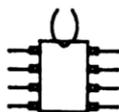


South Bay Users Group

Contents Copyright SBUG 1986



DYNAMIC MEMORIES

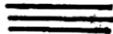
AUGUST



ATTENTION! ATTENTION! ATTENTION!

SBUG MEETING

MONDAY, AUGUST 10TH, 7:15 P.M.



CONTENTS

PAGE

- 4 FINANCIAL REPORT by the Treasurer
- 13 "ON-LINE WITH YOUR COMPUTER" by Don Rhodes
- 5 An article about RBBS by Chris Oman
- 15 Using the second 64K Memory as a RAM drive with system.

LOOK AND PAY ATTENTION!

Our next SBUG Meeting will be held at the Saratoga Library. The address is 1765C Saratoga Avenue, Saratoga, CA.

DATE: MONDAY, AUGUST 10th
TIME: 7:15 P.M.

The September meeting will be back to our SECOND TUESDAY night. The date is September 8th. Our October meeting will also be on TUESDAY, the 13th. So make a note of these dates and we hope to see you all at these meetings.

PROGRAM FOR AUGUST

This is a continuation of last month's scheduled demonstration of the FRAMEWORK II package, plus, time permitting, also a talk about our BBS and possibly a demo by a surprise guest. Anyway, see you all at the meeting.

MEMBERSHIP INFORMATION

If you wish to become a member of SBUG and start receiving our newsletter DYNAMIC MEMORIES then send a \$20 check or money order to the following address:

SOUTH BAY USERS GROUP
P.O. BOX 60116
Sunnyvale, CA 94088

Or come to one of our meetings. We also perpetrate a bulletin board to which you will have access as a member of SBUG.

COPYRIGHT (C) 1987 SOUTH BAY USERS GROUP (SBUG). WORLD RIGHTS RESERVED. NO PART OF THIS PUBLICATION MAY BE REPRODUCED WITHOUT GIVING CREDIT TO THE AUTHOR AND SBUG. REPRODUCTIONS MAY ONLY BE PERFORMED BY NON-PROFIT ORGANIZATIONS. PROFIT-MAKING ORGANIZATIONS MUST HAVE PRIOR WRITTEN PERMISSION FROM THE EDITOR.

SBUG STEERING COMMITTEE

TITLE	NAME	USER NAME	PHONE
Chairman:	Chris Oman	OMAN	(408) 985-9460
Treasurer:	Henry Schulze	HENRY	(408) 866-5731
Newsletter Editor:	Joel Lee	EDITOR	(408) 926-3999
Librarian: (Disk)	Bernie Thompson	BERNIE	(408) 867-7455
Sysop:	Jim Gonsalves	MANGR	(408) 241-9347

OTHER KEY INDIVIDUALS

Cover designer: Wright Huntley (Where are you Wright?)

Host computer: SBUG ALL (408) 249-8259

If the need arises, feel free to give anyone of us a call.

THE TEMPORARY EDITORS REMARKS

Well, our illustrious Editor, Joel, should be back from his hiatus. Hopefully he had a good time and was able to accomplish all he had set out to do. We all are anxious to hear about his exploits down in Mississippi.

Possibly he'll do that in a future article in our newsletter. Which, of course, brings me to the subject of Editor again. Joel, the job is still yours, whenever you are ready to resume your "duties". We are all eager to have your expert touch and witty remarks grace these humble pages.

SBUG Financial Statement
July 20, 1987

Receipts:	July	Y-T-Date	% Used	Budget
Members dues	40.00	370.00	37.00%	1000.00
Disk Library	2.00	50.00	33.33%	150.00
Load80	28.00	313.00	104.33%	300.00
Documentation	0.00	.00	.00%	24.00
Interest	3.13	9.60	96.00%	10.00
Miscellaneous	0.00	98.00	49.00%	200.00
Total Receipts	73.13	840.60	49.92%	1684.00
Disbursements:				
Phone	8.53	50.29	49.30%	102.00
Utilities	0.00	90.00	50.00%	180.00
Printing	0.00	231.69	42.91%	540.00
Postage	0.00	44.00	30.56%	144.00
P O Box	0.00	29.00	111.54%	26.00
Bank charges	4.00	28.00	116.67%	24.00
Disk Library	0.00	.00	.00%	120.00
Documentation	0.00	10.00	20.00%	50.00
Load80 Subscription	0.00	149.95	74.98%	200.00
SBUG BBS Repairs	0.00	.00	.00%	100.00
Misc. Expenses	0.00	94.00	75.20%	125.00
Total Disbursements	12.53	726.93	45.12%	1611.00
Beginning Cash Balance	367.38	314.31	100.00%	314.31
Net Receipts	60.60	113.67	155.71%	73.00
Ending Balance	427.98	427.98	110.50%	387.31

