



Blackboard II

A COMPLETE BULLETIN BOARD SYSTEM

FOR THE COMMODORE 64 OR COMMODORE 128 IN 64 MODE.

FEATURES:

Custom menu driven, SYSOP definable menus, over 30 functions to choose from, up to 38 lines per menu, unlimited number of menus, on-line modification of user accounts, 4 operating methods, fully security coded, up to 20 message bases (public or private), 300 or 1200 BAUD operation, works with any drive combination, works with almost any modem, built-in terminal program, works with any file transfer, remote SYSOP capability, AND MUCH, MUCH MORE!!!!

INCLUDES:

BBS program, SETUP utility, CRUSH utility, SEQUENTIAL writer, MENU MAKER, DOWNLOAD MAKER and USERLOG.MOD.

REQUIRES:

Commodore 64 or Commodore 128 in 64 mode, at least one drive (Device 8, drive 0 required), an autodial/autoanswer modem. A printer is optional.

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BLACKBOARD II BBS

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Dedication

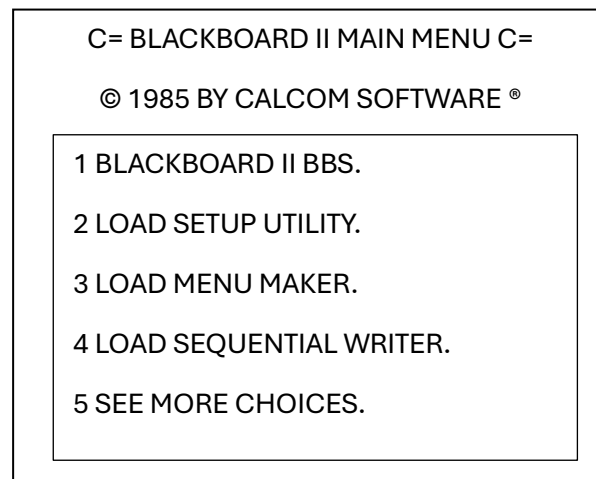
This manual is dedicated to Gerry Rynders, a good friend of mine who shares words of wisdom over coffee and peanut butter cookies; Ron Smith, who got me off my behind to get this project off the ground; and to the users of the original BLACKBOARD BBS back in Fredericton (New Brunswick, Canada) who put up with all of the system crashes for the first year and a half. Here's to good honest people who go out of their way to help. Thanks to all of you.

1.0 INTRODUCTION TO BLACKBOARD II

BLACKBOARD II is a custom menu driven BBS (Bulletin Board System) for the Commodore 64 or (Commodore) 128 in 64 mode. The menus are created by the user using a built-in MENU CREATOR using functions. These functions allow the user to leave a message and go to another menu as well as leave various types of messages. This program supports file transfers using the NEW PUNTER file transfer protocol. Remote SYSOP functions are available for inclusion into the menus. This versatile menu driven BBS will operate at 300 or 1200 baud and will support most any modem. Any dual drive combination is supported but one drive MUST be a dual drive unit. Drive 0 must always be present in the system. The drive may contain files to load as well as upload/download material may be stored on any drive including the system file drive. This will allow more room on the system drive for the file transfer area and a number of message bases. The size of your system will depend on your systems' storage capacity.

2.0 THE MAIN MENU

To load the main menu, first type: LOAD"BOOT",8,1 [RETURN]. When the program has finished loading you will see a menu appear on your screen:



BLACKBOARD BBS is the BBS program. DO NOT load the BBS unless you have already set up a data disk. To set up a data disk, you will need to use several programs on your BBS program disk. The first will be the SETUP UTILITY. This program sets up the BBS control files that tell the BBS program the specifics of your system. MENU MAKER will help you set up the menus that your system will use. SEQUENTIAL WRITER will allow you to enter system files and text files. It is a simple word processor that will produce BLACKBOARD II format sequential text files. The second menu contains five more choices. To get to the second menu you must press '5' on the first menu. The CRUSH UTILITY removes deleted, received and outdated messages from your message bases. DOWNLOAD MAKER will help in creating download menus from disk directories. The USERLOG UTILITY will set up and edit your user accounts. Unlike the modify user file option used in the menus; this program will allow total manipulation of the user file as well as the option of hard copy output.

3.0 THE SETUP UTILITY

To set up a BBS, you will need a blank, formatted diskette. Consult your disk drive owner's manual if you are unfamiliar with the procedure for formatting a diskette. First, place the BBS program disk into the drive, load the main menu and select the SETUP UTILITY option from the first menu. Once you have selected the SETUP UTILITY, the program will load and another menu will appear on your screen. At this time, insert the blank, formatted diskette into DEVICE 8, DRIVE 0. This disk will become your data disk. Three files are used by the BBS to operate. CTRL.1 is the file that tells the BBS the name of your system and defines several default settings. BRDCONFIG defines your message systems. You may have up to 20 message systems but most one drive BBSs will have two or three. CTRL.2 handles a modem type value that tells the BBS what kind of modem you are using as well as all of the pointers used by the BBS. The CTRL.2 file is updated after every call to the BBS that affects a pointer value. Options that have been selected from the first menu are shown in reversed video. This is a helpful reminder as to what you have already done.

3.1 THE CTRL.1 FILE

When you select the first option, CTRL.1, you will be shown a new menu. To change a value, press the number shown in the box in front of the value you wish to change. BRD NAME is the name of your BBS. This name may be up to 18 characters in length but may not include commas, quotes or colons. # INTROS is the number of introduction files that you want on your BBS. The intro file is the first thing shown to anyone calling the BBS. You may want to tell the callers your hours of operation, your operating parameters or just about anything you can think of. This file is created by using the SEQUENTIAL WRITER UTILITY. You may wish to have more than one intro file with the first being unchanging information and the following files being updates and news. Have as many as you like but you MUST have at least one. BLANKING is an option that you can toggle off (a value of 0) or on (a value of 1). This will blank out the BBS main screen after no activity for a one-minute period. This will save your monitor from "burn-in", a permanent image burned into your screen from continuous display of an image over a long period of time. The PRINTER value is another toggle value. A '0' turns the printer off, a '1' turns it on. When on, the printer option will produce a hard copy of all BBS activity such as who called and what messages were left etc. DO NOT turn this option on if you do not have a printer. The values in the CTRL.1 file may be changed at any time through use of the utility programs so don't worry about future additions to your system. This HIGH OBJECTIVE SYSOP option is another SYSOP option, again toggled with '0' as off and '1' as on. This turns the SYSOP page function off and on. If you turn the SYSOP page off, the user will get a 'SYSOP NOT AVAILABLE' message on his screen when he tries to access the SYSOP page function. The BLANKING, PRINTER and CTRL.1 file just sets the defaults for these values to save you typing every time you run the BBS. The NUMBER OF BOARDS pointer may have a value of 0-20. It controls the number of message bases your BBS has. Usually, you will want to set this value as it is controlled automatically by the SETUP UTILITY but the situation may someday arise when you will have to modify this value. This option allows that flexibility again. Note that if you try to enter a number that is larger than the maximum allowable number for any value, the program will enter the maximum allowable number instead of what you entered. This is a safety measure.

