

ARBTM

BBS!

TELEPHONE

**BULLETIN BOARD
SYSTEM**

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**COMMODORE 64.
AND
128.**

**FREE
TERMINAL
PROGRAM
!**

**UP/DOWNLOAD
IN
PUNTER C1 AND
X-MODEM**

1 TO 5 DRIVES

27 SUB BOARDS

SOURCE CODE

MANUAL

ARB BBS SYSTEM OPERATOR (SYSOP) MANUAL IV
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ARB BULLETIN BOARD SYSTEM OPERATOR (SYSOP) MANUAL

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NOTES



GETTING STARTED

WHAT YOU NEED

- * One Commodore 64 or 128
- * One Auto-Modem (1650, 1670, Westridge, Microbit 1064, Master Modem, Total Telecom, Mitey-Mo, Avatex 1200, Anchor 1200)
- * One to five single or dual serial drives and/or up to nine single or dual IEEE drives
- * One video monitor or television
- * Several blank floppy diskettes
- * Optional printer
- * Optional extra phone line.

LOADING THE PROGRAM

Turn on the computer for a fresh start and insert program diskette.

```
load "boot",8
type "run"
```

Select option from boot menu.

If the program fails to load, turn your computer off and on, and try again. Make sure you have the right diskette.

HOW TO USE THIS MANUAL

Before you start operating your BBS, **read** this manual. Familiarize yourself with the functions on the Sysop Menu, and understand how the files are set up. If you experience any error messages refer to the Trouble Shooting Section for help. For the most part this Bulletin Board System is easy to run. However, there are some areas that will be better clarified by reading the manual. Before you call the 24-hour hotline numbers check the manual to see if the answer to a particular problem can be found there.

MAKING BACKUPS

In the spirit of open communication, this program has been brought to you without any copy-protection. **PLEASE DO NOT GIVE COPIES TO YOUR FRIENDS**, it is not to your advantage to do so. **REGULARLY MAKE BACKUP COPIES OF ALL YOUR FILE DISKS.** Sometimes diskettes become corrupted and you could lose part of a message base. You can use any of a number of available copy programs to make backups. It is advisable to validate the diskette before backing it up.

SPECIAL KEYS

The up-arrow key is used to enter the Chat Mode. At any time during a logon you may enter the Chat Mode by pressing the up-arrow key (next to the restore key). Hold the key down until the Chat Mode is engaged. It may take a few seconds. To exit the Chat Mode, press the left-arrow key (on the upper left side of the keyboard). When you see "PAGING SYSOP" appear on the screen and you want to chat with the user, press the up-arrow key. When you finish chatting press the left-arrow key to exit the Chat Mode. The user will be returned to the Main Menu.

In the chat mode you may give a registered or non-registered user temporary full access by selecting <F1>. This will also give them ten extra messages, ten extra uploads, ten extra downloads and reset their time limit to the maximum.

You may enter permanent passwords online by selecting <F2>. After entering the passwords you will be returned to the Chat Mode.

The <F5> key will bring you to the Remote Sysop section.

In the Chat Mode the British pound sign will load the programmable keys from the 'keys' file. You can print them by hitting the pound key again followed by a number from zero to nine.

The Commodore key will abort a Punter transfer in progress.

At any of the single key input prompts you have the following options:

- F1 Full access (but not to remote sysop option)
- F3 Lower access to "new user" access
- F5 Adds a derogatory suffix to users name
- F7 Forced log off (says MALFUNCTION)

SETTING MONITOR COLORS

The Color Menu is accessed from the Sysop menu by first selecting "1. Online". Once you are in the "ONLINE WAITING FOR A CALL" mode, press <F7>. Follow the prompts in the color menu by typing in the three parameters separated by commas.

In the "ONLINE" mode press <F1> to return to the Sysop menu.

Press <F3> to run Auto Maintenance.

Press <F5> to connect someone on your phone line to the BBS (local start with carrier).

SYSOP MENU

As soon as the program loads you will see prompts for the current date and time. The time is set in military time. For example, 1:00 P.M. would be entered as 130000. After responding to these prompts, the Sysop Menu will appear on the screen. Each command function will be discussed in the order it appears on the menu.

1. ONLINE

This is the "ONLINE WAITING FOR A CALL" mode, where the BBS waits for the next caller.

Above the middle line is the BBS configuration:

Ovr = Number of files that produce an overload on drive 8.
Sub = Number of total sub boards.
Msg = Number of messages allowed per logon.
Min = Time limit in minutes.
P/D = Number of calls allowed per day.
D/L = Number downloads allowed per call.
U/L = Number uploads allowed per call.
Bul = Drive number for bulletins, submenu, subd, subs, subs, subt, subu, help, and merchandise sections.
1Bd = First board drive number and overload.
2Bd = Second board drive number and overload.
3Bd = Third board drive number and overload.

Upload/Download configuration is displayed in the right hand column.

Under the middle line are the following statistics:

U/l = Number of uploads.
Fbk = Number of feedback messages.
Reg = Number of registrations.
D/l's = Number of downloads done that day.
Post = Number of messages posted that day.
Call = Number of calls that day.
Chat = Number of times users hit Chat that day.
Read = Number of messages read that day.
Days = Number of days BBS is continuously online.

To return to the Sysop menu press <F1>

2. CREATE FILE

Create File is used to make a new file of up to 39 lines. Respond to the prompt "Drive#". Enter the file text and get it the way you want it to look with the BBS editor.

2. CREATE FILE (Con't)

When EDITING, you will see line zero and line one. Ignore these two lines. THEY ARE NOT SAVED WITH THE TEXT! These two lines are only used in the BBS message base. To save the text to disk, the file name **must not** be present on the disk. If it already exists, the whole process will abort, and you will have to try again. Use the "Scratch File" function on the Sysop Menu, before creating a new file.

3. SCRATCH FILE

Scratch File is used to scratch unwanted files. Answer the prompt "Drv#?" with the drive number of the file you wish to scratch. Enter the file name exactly. Use this before you recreate an existing file.

4. EDIT/PRINT FILE

Edit/Print file is used to look at an existing file. You can read a file and/or send it to the printer. The edit function only works on files up to thirty nine lines. If the file is over 39 lines the edit option will abort back to the Sysop Menu. The editing function works the same as in option 2 (Create File), with the exception that lines zero and one are not ignored. You may choose to <S>ave the changed file or <A>bort to the Sysop Menu.

To create and edit longer files, I recommend using a word processing program such as **PaperClip** or **Easy Script**. If you use another word processor, make sure that it can handle sequential files. A word processor makes editing the BBS files a quick and easy chore. Use it to examine how the existing files of the BBS are formed before creating your own. The way to properly create BBS files is to make each line a paragraph (end it with <CR>), surrounding each line with quotes. For a blank line, put "quote space quote return" (" "). See the section on creating files.

5. FEEDBACK

Feedback lets you read messages that users left for you in the <F>eedback section. All feedback messages go into one file called "feedback".

The following information is also recorded in this file:

- (a) the name of any program that was uploaded and the name of the user who uploaded it
- (b) the name of any user that logs off improperly
- (c) the name of any user who has received PRIORITY MAIL (P-MAIL) from you.

6. DIRECTORY

Lets you read the disk directory on the drive you specify. You must also specify the logical unit number (zero or one) in the event you are using a dual drive. If there is no disk in the drive or the device is not present, you may have to press "run/stop restore" and type "run" to restart the program. After reading a directory, you will have the option to have the program count the number of files on the diskette.

7. LOCAL START

Local Start simulates what a user sees when (s)he logs on. You will have to enter a password to get on. Use this function to see how your "logon intro" file looks and for testing the BBS.

8. ADD PASSWORDS

This function is used to enter a person's name and password. This allows him/her to gain access to the different sections of the BBS. There are four different password files.

- (a) Logon Passwords - ALLOWS USER TO LOG ON TO SYSTEM
Gives user access to <E>-Mail and <V>ote. User may <P>ost messages only on the first (category 1) message base, and/or <D>elete any messages (s)he has posted.
- (b) Second Board Passwords - allows user to access the second (category 2) message base. Depending on your configuration, it also allows user into the Need A Date feature and Submenu.
- (c) Third Board Passwords - allows user to access to the third (category 3) message base.
- (d) Download Passwords - allows user to upload and download files. Downloading protocols are Punter C1 (255 byte block, 8 bit, no parity), X-Modem or ASCII.

Option 1-Pswd - add a name and password not in the "register" file. Option 2-Val - reads the "register" file. (You will be prompted to respond "yes" or "no" to the different access possibilities.) Option three returns you to the Sysop Menu. Use the different combinations to generate security levels.

To remove a password, use the **ARB Utility Program** or a word processor to delete unwanted names and passwords.

9. CHAT ON/OFF

Function that turns off the chat mode bell and "chat intro" file if you do not wish to be disturbed. At anytime during a logon you may still enter the chat mode by holding down the up arrow.

10. SET TIME

Function that sets the date and time. Time is set in military time. 8:32 P.M. would be 203200. Although the time is set in military format it will be displayed in AM/PM format. The clock routine uses the time of day clock and is very accurate.