SBUG BULLETIN BOARD SYSTEM

RBBS-PC VERSION CPC14.1D OPERATING INSTRUCTIONS BY CHRIS OMAN

Often as new members arrive and older club members acquire a computer modem, I am asked, "how do I use the Bulletin Board system for SBUG." It is easy for me to relate to this question because it wasn't too many years ago that I asked the very same question of more experienced club members. During the life of SBUG, the bulletin board equipment and associated communications software has changed several times. As hardware and software technology evolves, we (the users), are given the opportunity to use these more sophisticated devices. During the next few paragraphs, I will try to briefly describe how the latest version of the SBUG Club RBBS software works. I will also try to provide in these instructions, the user menus that will appear on the screen as you "log onto the SBUG RBBS System". Some of these user menus will differ a little from what you will see on the screen, but it should at least get the idea across of how the SBUG RBBS system works. Hopefully, this will assist the club members in their use of SBUG. Also it should provide the SBUG Users with some "telecommunications" experience. Please remember, if you don't try using the system, you will not learn how to use it effectively. Give it a try and you will be "up and running" in short order.

In this paragraph, I hope to provide the justification for you to learn to use your computer system as a telecommunication device. First, by using your computer system and the SBUG RBBS system, you will enter the world of computer networking or telecommunications. This telecommunications system will allow you to call the Remote Bulletin Board System (RBBS), read any pertinent messages to you as a SBUG Club member, and leave messages for any other SBUG member to read at a later date. It will also allow you to "upload and download" software (computer programs and data files) to the RBBS system. This is a very handy feature and is used by the SBUG Club membership to provide inputs for the newsletter, leave messages for other club members, and discuss other club related events. This message function is often known as "Electronic Mail".

This paragraph will provide a list of the basic requirements for equipment and software to initially start using your computer system as a telecommunication device. Most of the SBUG club members have some form of a computer system. It may be a Tandy or Radio Shack computer, Radio Shack compatible, or a MS-Dos based system, often called a IBM compatible. It doesn't really matter exactly what particular model computer you may own, the principles are the same. They (the computers), will all work for telecommunication if you have the proper hardware and software combination. The following list will provide the necessary requirements for basic telecommunications function:

- 1.) computer system
- 2.) modem (either internal or external model will work)
 - Modem requirements- 300 or 1200 Baud rate
 - manual dial or autodial function
 - if external modem, a RS-232 cable is needed to connect between modem and computer.
 - telephone cable to connect between modem and telephone wall jack.

3.) communications software package

Examples: TRS-80 Models I III IV
 Modem-80
 Micro Link II
 Omniterm
 Deskmate - Somewhat difficult to setup
 LDOS - LCOMM Function - Included with LDOS
 TRSDOS 6 - COMM Function - Included with DOS

IBM Compatibles
Deskmate
Crosstalk
Qmodem
Procomm
PC-Talk

Once the required computer components are assembled or connected, you should turn on the computer, load the operating system, and configure your communications software for your particular system or equipment. This configuration process should be listed in the communications software manual. You will need to also set your communications parameters in your software to take full advantage of SBUG RBBS features. These settings include 300 or 1200 Baud, 8 bit word length, no parity, 1 stop bit, 1 start bit if requested. If you set 7 bit word length, even parity, and 1 stop bit, the SBUG RBBS software system will detect these parameters but will not allow the "XModem" upload / download features for file transfer with error detection / correction. So, if you want to upload and download files, use the 8 bit word, no parity, 1 stop bit parameters. The baud rate may be either 300 or 1200 baud. If you can use 1200 baud capability with your modem, the RBBS system will respond 4 times faster than 300 baud. ** Some of the listed software (LCOMM, TRSDOS COMM) will not support "XMODEM" file transfer without improved communications software. Modem-80 and MicroLink II will work fine for file transfers. Logical Systems Incorporated has a communications package called "HOST / TERM" which supports all these features with TRSDOS 6 on the TRS-80 Model IV Computer. It will also support some terminal emulations for access to other larger computers. The HOST / TERM package also allows a Model IV computer to be used as a "Host" computer with an auto/answer modem. This way other people can call your computer and leave messages, etc.. It does not provide full RBBS system features but it is a nice package.