The LOGON (log-on) value controls the way your BBS will operate. A '1' will make your BBS an open system, no passwords or userfile - pass only. A '2' will make your BBS a name and password system. Once a user calls the system, he will be shown the intro files and then be asked for his FULL name. The BBS will check to see if the user is on file. If the user is on file he will be asked to verify his location. If the user verifies his location he will be asked for his password. The user will be given up to four chances to enter the correct password. If, after four tries, he is unsuccessful, the user is disconnected from the system and a security warning is printed out if a printer is part of your system. If he enters the correct password the BBS will check if the user has a validated account. To validate a user, the SYSOP must view the users' account and change the authorization code to a non-zero value. If the user is not yet validated he is informed so and is then disconnected from the system. If the user is validated he will be allowed onto the system. If the user is not on file he will be asked if he wishes to register for access to your BBS. If the user wants to register for access he will be shown the NEWUSER/1 file (see SEQUENTIAL WRITER program description for more information) as well as ask his name and will be asked to provide his location, phone number and a password. After the user has completed the online application, the BBS will display the NEWUSER/2 file (again, see the SEQUENTIAL WRITER program description for more information) and disconnect the call.

A '3' in the LOGON value will cause the BBS to operate as a closed system. Again, both a name and password are used as in LOGON '2' with the difference being that the BBS will not accept registrations for access. If the user is not on file, he will be informed that this BBS is a closed system, and the BBS will then disconnect the call.

A LOGON of '4' will cause the BBS to operate using both name and password, as in LOGON '2', but the user will be allowed onto the system with an authorization level of 0 after he has registered for access. This, when used properly, will allow a new user to visit a system to see what it's like. The user can call as many times as he likes until you either grant him regular access or delete his account. When the BBS is operating in LOGON '4', remember use of authorization setting up to '255', will allow a visiting status. This is important as system crashers and other system slime, can do great damage to your files matter referred to read only files, can do great damage to your files matter referred to read only files. It may become necessary to change to a closed system and only accept applications by mail should you run into repeated incidents of this nature.

3.2 THE BRDCONFIG FILE

Press RETURN to return to the first menu when you have finished with CTRL.1. This time, select option 2 - BRDCONFIG. You will now be shown another screen:

```

C= BLACKBOARD II SETUP UTILITY C=
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BOARD # 1 of 1 BOARDS

1 > NAME = BOARD 1
2 > TYPE 0/1 = 0
3 > MAX # MSG = 100
4 > MAX LEN. = 4000
5 > DEVICE # = 8
6 > DRIVE # = 0
+ - D A RET
S SET UP INDEX FILE

```

Note that the program has already put the default values in for you. You may change the values to whatever you like. The program will indicate that this is board # 1 of 1 boards. If you do not wish to have a message system, hit RETURN to exit now and a message base will not be added. If you want to have message systems, hit a '1' to add a message system and you will see that the program has added a message base. You should then see 'BOARD 1 OF 1 BOARDS' at the top of the screen. The NAME is what you would like the message system to be called, ie. PUBLIC, PRIVATE, BUY/SELL etc. DO NOT USE " in the NAME as the program will send a command to the drive to scratch files with this name and " is a wildcard meaning ANY FILE. This could lead to the erasure of every file on your disk!!! I once lost an entire file disk this way so be forewarned. Quotes, colons and commas are also a no-no. Messages are stored in two parts. The message information such as who the message is from, who it is to and so on (called the message header), are stored in an index file identified by the filename '[message base name]/IND'. The index files are relative files. The second part of a message is the text itself. Every message on the BBS has its own sequential text file called '[message base name].[message number]'. MAX # MSG is the pointer to the maximum number of messages that the BBS will allow on this particular message base. This is a safety measure to prevent a 'disk full' error from occurring. This error will occur when the number of disk blocks exceeds the maximum allowable on your disk drive. For the 1541 the maximum is 144 files per disk. Consult your disk drive owners' manual if you are unsure as to the maximum allowable for your drive. The default for MAX # MSG is 100 messages and the maximum allowable value is 9999. With a one drive system using a 1541, you could have a value of 100 and still have space for downloads. The number you place here will determine the configuration of your BBS. At no time must the combined MAX # MSG for any drive exceed its maximum number of files per directory limitation or the possibility of a disk full error occurring will be imminent. Message bases do not have to be on device 8, drive 0. You can spread the load between bases around and increase the message base

size if you have more than one drive. 20 or 30 messages per message base is usually quite adequate although experience will show what your requirements are. MAX LEN is the maximum allowable size for a message in characters. This may be any number between 1 and 4000. Most of the time, 1000 is more than adequate. You may wish that you may wish to reduce the size of your messages to allow more space for files. DEVICE and DRIVE are the storage locations for your message base. These values may be any number between 0 and 99. '+' will advance one board in the list of message bases. '-' will go back one. When you go outside the range, the counter will roll over. '0' will delete the current message base from the BRDCONFIG file. You will be asked to verify the delete. Keep in mind that your files are not affected until you quit the program so, if you make a mistake you can simply reset the program and start over again with no damage to your old files. '8' will add one to the number of boards counter and displays the newly created board. If you try to add a message base past the limit of 20 message bases, a warning message will be displayed and the last board screen will be displayed. Before you can leave a message on a message base, you must first set up the index file. To do this, press '9'. If a message index file with the name specified on the current board information screen has already been set up, the old file will be erased and a new one set up so be sure you call the message bases by different names. Once you choose to set up a message base on a given device and drive, be sure that the data disk that you intend to use for that drive IS IN THE DRIVE SPECIFIED and then CONTINUE. The program will then set up the message base index file. Note that if you intend to expand the size of a message base in the future, it is better to set the MAX # MSG to the size you intend to have later and then change the size to your current needs after you have set up the message base index file. If you don't do this, it will take longer to save a message once you exceed the size of your relative index file.

Once you have finished setting up your message bases, hit RETURN.

3.3 THE CTRL.2 FILE

From the main menu, press '4' to modify the CTRL.2 'pointer' file. You should see the following on your screen:

```
C= BLACKBOARD II SETUP UTILITY C=  
© 1985 BY CALCOM SOFTWARE ®  
1 > # OF SYSTEM USERS = 0  
2> # OF CALLS TOTAL = 0  
3> MODEM TYPE VALUE = 0  
4> # MESSAGES BY BOARD.  
RET> RETURN TO MAIN MENU.
```

The # OF SYSTEM USERS, # OF CALLS TOTAL and # MESSAGES BY BOARD pointers are handled automatically by the BBS. Changing the values may become necessary at some point in time to repair a damaged data disk but for now, leave them alone. The # OF SYSTEM USERS is the number of users currently on file in the userlog. The # OF CALLS TOTAL is the pointer to the number of calls your BBS has received to date. This is the ONLY pointer value that you can change without any risk of doing harm to the system. The MESSAGES BY BOARD option will show you the number of messages on each message base.

