

**RAMBLIN'
THOUGHTS FROM THE PRESIDENT**

IN THE DECEMBER MEETING WE HAD APPROXIMATELY ELEVEN PEOPLE SHOW UP MONDAY THE 23RD, BECAUSE OF THE HOLIDAY SEASON. WE TRULY HOPE THAT EVERYONE HAD A GOOD AND SAFE HOLIDAY. I HAVE HAD THE FLU THE FOUR DAYS FOLLOWING CHRISTMAS AND SPENT FRIDAY NIGHT IN THE HOSPITAL, (MISPELLING ON PURPOSE), FOR ABOUT FIVE HOURS. THEY LET ME COME HOME WITH THE PROMISE TO SEE MY DOCTOR.

COMING IN THE NEW YEAR, WE HAVE A SOMEWHAT NEW MEETING PLACE, NEW TO THE ONES THAT HAVE NOT BEEN THERE BEFORE, BUT OLD TO THE MEMBERS THAT REMEMBER THE OLD BOARD MEETINGS AT THE USED TO BE MERIT SAVINGS AND LOANS. THEY CHANGED THEIR NAME TO CHARTER BANK. IT IS A SMALLER PLACE BUT COMFORTABLE AND HAS A WELL LIGHTED PARKING LOT. MORE INFORMATION WILL BE FOUND ELSE WHERE IN THIS NEWS LETTER. THE MEETING DATE ALSO HAS BEEN CHANGED.

IN THE DECEMBER MEETING WE HAD A DISCUSSION OF TI-BASE AND THE SIZE OF THINGS YOU CAN ADD TO IT. THANKS TO FRED MOORE. WE HAD ALSO OUR VICE-PRESIDENT TO GIVE A DEMO OF A DISK OF THINGS HE THOUGHT WE MIGHT BE INTERESTED IN WHICH INCLUDED DIGITIZED SOUND, AS LUCK OR A LACK THEREOF WE DID NOT HAVE SPEECH SYNTHESIZER. SO WE WATCHED BUT COULD NOT HEAR.

REMEMBER THAT ELECTIONS ARE COMING UP SO GET IN YOUR NOMINATIONS EARLY. WE HAVE HAD SOME NAMES SUBMITTED ALREADY. PLEASE TELL OR CALL ONE OF THE BOARD MEMBERS MY PHONE NUMBER IS (310) 644-6241.

THIS IS A CONTINUATION OF LAST MONTHS LETTER. I DID NOT GET IT TO THE EDITOR ON TIME BECAUSE OF THE HAPPENING MENTIONED ABOVE.

ON JAN. 8th 1992 WE MET AT THE NEW PLACE. THERE WERE ABOUT ELEVEN PEOPLE THERE. IT WAS VERY INFORMAL AND COZY. WE DID NOT HAVE A DEMO. BECAUSE THE EQUIPMENT GOT DRENCHED IN THE RAIN AND WE WERE HESITANT ABOUT POWERING THE SYSTEM UP. OUR ARMY SURPLUS WATER PROOF BOX WAS NOT

**LA 99ers
NEW MEETING PLACE**
The 2nd Wed Of every month
Heritage Bank
18505 S Western Ave
N of 190 St Opposite Denny's

Thanks to all officers who served this past year & a double thanks to those who are staying on for another tour of duty. Welcome to Sy Silver who picks up the library from Penelope Fowle.

Pres. : Edgor May
V.P. : Earl Roguse
Treas. : Al Whiteman
Secfry : Bob Wheeler
Editor : Joe Fierstein
Memshp: Hal Jeffery
Equip. : Gail Fair
Program: Steve Mehr
Mkt Pl.: Fred Moore needs help-Get involved
Usr Grp: Chick DeMarti has a new 386SX does this mean the end of the Crocker Barrel? I hope not.
We need your help to keep the the club running. The best way to learn is to pitch in. Let us hear from you!

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**NEXT MEETING WED FEB 12
7:30pm**

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XB MISCELLANY #8
By Earl Raguse

I am going to give you two new useful, at least to me, subprograms, CAT and SHOWARRAY. When SHOWARRAY is MERGED into your program and CALLED, it does just that, it retrieves an array (matrix) of numbers, or words, which have been stored on disk by your program, maybe by using my subprogram SAVIT, and displays them on the screen. It could quite easily be modified to also output them to a printer. The other subprogram CAT can be MERGED into a program to provide the option of cataloging a disk when you have forgotten the name of the file you want to load.