When you have configured the communications software for the above parameters, you are ready to place the call to SBUG. If you follow the instructions in your communications software manual, you should be instructed to place the call to the communications Host (SBUG RBBS) . The following instructions will provide "log-on" information for SBUG.

You should see the follow information on your computer screen:

You should see the word "connect" displayed on your computer screen. This tells you that your computer has detected the carrier signal produced by the "Host" computer modem (SBUG RBBS), after it answers the phone call from you. If this is the case, press the [ENTER] key - 2 or 3 times. This will allow the SBUG RBBS system to detect what baud rate, etc. that you have setup on your computer system. Next, you should see the following prompts appear on you

screen. I have also entered the appropriate "log-on" information for myself to access the SBUG RBBS system. These are my unique "log-on" parameters. You should enter your name and password information that apply to you as a club member.

DISPLAYS ON SCREEN
SBUG RBBS PROMPTS

YOU NEED TO TYPE OR ENTER
INFORMATION AS REQUESTED!

What is your FIRST Name?

Chris (lower case-OK)

What is your LAST Name?

Oman (lower case-OK)

Checking Users....

Enter Password (dots will echo)?..... type your assigned password

Granted access level 4

This gives your access level for use
You do not enter any response for thi
(access level controlled by Sys OP.)

Logging CHRIS OMAN

This means the System has allowed you
access to the SBUG RBBS.

If this is the first time that you have log onto the system, it will also ask (Prompt), you for some additional information like address and phone number. This is so the System Operator (SYSOP) can contact you to assist in resolving problems you may be having or other SBUG Club related information. The information will be treated as private data and will not be given out or sold for junk mail advertising purposes.

The SBUG RBBS System will then provide the following display:

RBBS-PC VERSION ***** NODE 1
OPERATING AT 1200 BAUD,N,8,1

This may be different depending on
the communications parameters you
set up on your software.

* <Ctrl K> or <Ctrl X> aborts <Ctrl S> suspends * Controls Display advance

```
-----  
SYSOP: "JIM GONSOLVES  
SANTA CLARA
```

```
SBUG RBBS
```

```
CLONE PC/XT  
MOUSE EPSON FX 85  
-----
```

MORE: [Y]es, [N]o, [NS] non-stop? y

Select one of the items in
parenthesis.

Last time on was: 07-30-87 22:58

Time you were last on SBUG

Would you like to skip the 20 bulletins? n

Enter either y or n

I have selected "no", do not skip bulletins, so I can see if there are any new additions on the SBUG BULLETIN Menu.

----- SBUG BULLETIN MENU-----

- | | | | |
|----|--------------------------------|----|--------------------------|
| 1 | WHAT DOES .ARC MEAN | 11 | RBBS FIXES or REPAIRS |
| 2 | Description of this system | 12 | DISK DRIVE SALE BULLETIN |
| 3 | Local bulletin boards list | 13 | REGISTRATION INFORMATION |
| 4 | National BBS list (01/17/87) | 14 | |
| 5 | QUBIE' modems and RBBS-PC | 15 | |
| 6 | ALL NEW IC PURCHASE | 16 | |
| 7 | "On the topic of 450 BAUD" | 17 | |
| 8 | Conferencing on RBBS-PC | 18 | |
| 9 | The story of the "second ring" | 19 | |
| 10 | Gov't Bulletin Boards | 20 | |

Bulletin # 1 thru 20, L)ist, Press [ENTER] to Continue? Select Subject ##

You are now prompted to enter which bulletin that you would like to see. If you do not care to select one of the bulletins, just press [ENTER] and SBUG will advance from the Bulletin Menu to the SBUG Main Menu. If you had selected "yes" to skip the Bulletins, the SBUG system would have advanced to the Main SBUG Selection Menu.

Checking messages.

Mail may be for YOU (*=Private)

*21 Message Number

Mail you may have left

36 37 Messages Numbers that I sent to another SBUG User.

Please <K>ill your old or unneeded messages

RBBS-PC Version CPC**** Node 1

Caller # 680 # active msgs. 32 Next msg # 38 Last msg read: 37

66 minutes left to access system today.