B. BREAK

Function that puts the program into the immediate mode. Type "run" to start the BBS.

C. CONFIGURATION

Function that sets the BBS for your hardware (disk drives and modem).

The <L>oad option will load a previously configured "tl" file.

The <S>et option will automatically load the "config" program. The prompts in the "config" program are easy to follow. At the end you will have the option to save the configuration. The configuration is in the "tl" program file. Save it on your back-up program disk so the BBS boots up with your configuration.

VERY IMPORTANT! IF USING MORE THAN ONE DRIVE PUT THE "cat1 intro", "cat2 intro", "cat3 intro", "category 1", "category 2", "category 3", "menu2" files on the diskettes that contain message bases.

If you did not configure the BBS correctly, you will get a DEVICE NOT PRESENT error. Type "run" and reconfigure properly. In the event the program stops because you made an error, the configuration will still remain intact even if you use the "run/stop restore" keys.

The user can read the downloads from the whole disk directory, from a file or from both. The "config" program will ask you "Disk directory downloads <Y/N>?". If you reply <Y>es, and the user chooses <X> on the main menu, (s)he will be able to see the entire disk directory on the drives that you have designated for downloading.

C. CONFIGURATION (Con't)

If you choose <N>o, and the user chooses <X> on the main menu, (s)he will receive the "Sorry option closed" message.

"Config" will ask you "<\$> Download File <Y/N>?". If you choose <Y>es, and the user accesses the <\$> on the main menu, (s)he will be able to read a list of download titles from a file instead of the entire directory. If you choose <N>o, and the user selects the <\$> prompt, (s)he will receive the "Option closed" message. The configuration menu will ask you "File download on drive#". Enter the drive on which you want the file for the downloads and the downloads themselves to be on. MAKE SURE THE "dl" FILES GO ON THAT DRIVE! The configuration menu will ask "Need password <Y/N>?". If you choose <Y>es, the program will check the "dasswords" file and only admit validated users. If you choose <N>o then any registered user may view the file download section. The name of the file that is accessed by selecting the <\$> on the main menu is "dl". This file and the corresponding downloads must be on the disk that you configured for the file downloads. 'dl' must contain a numeric list of the download programs and include the number of blocks in the file, and whether it is sequential or program. If the user selects 1 then the program looks for a file called "dl1". If the user selects 2, then "dl2" etc. It works like the "bull intro" and the "sub intro". You must rename the download programs on the disk. Call them dl1, dl2, dlA, dlb, dlc, dlx, etc.. Here is a sample "dl" file...

1. file reader	pgm	20 blocks
A. word processor	pgm	99

Use the file download for free downloads or if you are using one drive. Use the disk directory downloads for convenience. You may use both.

F. FIX DEVICE#

Function lets you change the drive number for multiple drive configurations.

P. P-MAIL (From Sysop)

P-Mail appears to the user as (s)he logs on and scratches automatically. P-Mail files have the user's name in capital letters with "xy" at the end. You may leave P-Mail to "all" and all users will see the message. "ALLxy" will remain until you scratch it. P-Mail may be left to new users.

Q. QUICK ON

Function that logs you on to the board with the name "SYSOP" and the password "SYSOP". Use the Quick Start to get on the system fast and to leave messages as "SYSOP". In order for you to have complete access to all the functions, you must enter name "SYSOP", password "SYSOP" into all four password files. You are put directly at the Main Menu and do not have to go through the logon procedure. With the password "SYSOP" you can delete any of the messages in the message bases by using the <D>elete option. Any user that has a password starting with an asterisk (*) will also be able to delete any message on the system, and will be able to access the Remote Sysop function if it is active.

Any user who tries logging on to the BBS with the name "SYSOP" will be immediately logged off.

R. RESET

Function will reset the "subd" userlog to empty and reset the statistics on the "Online Waiting For A Call" screen to zero. The number of days online will not be reset unless you re-boot the system or reconfigure it from scratch. Use this function every few days to keep the "subd" from getting too large.

T. TERM

This function toggles a built-in terminal program. Set the phone off or on the hook. Set the baud rate to 300 or 1200. Upload and download using the Punter C1 protocol. Use it to call other BBS's without having to take your BBS down.

F. FILE COPY

Function toggles a copy program that is part of the BBS program. It only will work between two drives. Enter the name of the file to be copied and the file type. Enter source (original file) drive number then enter destination (copy) drive number. It may not be the fastest copy program available, but it is convenient, especially when you only need to copy a few files without having to take down the BBS.

FILE HANDLING

INTRODUCTION TO FILES

The **ARB Bulletin Board System** only uses sequential files. All messages, bulletins and data are stored as sequential files. There are several different file types that Commodore DOS can handle. These are program, sequential, relative, user and random files. Through experience I have decided to use only sequential files in this system. Sometimes the Block Allocation Map (BAM) on a diskette will become corrupted and cross link the wrong files. If this happens to a diskette that contains relative, random, or user files, you will have a great deal of difficulty recovering those files. However, sequential files are easily recovered and fixed with any word processor that can handle sequential files. In addition, many of the compatible disk drives that are manufactured for the Commodore 64 have problems handling relative files properly. In theory, relative files would be a good way to store all information about a user. In practice, they frequently create many problems. Sequential files are easier to fix and their exclusive use in this system will save the SYSOP many hours of potential grief.

VALIDATING DISKS

It is extremely important that file disks are regularly validated. There are many saves and scratches of files occurring all the time. After many scratches, the BAM may not accurately reflect which blocks are actually free. If this occurs, a new file being saved may overwrite a previous file, the previous file being ruined. The result is that when the bad file is read, the whole system freezes, and the drive just stays on. Validating the disk will properly re-allocate all the available blocks. AUTO-MAINTENANCE will occur at 12am and will take care of this for you. **DO NOT STOP THE PROGRAM IN THE MIDDLE OF AUTO-MAINTENANCE OR ELSE!** You must let AUTO-MAINTENANCE happen every day so your "msg" file which contains the "searching for message" listing is updated and the "per day" file is reset.

LIMITATIONS

YOU MAY NOT PUT MORE THAN 144 FILES ON A 1541 DISK OR 224 FILES ON A SFD1001 DISK. To prevent an OVERLOAD condition, the system counts the files on each disk after each log off. If there are more than 136 files (1541) or 214 files (SFD), all posting and uploading is suspended. In addition, if there are less than thirty blocks free, the OVERLOAD is set, and you will see the OVERLOAD message at the "Online Waiting For Call" screen. If you see the OVERLOAD message, it is time to manually delete some messages. You must re-configure to turn on the uploads.

LIMITATIONS (Con't)

AUTO-MAINTENANCE will automatically delete the first message in any one category if there are more than 10 messages in that category. This helps to limit the number of files in order to prevent an OVERLOAD condition.

When there are 39 messages in one message category, the program will tell you CATEGORY FULL. It is then time to delete some old messages.

You may have up to 9 messages categories on each of the 3 message boards. This limits you to 27 message categories. You may want to have less. When you configure the system, one parameter is "How many Sub-Categories per board?". You may choose between 1 and 9. EACH OF THE 3 MESSAGE BOARDS MUST HAVE THE SAME NUMBER OF SUB-CATEGORIES. If you choose 6, each board must have no more or no less than 6 sub-categories. If you choose to have the maximum sub-categories the number of files on one disk will exceed 144 long before all the message categories reach their capacity. You must monitor the situation carefully.

IMPORTANCE OF PROPER FORMAT

The system uses input# rather than get# statements for speed. Each line in a file must be a string. If you create your files with the built-in editor, the format of the files will be compatible with the system. If you are using a word processor (which I highly recommend), there is a correct way to create compatible files. If the files are not done correctly they will cause the system to freeze. When using a word processor each line must be surrounded by quotes. Each line is also a separate paragraph. On most word processors that means you type a <CR> after the close quote. Here is an example of how the file will look if using a word processor.

```
"*****"-<CR>-  
" "-<CR>-  
"          WELCOME          "-<CR>-  
" "-<CR>-  
"*****"-<CR>-
```

You will notice that if you want a blank line you must put "quote space quote <CR>". Do not have lines with nothing on them, or the file will not work. There are some other ways to do it, but this is one way that definitely works. YOU MUST SAVE THE TEXT AS A SEQUENTIAL FILE, not as a program file. Examine the existing files that came with the BBS to determine how the format should appear on your word processor. When creating file text, also keep in mind that the appearance of your BBS is determined by how well you create your files. IF USING THE BUILT-IN EDITOR YOU DO NOT NEED TO PUT QUOTES.

CREATING FILES

To customize your BBS so it looks different from any other BBS, you will want to create all the files that introduce the different functions. Included with the BBS are all the files you need to run the system. These files are guidelines for you. The content of these files can be changed to anything you want. A complete explanation of each file function can be found in the "LISTING OF FILES AND THEIR FUNCTIONS" section. Make the files look good by centering text, use stars or other symbols around the borders, etc. Use your imagination. Included in the software package on the program diskette are "FILE FINDERS". If you run the BBS using this side, you will be able to see the names of files and their format. Use this as a guide for planning your own files.