To use SHOWARRAY, you must have a file which has a series of numbers, or words, which have been stored by a program, as individual records, with the number of records stored as record #0. The latter is important, without it, SHOWARRAY will not work. To use it you must do a:

```
CALL SHOWARRAY(D$,DN,FIL$,G$(),WIDE)
```

SHOWARRAY requires several parameters, D\$ is the drive number, DN is the device number for the file to be opened, FIL\$ is the name of the file to be opened, G\$() is the matrix in which the file array will be stored, and WIDE is the number of columns wide you want the screen display. G\$() must have been previously DIMensioned large enough to hold the array.

There is truly nothing very mysterious about the operation of SHOWARRAY, it first opens the file, then uses two loops, with indexes I and J to read the file data into the subscripted variable G\$() and displays the data on the screen in columns. When the screen becomes full, it stops, displays a prompt provided by PAK which we have discussed before, then clears the screen and continues to the end of the file, then returns to the calling line. You must, of course, have properly defined the parameter variables prior to the CALL.

As it stands, SHOWARRAY will open ONLY the default file type of DV80, if your file is not DV80, you must modify the OPEN statement, on line 7510, by adding

all the exact characteristics of the file, after INPUT. Since SHOWARRAY uses the subprogram PAK, that must also be MERGED.

To use subprogram CAT, it is just simply MERGED into your program, and when you are ready to open a file to retrieve data, instruct the user that if he can not remember the name of the data file to just enter CAT as the file name. Then you must monitor the input to see if it is CAT, if so, just do a CALL CAT. CAT does all the rest, including requesting the drive number to catalog. A short program segment to use CAT is a follows.

```
500 DISPLAY AT(12,1)ERASE AL
L:"Enter the file name " :D
ISPLAY AT(14,9): "DSKx."SEG
$(IF$,3,10)
510 DISPLAY AT(20,1):"If you
don't know, enter CAT"
520 ACCEPT AT (14,12)SIZE(-1
2):IF$
530 IF SEG$(IF$,3,3)="CAT" T
HEN CALL CAT
```

Please note that CAT uses subprograms GKEY, PAK and CLS which must be MERGED also. CAT is currently programmed to display only DV type files. It can easily be modified by removing line 6365, to list all files, or by changing the value 2, to list any type file. You need read, again, the Disk Memory System manual Model PHP1240 by TI, page 41. It will explain by example, how the disk is cataloged.

For those of you who are not too astute in reading some of TI's explanations, I add the following. On TI line 220, my line 6340, A\$ is the name of the disk, J is the size of the disk, ie 360, 720 ect in sectors, and K is the number of sectors free, so J-K is the number used. I am not interested in that here, so I read them and don't use them hence the comment "toss". You must read them though, to get at the next variables. See TI line 260, my line 6350 in which we read variables A\$,A,J,K for TI and A\$,T,J,K for me, which are respectively File Name, Type of file (1-5), Size of File, and Bytes per Record. I actually

By Earl Raguse

use only A\$ and T. T=2 is what determines a DV file. See TI lines 120 through 160, for other type files.

One of the things I am doing is listing file names in two columns on the screen. I do this by using the variable Y in 6370 to position the display. In the first column Y=2 and for the second column Y=16. Statements 6360 and 6380 are what controls Y. In 6380 I check to see if X<18, if yes, I increment it 1 and go back for more. If X=18, the screen is full, so I set X=0 and Z=1-Z. Thus if Z=0 then it becomes 1, if it is 1, it becomes 0, like a flip flop. Then in line 6360, we have Y=2-14*(Z=1). Thus when Z is 0, Y=2, because the statement (Z=1) is false, FALSE has a value of zero. Since -14*0 is still zero, the value of Y becomes 2. But, when Z is 1 then (Z=1) is true, TRUE has a value of -1. Hence Y=2+14=16. Making use of this type logic can shorten and speed up your programs.