It's a good idea to leave these pointers alone unless you are 100% sure of what it is you are doing. Again, all the pointers are handled automatically by the BBS. The option to change the values manually is there for use only in special situations. Well, that leaves only the MODEM TYPE VALUE. This number is calculated by adding the following numbers together depending on the characteristics of your modem.

BIT	VALUE	DECSRIPTION
0	0	300 BAUD ONLY.
0	1	300/1200 BAUD.
1	0	CARRIER PRESENT WHEN DTR IS LOW.
1	2	CARRIER PRESENT WHEN DTR IS HIGH.
2	0	DSR LOW = PHONE ON HOOK, DSR HIGH = OFF HOOK.(DUMB MODEMS ONLY)
2	4	DSR LOW = OFF HOOK, DSR HIGH = ON HOOK.(DUMB MODEMS ONLY)
3	0	RING DETECT LOW = RING.(DUMB MODEMS ONLY)
3	8	RING DETECT HIGH = RING.(DUMB MODEMS ONLY)
4	0	NON-SMART (DUMB) MODEM, CANNOT SENSE CARRIER. ie. 1650, etc.
4	16	SMART MODEM. CAN DETECT CARRIER. ie. HAYES, etc.

To calculate the modem value, add the values that are relevant for your modem together. For the values for the more common types of modems, see the additional information at the back of this manual.

When you have finished with the CTRL.2 pointer file values, return to the main menu by pressing RETURN.

To quit the program and save the values you have entered, make sure your data disk is in device 8, drive 0 and press '5' while on the first menu. The files will be saved to disk and you will be asked if you want to reboot the main menu. If you say yes, the program will instruct you to place the BBS system disk into device 8, drive 0 and hit a key. Once you have done that, the main menu will automatically reload.

When you want to change a value in the control files later on just reload the setup utility, place your data disk(s) into the drive(s) and select option '3' to READ PRESENT CONFIGURATION. You may then make changes and resave the files.

4.0 THE MENU MAKER UTILITY

If you select the MENU MAKER option from the main menu, the MENU MAKER UTILITY will load from the disk drive and the following will be displayed:

```
C= BLACKBOARD II MENU MAKER.PR C=  
  
© 1985 BY CALCOM SOFTWARE ®  
  
1 > CHANGE POINTER.  
2> GO TO MENUS.  
3> RETURN TO MAIN MENU.
```

At this time, place your BBS data disk into device 8, drive 0. If you have no menu pointer file on your data disk, ie. this is the first time you have run this program, press '1' to change the pointer value. The pointer file is a sequential file called MENU.0/CTL with a single number that indicates the number of menus your system has. At the 'Enter new Value' prompt, enter a '0'. This will initialize the pointer to '0'. Normally this pointer is maintained automatically by the MENU MAKER program but the ability to change the pointer is a useful tool and is necessary to set up the pointer file. When you press '2' to go to menus, you will be shown a screen with the number of menus on file at the top:

```
C= BLACKBOARD II MENU MAKER.PR C=  
  
© 1985 BY CALCOM SOFTWARE ®  
  
THERE ARE 0 MENUS ON FILE.  
  
1 > ADD A MENU.  
2> SEND DOS COMM.  
3> VIEW & MODIFY MENUS.  
4> READ IN SEQ FILE.  
5> RETURN TO 1ST MENU.
```

Press '1' to add a menu. You will now see this screen:

```

C= BLACKBOARD II MENU MAKER.PR C=
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LINE # 1 of 1 LINES IN MENU # 1

1 > STRING :
2> KEY or <= : <=
3> AUTH CODE : 0
4 > FILE NAME :
5> FUNCTION # : 0
6> DEV/MENU#: 9 7> 0=SQ/1=PG: 0
# or RET or +/- or Print

```

Each menu is broken up into lines. There may be up to 30 lines in a menu. The maximum number of menus is limited only by your storage capability. This allows for even a small BBS to appear large. At the top of the screen is an information line. This line informs you of your location within the current menu. For example, this might say 'You actually see on his screen. On this line you may have something like 'Leave a message.' or '= BUY/SELL MESSAGE BASE =*'. There are two types of STRING values. The first is a nonfunctional string only line and the second is a functional menu line. A nonfunctional string only line is made up of only two parts, the STRING and a KEY value of 'left arrow'. Nothing after the KEY value will be used by the program and is unimportant in this type of line. The functional menu line may include various values depending on the requirements of the function called by the line. If you wish the menu line to be invisible, that is to say have the line functionally but not visibly, you must put a 'left arrow' as the string value. This may be useful in situations where you want to have multiple commands shown on one line or if you want to have secret lines known only to a select few. A STRING value may be up to 37 characters long. Quotes, colons and semicolons may be used but they will be displayed on the MENU MAKER screen in a converted format that will be converted to normal by the BBS program later on. This is also true for the FILENAME value. The KEY value is what the user must enter to use the function indicated on the line. Normally you would want your STRING value to let the user know what this key value is. Again, a 'left arrow' as the KEY value will make the menu line a nonfunctional string only line. Next is the AUTH CODE. This is the AUTHorization level the user will be required to have to see and use the menu line. Authorization codes are compared on a bit-by-bit basis. The authorization code is a number between 0 and 255 that is converted by the BBS into a binary value having 8 bits. Each bit may be either off, a value of '0', or on, a value of '1'.

	BIT	VALUE
	0	1
	1	2
	2	4
	3	8
	4	16
	5	32
	6	64
	7	128
	===	===
TOTALS ->	8 BITS	255

A '0' AUTH CODE has no bits set, ie. 00000000 (binary) or 0 (decimal). A '255' AUTH CODE has all 8 bits set and is reserved for SYSOP level ONLY! ie. 11111111 (binary) or 255 (decimal). The AUTH CODE value is a total of the values for each bit set. With all 8 bits set, a value of '255', a user can delete or read any message, change and read any user information, and use a number of other special features. As you can see, this is a powerful feature for remote SYSOP capability but is definitely not for the users. The BBS doesn't check to see if the user AUTH CODE is higher than the menu line AUTH CODE to determine if access should be allowed but instead checks to see if the bits set in the menu line AUTH CODE are also set in the users' AUTH CODE. It won't matter if more bits are set in the users' AUTH CODE as extra bits will simply be ignored. If the user does not have proper authorization, the BBS will not display the line and will ignore any attempts by the user to access that line. The FILENAME is used by some functions and may contain a drive specifier, ie. 'D0:FILENAME'. Again, note that a colon will be displayed on the MENU MAKER screen as a checkmark but will be converted to a colon by the BBS program. The FILENAME must not exceed 16 characters in length. The FUNCTION is the actual function number that will be called should the user enter the correct KEY value and have proper access. Entering a number larger than the highest function number is permissible but will produce no result. This may be useful in some degree. See the additional information at the back of this manual for the functions, menu line information required by each function and a description of all the functions. The DEV/MENU # and D=SD/I=PG values are multi purpose. Their values will depend on the function called by the FUNCTION value. Again, refer to the back of the manual for more information on data required by each function.

