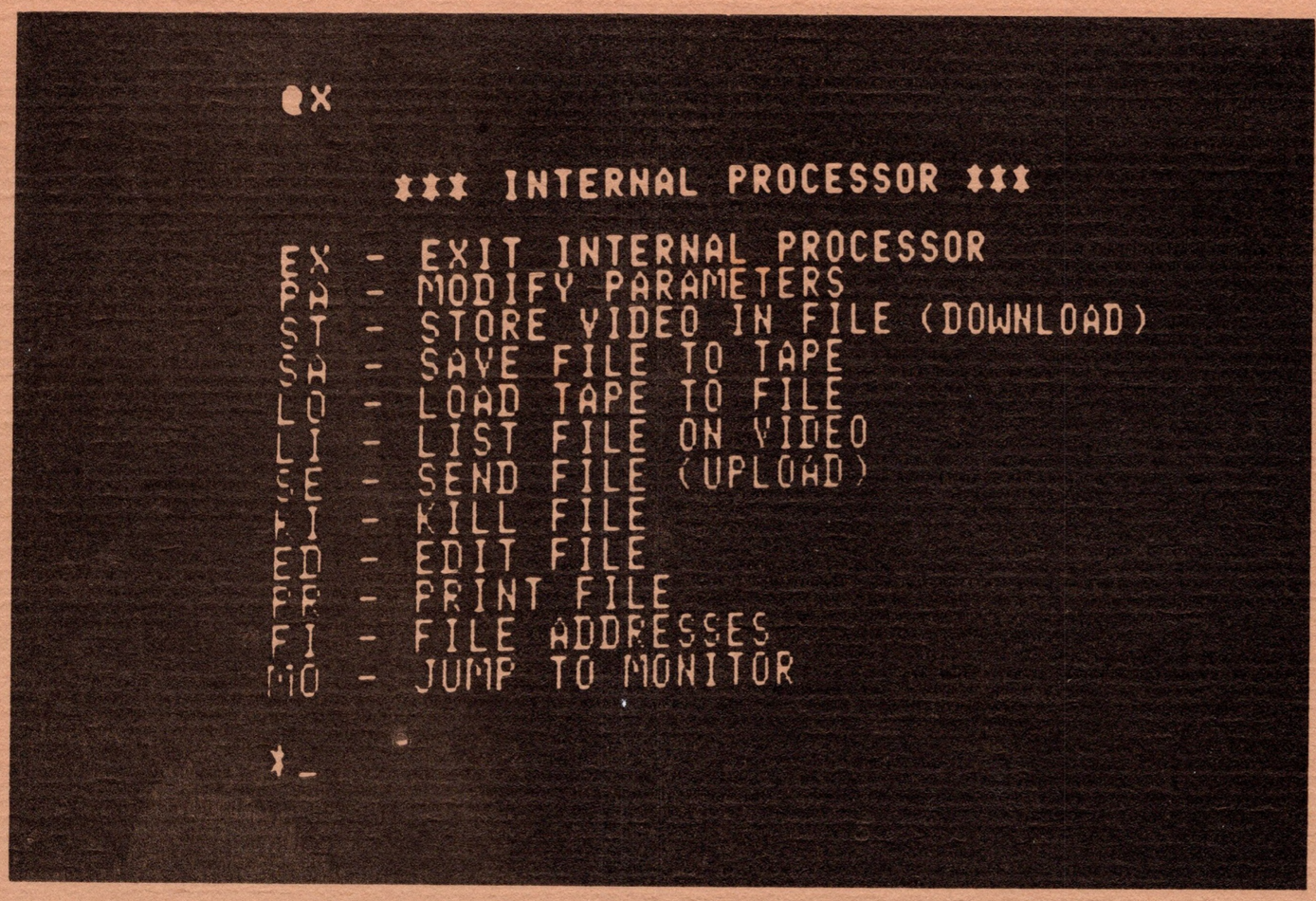

QS SMART TERMINAL

A program to communicate easily and efficiently with other computers.

For the Exidy Sorcerer

By Bob Pierce

A product of QS QUALITY SOFTWARE

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QS SMART TERMINAL PROGRAM

By Bob Pierce

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40 lines of 490 Start 5C4C
199 lines of 290 Start 396C
232 lines of 244 Start 326D
235 lines of 238 Start 319C
236 lines of 236 Start 313D
10,537 char

19,833 char remain

LOADING INSTRUCTIONS--LOW AND HIGH MEMORY VERSIONS

lo 5-47
48K 29-49
32K 51-69
16K 71-90
End 90-120

There are four versions of the QS Smart Terminal program on the cassette. The first program is the "low memory" version. The low memory version works on any size Sorcerer and provides the user with the capability to save frequently used files along with his program. On the cassette following the low memory version, there are three "high memory" versions. These versions are for 48K, 32K, and 16K Sorcerers respectively, and they have the additional capability to permit the efficient transfer of files to and from BASIC or the Word Processor. Each of these versions will load and run with a Monitor LOG command.

For detailed instructions on how to load the program follow these steps.

1. Turn on the Sorcerer and place the program tape in the cassette recorder.

2. Rewind the tape and then fast forward to the version of the Smart Terminal program that you wish to use. If you are loading the program for the first time, you may wish to load all of the versions noting at what number on your recorder each of them begins.

3. Enter the Sorcerer Monitor. If you are in BASIC, this is done by typing BYE (RETURN).

4. Type LOG, press PLAY on the recorder, and press the RETURN key on the Sorcerer.

5. The program should load in about one minute. The QS Smart Terminal proprietary message will appear on the screen for a few seconds, and the program will enter the communications mode (see the following section).

If you wish to name the program when using the LOG command, the four versions are named SMART, ST48, ST32, and ST16 respectively.

Should the program fail to load correctly, an adjustment in volume setting may be required. Once the program does load correctly, note the volume setting and save it for future reference.

COMMUNICATIONS MODE

Following the display of the proprietary message, the program will enter the communications mode. You will observe that the screen clears and the underscore prompt (_) appears in the upper left hand corner of the screen.

When the Sorcerer is properly connected to a modem through the serial port, you will be able to send and receive data and messages in the communications mode. The following special key presses will cause certain specific actions to occur if applied while the communications mode is in effect.

KEY PRESS	ACTION
CTRL I	Exit the communications mode and enter the internal processing mode (see below)
GRAPHIC N	Sends (transmits) the contents of file N for N= 1,2,...,9

While in the communications mode, data typed in via the keyboard may not appear on the video even though it will be sent out the communications channel. What appears on the video will be governed by two factors: the duplex status of the terminal program and whether or not the modem echoes back what is sent to it.