What happens if there are more than 36 listable files on the disk? In that case, line 6380, makes Z=0 again, and line 6390 NEXT F, will return to list more files. Line 6360 will make Y=2 so line 6370 will begin listing on the left on top of the old listings, but the most recent listings on the right will be undisturbed. This will continue to alternate till all files are listed.

```
6300 SUB CAT
6305 ! Needs GKEY, PAK CLS
6310 ! E Raguse 10/90
6320 DISPLAY AT(10,1)ERASE A
LL:" Enter Drive# to Catalog"
CALL GKEY(Q,24):: D#=CHR$(Q)
:: CALL CLS(10,11)
6330 OPEN #1:"DSK"D$.",RELAT
IVE,INTERNAL,INPUT
6340 INPUT #1:A$,L,L,L ! rea
d and toss
6350 X,Z=0 :: FOR F=1 TO 127
:: INPUT #1:A$,T,J,K :: IF
A$="" THEN F=127
6360 Y=2-14*(Z=1)
6365 IF ABS(T)=2 THEN 6370
ELSE X=X-1 :: GOTO 6380
6370 DISPLAY AT(X+3,Y)SIZE(1
4): A$
```

```
6380 IF X<18 THEN X=X+1 ELSE
X=0 :: Z=1-Z
6390 NEXT F :: CLOSE #1 :: C
ALL PAK :: SUBEND

7500 SUB SHOWARRAY(D$,DN,FIL
$,G$( ),WIDE):: CALL CLEAR
7510 Z=1 :: OPEN #DN:"DSK"D
$". "FIL$,INPUT
7520 INPUT #DN:A$ :: NR=VAL(
A$)
7530 FOR I=1 TO NR/WIDE
7540 FOR J=0 TO WIDE-1 :: IF
EOF(DN)THEN 7580 ELSE INPUT
#DN:G$(I+J)
7550 DISPLAY AT(Z,4*J+1):G$(
I+J):: NEXT J
7560 Z=Z+1 :: IF Z>22 THEN C
ALL PAK :: Z=1 :: CALL CLEAR
7570 NEXT I
7580 CLOSE #DN :: SUBEND
```

PROGRAMMER'S DILEMMA
by Don Lester, Vancouver, BC

From ROM Users's Group
Huntington Beach, CA

I sit before my 4A
The screen is cold and black
I push the keys I think will
work
But nothing's coming back.

I know it's not the RAM or
ROM
Since they were both just
tested.
Maybe it's hung up
In some deep loop I'd nested?

The floppy drives sit
silently
Their little lights are out,
I search the screen for any
clue
To what it's all about.

Could it be a vicious virus
Deep down in the root?
All else fails, I push the
button
To go for a reboot.

But nothing works!! Is there
no cure?
I must seek out this bug.
That's when I look down and
see
That someone's pulled the
plug!



-By- **Inscebot, Inc.**
 P.O.Box 291610, Ft.Orange, FL 32129

Version 3.01 Tutorial 25.1.1 By **Martin A. Smoley**
 NorthCoast 99'ers User Group - Dec. 21, 1991

This is a re-hash of the tutorial information I did around April, May and June of 1990, which I added to and updated. If you read my tutorials word for word, some of the information will be familiar. It is a very, very useful part of TIB.

The INSTALL Memory Area or TI-Base Macros

filename \MC
 MODIFY COMMAND

filename \DS
 DISPLAY STRUCTURE

filename \DST
 DISPLAY STATUS

filename \IC
 INSTALL CATALOG

filename \RES
 SET DATDISK=DSK6.
 SET PRGDISK=DSK5.
 SET PRINTER=PIO.CR.LF
 SET PAGE=000
 SET HEADING ON
 SET TALK ON
 SET SPACES=01
 SET RECNUM ON
 SET LSPACE=256
 CLEAR LOCAL
 SET CURSOR=02
 SET CRLF ON
 CLEAR
 DISPLAY STATUS
 INSTALL CATALOG

filename \DSPA
 PRINT (Drft),(E)
 DISPLAY STRUCTURE
 SNAP
 PRINT (Drft),(f)
 PRINT ALL

filename \D1
 SET DATDISK=DSK1.

filename \D6
 SET DATDISK=DSK6.

filename \D7
 SET DATDISK=DSK7.

filename \D8
 SET DATDISK=DSK8.

filename \D9
 SET DATDISK=DSK9.