You may use the built-in editor or any word processor that handles sequential files to create your files. IT IS VERY IMPORTANT THAT THE NAMES OF YOUR NEW FILES ARE EXACTLY THE SAME AS THE ONES THEY ARE REPLACING ON THE ORIGINAL DISK. If not, when running the program, you will see a single character (the last letter that was entered at a menu prompt), and several blank lines. The program will not crash, but something will be noticeably missing.

CREATING MESSAGE BASE CATEGORIES

There are three message bases. There may be up to nine sub-categories in each message base, for a total of up to 27 sub-categories. There can be less than nine in each message base, but each must contain the same number of sub-categories. The number of sub-categories is set in the CONFIGURATION option on the SYSOP MENU. If you select six, there may only be six sub-categories in each of the three message bases for a total of 18 sub-categories.

THE NAME OF EACH CATEGORY IS DETERMINED BY WHAT IS ENTERED INTO THE FILE. The program picks up the name from the file. Here are the names of the three files and their corresponding message base...

```
"category 1".....First Message Base....<R>  
"category 2".....Second Message Base...<*>  
"category 3".....Third Message Base....<=>
```

THE WAY YOU CREATE EACH CATEGORY IS VERY IMPORTANT! FOLLOW THESE INSTRUCTIONS!

1. Go to the sysop menu.
2. Select option "3. Scratch File".
3. Scratch category file you are going to replace.
4. Select option "2. Create File".
5. At the prompt "Enter file text" do the following...

CREATING MESSAGE BASE CATEGORIES (Con't)

6. DO NOT PUT A BLANK LINE AS THE FIRST LINE OF THE CATEGORY FILE OR ELSE!
7. Type "1. whatever" (this reads one, period, space, space, whatever). YOU MUST START ALL THE WAY OVER TO THE LEFT. DO NOT START WITH ANY SPACES. Type the number, period, two spaces (not 1 space not 3 spaces) and then the name of the category.
8. Type "2. second thing"
9. Leave no blank lines between categories.
10. Enter the rest of your categories the same way.
11. When finished typing your categories, enter a <CR> on a new line to end. Select the <S>ave option. If this is your first message base, enter "category 1". If this is your second message base, enter "category 2". If this is your third message base, enter "category 3".

This is how it should look...

(no empty line at the beginning)

1. c-64
2. cooking
3. free stuff
4. D&D
5. S&M
6. whatever
7. whoever
8. etc.1
9. etc.2

You don't have to have 9 categories, but all three message bases must have the same number of categories.

DO NOT EXCEED 20 CHARACTERS IN THE CATEGORY NAMES.

If, when accessing one category, the program freezes you may have done something wrong. Check to see there are no blank lines. If this is not the case, see the TROUBLE SHOOTING SECTION

Now you can create your categories on each of the three boards.

CREATING BULLETIN FILES

There are four sections on the Main Menu of the BBS that are your BULLETIN sections. Bulletins are information files that the Sysop posts on his/her system. The four Bulletin sections are...

1. ulletins
2. <S>ub menu
3. <H>elp
4. <M>erchandise

CREATING BULLETIN FILES (Con't)

THE FOUR BULLETIN SECTIONS MUST BE CREATED IN A SPECIFIC WAY! For example, to set up the <M>erchandise section, the first step is to create a file called "merc intro". In this file put a list of the different things about which you want to have bulletins. It might look something like this...

1. Used Equipment
2. Junk
3. Disks for sale

How this file looks is not as important as it was in the message category files. However, the numbers are very important when creating the next group of files. To create the corresponding file that is pointed to by the "1. Used equipment", create a file called "merc1". In the "merc1" file put information about the used equipment you are trying to sell. Listing 2 would be "merc2". Listing 3 would be "merc3". YOU CAN PUT AS MANY AS YOU WANT. After listing 9 you must use a,b,c,d,e,f,g,h, etc. The merc file for listing "a" would be "merca" (merc+a). The merc file for listing "b" would be "mercb" (merc+b). When the user selects a file, (s)he types in the number, lets say "7". The program adds "7" to the string "merc". Thus you get "merc7". If there is no "merc7", the program prints "FILE NOT FOUND", and brings the user back to the beginning of the "merc intro". Here is a summary...

"merc intro" is a numerical list of subjects.

"merc1" contains corresponding info. pointed to by 1.

"merc2" contains corresponding info. pointed to by 2.

"mercx" contains corresponding info. pointed to by x.

This works the same way for all four bulletin categories.

ulletins

Make your list of bulletins, and call the file "bull intro". Create each of the corresponding files calling them "bull1", "bull2", "bull3", "bull4", "bullx", etc.

<S>ub menu

Make your list of sub-menu things, and call the file "sub intro". Create each of the corresponding files calling them "sub1", "sub2", "sub3", "sub4", "subx", etc. The sub menu also has seven files that are used by the system:

"subd" detailed user log.

"subs" Add a BBS# <A> file.

"subt" Story board </> file.

"subu" Hints and tips <!> file.

CREATING BULLETIN FILES (Con't)

<H>elp

Make your list of "help" categories, and call the file "help intro". Create each of the corresponding files calling them "help1", "help2", "help3", "help4", "helpx", etc. The 'HELP' files are already included in the BBS software package. You can use them as-is, or customize them to your own needs. The names of the Main Menu selections can be changed by altering the file called "main menu". However the letter of each selection must remain the same. You could rename <S>ub menu, <S>igs. You could rename <M>erchandise, <M>ore Bulletins. And so on. However, you may not change the file names such as "merc intro" or "bull intro".

The bulletin files can contain whatever you want. Put your list of other BBS phone numbers here. Put classified ads here. Put hints and tips or game solutions here. Put racetrack tips here. Whatever you want.

MOVING FILES

Use the "X. File Copy" option on the sysop menu to transfer program or sequential files between two disk drives.

You can move sequential files that are 39 lines or less by selecting option "4. Edit/Print file". Select the <E>dit option. Load the file from disk "A". Remove disk "A" and insert disk "B". Save the file to disk "B". This function is useful in case you ruin a file and have to go back to the original disk to start again.

There are several good programs available that can move files from one disk to another. Many of these are in the public domain. Included on the file disk are two public domain file copy programs. They are saved as "dl1" and "dl2". "dl1" is a single drive file copy program and "dl2" is a double drive file copy program.

LISTING OF FILES AND THEIR FUNCTIONS

This section gives you an in-depth look at the system's utility files. All these files must be on the diskette that is in drive 8, unless otherwise indicated. If any one of these files is missing, something in the system will not function correctly. Occasionally, due to circumstances beyond your control, you will find that a file becomes "corrupted". This section will show you how to start up each of the utility files from scratch, and what the contents of each file should be. The names of each file must appear EXACTLY AS LISTED, or the BBS will not work right. Use the built in editor or a word processor to create the file text. If you are using a word processor, don't go past column 39 or you will get an extra blank line.

"logon intro"

This is the first thing that a user sees when (s)he logs on to the system. It should look something like this;

```
*****
*
*      WELCOME TO 'SO AND SO' BBS      *
*
*      LOCATED IN B'KLYN N.Y.         *
*
*      718-555-1212                   *
*
*      ONLINE 24HRS MON-SAT           *
*
*****
```

```
      The Sysop is not responsible for
      the contents of any messages posted
      on the public access message boards.
      All messages that are questionable
      in nature will be deleted.
```

```
*****
```

Try not to make the "logon intro" longer than one screen in length. After the "logon intro" is finished scrolling, the program prints "please wait...". At this point, the "call num" (call number) file is increased by one. It takes about 8 seconds for the call number to be updated, and during this time its better if the user can look at a whole screen with a neat appearance rather than the bottom part of some text with the top cut off.

The above example is just a suggestion. You may introduce your board any way you see fit.

"call num"

This is the call number. Every time someone calls the board (whether the logon is successful or not), the number in the "call num" file is increased by one. There is only one thing in this file. It is a number. If you wish to change the call number, first delete the old "call num" file. Then exit the program by pressing reak on the Sysop Menu. Type the following:

```
x=1000:open2,8,2,"call num,s,w":print#2,x:close2
```

The above sets the call number to 1000. Use any number. This file is also "self creating", that is, it will automatically "make itself". If you ruin your "call num" file just scratch the old "call num" file and run the BBS. A new "call num" file will appear on the diskette. DO NOT USE A WORD PROCESSOR TO CREATE THIS FILE.

"welcome"

This file appears after the user successfully logs on, either with his/her password, or by typing "new". In this file you can put short system bulletins, BBS policies, warnings or just "WELCOME AGAIN". Here is an example:

```
-----  
                ATTENTION!  
REFERENCES TO THE  
TRADING OF COPYRIGHTED SOFTWARE  
ARE NOT ALLOWED  
ON THIS SYSTEM!  
-----
```

```
-----  
REGISTER FOR OUR DOWNLOAD SECTION TODAY  
-----
```

```
-----  
ANSWER THIS WEEK'S TRIVIA QUESTION AND  
WIN A 1541 DISK DRIVE!  
-----
```

Here, again, put anything you like into the "welcome" file. Try to center everything properly. This message may be longer than one screen, and it will look okay. Use your imagination.