-----SBUG RBBS MAIN MENU-----

PERSONAL COMMUNICATIONS	UTILITIES	ELSEWHERE
B)ulletins	O)perator	H)elp
C)omments	P)ersonal mail	L)ines per page
E)nter message	Q)uick scan	X)pert on/off
I)ntial welcome	R)ead messages	?)Functions
J)oin Conference	S)can messages	U)tilities
K)ill message	V)iew Conference	
	W)ho's on other node	

Main Functions <B,C,D,E,F,G,H,I,J,K,L,O,P,Q,R,S,U,V,W,X,??> _ Select Option

I would like to see any messages (mail) that I may be interested in. So for this, I would press "r" to read the messages. Any messages that

are private, may not be readable if they are not addressed to me.

Msg # *21 Dated 07-20-87 19:01:42
From: SYSOP
To: CHRIS OMAN
Re: RBBS System Clock Problems

Msg # (0 to 37, *, <H>elp to retrieve (Press [ENTER] to end)? 21

Chris, The clock function now works fine but am still having problems with the system date. It will not advance properly at Midnight. Please let SBUG Users know that sometimes when they log on, the date shown may be in error.

MORE [Y]es, (N)o, (NS)non-stop, (RE)ply, (K)ill? y
Msg # (0 to 37, *, <H>elp to retrieve (Press [ENTER] to end)?

64 minutes left

-----SBUG RBBS MAIN MENU-----

PERSONAL COMMUNICATIONS	UTILITIES	ELSEWHERE
B)ulletins	O)perator	H)elp
C)omments	P)ersonal mail	L)ines per page
E)nter message	Q)uick scan	X)pert on/off
I)ntial welcome	R)ead messages	?)Functions
J)oin Conference	S)can messages	U)tilities
K)ill message	V)iew Conference	
	W)ho's on other node	

Main Functions <B,C,D,E,F,G,H,I,J,K,L,O,P,Q,R,S,U,V,W,X,??> _ s

I would like to scan to see any messages (mail) that I may be interested in. So for this, I would press "Q" or "S" to scan the messages.

Msg # 1 Dated 03-28-87 20:09:09
From: Sysop
To: All
Re: Welcome!!!

Msg # 2 Dated 07-12-87 17:03:56
From: AL LAWRENCE
To: HENRY SCHULTZ
Re: VALIDATION

Msg # 5 Dated 07-13-87 18:06:53
From: BRIAN DARBY
To: ALL
Re: OS-9 OPERATING SYS.

Msg # 6 Dated 07-13-87 22:36:28
From: FRANZ ROSS
To: ALL
Re: DESKTOP PUBLISHING

Msg # 7 Dated 07-14-87 06:34:51
From: AL LAWRENCE
To: HENRY SCHULTZ
Re: VALIDATION
MORE {Y}es, (N)o, (NS)non-stop? y

Msg # 8 Dated 07-15-87 21:53:57
From: VERN ADERMANN
To: ALL
Re: TRS-80 SYSTEM FOR SALE

Msg # 9 Dated 07-16-87 16:29:37
From: IAN WEBB
To: ALL
Re: FOR SALE

Msg # 13 Dated 07-16-87 19:43:23
From: KENNETH INMAN
To: SYSOP
Re: ACCESS

Msg # *21 Dated 07-20-87 19:01:42
From: SYSOP
To: CHRIS OMAN
Re: RBBS System Clock Problems

Msg # (0 to 37, *, <H>elp to retrieve (Press [ENTER] to end)? [ENTER] Pressed
56 minutes left

-----SBUG RBBS MAIN MENU-----

PERSONAL COMMUNICATIONS	UTILITIES	ELSEWHERE
B)ulletins	O)perator	H)elp
C)omments	P)ersonal mail	L)ines per page
E)nter message	Q)uick scan	X)pert on/off
I)ntial welcome	R)ead messages	?)Functions
J)oin Conference	S)can messages	U)tilities
K)ill message	V)iew Conference	
	W)ho's on other node	

Main Functions <B,C,D,E,F,G,H,I,J,K,L,O,P,Q,R,S,U,V,W,X,??> _ e

In this case I wish to enter a message. I will show the process in the following example:

To (Press [ENTER] for All)? sysop
Subject? RBBS Article
Security: K)ill, P)assword, R)eceiver, N)one, H)elp, [enter]=kill? N

Type message (Press [ENTER] to end, 19 lines max.)

```
[-----]
1: Jim,
2: I am currently logged onto the board to show the RBBS system
3: prompts so I can write the article for SBUG operations. I may
4: be selecting several options so please bear with me. I will
5: try not to stay on the board any longer that necessary so others
6: may log onto the board tonight for their needs.
7: Best Regards and Thanks for your continued club support!
8: later,
9: Chris Oman
10: [ENTER] key pressed
```

A)abort, C)ontinue, D)elete, E)dit, I)nsert, L)ist, M)argin, S)ave

Editor Sub-function <A, C, D, E, I, L, M, S,??> S Save message to RBBS
Adding new msg # 38.....