The duplex status of the terminal program is either full duplex or half duplex. If the terminal is in the full duplex status, only the data that is received or data that is typed and echoed back will appear on the video. If the terminal program is in the half duplex mode, anything typed into the Sorcerer will appear on the video and may appear twice if echoed back as well.

The QS Smart Terminal program is set to operate in the full duplex mode when shipped. This may be changed by executing the PA command in the internal processing mode.

Holding down the GRAPHIC key and typing an integer N between 1 and 9 sends the message or data in file N out the communications port. This may be used to send often-used messages such as logon procedures, IDs, and other codes without typing them in each time. It also may be used to send programs or letters or data to other computers. These files may be sent while in the internal processing mode too by using the SEND command discussed elsewhere.

PRINTER INTERFACE

There are two routines built into the QS Smart Terminal program for interfacing with printers. The program is shipped to you to operate with a serial printer at 300 baud. If you have a 1200 baud printer interfacing with the Sorcerer through the serial port, you can send data to that printer at 1200 baud by changing the value of the parameter controlling this rate. This is done by typing PA while in the internal processing mode. In a similar way you can adapt the program to operate with a Centronics type parallel printer. The QS Smart Terminal program uses the Sorcerer Monitor routines to drive parallel printers, so if your parallel printer works with your Sorcerer in other applications, it will work with this terminal program.

You may wish to write your own printer driver routine. If this is the case, the following instructions will permit you to easily interface your printer driver routine with the QS Smart Terminal program.

When printing a character, the program jumps to the address ORG+0002H with the byte to be printed in Z80 register A. The value for ORG is defined in the section entitled MEMORY ORGANIZATION. The driver routine must end with a RET (a C9H) to get back to the terminal program after printing a byte. Insert a jump instruction at ORG+0002H to jump to your routine and end it with a RET. To find a safe place for your customized printer driver routine, you should read the section entitled MEMORY ORGANIZATION.

INTERNAL PROCESSING MODE COMMANDS

The internal processing mode permits the user to perform several tasks that do not require communication with another computer. Such tasks include editing files, saving and loading files to or from cassette tapes, printing files, and modifying the communications status of the terminal program. While the internal processing mode is in effect, the terminal program is not communicating with another computer, and it is not necessary to be connected to another computer.

The presence of the * prompt indicates to the user that the internal processing mode is in effect. Each internal processing command is entered immediately following the * prompt and is ended by a carriage return. Where an [N] or [M] appears in the following command descriptions, it means that an integer input is optional. If no integer is typed, the processor assumes the default value of 1. If it is desired to enter a value for M, it must be preceded by a value for N. The first two letters typed determine the command name and need not be capitalized. Any additional characters in the command name that are not preceded by a blank are ignored. Integer inputs must be preceded by a blank.

COMMAND	ACTION
EX	Exit the internal processing mode and enter the communications mode
ST [N]	Store data in the communications mode into file N
SA [N] [M]	Save file N on cassette number M
LO [N] [M]	Load file from cassette number M into file N
LI [N]	List file N on the video. RUN/STOP key interrupts the listing
KI [N]	Kill (delete) file N
PR [N]	Print file N
SE [N]	Send file N out the communications port
PA	Inspect and modify program parameters
ED [N]	Edit file N
FI	List file boundaries on the video
MO	Jump to the Sorcerer Monitor
Q0	Turn cassette motors off
Q1	Turn cassette #1 motor on
Q2	Turn cassette #2 motor on

ADDITIONAL COMMANDS FOR HIGH MEMORY VERSION

The following additional commands may be entered when the high memory version of the Smart Terminal program is loaded. For a full description of how these commands are to be used, see the sections that discuss transferring files to or from BASIC or the Word Processor.

COMMAND	ACTION
TB [N]	Transfer file N to BASIC
FB	Set up video output to go to file 1 and jump to BASIC
TW [N]	Transfer file N to the Word Processor
FW	Set up the Word Processor serial printer output to go to file 1 and jump to the Word Processor

EXAMPLES

ST 7	Data in the communications mode will be stored in file 7
SA 3 2	File 3 will be saved on cassette number 2
SA 3	File 3 will be saved on cassette number 1
SA	File 1 will be saved on cassette number 1
LO 4 2	The file on cassette number 2 will be loaded into file 4
LI 5	File 5 will be listed on the video
LIST 5	The same as LI 5
list 5	The same as LI 5
KI 3	File 3 will be killed (deleted)
PR	File 1 will be printed
PR2	File 1 will be printed
PR 2	File 2 will be printed
SE 3	File 3 will be sent out the communications port; following the transmission the processor remains in the communications mode
PA	Allows inspection and modification of various program parameters
ED 4	The text editor will be entered and file 4 will be available for editing
FI	A list of the file boundaries will appear on the video
FILES	The same as above (FI)

EXIT INTERNAL PROCESSING MODE---EX COMMAND

To exit the internal processing mode and enter the communications mode, type

EX (RETURN)

STORING FILES---ST COMMAND

One of the features of the Smart Terminal program is the capability to download the video information during a communications session into a file in memory. The STORE command enables you to do this. For example, type

ST 5 (RETURN)

EX (RETURN)

and data that appears on the video during the communications will be stored in file 5. The EX command given above will cause the program to leave the internal processing mode and enter the communications mode. The following facts should be kept in mind while the STORE command is in operation.

1. Both data that you type and data that is received via the modem will be stored into the file.

2. Data sent out via the SEND command or the GRAPHIC N command will not be stored.

3. If you use the ST command to store data into a file that is not empty, the new data will be appended to the end of the old file.

4. If the available RAM is filled while the ST command is in effect, the following actions take place within the terminal program. The program detects the fact that memory is full, sends a CTRL S out the communications port to cause the sending device to pause, and sends a message to the user that he is OUT OF RAM. While CTRL S causes The Source to pause, the user is cautioned that other host computers may not respond this way. After the message is printed, the internal processing mode is entered, and the program awaits further instructions from the user.

5. Whenever the program enters the internal processor, the STORE command is turned off. If you wish more data to be stored, you must enter another ST command. Note that by item (3) above, you can add new data to an old file.

SAVING FILES---SA COMMAND

The QS Smart Terminal SA command may be used to save any one of the files from memory to cassette. By using the PA command, you may set the cassette baud rate at either 1200 baud or 300 baud. The 1200 baud rate setting provides for faster saving, but at the risk or somewhat lower reliability. The program is shipped to you to operate save and load on cassette tapes at 1200 baud.