"new user"

The "new user" file precedes the "welcome" file whenever a new user logs on. This message is only seen by someone who types "new" at the password prompt. In this file put information about registration, access to different sections of the board, including how to get access to the upload/download section. Or you could simply put...

WELCOME NEW USER

USE (+)REGISTRATION SECTION ON

MAIN MENU TO GAIN HIGHER ACCESS

After the "new user" file ends, the "welcome" file begins.

"passwords"

This is the file that contains the information that allows the user to logon.

The password information is stored in the following way;

NAME1
PASSWORD1
NAME2
PASSWORD2
NAME3
PASSWORD3

Normally the program will take care of this file for you. If, however, the passwords become "corrupted", you might have to scratch the old password file and create a new one (using option #2 on the Sysop Menu). Each password entry is 2 strings. The first is the NAME, the second is the PASSWORD. The names and passwords are all entered in UPPER CASE with NO spaces between the letters. "John Smith" is entered "JOHNSMITH" into the file. "Pass Word" is entered "PASSWORD". When using the "8. Passwords" section of the program, it doesn't matter how you enter the upper and lower case, the program takes care of the translation. If you are creating the file from scratch you must make the first entry with the EDITOR ONLY. All subsequent entries can be entered with the "8. Passwords" option. Go to the "Create File" option (#2). At "Enter file text" prompt enter the following...

SYSOP
SYSOP

The name is SYSOP, the password is SYSOP.

"passwords" (Con't)

All letters must be entered in UPPER CASE. You must have this entry in the passwords to get access to all the functions when using the "Q. Quick On" option. MAKE SURE there are no extra blank lines. Use "4. Edit/Print file" option to check the file after you have saved it. If there are any extra blank lines, the order of the passwords will be mixed up. Each entry takes up 2 lines. One line for the NAME, one line for the PASSWORD. Make sure the entries are All UPPER CASE with NO SPACES BETWEEN FIRST AND LAST NAMES. To delete someone from the system, use the appropriate function in the ARB Utility Program or a word processor. Delete both the NAME and PASSWORD. If you don't delete both, you will mix up the order of the passwords, and no one will be able to log on! DON'T USE COMMAS, COLONS OR SEMI-COLONS IN THE NAMES OR PASSWORDS!

"sasswords"

"sasswords" is the password file for the second message base. If the user's name and password are entered here, (s)he can access the second message base <*>. It is written to when you choose "yes" to the "2Bd" option in the "8. Passwords" section. The format is identical to the "passwords" file. The NAME and PASSWORD are structured the same way. Follow the same procedure as with the "passwords".

"thasswords"

"thasswords" is the password file for the third message base. If the user's name and password are entered here, (s)he can access the third message base <=>. It is written to when you choose "yes" to the "3bd" option in the "8. Passwords" section. The format is identical to the "passwords" file. Follow the same procedure as with the "passwords".

"dasswords"

"dasswords" is the password file for the up/download section. If the user's name and password are entered here, (s)he can access the up/download section. It is written to when you choose "yes" to the "D/L" option in the "8. Passwords" section. The format is identical to the "passwords" file. Follow the same procedure as with the "passwords".

If you are having any trouble creating the "passwords", "sasswords", "thasswords" or the "dasswords" files, take your original file disk, transfer the original file to your current disk, and start from there.

"baud intro"

This file tells the user that the baud rate may be set between 300 and 500 baud. It is accessed when the <#> prompt is selected on the Main Menu. It also explains that the best setting is 385 baud (some modems can go faster than that). If the user enters the baud rate but the subsequent two carriage returns are not equal to chr\$(13) the system will default to 300 baud. If you are in the local mode you may select 500 so the BBS goes faster.

"mail intro"

This file introduces the <E>-mail section. "E-mail" is a private message left by a user or the Sysop, to another user. The "mail intro" can look like this...

```
*****
PRIVATE E-MAIL
*****
```

You may customize this file to your own liking.

"chat intro"

This file introduces the <C>hat mode. It could contain the following...

```
---
HEY SYSOP, WAKE UP!
---
```

You can word this any number of ways.

"feed intro"

This file introduces the <F>eedback section. Here is an example...

```
====
LEAVE A PRIVATE COMMENT TO THE SYSOP
====
```

It gives information about leaving messages to the Sysop.

"register intro"

This file introduces the <+>Registration section. In this file, you should indicate when passwords will be verified. You can also state system policies, or convey other information about registering. It could be as follows...

+++++

REGISTRATION

+ passwords verified in 48 hours +

+ YOU MUST USE YOUR REAL NAME +

+++++

Add any other information to this file concerning particular aspects of registering on your system.

"category 1"

This file contains the names of the message categories that appear on the First Message Base (Board). The number of categories is determined by what was entered into the configuration option. Each of the three Message Bases (Boards) must have the same number of sub-categories. You may have up to nine sub-categories on each Message Base (Board). There must be no extra blank lines, either before or in between the category listings. The First Message Base is accessed by pressing the <R> command on the Main Menu. To access the Second Message Base, use the <*>. To access the Third Message Base, use the <=>. Here is an example...

(no extra blank line)

1. c-64
2. programming
3. hints an tips
4. buy and sell

Each listing must be as follows...

NUMBER-PERIOD-SPACE-SPACE-CATEGORY

Start all the way over to the left. Leave no spaces between the left margin and the number. There must be two spaces following the period. The category names must not exceed twenty characters. If you started this file with a blank line, it will freeze the program when the "category 1" file is read. If you don't use two spaces after the period, the name of the category will not appear correct, or may have a "." before it. The program reads this file to create the file names of the messages. Use a word processor if you don't want the characters outside the quotes.

"category 1" (Con't)

If you change the name or spacing of a category, even slightly, the program will not be able to access the messages left under the old name. "1. Commodore" is not the same as "1. commodore". You can change this file if you wish to change the message categories. Changing one category does not affect the others.

"category 2"

This file contains the names of the message categories that appear on the Second Message Base. The Second Board is accessed from the Main Menu by pressing the <*>. The user's name and password have to be entered into the Second Board Passwords in order for him or her to gain access to this board. It is set up the same way as "category 1". The categories on this board can be more private because higher access is needed for entry. The number of categories must be the same as in "category 1". Here is the example...

(no extra line)

1. dating
2. trading
3. for sale
4. telecomm.

Notice "category 2" has the same number of categories as "category 1". These categories must not contain any of the same category names used in "category 1".

"category 3"

This file contains the names of the message categories that appear on the Third Board. The Third Message Board is accessed from the Main Menu by pressing the <=>. The user's name and password must be entered into the Third Board Passwords in order for him or her to gain access to this board. It could look like this...

(no extra line)

1. bcug
2. meetings
3. info
4. new members

The number of categories must be the same as in "category 1" and "category 2". Each of the 3 Message Boards can contain a specific theme. The corresponding categories can reflect this theme. The most general message base usually should be the First Message Board.

"bull intro", "bull1", "bull2", "bullx"

The "bull intro" must contain a numerical listing of "bulletin" options. The numerical listing points to corresponding files. This section is accessed when the user selects the ulletin option on the Main Menu. Here is an example...

BULLETINS

1. System info
2. Downloading list
3. News and rumors
4. New computer releases

If the user choose "1", the program looks for a file called "bull1". If (s)he choose "7", the program would look for "bull7". It is up to you to create the files with the information that corresponds to the listing in the "bull intro". You must create a file containing the system information and then name it "bull1".

Listing 1 - Create "bull1"
Listing 2 - Create "bull2"
Listing 9 - Create "bull9"
listing a - Create "bulla"
listing x - Create "bullx"

This feature of the BBS lets you put as many bulletin files online as you want (up to the storage capacity of the disk drive).

"merc intro", "mercl", "merc2", "mercx"

This feature is accessed by entering <M>erchandise on the Main Menu. The name on the "main menu" file can be changed, but the <M> prompt must remain <M>. It works the same as the "bull intro" and the "help intro". Make your list, and call it "merc intro". Then make your corresponding files.

Listing 1 - Create "mercl"
Listing 2 - Create "merc2"
Listing 8 - Create "merc8"
Listing z - Create "mercz"

"sub intro", "sub1", "sub2", "subx"

This feature is accessed by entering <S>ub menu on the Main Menu. It works the same as the "help intro", "bull intro" and "merc intro".

"sub intro", "sub1", "sub2", subx" (Con't)

Make your list, and call it "sub intro". Then make your corresponding files. However, the "sub intro" must also contain the following listings:

```
<s> User supplied BBS numbers ("subs")
<t> Story board ("subt")
<u> Hints and tips ("subu")
```

"subs", "subt", "subu", "subd"

Create a file called "subs" into which you write:

Enter new BBS numbers into this section...

When the user selects <A> on the Main Menu (s)he will be able to continue this file.

Create a file called "subt" into which you write:

Once upon a time...

When the user selects </> on the Main Menu (s)he will be able to continue the story.