Macro Instructions have got to be one of the big new features in TI-Base. A Macro, or Macro Instruction, is roughly the ability to execute a large command, or a large group of commands, with a single keystroke or a very short key input. TI-Base Version 3.0 or later has that capability. It's a little repetitive to set up a large number of Macros, but once you've done it the rewards are great. Dennis has set up a usable area in VDP RAM, which is handled by the phrase INSTALL, for TIBs use. You should think of the word INSTALL more as the name of the area and not as a command. The things which you can do to the INSTALL area are CLEAR, ADD, REMOVE, CATALOG, LOAD and SAVE. You must create a command file on disk for each Macro Phrase you want to use. For example, I entered MODIFY COMMAND DSK1.\MC. This created the CF named "\MC" on disk drive #1. When the Edit screen appeared I entered two words "MODIFY COMMAND" and I pressed <FCTN 8> to save the CF. I did not enter any comments or place RETURN at the end of the CF. Then, at the dot prompt I entered INSTALL ADD DSK1.\MC. TIB retrieved the CF named "\MC" from DSK1 and placed its contents (MODIFY COMMAND) in the INSTALL area under the name "\MC". This allows me to execute that command by simply typing \MC at the dot prompt. This may not seem like much at first, but here's the big picture. TIB can execute many individual commands from VDP by their names and a Macro can be as large as a Command File. I created each of the Command Files you see on this page under their individual filenames and used the ADD directive to place them all in VDP at the same time. After that I entered INSTALL SAVE DSK6.INST2. TIB SAVED the complete INSTALL group to DSK6.INST2, with the suffix "/I". Next, I added the line "INSTALL LOAD DSK6.INST2. to my SETUP CF. This tells TIB to automatically LOAD all the commands when TIB is powered up. I haven't tried it yet, but I think that you should be able to stack up your ADD commands in a CF to make it easier to modify the overall INSTALL package. The number and size of Macros placed in VDP are only limited by space, which is currently 2546 Bytes. With everything you see to the left loaded into INSTALL I still have 1879 Bytes left. "Not Bad!" This Macro package means a lot to non-ramdisk users, because the execution is very fast compared to disk access. You could load several large CFs, which you use often, into INSTALL and execute them when needed. I wanted to demonstrate this idea, so I loaded the complete CF named 1LBL91 from Tutorial 24.1.2 (Sept. 14, 1991) into INSTALL. I already had the CF on DSK7 of my RAM Disk. I merely typed INSTALL ADD DSK7.1LBL91 at the Dot prompt (Dp) and pressed ENTER (<E>). This would be a good test because 1LBL91 contained a wide variety of TIB commands, including RETURNS and COMMENT lines. After TIB ADDED 1LBL91 to the INSTALL area I typed \IC (<E>). This runs the INSTALL CATALOG Macro you see to the upper left. This told me that the 1LBL91 CF used 1471 Bytes of INSTALL memory space and that I still had 405 Bytes remaining to use. "That's great!" At that moment I had placed twelve Macros in INSTALL, the eleven on the left of this page and 1LBL91. INSTALL contained the twelve Macro names and one hundred and three lines of commands and comments, and I still had 405 Bytes left. Next I typed 1LBL91 at the Dp and (<E>). 1LBL91 ran just fine. It opened the Database (Db), set my printer, asked me for the record number, found the name I wanted, printed some labels (using my special printer control commands), reset my printer and TIB commands and RETURNed me to the Dp. "And I think it's a little faster than my RAM Disk. I love it." If you manage this space well, the speed advantages over regular disk drives will be enormous.

Next Page.

TI-Base

-By- **Inscehot, Inc.**
P.O.Box 291610, Ft. Orange, FL 32129

Version 3.01 Tutorial 25.1.2 By **Martin A. Smoley**
NorthCoast 99'ers User Group - Dec. 21, 1991

1LBL91 is a great example of a large CF which can be stored and run from the INSTALL area, but I normally run small CFs as Macros. I always seem to be using the wrong disk for my DATDISK when an idea strikes me for something to do. This led me to the creation of the last five Macros on 25.1.1 (\D1...D9). "DSK6, 7, 8 and 9 relate to my Bud Mills Horizon RAM Disk." If I want to access a bunch of stuff on drive #7, I type \D7 (E) at the Dp, and TIB processes the command SET DATDISK=DSK7. The key stroke savings are not much for one Macro use, but if you do this ten times during one computer session it means a lot. A Macro that means even more to me is \DSPA. I make a lot of changes to several small Dbs on a frequent schedule. Whenever I do, I like a printout I can use to check my work while I'm away from the computer. I might type \D7 (E), USE CLUB91 (E) and then \DSPA (E). These three short Macros would switch my DATDISK to DSK7, USE CLUB91 located on drive #7 and \DSPA would set my printer to Emphasized mode. DISPLAY the Dbs STRUCTURE to my screen and then SNAP the screen to my printer, next it changes my printer to Condensed and prints the whole Db.

