDENSED
    IS STORED IN MERGE FORM
    ON DISK 1
453 !
460 ! WHEN THE CONDENSING IS
    COMPLETED, THE CONDENSED
    VERSION WILL BE SAVED ON
    THE DISK. IT'S NAME WILL
    BE: "AAA" WHERE "AA"
    STANDS FOR THE FIRST 9
    CHARACTERS OF THE NAME
    OF THE PROGRAM THAT IS
    BEING ALTERED.
470 !
480 !
490 ! THE PROGRAM THAT IS
    BEING ALTERED REMAINS
    INTACT. (REALLY ONLY A
    COPY IS BEING ALTERED.)
500 !
501 ! THE ALTERED VERSION
    CAN BE USED BY FIRST
    COMMANDING "NEW" AND
    THEN "MERGING" THE
    ALTERED VERSION. SAVE
    THE ALTERED VERSION
    IN THE USUAL FASHION.
510 !*****
520 !
522 ! LIMITATIONS: MAX
    NUMBER OF VARIABLES IS
    130 STRING VARS & 130
    NUMERICAL VARS. MAX
    NUMBER OF LINES THAT
    CAN BE DELETED FOR
    BEING REMARKS IS 125
526 !
527 !*****
528 !* IF YOU HAVE THE
    * MEMORY EXPANSION THEN
    * REMOVE THE "!" FROM
    * LINE 530
529 !*****
530 ! CALL INIT :: CALL LOAD(-
    31878.0)
540 ! U$=CHR$(0)&CHR$(1)
550 ! EOF$=CHR$(255)&CHR$(255)
560 ! YES=1 :: NO=0
570 ! GONE$.USE$="" :: REPLACE
    =NO
580 ! INPUT "NAME OF PROGRAM?
    ":X$
590 ! OPEN #1:"DSK1."&X$.INPUT
    .DISPLAY ,VARIABLE 163
600 ! OPEN #2:"DSK1.TEMP".OUTP
    UT,DISPLAY ,VARIABLE 163
610 ! NAME$="#"&SEG$(X$.1,9)
620 ! DIM A$(130),B$(130),NA$(
    130).NB$(130)
630 ! FOR K=1 TO 26 :: A$(K)=C
    HR$(64+K):: B$(K)=A$(K)&"$"
    :: NEXT K
640 ! FOR J=1 TO 4 :: FOR K=1
    TO 26 :: T=J*26+K
650 ! A$(T)=CHR$(64+J)&CHR$(64
    +K):: B$(T)=A$(T)&"$"
660 ! NEXT K :: NEXT J
670 ! R1$=CHR$(131):: R2$=CHR$(
    154):: EOF$=CHR$(255)&CHR$(
    255)
680 ! INPUT #1:X$ :: LINE$=SE
    G$(X$.1,2):: IF LINE$=U$ THE
    N PRINT : "THERE IS A LINE WI
    TH LINE NUMBER 1 -- REMOVE
    IT!" :: STOP ELSE GOTO 700
690 ! INPUT #1:X$ :: LINE$=SE
    G$(X$.1,2):: IF X$=EOF$ THEN
    PRINT #2:X$ :: GOTO 940
700 ! PRINT ASC(SEG$(X$.2,1))+
    256*ASC(X$)
710 ! IF REPLACE=YES THEN USE$
    =USE$&LINE$ :: REPLACE=NO
720 ! Z$=SEG$(X$.3,1):: IF Z$=
    R1$ OR Z$=R2$ THEN GONE$=GON
    E$&LINE$ :: REPLACE=YES :: G
    OTO 690
730 ! P=POS(X$.R1$,3):: IF P>0
    THEN X$=SEG$(X$,1,P-1)&CHR$(
    0)
740 ! Y$=SEG$(X$,1,2):: I=3 ::
    LL=LEN(X$)
750 ! T$=SEG$(X$,I,1):: C=ASC(
    T$)
760 ! IF I=LL THEN PRINT #2:Y$
    &T$ :: GOTO 690
770 ! IF C=201 THEN Y$=Y$&SEG$(
    X$,I,3):: I=I+3 :: GOTO 750
780 ! IF C=199 OR C=200 THEN J
    =ASC(SEG$(X$,I+1,1)):: Y$=Y$
    &SEG$(X$,I,J+2):: I=I+J+2 ::
    GOTO 750
790 ! IF C>128 THEN Y$=Y$&T$
    :: I=I+1 :: GOTO 750
800 ! FOR J=I+1 TO LL :: C=ASC
    (SEG$(X$,J,1))
610 ! IF C>32 OR C>128 THEN B$
    =0
620 ! NEXT J
630 ! N$=SEG$(X$.1,J-1)
640 ! IF SEG$(X$.J-1,1)="$" TH
    EN STRING=YES ELSE STRING=NO
650 ! IF STRING=YES THEN B90
660 ! FOR K=1 TO NUMNONSTRING
    :: IF N$=NA$(K) THEN B80
670 ! NEXT K :: NA$(K)=N$ :: N
    UMNONSTRING=NUMNONSTRING+1
680 ! N$=A$(K):: GOTO 920
690 ! FOR K=1 TO NUMSTRING ::
    IF N$=NB$(K) THEN 910
900 ! NEXT K :: NB$(K)=N$ :: N
    UMSTRING=NUMSTRING+1
910 ! N$=B$(K)
920 ! I=J :: Y$=Y$&N$
930 ! GOTO 750
940 ! CLOSE #1 :: CLOSE #2
950 ! OPEN #1:"DSK1.TEMP".INPU
    T ,DISPLAY ,VARIABLE 163
960 ! OPEN #2:"DSK1."&NAME$.OU
    TPUT ,DISPLAY ,VARIABLE 163
970 ! PRINT #2:CHR$(0)&CHR$(1)
    &CHR$(64)&CHR$(190)&CHR$(200)
    &CHR$(1)&CHR$(49)&CHR$(0)
980 ! ONE$=CHR$(200)&CHR$(1)&C
    HR$(49)
990 ! INPUT #1:X$ :: IF X$=EO
    F$ THEN PRINT #2:X$ :: CLOSE
    #1 :: CLOSE #2 :: STOP
1000 ! P=POS(X$.ONE$,3):: IF P
    <>0 THEN X$=SEG$(X$.1,P-1)&
    0*&SEG$(X$.P+3,255):: GOTO 1
    000
1010 ! P=2 :: L=LEN(X$)
1020 ! IF P>=LEN(X$) THEN 1090
1030 ! P=POS(X$.CHR$(201),P+1)
1040 ! IF P=0 THEN 1090
1050 ! Y$=SEG$(X$.P+1,2):: Q=0
1060 ! Q=POS(GONE$,Y$,Q+1):: I
    F Q=0 THEN X$=SEG$(X$.1,P)&Y
    $&SEG$(X$.P+3,255):: GOTO 10
    20
1070 ! IF Q=2*INT(Q/2) THEN 106
    0
1080 ! Y$=SEG$(USE$,Q,2):: GOT
    O 1060
1090 ! PRINT #2:X$
1100 ! GOTO 990

```