Create a file called "subu" into which you write:

Add any hints or tips for the C-64...

When the user selects <!> on the Main Menu (s)he will be able to add hints and tips.

Also, by hitting "d" on the Submenu you can see the "subd" user log. Use the R. Reset option so it doesn't get too big. It contains the following info:

```
name
date
logoff time in military time
minutes and seconds online
Number of messages posted and read
Number of downloads and uploads
Number of times a user voted
```

If you wish you can change the BASIC source code in order to change "subd" to something else.

You can change these append files to something entirely different than what I have suggested here. You can have a D&D game or a listing of something else. Just introduce them as you wish and remember to alter the "main menu" file accordingly. Also something to remember is that these files will continually be growing in size and may need editing or scratching from time to time.

"v question"

This file contains a question with six parameters to record the results. It is accessed in the <V>ote section and can look like this...

VOTING QUESTION

What is your age group?

1. under13
2. 14-21
3. 22-31
4. 32-45
5. 46-59
6. 60 or over

Use any question you wish. There are six parameters for the results. The parameters are part of the file. Keep the lines on the six parameters close together so the user can still see the parameters and the results on one screen. The results go into the "vote" file.

"vote"

This file contains the voting tally of the "v question". When starting a new question, first scratch the old "vote" file. Go to the <V>ote section. The first time the question is run through you must put in the first vote. This is because the "vote" file is a self starting file that gets created by the program. The first time a new "vote" file is accessed it is not created yet, and the disk drive light will blink. Just enter your vote and the "vote" file is created.

"feedback"

This file contains your feedback messages. Rather than each new feedback message taking up its own sequential file, all of them are stored in one file on drive 8. If you must re-create this file do the following:

Scratch the old "feedback" file. Use the "2. Create File" option, and enter a couple of words (anything will do). Save the file as "feedback". Go to "5. Feedback" option and read your feedback. The program will say "DELETE?". Choose <Y>es. The program will straighten out, and reset the "feedback" file.

Uploaded file names go into feedback. Also if a user logs off improperly (drops carrier) his or her name goes into feedback.

"register"

This file contains all the new registration applications. To re-create follow the same instructions as in fixing the "feedback" file. Go to "8. Passwords" section of the Sysop Menu instead of "5. Feedback" section. Choose the <S>cratch option at the end of the "2-Val" option. The program will re-create the file, and it will function properly.

"user log"

This file can start off like this:

```
*****  
USER LOG  
*****
```

This file keeps an update of the names of all the users who have passwords. New users are not entered into this file. The program automatically enters the names (only once) of all the users. If someone logs on using different spacing in his/her name, the name may appear twice on the "user log". The "user log" is written to after the user logs off. You will notice that the disk drive goes on after someone logs off. This is the "user log" being updated. When creating the user log the first time make sure to leave a blank line or two with the "quote-space-quote" if using a word processor so the list of names that will appear under will not start right after the intro.

"main menu"

The "main menu" file contains all the prompts that allow the user to find his way around the BBS. This file is covered in some depth in a later chapter.

"menu2"

This file must be on every drive that there is a message base. It looks like this:

```
<V>iew msgs on THIS sub-board to you  
<L>ocate ALL msgs to you  
  
<F>orward read <R>everse read  
<A>ll messages <S>can messages  
<P>ost message <D>elete message  
<C>hange board <M>ain menu
```

Try to put it at the top of the disk directory for faster access.

"dl", "dl1", "dl2", "dlx"

Create a file called "dl". It can look like this...

\$

Free Public Access Downloads

Subscribe to our larger Download
Library today!

\$

1. 4 minute copy pgm 11 blocks
2. superman seq 112
3. mind probe pgm 54
4. dl4 seq 22
5. dl5 *****
6. dl6 * Call the download names *
- a. dla * Anything you like in *
- b. dlb * this 'dl' file. But you *
- c. dlc * must rename the actual *
- y. dly * file names on the disk. *
- z. dlz *****

\$

This "dl" file is accessed by selecting <\$> on the Main Menu. You must put this file on the drive that you configured for the "file downloads". You must also put the download programs themselves on that drive and rename them accordingly. If you select "3" it looks for a file named "dl3". Select "n" and it looks for "dln" etc. The "dl" file points the way to the renamed download program.

There are two download modes. If you select <\$> then you are using the "dl" file download mode. If you select <X> you are using the mode that will read the whole disk directory. When using only one drive use the "dl" file mode instead of the whole directory mode so nobody can download your password file. YOU CAN USE EITHER MODE OR BOTH MODES.

"msg"

During AUTO-MAINTENANCE the "msg" file is created. It contains information about who left which message to whom and where it is. The "msg" file is accessed during logon after the "Searching for msgs" message. It is also accessed when you are in the message base and choose "<L>ocate all msgs to you". It is very important to let Auto-Maintenance occur once per day so that this file is updated. To re-create this file simply run through auto-maintenance. It is automatically created.

"mml"

This file contains the "<N>eed a date" matching questions. Each group of 5 questions is a string. That means that each group of 5 questions must be surrounded by quotes and end with a <cr>. The first question is very important because it will match the users (e.g., male to female). You may change the wording of this question or the others to suit your local area. The file contains 20 sets of 5 questions. It looks like this:

"You are:<1>Female <2>Male <3>Lesbian
<4>Homo-sexual <5>Bi-sexual"
"Age:<1>under 18 <2>19-25 <3>26-35
<4>36-45 <5>Over 45"
"Income:<1>Under 10k <2>10k-20k
<3>20k-30k <4>30k-40k <5>over 40k"
"Education:<1>Elementary <2>High School
<3>College <4>Graduate <5>Doctor"
"Status:<1>Single <2>Married but...
<3>Divorced <4>Desperate <5>Other"
"Prefer to live: <1>City <2>Suburbs
<3>Country <4>Up North <5>Down South"
"Books:<1>Rarely read <2>Science-Fiction
<3>Romance <4>Mystery <5>All"
"Travel:<1>Like to stay home <2>Car ride
<3>Back-pack <4>Train ride <5>Airplane"
"Times per month you like to go to
the movies <1> <2> <3> <4> <5>"
"Hours you like to watch TV per day:
<1>0 <2>1hr <3>2hr <4>3hr <5>4hr+"
"Sports activities:<1>Water <2>Running
<3>Nautilus <4>Other <5>Never"
"Watch TV sports:<1>Baseball <2>Football
<3>Hate to <4>Love to <5>Sometimes"
"1st Date:<1>Restaurant/Show <2>Park
<3>Quiet dinner <4>Mcdonalds <5>Other"
"Attitude:<1>Aggressive <2>Easy going
<3>Possessive <4>Shy <5>Psycho"
"Music:<1>Rock <2>Classical <3>Jazz
<4>All <5>You are a musician"
"Sex on first date if in mood:<1>Yes
<2>No <3>Maybe <4>Partial <5>Don't know"
"Racial preference:<1>Black <2>White
<3>Other <4>Martian <5>Doesn't matter"
"Times per week you'd like to make
love:<1><2><3><4><5>five or more"
"Sexual arousal threshold:<1>VERY easy
<2>Easy <3>Moderate <4>Slow <5>Hard"
"Looking for:<1>Good relationship
<2>Marriage <3>Fun <4>Sex <5>Other"

Remember the carriage return after the closing quote otherwise you may get a string too long error.

"mm2"

This file contains the results of the questions asked in the "mml" file. If you must restart it do this:

(no extra space)

*

*

(no extra space)

It works like the passwords. Each entry is 2 strings. If you put an extra line it will throw the results off. Edit the "mm2" file from time to time.

"mm3"

Contains a paraphrase of each of the questions in "mml". There are twenty lines in this file. The first line must say something to the effect:

You have the following in common:

This file is accessed when the user selects <I>nfo in the dating section. Make sure that the lines correspond to the lines in the "mml"

"quiz1"

Contains the twenty questions for the online quiz. It is set up like the "mml" only each question/answer is two strings (two lines). There will be a total of forty lines in this file. Each line may be up to eighty columns. Each question must have five possible answers.

"quiz2"

The first two lines of this file must contain the correct answers to the "quiz1". All the subsequent results will append into this file. It may look like this:

```
"12345123455432112312"-<CR>-
```

```
"12345123455432112312"-<CR>-
```

Make sure there are no extra lines before or after. Both answer strings must be identical.

"arb"

This is an ad for the BBS. It is accessed by selecting <?> on the Main Menu.

"remote"

This file describes the Remote Sysop functions. It can only be accessed if the user's password starts with an asterisk (*) and <Z> is selected from the Main Menu. The user may only access this section if the Remote Sysop is configured "On". If the Remote Sysop is on, you will see the phrase "REMOTE" displayed on the "Online Waiting For A Call" screen, under the middle line.

The "remote" file may look like this:

REMOTE SYSOP

To give a user remote sysop access his or her password must start with an asterisk (*). It will also allow them to delete any message.

1. Read file
2. Create file
3. Append file
4. Disk Directory
5. Passwords

Be very careful to whom you give Remote Sysop access. He or she could do a great deal of damage to your system with this option. The Remote Sysop can only access drive eight, where most of the important system files are located.