At the bottom of the screen is an options line. '#' refers to the numbers shown in front of the values (1-7). Pressing RETURN will save the current menu and take you back to the second screen. '+' and '-' are for movement within the menu. Press 'P' and you will be given the option to print a hard copy of the current menu. Make sure your printer is on before using this feature.

From the second screen, you can send a DOS (Disk Operating System) command by pressing '2'. You must enter the command in two parts. ie. command by pressing '2'. You must enter the command in two parts, ie. part 1 - I, part 2 - 0 will initialize drive 0; V and 0 will validate the disk. Consult your disk drive owners manual for more commands. This feature is particularly handy when duplicating menus. Just use the drives' copy command to make a new menu called 'MENU.[#] of menus on file +1].CTL and add one to the menu pointer. When you have to enter a lot of similar menus, you can save a lot of time using this method. VIEW AND MODIFY MENUS will allow you to

view and modify any menu you want to load. The number you enter should be between 1 and the highest menu number on file. If the menu number you specified does not exist, the status line at the top of the screen will show your position as line 1 of 0 lines. Should this occur, simply press RETURN to go to the second menu. Nothing will be written to the drive as long as you do not attempt to change anything before returning to the second screen. Editing the menu is carried out exactly in the same way as when you add a menu. The READ IN SEQ FILE option, number '4', will allow you to type in the string values for a menu on the SEQUENTIAL WRITER UTILITY and then use them to make a new menu. Just use SEQUENTIAL WRITER to type out what you want your menu to look like, save it to disk and load it into MENU MAKER using the READ IN SEQ option. You will be asked the name of the file to be read and the number of the new menu. Insert the file disk with the SEQ file on it into device 8, drive 0 and hit a key. If the file you specified is not present, an error line will be displayed. Hit a key to go to the menu and press RETURN to exit the program without saving the menu. If the file is found, you will be asked to insert the BBS data disk into device 8, drive 0. You will then be shown the first line in the newly created menu. You can now enter the rest of the menu line information for each of the menu lines. The string values will have been entered from your file. This saves a lot of guesswork in long menus. The RETURN TO 1st MENU option takes you back to the first screen where you can reboot the BBS MAIN MENU when you are done.

5.0 THE SEQUENTIAL WRITER UTILITY

The BLACKBOARD II BBS uses a specialized file format. The format makes use of the following rules:

No line is to be longer than 80 characters.

Commas, quotes and colons are 'shifted' (have 128 added to their ASCII character values) and are then converted to normal by the BBS program.

You will need to write several files for your BBS:

- 1) INT.[# of file] - First file the caller sees. You must have as many as you specified in the setup process.
- 2) NEWUSER/1 - File shown to user prior to registering for access.
- 3) NEWUSER/2 - File shown to user after registering for access.
- 4) LOG-IN - File shown to user after a successful log in.
- 5) LOG-OFF - File shown to user just before disconnection.

All files except the 'INT.[#]' file(s) can be left out without causing any problems. The BBS will check to see if the file is there, if not the BBS will just carry on. The 'INT.[#]' files must be present or the BBS may crash.

After loading the SEQUENTIAL WRITER UTILITY you will see this appear on your screen:

```
==> ENTER MESSAGE <==
```

```
[CR] to end.
```

```
1 >
```

To end input of text hit RETURN on a blank line. Doing this will display the program commands:

```
==> ENTER MESSAGE <==
```

```
[CR] to end.
```

```
1 >
```

```
D isplay/C ontinue/S ave/E dit/L oad
```

```
R eboot/Q load/W ipe/ + / - / P rint
```

To select a command, press the letter shown as separated from the rest of the command name. Here is a description for each of the commands.

DISPLAY will show the text that you have entered so far. CONTINUE will allow you to resume text entry where you left off. SAVE will save your file on, device 8, drive 0, under the filename you specify. The program will then ask if you wish to write another file. EDIT will ask you for a line number to edit. The line number specified must be within the current range of lines. Once you have specified a line to edit, you will be shown the line number. You can then edit the line without affecting the other lines or load a BLACKBOARD II format sequential file. Once a file is LOAD will edit the file using the same commands. REBOOT will load the BBS MAIN MENU. Q LOAD will load a standard sequential file that may be written on most word processors and convert the file to BLACKBOARD II format. WIPE will completely erase your text work area. '+' and '-' will insert and delete commands. Once you have used either of these commands, you will be asked to enter a starting line and the number of lines to insert/delete. If you do not wish to insert/delete lines, you may abort by entering a valid line number followed by RETURN as the number of lines. PRINT will give you a hard copy of your text if you have a printer.

6.0 THE CRUSH UTILITY

When a message is deleted, it is not actually removed from the message base. Instead a flag is set that tells the BBS that the message UTILITY will remove deleted and received messages from your message bases. When the CRUSH UTILITY loads, here is what you will see:

```
C= BLACKBOARD II MAIN CRUSH UTILITY C=  
  
© 1985 BY CALCOM SOFTWARE ®  
  
THIS UTILITY "CRUSHES" MESSAGES  
  
1 > LOOK FOR DELETED MESSAGES.  
2> LOOK FOR RECEIVED MESSAGES.  
3> BOTH RECEIVED AND DELETED.  
4 > CRUSH BY DATE OF MESSAGE.
```

Select the number corresponding to the type of messages you wish to remove. Option '4', crush by date, will ask you for a date before which any outdated message will be deleted. For example, if you enter a date of 010186 for January 1st, 1986, the CRUSH UTILITY will remove any messages dated before but not including January 1st, 1986. You will now be asked to insert your BBS data disk(s) into the drive(s). Once you have done this, hit any key to continue. The program will now display a list of all the message bases. Select the number of the message base that you wish to crush.

The default device and drive for the message base will be shown on your screen. If you want to change these values for the crush operation, enter BOTH of the new values separated by a comma. If not, just hit RETURN. The program will now carry out the crushing operation. First, the program sets up temporary files to which the new index file will be written. This is a safety measure just in case something should go wrong. The original index file will not be affected in any way until the crushing process is complete. When the message base index has been crushed, a status line showing the start and finish totals will be displayed on the screen. Directly below this line are shown the program options to re-run the program or load the BBS MAIN MENU.

7.0 THE DOWNLOAD MAKER UTILITY

Making up a download menu can be tedious work, especially when you want to update them every week. To help you out, there is a program called DOWNLOAD MAKER. DOWNLOAD MAKER will read the file names from a disk directory and allow you to select the files you wish to include in your menu. The DOWNLOAD MAKER UTILITY will then put the menu for you.