SETUP/Command File

```

SET TALK OFF
WRITE 22,4,"Welcome to TI-Base Ver. ;
3.01"
*
*                               SETUP/C
*                               Ver. 3.01 04/14/90
*
INSTALL LOAD DSK5.INST2
*
COLOR WHITE DARK-BLUE
PRINTER EPSON
DO \RES
*
*                               Version 3.01
*
*   Type QUIT to terminate TI-Base
*
* \MC   = Modify Command
* \DS   = Display Structure
* \DST  = Display Status
* \IC   = Install Catalog
* \RES  = RESet TIB Options
* \DSPA = \DS, SNAP, PRINT ALL
* \EDIT = EDIT
* \MS   = Modify Structure
* \D1   = SET DATDISK=DSK1.
* \D6   = SET DATDISK=DSK6.
* \D7   = SET DATDISK=DSK7.
* \D8   = SET DATDISK=DSK8.
* \D9   = SET DATDISK=DSK9.
*
RETURN <FCTN 7> help not available
    
```

After \DSPA is finished I type CLOSE (E) and go on to the next job. I have included another listing of my SETUP CF in the lower left corner of this page because I want to run through parts of it again. SETUP is the CF that automatically runs right after you type in the current date when TIB is loading. The first important line is INSTALL LOAD DSK5.INST2. This line takes the one file that holds all 11 Macros from 25.1.1 and loads them into INSTALL. As soon as that is done the 11 Macros are ready to use. Next I set the screen colors I like. The third thing I do is load up the printer commands from my personalized Db as I tried to demo in TUT 24.1.1. The last command I issue from SETUP is DO \RES, which runs the RESET Macro that should now be in the INSTALL area. You should take special notice that you must include the [DO] when running a Macro from a CF. If you run a Macro from the Dp the [DO] is not used. The last 20 lines of SETUP are all comments. By my positioning, these lines will remain on the screen after SETUP is finished. This allows me to refresh my memory as to the Macros which I have loaded into INSTALL and to possibly print out a copy of this screen, using SNAP, if need be. This whole job was a lot of work the first time, but now that it's done, and runs itself each time I start TIB, it's a great little tool. I need to throw in another important note. INSTALL works like a stack with the last item you put in being the top of the stack. This means that you cannot remove and/or replace an item in the middle of the stack without extracting and replacing all the items above it in the stack. For example, if I want to remove \D1 from INSTALL, I must enter INSTALL REMOVE \D9 (E), INSTALL REMOVE \D8 (E), INSTALL REMOVE \D7 (E), INSTALL REMOVE \D6 (E) and finally INSTALL REMOVE \D1 (E) to accomplish my goal. You would then need to replace, using ADD, any of the Macros you did not want removed with \D1. For this reason you need to place the most temporary Macros at the end, or closest to the top, of the stack, as I did with 1LBL91. If you need to REMOVE something that is more than half way into the stack, you should consider using INSTALL CLEAR to CLEAR everything out of the INSTALL area and then put back what is needed. There is a little more information on Adding CFs to the INSTALL area, using those CFs and then REMOVE(ing) them from the INSTALL area, from another CF in the April, May and June 1990 Newsletters, if you're interested. This is something that you must be determined about, plus you must start small and expand the number and size of your Macros slowly. As a matter of fact you could say that about TI-Base in general.

A special note from Marty

I do not anticipate doing any more TI-Base Tutorials. If I find the time I may try and write something, but I do not expect that right now.

Good luck.
Marty.



HOW TO DO A PERSON TO PERSON DOWNLOAD.

by: Jeff Overton

From PUNN Newsletter -
Portland, Or

How many times have you wished that you could get a copy of a program from someone? You could go to their home and make a copy, or you could just wait until the next HUG meeting. But what if you needed that program yesterday?

If you own a modem you can get the program that you need in a matter of minutes. You call the BBS and get programs all the time. Why not call a friend and get the program that you want? I know you're thinking, "I have tried before and it didn't work." Well I also tried it before and it didn't work, but this time it did.

I will try to take you through step by step how it is done using TELCO 2.3 .