A file may be saved to either cassette number 1 or cassette number 2 if you have a pair of cassettes cabled to the serial port. If you wish to save file number 4 to cassette number 1, type

SA 4 1 (RETURN)

You will be asked to type either S to start saving or X to abandon the save. Type S if you wish to save. The 1 in the above command is redundant. Typing SA 4 (RETURN) has the same effect. However, the command

SA 4 2 (RETURN)

will save file 4 on cassette number 2.

LOADING FILES---LO COMMAND

The QS Smart Terminal LO command may be used to load any file that has been created with the Sorcerer SA or CSAVE commands or by the Terminal SA command. The important feature of the LO command is that it loads the file into that portion of memory reserved for files and records the file boundaries in the file directory. Of course, the file must be loaded at the same baud rate at which it was saved. The cassette baud rate may be modified using the PA command.

There are several features to keep in mind when using the LO command.

1. If a cassette file is being loaded into a file in the terminal program that already has data, the new file will be appended onto the end of the original file.

2. If there is a CRC error while loading, you may re-enter the program from the Sorcerer Monitor by typing

6A00

GO ORG (RETURN)

where ORG is the starting address for the version of the Smart Terminal program that is loaded. The value for ORG may be found in the section entitled MEMORY ORGANIZATION. You will then have to start the loading of the file all over again.

3. If the file you are loading is too large, it can write over the buffer area at the top of memory or the stack area or the high memory program itself. The Smart Terminal program uses the Monitor LOAD routine and is unable to check to see if a file is too large. If the file is too large, your program will likely "blow up" and you will have to start over again.

4. If you hit the RUN/STOP or ESC key while loading a file, the program will cease loading and jump to the Sorcerer Monitor. To return to the program, type GO ORG (RETURN).

To load a file from cassette number 2 into file number 8, type

LO 8 2 (RETURN)

You will be asked to type L to load or X to forget the idea. Typing L will turn the motor on and start loading. The command

LO 8 (RETURN)

will load the file from cassette number 1 into file 8.

LISTING FILES---LI COMMAND

A file may be listed on the video by using the LI command. For instance, typing

LI 7 (RETURN)

lists the contents of file 7 on the video. To interrupt or stop a listing, you may use either the RUN/STOP key or the ESC key. If the listing stops, pressing the SPACE BAR will resume the listing. Pressing X will terminate the listing. When the file has been completely listed, the internal processing mode menu will appear unless disabled, and may obscure part of the listing. The menu may be disabled by means of the PA command.

KILLING (DELETING) FILES---KI COMMAND

A file may be killed by using the KI command. It is highly recommended that the LIST command be used prior to killing a file to avoid killing a file that will be needed later. Since the LIST command requires very little time to execute, even the most impatient user should heed this recommendation. To kill file 7, type

KI 7 (RETURN)

You will be informed that file 7 has been killed, and the internal processing mode will still be in effect.

PRINTING FILES---PR COMMAND

Once the terminal program has been properly configured to interface with your printer, you may print file 6, for example, by typing

PR 6 (RETURN)

You will be asked for a P to print the file or an X to abandon the idea. Answer by typing P if you wish to print the file. Once printing has started, it may be interrupted by pressing the ESC or RUN/STOP key. Having been halted in this manner, pressing the SPACE BAR will resume printing and pressing X will terminate printing.

See the section of this instruction booklet entitled PRINTER INTERFACE to properly configure the terminal program to your printer.

SENDING FILES---SE COMMAND

A file may be sent out the communications port directly from the internal processing mode by using the SEND command. For instance, to send file 3, type

SE 3 (RETURN)

You will receive a message on the video that file 3 is being sent. This message will not be transmitted. You will then see the data on the video as it is being sent. The user should be aware of several facts about sending files.

1. The SEND command from the internal processing mode performs the same function as the GRAPHIC N command from the communications mode.

2. While data is being sent out with this command, the terminal program ignores all key presses except ESC or RUN/STOP and does not receive data from the communications port. However, the user may modify this. To learn how to modify the terminal program to receive data following each transmission of a carriage return, consult the section entitled CUSTOMIZING YOUR QS SMART TERMINAL PROGRAM.

3. After a file has been sent, the terminal program will be in the communications mode.

4. The rate at which bytes (characters) are sent using the SEND command may be changed. See the section of this booklet entitled CUSTOMIZING YOUR QS SMART TERMINAL PROGRAM to find out how to do this.

5. Pressing the ESC or RUN/STOP keys during a SEND or GRAPHIC N command will cause the transmission to halt. Pressing the SPACE BAR will resume transmission, while pressing X after halting will terminate the transmission.

INSPECT AND MODIFY PROGRAM PARAMETERS---PA COMMAND

Several program parameters may be inspected or modified by entering the internal processing mode and typing

PA (RETURN)

After this is done, the user will be prompted to make several selections, one at a time, and may respond by typing either RETURN, X, 0,or 1. If RETURN is typed, the value of the parameter will be left unchanged, and the current value of that parameter will be printed out. Simply typing RETURN in response to all prompts permits the user to inspect the current values of all of the parameters and leave them unchanged. Typing X at any time terminates the mode and returns the user to the internal processing mode. An entry of 0 or 1 causes the value of that parameter to be set accordingly.

Default values are underlined

The following list will give a brief description of the effect of each choice of program parameter.

1. 0:FULL DUPLEX 1:HALF DUPLEX

use this changed in STM31

Full duplex operation means that a character typed in the communications mode is not printed on the video unless echoed back to the terminal. In half duplex operation, the characters entered via the keyboard are printed on the video, and if they are echoed back by the modem, double characters will appear on the video. The QS Smart Terminal program is shipped to the user with this value set in the full duplex mode.

2. PRINTER INTERFACE, 0:PARALLEL 1:SERIAL

This parameter determines the port to which the printer driver sends data. If you have a printer that connects to the parallel port at the back of your Sorcerer, you should set this value to 0. This value is set to 1 when the program is shipped.

3. SERIAL PRINTER BAUD RATE, 0:1200 1:300

If you have a parallel printer, you can ignore this parameter. For users with serial printers, this parameter sets the baud rate at which data is sent from the Sorcerer to the serial printer. This value is originally set to the 300 baud value.

4. TAPE BAUD RATE, 0:1200 1:300

This parameter determines the rate at which data is loaded from and saved to cassette tapes. It is the same condition that is set by the SET T=x command in the Sorcerer Monitor. It is originally set for cassette operations at 1200 baud.