When DOWNLOAD MAKER is loaded, you will see the following on your screen:

```
Download Menu Maker:
```

```
Number Of Menu?_
```

Enter the number of menu you wish to make. If the menu number of the one you specify already exists, it will be erased to make room for the new menu to be sure you know what menu number you want to make before you start. Once you have entered the menu number, you will be asked for a starting file. This is the name of the file in the directory that you want to start with. This is helpful in situations where you have a long directory and you want to make many menus from it. If you want to start with the first file, hit RETURN at this prompt. You will then be asked for the device number to read the directory from. This is device number of the drive that your disk of files is presently in. ie. a 1541 is normally device 8. Make SURE your disk with the files you wish to include in your menu is in the correct drive. You will then be asked for that devices' drive number. For a single drive unit, enter a '0'. For dual drives, enter a '0' or '1'. Next, you will be asked for the device and drive number that you want the new menu to be written onto. The menus MUST be written to the BBS main data disk so be sure to write to that disk and that the disk is in the correct drive. This can be the same drive that you are reading the file names from if you only have one drive. After all this you will be asked for the device and drive that the download files will be on when the BBS is running normally. For a one drive system, all of the device numbers will usually be '8' and the drive numbers '0'. You will now be shown the following:

```
HIT 'Y' TO INCLUDE CHOICE IN MENU
```

```
HIT 'N' TO SKIP TO NEXT CHOICE
```

```
HIT 'S' TO END CHOICE SELECTION
```

```
Y boot prg< n
```

```
0 blackboard 2 bbs usr< y
```

Hit 'Y' to include the file or 'N' if you want to skip to the next file. Keep in mind that you can only have as many as 20 files on a menu. When you have either selected 24 file names, hit 'S' or the end of the

directory listing has been encountered, the selection process will stop. Depending on whether or not you have less than 24 lines in your menu, you will be asked if you wish to include files from another disk. If you do want to include file names from another disk, insert the other disk and hit 'Y'. If not, then insert your BBS data disk in device 8, drive 0 and hit 'N'. When the menu has been written, you will be given the options to either re-run the program, loading the MAIN MENU or exiting to BASIC.

The new menu will have four lines on which you can enter a title, two files, an exit the system line and a exit to main menu line. The only thing you will have to do is enter the title lines and ensure the exit to main menu line goes to the right menu.

8.0 THE USERLOG.MOD UTILITY

All user accounts are recorded on a relative file called USRLOG/VAR. You may have up to 255 users on file. Although the BBS program supports a function to modify the userlog, it does not allow you to switch users or allow a hard copy of the userlog. USERLOG.MOD will allow easy manipulation of the userlog. If the userlog file has not yet been created on your data disk, the USERLOG.MOD UTILITY will set it up for you providing you have already set up the BBS control files using the SETUP UTILITY.

To load the USERLOG.MOD UTILITY, select the option from the second screen on the MAIN MENU. When USERLOG.MOD loads, you will be asked to insert your BBS data disk into device 8, drive 0. If the control files are not present on your data disk, you will be asked to insert the BBS program disk into the drive. The MAIN MENU will then reload. If this happens, you will have to load the SETUP UTILITY and set up your BBS control files. If the control files and userlog file are present on the BBS data disk, the USERLOG.MOD UTILITY will load the userfile and display a position indicator while it is so. If you do not have a userlog file on your BBS data disk but do have the control files, the program will display the SYSOP as user #1. If you do have a userlog file, the users' names will be displayed on your screen.

```
CURSOR:MOVE|M:MODIFY|P:PRINT|C:CLEAR|D:DELETE|S:SWITCH|A:ADD|E:END
```

```
- : BACK ONE|D:DELETE|S:SWITCH|A:ADD|E:END
```

```
USER: 1 SCREEN: 1 USERS: 1
```

```
SYSOP
```

The cursor keys will allow movement within the current screen page. The current user is shown in reverse video. This is the cursor. When the cursor is on the user you wish to examine or modify, press 'M' and you will be shown that users' account information.

```
USER # 1
1)Name ->sysop
2)Location ->bbs
3)Password ->system
4)Last On ->3000000
5)Auth Code ->255
6)Time Code ->120
To Change or RET to Exit
```

To change a value, press the number shown before each line and enter the new value. When you have completed editing the account, hit RETURN to exit to the main screen.

'P' will print a hard copy of the user file to your printer. You will be asked the start and end positions within the file that you wish to print. The records you have requested for will now be listed on your printer. The paging commands are paging commands. These are used when you have more users than will fit on one screen. '+' will move one page ahead, '-' one page back. 'D' will delete the current user. 'S' is the command to switch two users within the file. To switch two users, move the cursor to the first user and press 'S'. That user will now be shown under a yellow cursor. Now move the cursor to the second user. Note that you may use the paging commands to get to the second user. Once the cursor is on the second user, press 'S' and the users will be switched. 'A' will add a user to the userlog file. 'E' will end the modification process and write the new userlog file to the data disk. You will then be asked to insert the BBS program disk into the drive. When you do this, the MAIN MENU will be loaded.

9.0 THE BLACKBOARD II BBS PROGRAM

Before you can load the BBS program, you must first have setup a BBS data disk. The sequence for setting up a data disk goes like this:

- 1) Format a blank disk for use as a data disk.
- 2) Set up the BBS control files using the SETUP UTILITY.
- 3) Create your menus using MENU MAKER.
- 4) Set up the USERLOG file using USERLOG.MOD.
- 5) Write the INTRO, LOG-IN, LOG-OFF, NEWUSER/1 and NEWUSER/2 files using SEQUENTIAL WRITER. (All but the INTRO file are optional).

BLACKBOARD II USERS GUIDE

The functions available to you as a SYSOP will depend on what you have in your menus. I like to have the first menu as a jump to other menus. I make sure that one of those menus is a SYSOP utility menu that contains all of my SYSOP functions. I also make sure that the jump to the SYSOP menu in the first menu has an authorization code value of 255 so that only I can get to it. You'll learn the tricks of running a BLACKBOARD II BBS after a while but for now, just make sure you include these SYSOP functions in one of your menus.

So far you've learned almost everything there is to know from reading about the utility programs so we'll concentrate on the features of the BBS itself.

When you load the BBS, you will be asked to enter the date, whether it is AM or PM, and the time in 12 hour format. ie. 8:00 PM is 080000. Next 200000 as in the 24 hour format. Once you have done this, you will be asked to insert your BBS data disk into device 8, drive 0. Press any key and the BBS will read the control files. If the BBS runs into problems reading your files, it is more than likely that you did not set up the control files. Once the control files have loaded, the main SYSOP screen will be displayed on your screen.