The first thing you must do is call your friend (on voice) and tell them what you want to do. Tell your friend what program you want. If that program has more than one file your friend should archive it, or you will have to transmit the files one at a time.

Each of you must set your terminal to HALF Duplex. If you don't do this neither of you will be able to see what you are typing. FULL Duplex sends or "echos" the recieved characters BACK to the sender only if the recieving terminal "remote echo" is set on. Let me assure you this not a good choice!! To go to HALF Duplex, you will press "fctn N" from the terminal screen, or use the Setup Terminal option screen & select option "I".

It is also a good idea to make your Setup Terminal option "C" a CR/LF. Doing this will make your text automatically advance a line at end of your line width, or every time you hit "ENTER". This is a good way to signal the other user that you are through sending text. Hit enter two or three times & your text will roll up that many lines.

One of you will have to put your modem in Auto-Answer. To set a Hayes compatible modem to Auto-Answer, type "ATSO=1".

This will answer on the first ring. The modem will return non Auto-Answer after it is powered off.

You now hang up & whoever is NOT in Auto-Answer calls the other modem. When his computer answers, you will see on your screen "CONNECT" or "CONNECT 1200" or "CONNECT 2400" (depending on your baud rate). This is just like the way that you call the BBS.

Now you can talk to each other with the keyboards and display screens.

If you are to receive the file, you must press "fctn 4" to select a transfer protocol. Both computers must be using the same protocol (Xmodem or Ymodem) and this should have already been agreed upon. In our tests Ymodem is about three times as fast as Xmodem. On paper it should be 8 times as fast as Xmodem transfers 128 bytes at a time and Ymodem transfers 1024.

The person sending you the file must press "fctn 6" and select a transfer protocol. The sender must then enter the file name exactly as it is stored on disk. However the reciever can name the file to be recieved anything, as long as it follows TI disk file header rules. (not more than 10 characters, no blanks or periods—You know the rules.) Just type in the file name and it's automatic from then on.

I am sorry to say, if neither of you have Auto-Answer I don't know how it will work. If only one has Auto-Answer it will still work.

With a little practice this will become as easy as file transfers to a BBS.

From the Feb. '91 HUGGER newsletter.

TI BITS n' BYTES

by Val Flehling

What The Heck is a BOOLEAN?

Have you ever wondered what a Boolean Variable is, or what it might be used for? Boolean Variables (BV's from here on), are quite different from most other variables in that the range of values they can contain is somewhat limited. The entire range, in fact, covers only two possible choices. You can consider these choices to be True/False (the most common), Yes/No, On/Off or whatever pair of mutually exclusive conditions you desire. If you need more than two choices then what you need is not a BV type, and I'll get to that later.

Knowing when to use a BV shouldn't be too hard once you are familiar with them. For example, in the Disk Catalogue program I'm working on, I am keeping track of whether or not files have been Loaded or Saved, whether an Error condition exists, a disk name has been Duplicated, a disk is Full or whether I want to Quit the program. The first of these which I thought of was the SAVED flag. If you are working with any kind of data or text files and you add or change anything, you might be pretty upset if you decided to take a break and forgot to save the file first. Having the program look at a BV when you select quit, and remind you if files aren't saved, can save a lot of grief, not to mention hours of work. Now we'll have a look at how these BV's are set up in my program.

As is the case with most Basics, ours has built in BV's. True and False are defined as having the values of 0 and -1, respectively. You can stay with those values if you like or you can redefine them, as I did, so that True = 1 and False = 0. Either way, use of the BV's is the same. When a program is started, the flags are initialized to reflect the status at that time. The flags QUIT, ERROR, DUP and FULL would all be set to False. SAVED would be set to true. If you changed your mind about working on something and wanted to quit before you loaded any data, there is no reason to caution you about unsaved files. Any routine which is used to update a file would automatically set the SAVED flag to False each time it was called. Your routine to Save the file would set the SAVED flag to True. Now, when you select Quit, this routine should look at the SAVED flag and then either allow you to Quit or issue a reminder about the unsaved file, and allow you to go back and save it. This is where the QUIT flag is used. If it is okay to leave, (or you chose to leave anyway), this flag comes back as True and your program then goes on to its Exit routine. If the QUIT flag comes back as False, you would be returned to the Main Menu.