"keys"

This file contains ten lines of phrases that are used for the function keys in the Chat Mode. When you go to the Chat Mode and select the British pound key these ten phrases will be loaded into memory temporarily. By hitting the pound sign again followed by a key from zero to nine one of these phrases will print out. It may look like this:

Hello, how are you?

Go ahead...

Okay...

Can you go voice?

Call me on my voice number...

Hmmm...

Hold on a minute...

I must go now, Bye.

See you...

So long and thanks...

FILES THE PROGRAM CREATES

name++

The ++ files are files that the program creates. These files contain all the information about the messages in each message category. When the user chooses the category (s)he wishes to access, the program loads in the corresponding ++ file, storing all the information contained within. This information points to the sequential files that contain each individual message. If you scratch a ++ file, it will appear as if there are no messages in that category. Sometimes you might wish to scratch the ++ file and its corresponding files. When you enter the names into the category files the program will pick up the first 8 characters of the category name if you did it right (one period space space). It ignores the first 4 characters of the string, that's why we use "one period space space". If you use the wrong spacing your category name may start with a period or have the first letter chopped off. You may notice part of the category name is outside the quotes in the directory. This is because the BBS turns all spaces into chr\$(160). Any spaces in the category names that were made with the BBS editor will be chr\$(160). If you save a program with a shift space (chr\$(160)) anything past the shift space will appear outside the quotes.

namel

These files are the individual messages. The "name" is the name of the category. It will have the first 8 characters of the category name. The number following is the message number. Part of this may also be outside the quotes in the directory. If you have scratched the ++ file, you must also scratch ALL the corresponding "namel" files. Scratch the ++ file and the "namel" files if you remove or change a listing in the category files. This will free file space on the disk. Always Validate your disk after doing any big scratches.

"NAMEx"

The files that look like this contain the E-mail to the person whose name is in the file. They always end with "x". To save space, all E-mail to one person goes into one file. This file is created when the first E-mail message is sent to that person. If the person empties his Mail Box, the file is scratched. When a user successfully logs on, the program checks to see if (s)he has E-mail by seeing if this file exists.

"NAMExy"

Files that have the "xy" at the end are P-Mail messages from the Sysop. These are scratched as soon as they are read.

If you leave P-Mail to "all" then the file will look like "ALLxy". This will not be scratched after being read. You must scratch "ALLxy" when it is no longer wanted.

"per day"

This file keeps track of how many times per day a user logs on. In the configuration option you may enter the number of calls per day that users are allowed. It is accessed after the BBS recognizes the user's logon password. This file is emptied during Auto-Maintenance. You must do Auto-Maintenance once per day. This file will create itself during Auto-Maintenance. So if you must replace it just scratch it and run Auto-Maintenance.

"f-list"

This file is a list of users who left you feedback. When you select the "P. P-Mail" option on the Sysop Menu the prompt will ask "f-list?". If you say "yes" then this file is printed to the screen. When you delete your feedback this file is reset to empty.

MAIN MENU FUNCTIONS

LISTING OF THE MAIN MENU

The "main menu" file is the road map of the BBS. This is how users find their way around the system. You may alter the appearance of the Main Menu, but you may not change the letters of the prompts unless you change the program. For example; <M>erchandise could be altered to read <M>ore game solutions. <S>ub menu could be altered to read <S>igs. The spacing and lay out are up to you. However, I would advise you not to let the Main Menu scroll longer than one screen. This way all the choices are visible at the same time. Here is a sample "main menu" file...

```
-----  
*===== MAIN MENU =====*  
-----  
  
    <L>inefeeds          <H>elp  
    <?>ARB BBS info    <Q>uick off  
    <T>ime online      <G>oodbye  
    <R>Main boards     <E>-mail  
    <*>Adult boards   <F>eedback  
    <=>Telecom boards <C>hat  
    <V>ote             <U>ser Log  
    <B>ulletins        <S>ub-Menu  
    <X>Up/Download     <M>erchandise  
    <$>Free Download  <A>dd to BBS list  
    </>Story board    <!>War Room  
    <N>eed a Date     <->C-64 Quiz  
    <+>Registration  <#>300-500 Baud  
    <Z>Remote Sysop  <8>bit 7bit toggle
```

If you are creating your own version of the "main menu" file, try to center everything so it looks neat and professional. The <*> and the <=> should be named with whatever theme you decide to have on the Second and Third Message boards. You do not even have to put them on the Main Menu if they are secret or limited access boards. The layout of the "main menu" file will not affect the operation of the program, as would the layout of the "category 1", "category 2" and "category 3" files. Customize the "main menu" to your liking, or use the sample main menu that is included with the software package.

FUNCTIONS OF EACH SELECTION

This section is actually the <H>elp files for the user. I have included the names of the files that are accessed to give the Sysop a better understanding of the BBS program and its operation.

<L>inefeeds

Allows user to toggle between adding an extra <LF> at the end of each line or not. Some terminal programs need an extra linefeed.

<H>elp

Allows user to access the Help files. Accesses the "help intro", "help1", "help2", "helpx" files.

<R>Main boards

Allows user to read and post messages on the First Board. New users may read but not post messages. Accesses the "cat1 intro", "category 1", "name++", "name1" files.

<*>Adult boards

Allows users to read and post messages on the Second Board. They must have Second Board access to enter. Accesses the "cat2 intro", "category 2", "name++", "name1" files.

<=>Telecom boards

Allows users to read and post messages on the Third Board. They must have Third Board access to enter. Accesses the "cat3 intro", "category 3", "name++", "name1" files.

<E>-mail

Allows user to access E-mail section. New users may not leave E-mail but can receive E-mail. Accesses the "mail intro" file. Reads or creates "NAMEX" files.

<F>eedback

Allows user to leave a private message to the Sysop. Accesses the "feed intro" file. Reads and writes to the "feedback" files. Adds name to "f-list".

<C>hat

Allows direct communication between user and Sysop. Accesses the "chat intro" file. Up-arrow engages Chat Mode at ANY TIME. Left arrow (next to the "l") terminates the Chat Mode. Accesses "keys" file.

<V>ote

Allows user to vote on a question posted by the Sysop in the "v question" file. New users may not vote. Accesses the "v question" file. Creates and writes to the "vote" file.

<U>ser Log

Allows user to see the names of all the registered users of the system. Accesses the "user log" file.

<T>ime online

Prints the date and time, and how long the user has been online.

<G>oodbye

When user is ready to log off (s)he may select this option.

<Q>uick off

Log: / the user off immediately.

<+>Registration

Allows new users to fill out the registration application. Accesses the "register intro" file and writes to the "register" file .

ulletins

Allows user to access the bulletins section. Accesses the "bull intro", "bull1", "bull2", "bullx" files.

<S>ub-Menu

Allows user to access the Sub-Menu. Accesses the "sub intro", "sub1", "sub2", "subx" etc. files. Must contain the "subd", "subs", "subt", "subu" files.

<X>Upload/Download

Allows user to access the up/downloading section. Checks the "dasswords" file to see if user has access. Reads the download disk directory.

<M>erchandise

Allows user to view the merchandise section. Accesses the "merc intro", "mercl", "merc2", "mercx" files.

<->C-64 Quiz

Allows the user to take a twenty question quiz and gives the results. Accesses the "quiz1" and "quiz2" files. Each question/answer must be two strings long.

<N>eed a Date

Allows user to access dating section. Users are matched according to preference and results of compatibility are given as a percentage. Accesses the "mm1", "mm2" and "mm3" file. Contains twenty questions with five answers. System can be configured so that user requires Second Board access to get into the <N>eed a Date function.

<\$>Free Download

Accesses download listing in "dl" file. If user selects "6", then system looks for renamed download file "dl6".

<A>dd to BBS list

Allows user to add more listings to the "subs" file.

</>Story Board

Allows user to continue the story in the "subt" file.

<!>War Room

Allows user to let out some frustration. Accesses the "subu" file.

<?>ARB BBS info

Accesses "arb" file.

<#>300-500 Baud

Allows users with 300 baud modems to raise their baud rate up to 500 baud. Most modems will work fine up to 385 baud. Some can go faster.

<Z>Remote Sysop

Allows user to manipulate the files on the BBS and validate passwords from a remote location. Be careful with this one! If the Remote Sysop function is configured "On", any user who has a password that begins with an asterisk (*) will be able to use this function. Accesses the "remote" file and possibly any other file on drive eight.

<8>bit 7bit toggle

Allows users to whom the upper case letters look like graphics to toggle them to lower case. Allows 7bit no parity operation with the bbs.

CHANGING THE MAIN MENU

You may change the BASIC code if you want different letters for the prompts. Make sure you BLITZ! the program if you make any changes to the BASIC code. Don't run the program in the native BASIC without BLITZing because it will run too slow. Do not make the "main menu" longer than one screen.

If you add to the BBS program, make sure that after it is blitzed, there are at least 8000 bytes free. You can check the bytes free by using the "B. Break" function on the Sysop Menu. Then type:

```
printfre(0)
```

This will tell you how many bytes you have left. If you make the BBS too long it might go out of memory if your message bases are full.