5. MENU, 0:ENABLE 1:DISABLE

The menu that appears each time the internal processing mode is entered may be enabled or disabled by choice of this parameter. After the user has become thoroughly familiar with the options available in the internal processing mode, the menu may become annoying. The user may disable the menu by typing 1 when this choice appears. The program originally has the menu enabled.

6. 0: 1 STOP BIT 1: 2 STOP BITS

For a given baud rate, this parameter determines the minimum duration of the stop element that follows each word (character) transmitted to the modem. The program is shipped to the user with this parameter set for two stop bits.

7. PARITY, 0:ODD 1:EVEN

Parity generation and checking is affected by this parameter. It is set for even parity originally.

8. PARITY, 0:ON 1:OFF

This parameter determines whether a parity bit is generated for transmission and whether checking is done on reception. It is originally set for no parity generation and checking.

9. WORD LENGTH, 0:5 OR 7 BITS 1:6 OR 8 BITS

10. WORD LENGTH, 0:5 OR 6 BITS 1:7 OR 8 BITS

These two parameters determine the word length. If both are set to 1, as is the case when shipped to the user, the word length is 8 bits. If both are set to 0, the word length is 5 bits. If the first is 1 and the second is 0, the word length is 6 bits. If the first parameter is 0 and the second is 1, the word length is 7 bits.

EDIT FILES---ED COMMAND

This command permits the user to edit any specified file. For example, typing

ED 5 (RETURN)

puts the user in the edit mode with file 5 available for editing.

For more on the text editor, the user can consult the section of this booklet entitled TEXT EDITOR.

LIST FILE BOUNDARIES---FI COMMAND

The addresses of the beginning and end of each nonempty file are made available to the user by means of the FI command. Typing

FI (RETURN)

causes a listing of each nonempty file with beginning and ending addresses.

This command can be useful to any user, even if he is unfamiliar with hexadecimal memory addresses, because he can determine quickly what files are empty. The user can use this command to help remember what files he has created in a given working session.

The user can use this command to get an idea of how much memory is available for any new files he wishes to create. In some cases, the file boundary information might be used to recover "lost" files or to append two files.

SENDING A MACHINE LANGUAGE PROGRAM TO ANOTHER SORCERER

The user is reminded that transmitting a program from one computer to another constitutes copying. Therefore, it is a violation of the copyright laws to transmit copyrighted programs.

To send a machine language program to another Sorcerer, the following method can be used.

1. The sender should modify the byte that masks all outgoing transmissions. This byte is located at ORG+40H and should be changed from 7FH to FFH. A description of the use of this byte is given in the section entitled CUSTOMIZING YOUR QS SMART TERMINAL PROGRAM (Item 9). The sender should enter the internal processing mode and load the machine language program into an empty file using the LO command. The sender should also note the starting address of the program and the GO address.

2. The sender should notify the receiver that he is ready to send. The receiver sets up to receive a machine language program by modifying the Smart Terminal program so that no characters or bytes of data are ignored. This is done by changing the three byte jump instruction located at ORG+000EH from C3 00 D6 to C3 00 F1. In effect, this results in using a different RECEIVE routine and no bytes of incoming data will be ignored. For a description of how these two receive routines work, consult the section entitled CUSTOMIZING YOUR QS SMART TERMINAL PROGRAM (Item 11). The receiver sets up to store incoming data by entering the internal processing mode and using the ST command to STORE communications into an empty file. The EX command is then used to enter the communications mode and no key presses should be applied at the receiving end until the file has been completely received.

3. The sender may use either the SE command or the GRAPHIC N command to transmit the machine language file.

4. The receiver should use CTRL I to exit the communications mode at the conclusion of the transmission. The FI command will reveal the beginning and end addresses of the received file. The receiver should examine the first 20 or 30 bytes in the received file and compare them, using verbal communications, with the file that was sent. There are often some bytes of data at the beginning of the file that are created by noise in setting up the communications. In this way, the receiver can determine the address of the beginning of the received machine language program.

5. The receiver should obtain the starting address and the GO address of the program from the sender and use the Sorcerer Monitor MOVE command to move the received file to where the program will run. This is done by entering the Sorcerer Monitor with the MO command when in the internal processing mode. Then type

MOVE addr1 addr2 addr3

where addr1 is the beginning address of the received machine language program
addr2 is the ending address of the file
addr3 is the address of the beginning of the original machine language program.

The receiver may use the Sorcerer Monitor SAVE command to save the program on cassette and the GO command to run it.

ENTERING CONTROL CHARACTERS INTO FILES

In communicating with another computer on a regular basis, there are typically several sign-on commands that must be entered each time. The following example will show how to set up the ID registration for The Source. Here is how to do it.

1. Turn off the modem so that no outside communications will interfere with your work. While in the internal processing mode, type PA (RETURN) to change system parameters. The first parameter is a choice of full or half duplex. Type 1 in response to this. Then exit this mode by typing X.

2. After return to the internal processing mode, choose an empty file to save the ID registration. Assume that this file is 9. Type ST 9 (RETURN). Now all data from"the communications mode will be saved into file 9.

3. Exit the internal processing mode by typing EX (RETURN). You will enter the communications mode.

4. Since you have set up the communications mode to half duplex operation, all of the characters you type will be visible on the video. Type your ID as follows:

ID TXXnnn [CTRL Y][CTRL W][CTRL Z] (RETURN) (LINE FEED)

where XX, nnn, and Y,W, and Z are suitable for your ID. Press CTRL I to return to the internal processing mode and type FI (RETUSN) to see that file 9 has data in it. You might also type SE 9 (RETURN) to send file 9 and observe that it is as you intended. If you do this, you need to press CTRL I to return again to the internal processing mode.

5. Type PA (RETURN) again and change back to full duplex status by entering a 0 for that parameter.

6. Upon returning to the internal processing mode, test the file by typing

SE 9 (RETURN)

After you have set up all frequently used files that you wish and have assigned the values to the parameters that match your system, you will be ready to save your Smart Terminal program on cassette. Consult the section on SAVING YOUR CUSTOMIZED SMART TERMINAL PROGRAM ON CASSETTE.

TEXT EDITOR

The purpose of the onboard Text Editor is to permit the user to enter letters, programs, or data into a file off-line. This significantly reduces the connect time required to communicate with other computers. The Text Editor can also be used to edit a file prior to saving it on cassette or printing it.

@ is the prompt indicating that the user is in the edit mode. Preceding each @ prompt, the current line is printed. The invisible line pointer is positioned at the beginning of the current line.