For an example of how a BV might be used in conjunction with a SUB routine, we can try this one out.

```
XX10 SUB DISK_NAME(DISK$,NAME$,USED,FREE,ERROR,TRUE)
XX20 ON ERROR XX60
XX30 OPEN #1:DISK$,INPUT,RELATIVE,INTERNAL.
XX40 INPUT #1:NAME$,A,TOTAL,FREE :: USED = TOTAL - FREE
XX50 CLOSE #1
XX50 SUBEXIT
XX60 ERROR = TRUE
XX70 SUBEND
```

The variables we are looking for, NAME\$, USED and FREE, as well as DISK\$ ("DSK?" ?-drive #), the EROR flag and the BV TRUE, are all passed to the SUB. SUB's can alter any variable that is passed to them (except constants) and pass the result back. The BV EROR was set to False before calling this SUB and only needs to be changed if there was an error. Since I have redefined my True and False values, I must pass TRUE in case it is needed. If you stick with the original values of True and False you shouldn't have to pass them into a SUB to use them. After calling this SUB, you would look at the flag EROR and proceed accordingly. Should the EROR flag come back true you can then make a call to ERR(C,T,S,N) (page 83) to see what the error is. According to the manual, making this call is supposed to clear the System's Error flag and then allow you to try again. Upon noticing the error you would want to be able to just, let's say close a drive door if you left it open, and try again. So would I. Unfortunately, I have found that this doesn't work on my system. It may work on yours but, if you are writing anything that will be used by other people you must allow for the possibility that their system may not handle this function properly. (Any info or ideas on this point would be appreciated.)

If you have been following this column, then you know we are trying to follow some specific rules with the creation of SUB routines. The one shown above can be saved and later included into any program where it might be needed without modification. Building program parts in this manner is certainly more work and requires a little more mental effort sometimes, but the end result is that you should soon find that you have developed a nice library of commonly used modules. When developing something new you won't get bogged down re-creating these parts. Instead you will be able to put more effort into the more difficult parts of your project.

While I have a little space left, I would like to mention those other flags that you might need sometime; the ones that can hold more than two values. Actually, by definition, a flag is really a BV. It is On/Off, Set/Reset (Up/Down?), but nothing in between. The value that is obtained from making a menu selection might be in the range of 0 to 9, or 65 to 90 (ASCII A to Z), and this can't really be considered a flag type of variable. If you think about it, though, the smallest piece of data that the computer can pass around is a byte (if you use a character variable). Each byte consists of eight bits, each of which can be on or off. So, for the average BV, we actually have 8 bits doing the work of only 1. This usually doesn't matter but there have been times when I have wanted to make better use of those seven other bits (or 15 in a two byte variable). Being able to set/reset the individual bits in a variable isn't hard at all. A small array to hold the values array setup, and the SUBs that might be used, would look like this

Uh oh! The bottom of the page is getting dangerously close. One thing you never want to do is fall off the end of the page. I don't know what would happen but I'd rather not take the chance. I will continue with this part of the discussion next month. It shouldn't take more than a paragraph or two. And then.... who knows? I'm not sure what I'll be doing tomorrow, let alone next month. As always, though, I will do my best to be entertaining as well as informative. After all, if it isn't fun, why do it? And, in a more serious vein, "If it isn't good for the Earth, why do it?" Until next time, MFBWY. Val M.

ARCHIVING—A HEADACHE?

By: Andy Frueh, Lima UG

A lot of people are puzzled by archiving and how to use Barry Boone's Archiver. What follows is both a reference guide and explanation of Archiver III. It is not meant to totally replace the documentation for this program. Actually, I haven't seen a distribution copy that comes with a set of instructions. There may be hidden features of ArcIII that aren't obvious to me (for example, Disk Utilities by John Birdwell has a feature to figure decimal-to-hex conversions).

What exactly is archiving? Putting it simply, when you archive you take file or a set of files, and group them as one file then compress them so they take up less disk space. Some software comes archived. These ALMOST always include the archiving program. Examples are Jack Sughrue's PLUS! and the Complete Adventure disk set.

What is the purpose of archiving? Well it started out as a money saver for modem users. It is faster, and thus cheaper, to send 90 archived sectors as 1 file, than 120 sectors for 3 programs. Now it is also a means of hacking up disks. You can save each of your disks as a one file, squashed archive. You can specify whether you want compressed files or not. The reason you have a choice is that some unusual files actually take up more space when they are compressed. Another useful application of archiving is when you have programs you want to keep, but don't need ready to use. You can keep archives of all these files instead of taking up disk space.