PERSONAL COMMUNICATIONS	UTILITIES	ELSEWHERE
B)ulletins	O)perator	H)elp
C)omments	P)ersonal mail	L)ines per page
E)nter message	Q)uick scan	X)pert on/off
I)ntial welcome	R)ead messages	?)Functions
J)oin Conference	S)can messages	U)tilities
K)ill message	V)iew Conference	
	W)ho's on other node	

Main Functions <B,C,D,E,F,G,H,I,J,K,L,O,P,Q,R,S,U,V,W,X,??> _ f

In this case, the letter "f" is selected. this will now take me to the Files section of the RBBS system. This will allow the options to "upload" (send) or "download" (receive) a file to SBUG. From the "Files Menu", I have the options not only to upload and download, but to also list what files are on the RBBS. Also I can get a brief description of what the files are for. I will also step through the process of "downloading" a file. There are several ways that a file can be uploaded or downloaded. The below listing includes the most common ways with a brief description of what each method is for.

ASCII This is a straight upload or download of text information. It does not include error checking so some errors may occur during the data transfer. This should not be used to transfer any files other than maybe text for documents.

Xmodem This allows for file transfer with error checking. It is used with most communication software packages. During the file transfer, the file is sent one line (128 bytes) at a time. At the end of each line, a check sum count is sent to the receiving computer. The received line is processed for a check sum value and is compared with the check sum that was transmitted by the sending computer. If the two check sums are equal, then the receiving computer tells the sending computer to send another line of data. If the check sums do not match, the receiving computer tells the transmitting computer to resend the line of

data. this is repeated until the complete file is transmitted or ten transmission attempts on the same line of data. If the line of data cannot be sent correctly after ten attempts, the file transmission is terminated. This method usually works well unless the transmission lines or modem signal processing circuitry is noisy.

Xmodem CRC This method is similar to above but uses improved methods to ensure data transmission integrity. It is also a faster method of data transmission but not all communications software supports these functions. This method is preferred over plain Xmodem if it is available.

Kermit This is one of the latest methods of data transmission. Because it is new, only the most current communications software support this method. It is regarded very highly in the telecommunications industry due to some advanced features and data transmission accuracy.

Now that I have briefly discussed the file transmission methods, I will now show what the "Files Menu" looks like.

-----FILE MENU-----

D)ownload a file	H)elp	L)ist files	N)ew files
U)pload a file	S)earch	X)pert	?Xfer info

-----ELSEWHERE-----

G)oodbye Q)uit to main menu

File Function <D,G,H,L,N,Q,S,U,X,?> q Quit to Main Menu

I will now show what the Utilities Menu looks like when selected from the Main Menu.

-----ADDITIONAL UTILITIES-----

B)aud rate	C)ase change	F)ile Protocol	G)raphics
H)elp	L)ine feeds	M)sg margin	N)ulls
P)ass word	R)evue Profile	S)tatistics	T)ime
U)serlog	X)pert	!)Prompt sound	

-----ELSEWHERE-----

Q)uit to main menu

Utility Functions <B,C,F,G,H,L,M,N,P,Q,R,S,T,U,X,!> Q Return to Main Menu

This has been a brief introduction to using the SBUG RBBS. Next month, I will go into file transmission (uploading and downloading) methods. It is a little tricky so I will provide a step-by-step set of instructions to guide you through the process. I hope this has been worthwhile and provided a better understanding of SBUG. Give SBUG a try using electronic mail.

Regards, Chris Oman

This article was uploaded onto our BBS some time ago by the author. I don't know whether it has ever been published in our newsletter before. Even if it has, I thought it might be of interest to some of our newer members.

On-Line
With Your Computer

By Don Rhodes

Your computer offers more than a means to run programs in the local mode. You can use your computer to tie in with the WORLD! Connecting a modem and telephone to your computer brings the outside world in to be displayed on your screen or captured on your disk.