EDIT COMMANDS

The following list of text editor commands are available whenever the @ prompt appears. When [N] appears, this means that the integer N is optional. Each of the commands listed below must be entered immediately following the appearance of the editor prompt @, and must be ended with a RETURN. See the set of examples following the list of commands.

COMMAND	ACTION
X	Exits the edit mode
I	Insert a line(s) of text at the current line pointer--immediately preceding the current line; Pressing the ESC key exits the insert mode and erases the line on which it is typed
L [N]	Lists N lines of text, starting at the current line and leaves the line pointer unchanged
T	Positions the line pointer to the top of the file and prints the top line
B	Positions the line pointer to the bottom of the file
D [N]	Deletes N lines of text starting at the current line, prints the N+1 line, and positions the line pointer to the beginning of the N+1 line
U [N]	Positions the line pointer N lines above the current position and lists the new current line
[N]	Positions the line pointer N lines below the current position and lists the new current line
RETURN	Positions the line pointer 1 line below the current position and lists the next line
F [N] /character string/	Finds and lists any line among the next N lines that contains the specified character string. If any such line(s) are found, the line pointer is repositioned to the beginning of the last line found.
C [N] /string 1/string 2/	Finds any line among the next N lines that contains string 1, and changes string 1 to string 2; lists each line changed and positions the line pointer to the beginning of the line changed last
. (period)	Enters the TAB set routine. For a description of how to enter TAB settings, see the paragraph below entitled SETTING TABS.

EXAMPLES

In the examples below, each command that follows the @ prompt is to be typed immediately following the prompt. Suppose that the file you wish to edit consists of the following well-known passage:

> Four score and seven years ago our fathers brought forth on this continent a new nation conceived in liberty and dedicated to the proposition that all men are created equal.
>
> Now we are engaged in a great civil war testing whether that nation or any nation so conceived and so dedicated can long endure. We are met on a great battlefield of that war. We have come to dedicate a portion of that field as a final resting place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this.

If the user enters

```
@t (RETURN)
```

the top line consisting of

> Four score and seven years ago our fathers brought forth on

will be printed on the video and the @ prompt will appear immediately below this line. This indicates that the line pointer is positioned at the top of the file and at the beginning of the line printed. To list the entire text, type

```
@l 20
```

The entire text will be listed on the video since 20 exceeds the number of lines in the file. The line pointer will remain at the top of the file. To delete the first line, type

```
@d (RETURN)
```

The top line will be deleted and the next line will be listed on the video with the @ prompt immediately below it. If instead, the user were to type

```
@d 3 (RETURN)
```

the entire first paragraph of the text would be deleted and the first line of the second paragraph would be listed on the video with the @ prompt below it.

Suppose that the above deletions were not made, but that the user wished to change the word "nation" to "society" wherever it appeared in the text. To do this go to the top of the text as before and type

@c 20 /nation/society/ (RETURN)

and the three lines on which the word "nation" appears will be printed on the video with the word "society" in its place each of four times. The number 20 in the above command was chosen large enough so that the entire text was scanned for the word "nation". The command

@c 12 .nation.society. (RETURN)

causes exactly the same result. Almost any character may be used as the delimiter in the FIND and CHANGE commands. If after making the above change, the user enters the command

@f 20 /long/ (RETURN)

the text editor will respond by simply printing another @ prompt because the word "long" does not appear in the file within or after the line in which the last change was made. If the above command were preceded by an @t command, the editor would list the line containing the word "long" and position the line pointer to the beginning of this line. Then the command

@c / long// (RETURN)

will delete the word "long" from the line. To move the line pointer up to the beginning of the second paragraph, type

@u 1 (RETURN)

and the editor will list the first line of the second paragraph and place an @ prompt beneath the line.

If at this point, the user types

@i (RETURN)

the editor will be in the insert mode and any text entered will be placed in front of the second paragraph. It is important for the user to recognize that insertions are placed immediately in front of the line listed above the @ prompt.

If the user finds nothing of value to insert prior to the second paragraph, the command

@l 7 (RETURN)

will cause the entire second paragraph to be listed on the video and the line pointer will remain at the beginning of the second paragraph.

To move the line pointer to the end of the text, there are several options. The command

@ (RETURN)

when applied seven times, will successively lower the line pointer and list a line each time. The command

@7 (RETURN)

will lower the line pointer seven lines and list the next line (in this case an empty line). The command

@b (RETURN)

will always place the line pointer at the end of the file and list an empty line.

SETTING TABS

TABs may be set at up to six locations. The program comes to the user with the TABs set at columns 8,16,24,32,40,and 48. To alter the TAB settings in the text editor, type .(RETURN) in response to the @ prompt. Then enter your own TAB settings by pressing 'T' in a column in which you want a TAB and any other key in a column in which you want no TAB. To exit the TAB setting mode, type (RETURN). For example,

```
@.(RETURN)
.....T......T(RETURN)
```

sets TABs at columns 6 and 13.

When the sixth TAB is entered, the program automatically terminates the TAB setting mode and returns to the text editor mode. Entering the TAB setting mode erases any previous settings.

TEXT EDITOR TIPS AND CAVEATS

(1) INSERT enters text above the current line. The current line is often, but not always (see (2)), listed above the @ prompt.

(2) LIST does not alter the current line pointer which points to thd beginning of the first line listed.

(3) CHANGE replaces all occurrences of string 1 with string 2 (in some cases, in undesired ways) and should be used cautiously.

(4) CHANGE permits up to 31 characters in a string. If more are used, no change is made.

(5) Pressing the RETURN key while in tHe INSERT mode causes the actual entry of the line into the text. Before that, the line is in an input buffer. Pressing the ESC key to exit the INSERT mode does not enter any text into the file that resides on the line on which the ESC key is pressed.

(6) A line in the INSERT mode may have up to 125 characters. Pressing RETURN terminates the line and enters the line into the file. After the 64th character is typed in a given line, the cursor automatically is placed at the beginning of the next video line, but a CARRIAGE RETURN is not entered into the text.

INTERFACING WITH BASIC OR EXIDY WORD PROCESSOR

Interfacing the terminal program to BASIC is not a straightforward task because BASIC files are stored in memory and on tape in a coded format. In particular, BASIC commands such as GOTO, DATA, FOR, or NEXT are represented (tokenized) in memory and on tape by the single hexadecimal bytes 89H,83H,81H, and 82H respectively. When a BASIC program is listed on the video, the data listed may also be sent to a file. Such a file is called an ASCII coded BASIC file. In an ASCII file, GOTO is represented by the four hexadecimal bytes 47 4F 54 4F. Files created and used by the Smart Terminal program are in ASCII format. If the user loads a BASIC file created by CLOAD into a terminal program file, the result will be unreadable except by the Sorcerer's BASIC interpreter because the data will be in the BASIC code. For this reason the terminal program is designed to work only with ASCII formatted BASIC files. The terminal program does provide the capability to transfer programs to and from BASIC.