OK, now that you have the "what", here's the "how". As far as I know, the only archiver is Barry Boone's program. Its operation is completely different from Archiver II. Rather than add new features to past versions, Archiver was completely re-written. It usually contains an XB LOAD program, but may be loaded from E/A. The program's filename is usually ARCl. It can be found on almost all of the bulletin boards, as a commercial version with Geneve utilities, in user group libraries, with other Fairware programs or from the author. Chances are, you can definitely get a copy.

First things first, so get the program loaded. After that, you should see a Fairware notice. Press any key to pass this. You then see a menu. Each menu option is described in detail below.

1) Archive Files - These options are largely self-explanatory. As you may have guessed, this option archives files. Pressing one will deliver a set of prompts. These are "Source Drive (1-Z)". Yes, you can have drive numbered from 1-9 and A-Z. Then comes, "Output Drive (1-Z)". You may use one drive. Archiver will prompt you to change disks when needed. It is highly recommended that you use a blank output disk, since archives may fill or almost fill a disk. Next comes "Output Filename". This is usually the name of the disk you are archiving, or some related heading. For example, a set of D/V 80 articles may be named "ARTICLES". The following prompt is "Pack all Files? (Y/N)". If you answer "Y" then all the files on the source disk are archived. If you answer "N", then when Archiver is working, you are asked "Include filename? (Y/N)". If you answer "Y" then that file is archived, otherwise it is ignored. This is a handy feature if you have programs and files for example, and need them separated. This process repeats for each of the files on the source disk. The final prompt is "Compress? (Y/N)". Saying "Y" and Archiver attempts to squash each file so it takes up less space. Remember that some unusual file types will actually get LARGER if compression is attempted. When all the prompts are answered, press REDO to correct an error in your answers, BACK to return to the menu, or any other key to continue. When Archiver is done performing any operation, pressing a key goes back to the main menu.

2) Extract Files - This is the opposite of archiving. It will let you pull (extract) files from an ARC file. You are first asked for the source drive. Next you input the source filename. After that, you are asked for the output drive. It must be stressed that the output drive for ALL operations of Archiver should be different than the input drive. You may run out of space or overwrite a file accidentally. Output disks should be blank.

The next prompt asks, "Extract all files?" If you answer "Y" then every file stored in the ARC file will be taken out. If you answer "N" then when extracting starts, the program asks, "Include filename?" for every separate file in the archive. Again, press REDO (to restart this option), BACK (return to main menu), or any other key to continue.

3) Catalog Disk - This is fairly self explanatory. Simply input the source drive name. The program will ask if you want a printout. If you answer yes, then you are asked for the printer name. If there are more files than can be displayed, then [more] is printed on the screen and pressing a key advances the screen.

4) Catalog ARC File - If you aren't sure what files are contained in an archive file, then this option tells you. You are asked for the source drive, source filename, and whether or not you want a printout of the list of files.

5) File Copy - This option will copy a file (obviously). Simply supply the source drive and filename, and the output drive and filename.

6) File Rename - Again, this option should explain itself. Give the source drive and filename, then the output filename.

7) File Delete - Supply the source drive and filename.

8) File Un/Protect - You first supply the source drive and filename. You are then asked "Protect?" If you answer "Y" the file is protected. Otherwise file protection is lifted.

9) List Text File - This will display or print a D/V 80 file. Give the source drive and filename. You are then asked if you want the file printed or not.

10) Load FW - This returns to Funnelweb. Simply give the drive number on which the UTIL1 file is located.

NOTE: When an I/O error occurs, pressing a key returns to the main menu. If you have a Geneve, this is for you. Using a sector editor, find the string 04E08C00 and replace it with D8018C00.

I think that this should get people on the road to understanding archiver. Remember that it is fairware, so if you find it very useful, send the author (Barry Boone) a donation.

[This article/item comes from the January 1991 issue of BITS, BYTES PIXELS (Charles Good, editor), the newsletter of the Lima OH 99/4A User Group, P.O. Box 647, Venedocia, OH 45894.]

NEW MEETING PLACE

The LA 99ers have a new meeting place.

Starting Jan 8 we will meet the second Wed of

every month at the PACIFIC HERITAGE BANK
18505 S. WESTERN AVE TORRANCE. (One block North
of 190th st opposite Denny's Resturant)

Next Meeting Wed. Feb 12