BLACKBOARD II BBS BY CALVIN MARTINI	CBBS 5.0 300/1200
--	----------------------

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CALLS TODAY : 00000	(B)BLANKING : ON
TOTAL CALLS : 28761	(S)SYSOP : OFF
TOTAL USERS : 00037	(P)RINTER : ON
TOTAL #MSGs: 00054	# MENUS : 09
LOGON METHD : 00001	# BOARDS : 04

LAST USER : NONE

-> SYSTEM <-	-> ONLINE <-
F1: LOG ON	KEYS : SAME
F3: BYPASS	F1 : CHAT
F5: TERMINAL	F3 : MODIFY
F7: REBOOT	F5 : USER

In the upper right hand corner is the version number. The CALLS TODAY is actually the number of calls received since the BBS program was loaded. TOTAL USERS is the total number of users with accounts in your userfile. This number will be '0' if you are running an open system as there is no userfile. TOTAL # MSGS is the total number of messages on all the message bases combined. LOGON METH is the operating method. A value of '1' indicates an open system, '2' a name and password system with applications, '3' a name and password system without applications (closed), and '4' is a name and password system with applications and visiting privileges. MODEM VALUE is the number used by the BBS program to define what type of modem you are using. BLANKING turns

the screen blanking on and off. If this option is 'ON', the sysop screen will go blank after 1 minute with no keyboard activity. This is to prevent monitor burn-in. When there is a call to the system, or when you press a key on the system keyboard, the screen will return to normal. SYSOP turns the SYSOP page feature on and off. If 'ON', the BBS will assume that the SYSOP is available to chat and tells the user so. If 'OFF', the BBS will not allow the user to page the SYSOP and will inform them that the SYSOP is not available to chat. The PRINTER, when 'ON', will produce a printout of BBS activity. The printout will include names of callers, connect times and message base activity information. The BLANKING, SYSOP and PRINTER values can be changed from the SYSOP screen by pressing the letter shown ('B', 'S' and 'P'). The # MENUS is the number of menus that you have on your BBS data disk. # BOARDS is the number of message boards you BBS has. The BBS may have no more than 20 message boards. LAST USER is the name of the last caller to your BBS.

There are several keys that you can use to control the BBS. They are shown at the bottom of the SYSOP screen in two lists, SYSTEM and ONLINE. The SYSTEM list shows the keys you can use from the SYSOP screen and the ONLINE list shows the keys you can press when a caller is on the system.

First, the SYSTEM list. F1 allows you to log on to the BBS normally. F3 will allow you to bypass the log in sequence and go directly to the first menu on the system. When F3 is pressed, the caller will be assumed to be the SYSOP and to have an authorization code of 255. F5 will take you to the built-in terminal program, CALTERM. F7 will reboot the MAIN MENU from the BBS program disk.

Now, the ONLINE list. When a caller is online, you will see everything that the caller sees. You will also be able to type anything the user can, just as if you were typing at his keyboard. F1 will put you into chat mode. The users' account information will be displayed on your screen only and you will be placed into chat mode. To exit chat mode, press F1 again. F3 allows you to modify a users' account information while he is online. The user will be asked to wait and you will be shown his account information. Change any value you wish by pressing the number shown in front of each information line. When you have completed the modifications, press RETURN. You will then be asked if you want to make the changes permanent by saving the changes to disk. If the BBS does not ask you if you want to save the changes, it is because a file is already being accessed by the BBS, try again when the BBS is not accessing a file. If you don't save the changes, the changes will be lost when the caller hangs up. Note that once you make changes, the BBS will not allow the caller to use the change password function as it rewrites the account information to the userfile. DO NOT try to save the changes to disk if you are running an open system (LOGON METHOD 1). F5 will display the online users' account information on your screen only. Sometimes it will be necessary to press the function keys more than once if at the 'CHOICE ->' prompt, this is normal.

When a user calls, or when you press F1 to log on normally, the BBS will go through its log on procedure. The way the BBS does this is determined by the LOGON METHOD value. Refer to the SETUP UTILITY program description for details on the different methods. Once a user logs on, the BBS will display the first menu, MENU.1/CTL. You must have MENU.1/CTL present on your BBS data disk at all times as it is the menu that the BBS looks for when all else goes wrong. All other menus are accessed from menu 1. The user is then asked to make a choice from the menu selections. Depending on the choice, a function will be accessed. Refer to TABLE B at the back of the manual for descriptions of the various functions. When the user logs off, he will be shown the LOG-OFF file and then be disconnected from the system. The BBS will then update the BBS control files. At no

time must you turn off the power or remove the BBS data disk(s) from the drive when the BBS is accessing files on the BBS data disk(s). If you do, the BBS control files will be damaged. It is possible, however, to repair the damaged files using the SETUP UTILITY if you know what the values were when the files were damaged.

9.1 THE BUILT-IN TERMINAL PROGRAM, CALTERM 1.0

Pressing F5 from the SYSOP main screen will display the following options on your screen depending on the type of modem you are using.

```
-CALTERM 1.0-  
F1-BAUD 300/1200  
F2-AUTODIAL 16XX  
F3-TERMINAL MODE  
F5-RECEIVE FILE  
F6-SEND FILE  
F7-RETURN TO BBS
```

F1 will toggle the baud rate between 300 and 1200 BAUD if you have a 300/1200 BAUD modem. The current BAUD rate is shown in reverse video. F2 will autodial a non-smart type (dumb) modem by pulsing the DTR line. If you want to dial manually, hit RETURN at the NUMBER TO DIAL prompt after you have dialed the number manually to go online. F3 will put you in the terminal mode. The terminal operates at 8 word length, 1 stop bit, no parity, and full duplex. These settings are fixed and cannot be changed. To exit terminal mode, press either the CLR/HOME key or CTRL-S (the CTRL and S keys pressed simultaneously). To autodial using a smart modem, enter the dialing commands supported by your modem. Refer to your modem users' guide for details. F5 and F6 are the file transfer commands. The protocol supported is the NEW PUNTER protocol for file transfers. These commands will not work on BBS's that don't support this protocol. To use these commands from terminal mode, return to the main menu by pressing the CLR/HOME key and press either F5 or F6 depending on whether you want to send or receive a file. You will then be asked for the filename and type. To abort the transfer, press the C= (commodore) key at any time. These functions only use device 8, drive 0. F7 returns you to the SYSOP screen.

10 CONCLUSION

Well, that's it. All you need now is some time to sift through all this material and set up a BBS. That's the easy part, the rest will depend on your users. If you're lucky, like me, you will get a good crowd of responsible users who will help your BBS to grow. It's always nice to be able to run an open system

but that doesn't always work. Beware of hackers looking for a BBS to destroy. Keep your guard up and everything will work out fine. If all else fails, go to a closed system and only take applications by mail. When it all comes down to something a good friend of mine said to me when I called his own BBS someday. He said "YOU GOTTA HAVE A TOUGH HIDE". I'm still here and I've managed to stick with it for 3 years. I guess I have a tough hide after all. Only time will tell if you can take all of the hassle. Good luck and by all means, HAVE FUN.