The user is cautioned that interfacing the QS Smart terminal program with BASIC or the Exidy Word Processor can result in the loss of entire files. The ROMPAC programs have not been designed to operate with the terminal program sharing the memory. In transferring ROMPAC files to the Smart Terminal program, the terminal program checks to see if memory is full during the transfer, and the transfer is stopped when there is no more room for the new file. However, if the user fails to follow carefully the steps described below, unpredictable results can occur. For example, entering data into the ROMPAC file after the transfer command has been initiated and before the transfer has been completed, causes overlap because the terminal program is designed to maximize the space available in memory for the transfer by establishing the beginning of the terminal program file to be at the end of the ROMPAC file.

In transferring a file from the Smart Terminal program to a ROMPAC file, it will usually be the case that following the transfer, the terminal program file will be polluted. This happens because the ROMPAC file created by the transfer will often be large enough to "walk over" the file in the terminal program.

TRANSFERRING A BASIC PROGRAM TO A SMART TERMINAL PROGRAM FILE

To transfer a BASIC program to a file in the Smart Terminal program, carefully follow these instructions.

1. Be sure that the Sorcerer is turned off when you insert the BASIC ROMPAC. Enter the BASIC program you wish to transfer either from tape or from the keyboard.

2. Type BYE (RETURN) to enter the Sorcerer Monitor. Then load and run a high memory version of the QS Smart Terminal program by readying the cassette and typing

   LOG (RETURN)

3. Enter the internal processor and kill any nonempty files. If a file is already present in BASIC, and more than one file is present in the terminal program, then it is important to kill the file located highest in memory first, and do the same with the remaining files. In this way, no change will be made to memory located in the file space and the BASIC program will be unaffected. Then type the command

   FB (RETURN)

to set up all video output to go to file 1. This command also returns the user to BASIC and establishes the beginning address of file 1 to be the ending address of the BASIC file.

4. In BASIC type

   LIST (RETURN)

and the BASIC file will be listed on the video and transferred to file 1. Then type

   CTRL X

i.e. holding down the CTRL key, type "X". This will return the user to the Smart Terminal program, and will also stop video data from being entered into file 1.

5. Edit file 1 to eliminate the READY, LIST and blank line statements at the top of the file and the READY at the bottom of the file. File 1 will contain the BASIC program in ASCII format.

TRANSFERRING A FILE FROM THE TERMINAL PROGRAM TO BASIC

To transfer an ASCII file from the Smart Terminal program to BASIC, carefully follow these instructions.

1. Make sure that the Sorcerer is turned off when the BASIC ROMPAC is inserted. With the BASIC ROMPAC inserted and a BASIC program in a Smart Terminal program file, the user is ready to send the file to BASIC. However, before he does so, the user should edit the file to be sure that the file will be entered properly into BASIC. In particular, any line greater than 64 characters will cause an error message during the transfer and the entire line will be missing from the BASIC program.

2. Enter the internal processor and type

   TB N(RETURN)

where N is the file number of the file you wish transferred to BASIC. The file will be displayed on the video as it is entered into BASIC and any syntax errors will be printed by the Sorcerer in the same way as when data is entered from the keyboard. The transfer is rapid but may be interrupted by the RUN/STOP key. To resume the transfer, use the SPACE BAR. It is important to interrupt the transfer if errors are printed and to note the line numbers of the improper lines. Do not exit the transfer by typing "X" when the transfer has been interrupted because this will leave the computer with the keyboard "frozen" out.

3. When the transfer is completed, BASIC is in control and data may be entered from the keyboard.

TRANSFERRING A WORD PROCESSOR FILE INTO A TERMINAL PROGRAM FILE

To transfer an Exidy Word Processor file into a Smart Terminal program file, carefully follow these instructions.

1. Be sure that the Sorcerer is turned off when you insert the the Word Processor ROMPAC. Enter the file that you wish to transfer into the Word Processor from either the keyboard or tape.

Set WP word limits located in 0742-0745

Normal 32K limits are 77 7E 77 7E
Max to protect ST and
and divide into 2 ST files is 7F 67 7F 67
Limit for 12K ST file is 7F 37 7F 37

2. Exit the Word Processor by entering the Command Mode and typing

   X (RETURN)

Then load the high memory version of the Smart Terminal program by readying the cassette and typing

   LOG (RETURN)

3. Enter the internal processor and kill all nonempty files. If more than one nonempty file exists, then use the FI command to see which file is located highest in memory. Kill the file located highest in memory first, and do the same with the remaining files. In this way, no change will be made to the data in file space and the Word Processor file will be unaffected. Then type

FW (RETURN)

to set up the output from the Word Processor's serial printer routine to go to file 1 in the terminal program. This command also returns the user to the Word Processor and establishes the beginning and ending addresses of file 1 to be set to the end of the Word Processor file.

4. In the Word Processor, do not add any more data to the file. Enter the command mode and type

Y (RETURN)

Set the print device value to 1. You may also wish to alter some of the other Y table values such as LINES/PAGE or INDENT. To exit the Y table, press the ESC key. Type

T (RETURN)

to position the cursor to the top of the file. Then type

P (RETURN)

Press the SPACE BAR or RETURN as many times as necessary to send the desired number of pages to the terminal program file.

5. To cease sending data from the Word Processor file to the terminal file and to enter the terminal program, type

X (RETURN)

File 1 in the terminal program contains the data "printed" in this fashion from the Word Processor.

TRANSFERRING A TERMINAL PROGRAM FILE TO THE WORD PROCESSOR FILE

To transfer a file in the Smart Terminal program to the Word Processor file, carefully follow these instructions.

1. Make sure the Sorcerer is turned off when the Word Processor PAC is inserted. With the Word Processor PAC inserted and with a file in the Smart Terminal program, the user is ready to send the file to the Word Processor.

2. Enter the internal processor and type

TW N (RETURN)

where N is the file number of the file you wish to transfer to the Word Processor. When the transfer is complete, the user will be returned to the Word Processor with the file in place.

The user should be aware that CR's entered into a terminal file will be transferred intact to the Word Processor file. However, the user has the option of omitting the transfer of CR's. To do this, consult the section entitled CUSTOMIZING YOUR QS SMART TERMINAL PROGRAM (Item 12).