Presently there are more than a million people that use their computer to communicate, exchange ideas and obtain information using their personal computer. I suspect that those that do not use their computer for communications, have some idea that they don't know anyone that they can call if they did have the modem connected.

If you do not call another computer, what is the reason? Check one of the below answers:

- 1) Don't want the expense of a modem
- 2) Don't know who to call
- 3) Don't like calling strangers
- 4) I might look like an idiot, if I did call somewhere.
- 5) I don't want to tie up my phone by using the computer
- 6) My reason is:

When I bought my first computer, I added the Modem interface and modem and a Terminal Program called VideoText. The computer dealer had bundled an application to Dow Jones News Service and an application to CompuServe in with the Terminal program. All I had to do was insert the diskette with the terminal program on it and press the START key to get the program going. From the Main Menu, I selected the Auto Log on for CompuServe and was connected within 5 seconds to CompuServe where I filled out the on-line application and provided my Master Card credit card number. A few days later I received a letter from CompuServe which provided me with my access password and account number.

	<u>On-Line Services</u>			
	<u>Initial</u>	<u>- Baud * -</u>		
	Fee	300	1200	Members
CompuServe	\$40	\$6.00	\$12.50	270,000
The Source	\$50	\$8.40	\$10.80	60,000
SBUG BBS	\$20	\$0.00	\$0.00	38

* Charge per hour at the specified baud rate.

After the first month had passed, I received the bill from Compuserve and decided then that the expense of Compuserve was not within my budget and discontinued using the service. I read in the Sunday paper that there was a computer user club meeting the next Tuesday and decided to attend. My computing life changed from there on. The members in the club were very helpful and explained that they operate a Bulletin Board Service which I could call. I asked "what is the Bulletin Board used for?" I was told that I could use it to keep informed on the activities of the club and to down load program files. I could also use it to upload programs that I had written or that I had obtained from somewhere else (non copy righted programs).

The difference between a commercial service and a club BBS is that I get to meet the people I exchange messages with and I can up and down load program files (files that are in binary format, commercial services are limited to ASCII text formatted files).

Another benefit of using a BBS is getting a message to another member, even if that member is unavailable by phone. I just call the BBS and leave a message. Usually by that evening, the member has logged on and replied to the message, or given me a call. It's sort of like a answering machine, except the messages can be composed like a letter, then sent to the BBS.

What we need next is a BBS that can call the phone number of the addressee and speak the message into the phone; a talking message BBS.

JCL Program for Model 4 with LS DOS 6.3 (128K)

```
BUILD MEMTED :(Drive)
.*** JCL Installs MEMTED in extended memory in MEMDISK as Drive 0.
.
SYSTEM (DRIVE=2,DRIVER="MEMDISK")
D
D
Y
BACKUP /SYS:0 :2 (S)
PURGE SYS0:2 (S,Q=N)
PURGE SYS4:2 (S,Q=N)
PURGE SYS5:2 (S,Q=N)
PURGE SYS7:2 (S,Q=N)
PURGE SYS8:2 (S,Q=N)
PURGE SYS9:2 (S,Q=N)
PURGE SYS13:2 (S,Q=N)
BACKUP BASIC:0 :2 (I)
BACKUP TED:0 :2 (I)
SYSTEM (DRIVE=2,WP)
DIR :2 (S,I,A=N)
.*** LSDOS 6.3 installed in MEMDISK with BASIC and TED.
.*** Ignore any "Job Aborted" message appearing below.
.*** Library A commands are Present.System Disks can be removed from
.*** Drive 0 and 1.Drive 0 is now Drive 2. Memdisk is Drive 0.
SYSTEM (SYSTEM=2).
```

To run type DO MEMTED at LS DOS ready.

Copy The Program as shown. To END the program Press CONTROL-SHIFT-@ beginning of the line after the last Command. You must have 128K installed in your model 4 for this to Work!

The TED program will edit any ASCII program you load. You can then MERGE that program with your BASIC program. You can store all "DATA/TXT" items using line numbers 5000 and up so that when you MERGE the lines will not overlap.
For Example:

```
5000 DATA 20: REM Number of items
5010 DATA NAME,ADDRESS,CITY,ZIP,TEL NO
```

Keep your regular BASIC program free of all DATA. Store the DATA as a /TXT file for easy editing.

CONTRIBUTED BY BILL BREMER

South Bay TRS-80 Users Group
P.O. Box 60116
Sunnyvale, Ca 94088

FIRST CLASS MAIL