TABLE A - LIST OF MODEM VALUES

MODEM	BAUD	VALUE
Commodore 1650	300 BAUD	0
Commodore 1660	300 BAUD	4
Commodore 1670	1200 BAUD	19
Westridge	300 BAUD	0
Pocket Modem	300 BAUD	0
Volksmodem 12	1200 BAUD	17
Hayes Smartmodem	300 BAUD	18
Hayes Smartmodem	1200 BAUD	19
Avatex	1200 BAUD	19

TABLE B - FUNCTIONS AND DESCRIPTIONS

#	FUNCTION	DESCRIPTION
1	FORWARD READ	Allows users to read messages sequentially, with options to stop, skip, or reply.
2	REVERSE READ	Similar to Forward Read but displays messages in reverse order.
3	READ TO USER	Displays only messages addressed to the current user, including both received and undelivered messages.
4	READ FROM USER	Shows all messages on the board from the current user, including both received and not received messages.
5	SEND DOS COMMAND	Allows sending a Commodore disk command to a specified device and drive. Consult your disk drive owners manual for acceptable command formats. Enter all commands in two part format. ie. To initialize the drive, enter part one of 'I' and part two of '0' or '1' depending on drive number. If a null is entered at either 'PART' prompt, the function will be aborted. Recommended as a SYSOP only function.
6	VIEW DIRECTORY	Will display all files on the user specified device and drive. Hitting any key while the directory is listing will cause the function to be aborted. Recommended as a SYSOP only function.
7	GO TO NEW MENU	Will jump to the menu specified in the function line. Remember that there is full wrap-around on all menus.
8	USER LOG LISTING	Will display the user list. The user will first be asked the direction of display (FORWARD OR REVERSE) and then the starting position. This list will show the user #, name, location and last time on. If the user has SYSOP status (authorization level of 255), he/she will also be shown the users' password, authorization level and time limit. Pressing 'S' during the listing will abort the process.
9	NEW PUNTER SEND	Will transmit the menu-specified file using standard NEW PUNTER format. This function will not work from the system keyboard.
10	SYSOP PAGE (CHAT)	This function will do one of two things. If the SYSOP is available to chat (SYSOP option is 'ON'), will display 'PAGINGSYSOP' and will sound a bell five times. If the SYSOP is unavailable (SOUND option is 'OFF'), will state that the SYSOP is unavailable to chat.
11	RESERVED FUNCTION	
12	SEND ASCII FILE	Will display a file (PRG or SEQ) in standard ASCII format. This same routine is used to display the introduction files etc. Pressing 'N' or 'S' will abort the reading process.
13	DISPLAY TIMES	Will show the user the time of log in, present time and time on the system.
14	CHANGE PASSWORD	Will allow the user to change his/her password. Note that it is possible to change the last users' password by passing the log in and selecting this option. Only the name and authorization code values are changed from the last users' when bypassing log in. It is important to note that fact so you don't accidentally change a users' password on him/her! Of course, this can be used to your advantage when handling unwelcome 'system slime'.

15	MODIFY USER FILE	Will allow the user to change any part of the USRLOG/VAR file. Keep this one to yourself for obvious reasons! You will be asked to enter a name, '#' or 'A'. If you enter a name, and it doesn't have to be the whole name, the program will search for the first occurrence of that name and display that account information. If you select '#', you will be asked to pick a starting account number. The program will then display that account. If you select 'A', a blank account will be set up and displayed for you with the defaults in place. Once you have an account in front of you, you can change a value by selecting its corresponding number and then entering the new value. Movement within the file is accomplished through the use of '+' and '-'. '+' will go forward one account, '-' back one. If you want to delete the current account, you just hit 'd'. You will then be asked to verify the delete. When you are done and want to return to the menu, just hit '*'. Note that you do not have to wait for the entire account to print out, there is full type-ahead on this function.
16	GOOD-BYE – RESET	This function will force the system to log the user off. If a LOG-OFF file exists, it will be displayed. If the user has exceeded his/her time limit, that information will be displayed. The same is true for the 5 minute no-activity time limit. The user will also be reminded to turn off his/her modem.
17	RESERVED FUNCTION	
18	LEAVE A MESSAGE	This function will allow a user to leave a message on the menu-specified message board. The users' name will be shown and he/she will be asked to enter the name of the user to send to. If a null is entered at this prompt, the function will be aborted. The user will then be asked to enter a subject. A null entry is permissible here. It will not cause the function to abort. A choice will be allowed at this time. The user may specify line (with line prompts) or block (without prompts) message entry. If line entry is specified, the number of characters left, followed by the line number, will be shown on a line-by-line basis. To end the writing process, the user enters [RETURN] on a line by itself. If the user enters [RETURN] (a null string) on the first line, the function will be aborted. On any other line, entry of a null string will cause the option line to be displayed. With that line, you will be given the choice of 'C'ontinuing, 'E'diting, 'A'aborting or 'S'aving the message text.
19	NEW PUNTER RECEIVE	This function will receive a user-specified NEW PUNTER protocol file. The user will be informed of the number of disk blocks free for transfer to the menu-specified device. The user will then be asked to confirm that the program to be transferred is less than the number of free disk blocks. If the reply is a 'NO', then the function is aborted. If a 'YES' answer is given, the user will be instructed to indicate either 'P'rogram or 'S'equential file type. Following the reply, he will be asked to enter a four character I.D. code that will be used for identification purposes. This I.D. will be added to the I.D. prefix in the menu line to form the file name. If the I.D. code has already been used, the user will be asked to

		enter another I.D. code. Note that this feature is not accessible from the system keyboard.
20	READ MARKED MSGs	This function will allow a user to read messages to him that have not yet been received by him. If no marked messages are found, the '=> NO MESSAGES FOUND <=' message will be displayed. This feature behaves in the same manner for the SYSOP.
21	VOTE A 'YES'	This function is involved in the voting system. When selected, it will register a 'YES' vote in the menu-specified vote file. The vote question is contained either in an ASCII file read using function number (12) or it is contained within the menu as text lines. Note that in order to use this function, you must have first set up the voting file using the 'VOTESSETUP' program. Load and run the program, insert your BBS data disk into the drive and enter the name of the vote file. This program may also be used to reset the vote file. If the printer is 'ON', the vote will also be recoded on the printer.
22	VOTE A 'NO'	This function will record a 'NO' in the menu specified vote file. See function (21).
23	VOTE 'UNDECIDED'	This function will register an 'UNDECIDED' vote in the menu-specified vote file. See (22).
24	SUMMARY OF VOTES	This function will display the results of the voting on the menu-specified vote file.
25	DISP. BLOCKS FREE	This function will ask the user to enter the device and drive to check. A null reply to either prompt will abort the function. It will display the number of free disk blocks to the user. This function is recommended for SYSOP use only.
26	RETURN TO LAST MENU	This function, when called, will return to the last menu. This is handy when using the same menu in more than one place, as in a help menu. The order of menus are kept in a 'stack'. When this function is called, it pulls the last menu off of the stack. The stack can only keep track of 30 menus so be sure that there is no possible way that the user can exceed 30 menus past the point where the return function is expected to be called. If the stack is overloaded and a return function is called, an 'MENU STACK OVERFLOW' error message will be printed on you printer and the menu pointer will be set to the first menu.
27	READ NEW MESSAGES	This function is a specialized message, read function. It will search for and display to the user any message dated on or after his last log on date.
28	TOGGLE BAUD RATE	Use this function ONLY if you have a 450 BAUD capable modem. The 1650 and 1650 compatible modems are capable of 450 BAUD transmission. When called, this function will toggle the baud rate between 300 and 450 BAUD. The user must have a terminal program that will allow for 450 BAUD rate transmission as well as a 450 BAUD capable modem. The function is called in the current baud rate, the user changes baud rate and the new speed is used on both ends.
29	CHANGE BLOCK SIZE	This function is used in conjunction with the NEW PUNTER file transfer functions. It is used when the file cannot be transferred at the default 255 character block size due to bad line noise. The user calls the

		function, enters the desired block size and then changes the block transmission size on his end to match. The number that the user inputs must be between 1 and 255.
--	--	--