BLITZ! is the only compiler that will work with the BBS program.

REMOTE SYSOP

As has been stated several times you must be very careful to whom you give Remote Sysop access. If possible leave it turned off in the configuration. If someone gets access and intends to cause trouble they will be able to destroy your system. Not only that, but many people use the same password on several systems. If your password file was read it could cause far reaching problems.

The Remote Sysop function is only for drive eight, but that is where all the important files are.

You can change the BASIC code so that the Remote function is an unlisted menu prompt if you wish.

DATING/MATCHING BOARD

One of the features of this board is the match making function. By selecting <N> on the Main Menu, validated users fill out a 20 question questionnaire. Each question has five choices. After the questionnaire is completed, the matching option can be chosen. Users may choose a matching percentage between 0 and 9. The lower the number that is chosen the more matches they will get. If a user completes more than one questionnaire, the last one completed will be the one used when (s)he looks for a match. The other ones (s)he filled out will still show up on other people's matches. Sometimes a male will hit the <F>emale response. Oh Well. You may edit the "mm2" file from time to time to shorten it. You may change the "mml" file questions, but not the first one (you may paraphrase though). The first question determines who is matched with whom.

Males match with females.

Females match with males.

Male gays match with male gays.

Female gays match with female gays.

Bi matches with everyone but only Bi matches with them.

Some Sysops use one of the message categories as an adult board or dating board. Some charge a small fee for access.

You have the option in the configuration to require users to have Second Board <*> access in order to get into the Dating and the Sub-menu. In this way, you provide more security for these functions and your BBS.

UPLOADING AND DOWNLOADING

PROTOCOLS

The ARB Bulletin Board System uses PUNTER C1, X-MODEM and ASCII protocols. They were chosen because of the wide availability of public domain terminal programs that incorporate them. Punter C1 is faster than Xmodem for Commodore computers (except Amiga). It works at 300/1200 baud, 8 bits, no parity, and 255 byte blocks. PUNTER C1 PROTOCOL ONLY WORKS FOR THE COMMODORE 64 or COMMODORE 128. X-Modem is used so that new users with X-Modem are not left out. ASCII is good for reading sequential files like "docs". We've had some success with storing IBM and Apple files with X-modem. The downloads are mainly for the Commodore 64 or Commodore 128. There are many public domain terminal programs that are compatible with this BBS. It is a plus that the compatible terminal programs are so widespread, because users will have no trouble finding such a version. They will then be able to use the Download section if allowed access.

SETTING UP FOR DOWNLOADING

If using only one disk drive use the "dl" file download mode only, so the "passwords" file cannot be downloaded. If you have uploading with only one drive watch the situation carefully. If you are using more than one drive, it is very easy to set up for downloading. All you do is configure the drive and put in the download disk. That's all there is to it. The program transmits the entire download disk directory. Then the user types the name of his or her selection. You may have up to four drives for downloading. DO NOT PUT ANYTHING EXCEPT PUBLIC DOMAIN PROGRAMS ON THE DOWNLOAD SECTION!

PUBLIC DOMAIN PROGRAMS

IT IS ILLEGAL TO TRANSMIT COPYRIGHTED SOFTWARE THROUGH THE DOWNLOAD SECTION. You may ONLY transmit PUBLIC DOMAIN software. Public domain software is software that the author makes freely available to the public, and waives any claim of copyright. Several large computer information networks have extensive data bases of public domain programs that they let you access for a fee. Another source of public domain programs is USER GROUPS. Some companies sell disks with ten or twenty public domain programs on them for less than \$10. Also, users will be able to upload public domain programs to you, which you can copy on to other diskettes.

UNDER NO CIRCUMSTANCES SHOULD YOU VIOLATE THE COPYRIGHT LAW!
YOU COULD BE LIABLE FOR A \$50,000 FINE AND IMPRISONMENT.

USER ACCESS TO DOWNLOADING

As the Sysop, you determine who gets access to the download section. You may decide to charge a small fee (\$5) to users who wish to subscribe to the download section. If you do charge, you will be expected to provide good public domain programs. If you decide not to charge, you may establish criteria by which users can access the downloads. For instance, users who log on frequently could be rewarded with access. Perhaps you will let only your friends get access. It is up to you to set the guidelines. For multi-drive systems you may charge \$5 for the <X> main downloads but allow all users to download something from the <\$> File Download ("dl" file).

MULTI-FILE DOWNLOADING

Multi-File Punter Downloads are supported on the BBS. The user can select which programs to download with "Yes/No/Quit" prompts. The system will only allow up to the download limit that was set in the configuration. It will also check the time limit between files and terminate if the time limit has been reached.

Even if the user does not have a Multi-File Terminal the function can be used. The user can keep going to his/her "receive" option manually.

MANAGING UPLOADS

If you have uploads on your message disk you must not scratch them off the disk. If you wish to remove the uploads start with a freshly formatted disk and file copy the individual BBS message files to the new disk. Then you can deal with the uploaded files. If you scratch several hundred block files frequently when the disk is validated, many files tend to "mysteriously disappear".

It is always best when making backups to use an individual file copy program to put the BBS files on a freshly formatted disk rather than using a nibble copy. The nibble copy will also transfer any disk errors.

Make back-up copies of your BBS file disks regularly.

TROUBLE SHOOTING

AUTO-MAINTENANCE

The ARB Bulletin Board System performs Auto-Maintenance daily at 12:00 A.M. During this time all message disks are validated, the "msg" file is updated and the "per day" file is reset. The first message in any category with more than 10 messages is deleted. **DO NOT UNDER ANY CIRCUMSTANCES STOP THE PROGRAM IN THE MIDDLE OF AUTO-MAINTENANCE OR ELSE!** Stopping in the middle of validation will destroy the disk.

VALIDATION

Never scratch an open file. Validate! After scratching files validate the disk immediately. This will usually prevent disk errors. You can use the "B. Break" option to get to the immediate mode.

PROBLEMS AND SOLUTION

A problem you will encounter from time to time is that the disk drive and the program appear frozen. **THIS PROBLEM IS CAUSED BY A RUINED FILE.** Take note of the spot where the program freezes. Figure out which file is being accessed at that time. Scratch the bad file and recreate it using the information in the "LISTING OF FILES AND THEIR FUNCTION" section. Make sure you understand how to recreate the files properly.

THE MAIN CAUSE OF TROUBLE IS USUALLY A RUINED FILE. Think of this FIRST!

Here is a table of possible problems and their solutions.

- PROBLEM:** Program will not load.
SOLUTION: Turn the computer off and on, and try again. If program refuses to boot, your drive may be out of alignment.
- PROBLEM:** Program freezes and red light on disk drive is on.
SOLUTION: File ruined - figure out which file was being accessed when program froze. Scratch that file and recreate it.
- PROBLEM:** "device not present" error message.
SOLUTION: Type "run" and reconfigure your drives properly.
- PROBLEM:** "file error in xxxxx" error message
SOLUTION: File ruined - scratch bad file and recreate.

PROBLEM: Program freezes during Auto-maintenance.
SOLUTION: Make sure configuration is set for proper number of categories. Check "category 1", "category2", "category 3", depending on where BBS froze.

PROBLEM: Illegal quantity error when attempting to access message base.
SOLUTION: Configuration for number of sub-categories not set properly. Remember, if you set it for six, the total comes to eighteen. Also if "category 1", "category 2" or "category 3" files are not set up properly or are not on the drive(s) where you have the corresponding message base(s), you will get this error. In addition, the system will not make it through Auto-Maintenance.

PROBLEM: Strange characters and no spacing.
SOLUTION: User's terminal program not compatible with BBS. User can try to configure terminal program to 300 baud, no parity, 8 bit word length, one stop bit.

PROBLEM: Case of text changes.
SOLUTION: User hit some control codes. Everything will reset after log off.

PROBLEM: Everything on disk wiped out!
SOLUTION: The number of files went over 144 on one disk. Hope you made a backup!

PROBLEM: Can't scratch "name++" files.
SOLUTION: Copy all the files you want to keep onto a freshly formatted diskette.

PROBLEM: Can't scratch "name1" files.
SOLUTION: Copy all the files you want to keep onto a freshly formatted diskette.

PROBLEM: Passwords don't work.
SOLUTION: You may have an extra line in the file. Check to see if names and passwords are in the proper sequence.

CHANGING THE BASIC

Just about everyone running a board likes to make some personal changes to the BASIC source code. That's why I included the source code. You may change anything you like but YOU MUST COMPILE THE REVISED PROGRAM WITH BLITZ! The program will not work well in the BASIC because all the loops are set for blitzing. You'll be paging the sysop for five minutes instead of 30 seconds. Many of the sysops running the board have learned most of their BASIC programming from playing around with the code. Call the Hotline Numbers if you need any help with programming. Have fun.