MERGING BASIC PROGRAMS OR APPENDING A TERMINAL PROGRAM FILE TO A WP FILE

This section may be omitted by a user on first reading. It is intended to assist the user who wishes to perform unusually involved operations with the terminal program. In particular, this section discusses how to avoid difficulties that can arise when both a ROMPAC file and a terminal program file are to be merged together into one ROMPAC file.

If the user is successful in loading both a BASIC program and a terminal file that contains a BASIC program in ASCII format into memory simultaneously, then he can follow the steps given in the section entitled TRANSFERRING A BASIC FILE IN ASCII FORMAT FROM THE TERMINAL PROGRAM TO BASIC to merge the two programs into one BASIC program. Merging two programs in this manner achieves the same result as if the terminal program file were typed into BASIC from the keyboard. In partcular, if two lines in the two programs have the same line number, then the resulting program will contain only the the line that was originally in the terminal program file. Moreover, if the line has more than 64 characters, an error message will be displayed and the entire line will be missing from the BASIC program.

Similarly, if the user is successful in loading both a Word Processor file and a terminal program file into memory simultaneously, then he can append the terminal program file onto the end of the Word Processor file by following the steps given in the section entitled TRANSFERRING A TERMINAL PROGRAM FILE INTO A WORD PROCESSOR FILE.

To get both a ROMPAC file and a terminal program file compatibly into memory at the same time, the following procedure may be applied. Load the ROMPAC file and make sure that there is sufficient room for the terminal program itself. Then load the terminal program. If the ROMPAC file is large enough so that the user must load the terminal program file at an address higher than 1300H so as to not conflict with the ROMPAC file, then the user may follow these steps to load a file at a higher address.

1. With the terminal program loaded, kill all nonempty files and enter the Sorcerer Monitor with the MO command. Killing a file does not alter the contents of the data in the file space provided that the file killed is located highest in memory among the nonempty files. It can be important to observe this when a file is present in the ROMPAC program since the two file spaces may overlap.

2. Modify the beginning and end addresses of file 1 to the address at which you wish your terminal file to begin. This address should be larger than the end of the file in the ROMPAC program. The end address of a BASIC program is located in memory at 01B7H. For the Word Processor, the end address of the file is at 074AH. To modify the beginning and end addresses of file 1, consult the section in this manual entitled MEMORY ORGANIZATION.

3. Once the beginning and end addresses of file 1 are set large enough so as not to conflict with the ROMPAC file, data may be entered into any file in the terminal program without "walking over" the ROMPAC file. Such data may be entered from the keyboard or from loading a file from tape.

4. When loading a file from tape into the terminal program, be sure that enough room exists in memory for the file. The terminal program uses the Monitor load routines and is not able to check to determine if there is sufficient room to load the file.

CUSTOMIZING YOUR QS SMART TERMINAL PROGRAM

There are a great many ways in which the user may customize the Smart Terminal Program. It is recommended that the user examine the following list and make those changes that will most nearly fit his applications and hardware interfaces. After these changes have been made, the user may save the customized terminal program on cassette following the instructions given in the section SAVING YOUR CUSTOMIZED SMART TERMINAL PROGRAM ON CASSETTE. In the following list of possible modifications to the terminal program, there are several instances where the user is required to change a byte in memory. To do this, enter the Sorcerer Monitor by typing MO (RETURN) while in the internal processing mode. Make the desired changes to memory using the Monitor commands DU and EN. As an example of how to do this, suppose the user wishes to change the keypress for exiting the communications mode. In (4) below, it is noted that the byte in memory controlling this is located at the address ORG+0015H. Assume for this example that ORG=0000H, i.e. that the user wishes to modify the low memory version. From the Monitor, type

```
>DU 15 (RETURN)
```

and the Sorcerer will respond with

```
0015:  09
```

This confirms that the byte at 0015H is 09H. To change the byte to 1BH which represents the ESC key or RUN/STOP key, type

>EN 15 (RETURN)

and the Sorcerer will respond with

0015: _

Enter the following response

1B / (RETURN)

and the byte 1B will now be located at address 0015H. The / is necessary to exit the Monitor ENTER command.

1. PARAMETER CHANGES. The user should read and follow the directions given in discussing the PA command.

2. SET UP FREQUENTLY USED FILES. Using the Text Editor the user may set up frequently used files and then save them on cassette along with the Smart Terminal program. If any file such as the ID used with The Source should require CTRL characters, consult the section on ENTERING CTRL CHARACTERS INTO FILES for a description of how to do this.

3. TAB SETTINGS FOR THE TEXT EDITOR. The user should change the default settings for the TABS in the Text Editor to the settings he prefers. This may done by following the procedure discussed in the section on the TEXT EDITOR.

4. CTRL I . The CTRL I keypress is used to exit the communications mode. Thus a CTRL I, which is represented by the byte 09H, cannot be sent out the communications port by means of the keyboard. If the user wishes to use a different key to exit the communications mode, he may do so by changing the byte located at the address ORG+0015H in the terminal program.

didn't work

5. COMMUNICATIONS BAUD RATE. The baud rate with which the user may communicate through the modem is set at 300 baud. This may be changed to 1200 baud by changing the byte located at the address ORG+0016H in the terminal program from 80H to C0H.

6. SEND DELAY TIME. Although the terminal program transmits data to the modem at 300 baud, there is a delay between bytes sent out using the SE or GRAPHIC N commands. This delay has been inserted to permit the receiving computer time to finish polling all the terminals that are on line. If the user wishes to slow down the ratd at which the bytes are sent because the receiving computer is losing some of the data, he may do so as follows. The byte at memory location ORG+0018H is originally set at the value 20H. Increasing this value to 40H, will cause a significantly slower rate of transmission. Decreasing the byte to 10H will result in almost no delay (greater than the two stop bits that are sent following each byte of data).

7. SENDING A CTRL S WHEN OUT OF RAM. When the terminal program is in the communications mode and is STORING all received and typed data into a file, the program checks to see if memory is full. If it is (see the description of the ST command), one of the actions taken is to send out a CTRL S (in ASCII, 13H). This causes The Source to pause. If this is unsuitable for your application, you may change the byte located at memory address ORG+001BH of the terminal program.

8. UART BYTE. This byte is sent out to the port FDH whenever the terminal program enters the communications mode. It sets up the UART to control such communications characteristics as bits per character, number of stop bits, and parity. The lower five bits of this byte can be set by the last five parameters set with the PA command. This byte may also be changed by changing the byte located in memory at ORG+0019H.