TABLE C - SYSTEM FEATURES

FEATURE	1	2	3	4	5	6	NOTES
forward read	1		A	*	*		
reverse read	2		A	*	*		
to user read	3		A	*	*		
from user read	4		A	*	*		
send DOS command	5			*	*		
view directory	6			*	*		
goto new menu	7	A		*	*		
user log listing	8			*	*		
NEW PUNTER SEND	9	B	B	*	*	A	
sound bell(chat)	10			*	*		FOR USE WITH MENU MAKER.
not used	11						
send ASCII file	12	B	B	*	*	A	To use this table:
display times	13			*	*		
change password	14			*	*		1) Follow function line to
modify user file	15			*	*		character in column.
goodbye – reset	16			*	*		2) Compare column number
not used	17						with listing at the
leave a message	18			*	*		bottom for character desc.
NEW PUNTER RECV.	19	B		*	*	A	ie. Function #20 (Read marked
read marked msgs	20		A	*	*		msgs) requires 'A' in column
vote a 'YES'	21	B		*	*	A	#3. Under the description for
vote a 'NO'	22	B		*	*	A	column #3, we see that column
vote 'UNDECIDED'	23	B		*	*	A	#3 refers to the S/P entry in
summary of votes	24	B		*	*	A	the menu maker screen.
disp.blocks free	25			*	*		An 'A' under the descriptions
return last menu	26			*	*		for column #3 refers to the
read new only	27		A	*	*		number of message system that
toggle baud rate	28			*	*		we want the function to
change block	29			*	*		search.

#	The value is required for all functions.
1	Function number.
2	Device/menu number. A = Menu number. B = Device number.
3	Sequential/program/number of board. A = Number of message system. B = Sequential or program file (0 = SEQ, 1 = PRG).

4	Authorization level A number from 0-255 (8 binary flags)
5	Key to press or [left arrow]. [left arrow] for nonfunctional string only line. No other parameters. Key for functional lines. May be any character
6	File name/I.D. file name. A = File name. General usage. May include a drive specifier. ie. D:FILE. For functions that write files, is used to identify files.

PROGRAM REVISION- VERSION 5.2

Please add this page to the end of your users' manual.

This is an upgrade notice for users of version 5.2. It covers changes made since version 5.0. This update should put several problems to rest.

a) EPYX FAST LOAD - DO NOT use any cartridge when using any portion of the BLACKBOARD II operating system. In particular, the EPYX FASTLOAD (Trademark of EPYX). This cartridge is not compatible with relative files such as those used by this BBS package. Use of this cartridge could cause serious damage to your data files. If this happens to you, use the BBS utilities to transfer your data you can to a new data disk. It will be necessary to set up any affected message base index files all over again on the new data disk. Version 5.2 does not allow cartridges to be plugged in while the BBS is running. If this is a problem for anyone using a cartridge interface please contact us for a version without the safety check line.

b) Message base problems - Version 5.1 had a problem involving the message bases that would cause the message read function to crash. In detail, if a users' time limit was reached when reading messages, the BBS would close the message files and go to the log off routine. Normally this would not cause a problem, however, when the SYSOP bypassed the normal log in sequence, the time used counter was not reset and the BBS would close the message files down. The message read function checked to see if the SYSOP was online AFTER the time check and would allow the SYSOP to continue reading even though the files had been closed. As it turns out, any replies left after the files had been closed WOULD NOT be recorded on the data disk but WOULD be added to the message base message counter. Another totally separate problem would close the drive control file, necessary when working with relative files, if the reply message was aborted, also giving unfavorable results.

c) MENU MAKER - If you noticed corrupted menus when using menu maker (shifted entries or failure of the program to load a menu), this was caused by the failure of the utility to check for blank entries. This has been corrected. The ability to insert or delete lines has also been added. When scrolling from line to line, rollover has been added to allow movement from line 1 to the last line in the menu. If scrolling from the last line to line one, you will be asked if you wish to add a line. If you answer yes, one will be added as usual. If you answer no, the utility will scroll to line 1 instead of remaining on the current line.

d) MAIN MENU - The main menu program now includes the option to change the default colors of the BBS screen. Note that you must have a BBS data disk set up before you access this feature.

e) THE BBS PROGRAM - The BBS now accepts the color file created by the main menu program (option 3 from the second screen). If the BBS doesn't find the "color/ctl" file on your system data disk, it will default to black on white. The option to receive a file, accessed from the CALTERM has also been fixed. The number of calls pointer now resets at the end of each day. Pause capability is now available when reading text files. To enter pause mode, press 'p'. To exit pause mode, press any key. The BBS no longer requires an "INT." file. This is now optional as is the case with all other text files.(ie. log-in, log-off, newuser/1, etc.)

f) USERLOG.MOD - This utility will now ask you for the maximum file size before reading in any records. This is the largest number of users you anticipate to have on your system. The acceptable value is between the current number of system users and 500. If you enter a number out of range, the utility will default to the current number of users plus 20. Most SYSOPs will find the need for a file size of only 100 records instead of the version 5.0 default of 500. This can save you considerable disk space. Note that the BBS still allows up to 500 users even if you set the maximum file size lower. If a record number greater than the maximum file size is accessed, it will simply require a much longer time to write the record. No crash will occur.

g) The manual - On page 6 of your user manual, it incorrectly states that, when using log on method #3, if the user is not on file the BBS will inform the user that the system is closed to registrations and log the user off. This IS NOT the case; the BBS will in fact display a file called "closed/seq". You may create this file using the sequential writer utility. In this file you may specify information such as the address to write for access, your reasons for having a closed system, etc.

We hope that these corrections will add to your enjoyment of this software package. If you have any problems, please feel free to call the SYSOP support BBS at 1-506-457-0876 (24 hours, 300/1200 BAUD, 8 word length, 1 stop bit, no parity.). When you first log on, you will be required to register for access. Be sure to leave a message to the SYSOP with your BBII program serial number (found on your program disk and on the inside front cover of your manual). Once your information has been verified you will be given access to the SYSOP support section. Only users who have sent in their warranty registration card will be given access to this service.