MODEMS

The ARB Bulletin Board System will work with a variety of 300/1200 baud modems. These fall into several categories:

CBM 1650 compatibles:

- * 1650
- * Westridge
- * Total Telecommunications
- * Microbit 1064
- * Master Modem
- * Taihaho

Mitey-Mo compatibles:

- * Mitey-Mo
- * Hes II

CBM 1670 compatibles:

- * 1670
- * Anchor 1200
- * Avatex 1200

The CBM 1670 is an ideal modem for running your system. It would be my first choice.

The Avatex 1200 is fairly inexpensive. If you are using it follow these directions:

Use the Omnitronix RS232 interface. Set the interface for Modem 1 and Modem 2. Set the third switch to the INVERTED position. Turn all switches on the modem to the up (off) position, except pin 6 which is set to the down (on) position.

SAMPLE DRIVE CONFIGURATIONS

Here are possible set-ups for several drive combinations:

One 1541

Uploads OFF
Directory downloads OFF
"dl" file downloads on drive 8
Three subs per message board for a total of nine on drive 8.

Two 1541s

Uploads on drive 9
Directory downloads on drive 9
"dl" file on drive 8
Three subs per message board for a total of nine on drive 8.

Three 1541s

Uploads on drive 9
Directory downloads on drive 9
"dl" file downloads on drive 10
Six subs per message board for a total of eighteen
First board on drive 8
Second and Third boards on drive 10.

Four 1541s

Uploads on drive 9
Directory downloads on drives 9 and 10
"dl" file downloads on drive 11
Six subs per message board for a total of eighteen
First board on drive 8
Second and Third board on drive 11.

One SFD1001 (8) and One 1541 (9)

Uploads on drive 9
Directory downloads on drive 9
"dl" file downloads on drive 8
Six subs per message board for a total of 18 on drive 8.

There are many possibilities. Depending on your purpose, you may wish to have a large message base or an expanded download library.

IEEE drives are faster than serial drives. If you are using a combination of IEEE and serial drives, use the IEEE devices for your message bases for faster access.

BACK UP SUPPORT

TWENTY FOUR HOUR HOTLINES

If you are having difficulties with the program, try to find the answer somewhere in the manual. If you cannot solve the problem you can log on to the following bulletin boards 24 hours a day. Log on as a NEW user if you are not registered. Try the <C>hat mode. It is possible you may get your answer right away. If the Sysop is not available, go to the <F>eedback section. Say you are a Sysop running the system. Leave your telephone number (don't forget the area code) and the hours you can be reached. State the problems you are having. Someone familiar with the system will call you COLLECT. Here are the hotlines...

ARB SYSTEM ONE
LANGHORNE PA.
215-752-7841

THE TIME TUNNEL
QUEENS N.Y.
718-849-3422

THE TREASURE CHEST
B'KLYN N.Y.
718-645-1979

REMINDER

If using more than one drive, remember to put the "cat1 intro", "cat2 intro", "cat3 intro", "category 1", "category 2", "category 3", and "menu2" files on the drives that are configured with the corresponding message boards.

Put three lines of 38 spaces at the top of the logon intro to allow user's term program to catch up with the transmission.

Do not run the BASIC source code. You must BLITZ! the BASIC source code if you want the program to run properly.

OTHER PROGRAMS INCLUDED

There are two versions of the BBS on the Program Disk. One is the BASIC source code and the other is the Blitzed! version.

When you access the "C. Config" section on the Sysop Menu the BBS will load in a program called "config". This program allows you to set the system configuration and save it. The "config" program will return you to the BBS.

Included on the program disk is **ARB Utility**. The utility program contains a message base renumberer and other helpful utilities.

There is a program called **BBS File Reader**. The files on the BBS are accessed by input# rather than get# statements. This is the reason for the quotes around the text. When you use a word processor to create the BBS files you can run them through this program to see if they are compatible. If the program doesn't stop, they are acceptable. If the program freezes, you forgot a quote or something and have to fix it.

There is a program on the disk called **Test/Print Files**. This program will run through the BBS file disk and send to the screen and/or a printer ALL the files that come with the program. If it freezes, you found a bad file.

The **ARB Converter** will convert any sequential file to BBS format with the quotes around each line.

Also on the program disk is the **ARB TERM64** terminal program. It works with several types of modems. It contains the names and telephone numbers of 80 bulletin board systems across the country, and has room for many more.

AUTOMATIC MESSAGE FORWARDING

OVERVIEW

The BBS can support a network of up to nine other systems. A user may leave a message on one of the nodes and it will automatically transfer over to the target system. The transfer occurs between the hours of 3:00 A.M. and 5:00 A.M. or can be initiated at any time by selecting the "<F5>Send" option when the BBS is online waiting for a call.

THE NETWORK OPTION ONLY WORKS WITH A CBM 1670 MODEM OR HAYES SMARTMODEM 1200.

SETTING UP FOR NETWORKING

The configuration program will ask if you want networking. Answer "yes". Then you will be asked for the number of the drive where the network boards will be located. This is the drive that contains the message base(s) which will be part of the network. For example, if you wish to have network subs on the second board ("category 2") and the second board is located on drive ten, answer "10" when selecting the network drive.

You may have network subs in any of the three message boards as long as the categories are on the drive that you have selected for networking.

A network sub must start with a hyphen (-). Here is an example of a "category 1" file with some network subs:

- "1. General"
- "2. -Treasure Chest"
- "3. Amiga"
- "4. -Time Tunnel"
- "5. IBM sig"
- "6. -ARB BBS system one"

Out of the preceding "category 1" file the ones that start with the "-" are network subs. The first eight characters (including the hyphen) are very important. These must correspond with the name of the incoming network's logon name which is contained in its "id" file.

DO NOT START ANY OF THE SUB BOARD NAMES WITH THE HYPHEN UNLESS THEY ARE ON THE DRIVE CONFIGURED FOR NETWORKING OR ELSE!

Use a word processor to make the category files. Avoid the shift spaces that the built in editor uses.

Use the "network setup" program to create the "n-list" and "id" files. Answer all questions in the program. Make sure that you insert the disk containing the network subs in the drive.

VERY IMPORTANT! THE "n-list" AND "id" FILES MUST BE ON THE DRIVE THAT WAS CONFIGURED FOR THE NETWORK.

You must coordinate the names and passwords with the other members of your network. The names must start with a hyphen (-) and not be more or less than eight characters including the hyphen. For example:

-Steve's

The name of the sub (-Steve's Sick System) can be longer than eight but the name in the "n-list" must be eight characters EXACTLY. The password also must be exactly eight characters.

Upper case, lower case and spaces count, unlike the regular password system.

NETWORK PROTOCOL

The network protocol works like this:

A user leaves a message in a sub that starts with the hyphen (-). A poke corresponding to the sub's I.D. number is set to one. At 3:00 A.M. the BBS checks for these pokes and proceeds to try to call all nodes that have messages waiting. The BBS will try every ten minutes to call each network node on the list. The BBS will accept incoming calls after it has completed calling a node. If the other node is contacted the caller immediately goes into the Punter transmit mode, transmitting its "id" file. The receiver sees the "googoogo" and goes into the receive mode. The "id" file is received onto the network drive and is renamed ".id". The caller then assembles the "--" file from the "++" file and immediately starts sending it. The receiver checks the ".id" file against the "n-list" and scratches the ".id" file. If the name and password are not valid, the receiver hangs up. If they are valid, the receiver goes into the Punter receive mode to receive the "--" file which it renames "..". The receiver then merges the ".." file with the "++" file and figures out how many message files it needs to receive. At the same time, the caller starts sending the message files to the receiver. After all the message files are sent, sender and receiver switch roles and do the same thing again. The flag pokes are set to zero and both sides hang up.

Pretty simple, eh?

"n-list"

This file must be on the drive that was configured for the network boards (set in the configuration program). It has the following structure:

```
"Total number of nodes (1-9)"-<CR>-  
"-namell1"-<CR>-  
"Password"-<CR>-  
"Telephone number"-<CR>-  
"I.D. number (1-9)"-<CR>-  
"*"-<CR>-  
"-name222"-<CR>-  
"password"-<CR>-  
"telephone number (1-9)"-<CR>-  
"I.D. number"-<CR>-  
"*"-<CR>-
```

It contains the information about the other nodes in the network. You must coordinate this with the other members of the network. The name must start with a hyphen and be exactly eight characters. The password must also be exactly eight characters. All the strings are enclosed in quotes. Use the "network setup" program to create this file.

"id"

Contains the name of your BBS and its password. It looks like this:

```
"-NameBBS"-<CR>-  
"Password"-<CR>-
```

The name and password are eight characters each. They must be surrounded by quotes and end with a carriage return after the closing quote. This file must be coordinated with the "n-list" files on the other nodes in the network. Capitals and spaces count. Use the "network setup" program to create this file.

THE "n-list" AND "id" FILES MUST BE ON THE DRIVE YOU CONFIGURED FOR THE NETWORK BOARDS.

OTHER FUNCTIONS

At anytime of day if you wish to send to one specific node select the "<F5>Send" option in the online mode. Then enter the I.D. of the node you wish to send to. It will send even if the flag poke is not set "on". During the auto-dial the F1 key will abort the operation and reset the flag pokes to zero.

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