9. SEND MASK. The SEND and GRAPHIC N routines strip off the high bit of each byte that is transmitted. This is done by ANDing each byte with 7FH. Stripping the high bit is sometimes required because when ASCII data is received, the high bit is often set for parity, and depending on which RECEIVE routine is used (see (10) below), the Smart Terminal program may store the data in memory as it is received. By stripping the high bit, the program permits these received files to be retransmitted without distortion. If the user wishes to transmit files (such as machine code programs) without stripping the high bit, he may change the SEND MASK byte located at ORG+0040H from 7FH to FFH.

10. SEND INTERRUPTION. Following each CARRIAGE RETURN during a SEND operation, the program jumps to the dummy subroutine located at ORG+46H. If the user wishes to delay or check for a signal sent by the host computer, he may use the three bytes at ORG+46H to jump to his own subroutine. The user subroutine must end with a RET.

11. RECEIVE ROUTINES. The Smart Terminal program has two built-in RECEIVE routines for receiving data from the communications port. The program comes to the user with the RECEIVE routine designed to do the following:

a. The high bit of each received byte is stripped off.
b. If the resulting received byte is equal to 7FH,00H, or 11H, the byte is ignored.

This routine, which we shall call RECEV1, has been installed because a number of host computers send these bytes as part of a protocol. They are not used by the Smart Terminal program, and can cause trouble. For example, the byte 11H causes the cursor to move to home.

The second RECEIVE routine, called RECEV2, within the Smart Smart Terminal does not alter the data received prior to sending to the VIDEO routine or the STORE routine. The VIDEO routine always masks off the high bit prior to display, but the STORE routine, if active, stores data exactly as it is input from the RECEIVE routine.

The user may easily modify the RECEIVE routine in two different ways. One way to alter it is to use the second RECEIVE routine. This must be done to receive machine code programs, for example. To do this, alter the JUMP instruction located at the RECEIVE wormhole ORG+000EH from C3 D6 XX to C3 F1 XX where XX depends on the location of the Smart

Terminal program. In any case the byte represented by XX need not be altered.

The second way the RECEIVE routine may be altered is to modify the bytes which RECEV1 ignores. At memory location ORG+49H is a table of eight bytes that can be set up to be ignored by RECEV1. Currently, the first three of these bytes are 7FH,00H, and 11H. The rest are 00H. If the user wishes to change this list, he can do so as follows. The user should first decide how many characters he wishes the RECEIVE routine to ignore. If this number is zero, he should use RECEV2 described above. The user should list the bytes to be ignored starting at address ORG+0049H. This list must not exceed eight. Then the user should change the byte at ORG+00E3H from 03 to the desired number of bytes to be ignored by the RECEIVE routine.

12. CR'S TO WORD PROCESSOR. The terminal program is configured to send CARRIAGE RETURNS to the Word Processor during transfer of a file. To eliminate the transfer of these CR's, change the byte at ORG+41H from 0DH to 00H.

13. HIGH BIT MASKED IN BASIC FILES. In transferring a file from the terminal program to BASIC, the high bit is stripped by masking each byte transferred with 7FH. For certain Sorcerer BASIC programs that contain graphics, this may be undesirable. To avoid stripping the high bit during transfer of a file from the terminal program to BASIC, the user must change the byte located at ORG+42H from 7FH to FFH.

14. LOCATION OF FILES. The user may locate file space anywhere in memory that he chooses provided that file space does not intersect the terminal program itself. To change the location of the beginning file addresses, be sure that all files are killed. Then set both the beginning and end addresses of file 1 to the desired starting address. The location of the beginning address for file 1 is at ORG+001CH and the location of the ending address of file 1 is at ORG+001EH. Thus, to start all files at 2000H, the user should enter 00 20 00 20 at the memory location ORG+001CH.

SAVING YOUR CUSTOMIZED SMART TERMINAL PROGRAM ON CASSETTE

LOW MEMORY VERSION

After you set up any files you wish to save with your program and noted the highest address in any of the files, and after you have customized your program to your needs by modifying the program parameters, you will wish to save the program on cassette. To do this enter the internal processing mode and type MO (RETURN). This will put you in the Sorcerer Monitor and the ">" prompt will appear. Ready your cassette and type

SA SMART 0 XXXX

where XXXX is the highest ending address of any file you wish to save. Now press the RECORD button on the cassette and hit RETURN. If you are saving at 1200 baud, the program should be saved in little more than one minute.

To re-enter the program after saving on cassette, type

GO 0 (RETURN)

The files present before saving the program will still be available.

HIGH MEMORY VERSIONS

The high memory versions of the Smart Terminal program differs from the low memory version in that they contain capabilities to transfer a file to and from BASIC or the Word Processor. However, it is not practical to save files with the high memory version. Therefore, after a high memory version has been satisfactorily customized, the user should follow the steps above to enter the Sorcerer Monitor and the SA command should be preceded by the command

SET X=ORG

and the save command should read

SA QSnn ORG END

where ORG is the hexadecimal starting address of the high memory program, END is the hexadecimal ending address of the program, and nn is the number of K of RAM that your Sorcerer possesses. END is calculated by adding the hex value of BLCK to the starting address which are both listed when the program is loaded. By inserting the SET X command before saving, you will able to load the customized version with an LOG command. To re-enter the program after saving on cassette, type

GO ORG (RETURN)

MEMORY ORGANIZATION

The purpose of this section is to provide the user with enough information so that he can easily interface his own routines to the terminal program. The user may also use this information to recover "lost" files or to merge two or more files.

The following table is a memory map of the terminal program. Where the term HIMEM appears, it refers to the highest address in user RAM. The value of HIMEM is 1FFFH, 3FFFH, 7FFFH, or BFFFH for an 8K, 16K, 32K, or 48K Sorcerer respectively.

MEMORY BOUNDARIES	TERMINAL PROGRAM USAGE
HIMEM-FFH to HIMEM	Stack and Monitor Workarea
HIMEM-1BFH to HIMEM-100H	Terminal program buffers
1300H	Beginning of file space
ORG to ORG+1407H	High memory version of terminal program
0000H to 12B7H	Low memory version of terminal program

The following table defines the values for ORG as a function of the version of the terminal program.

ORG	TERMINAL PROGRAM VERSION
0000H	Low memory version
2A00H	16K high memory version
6A00H	32K high memory version
AA00H	48K high memory version

F1		BEGIN	END +1
	1	ORG+001C,1D	ORG+001E,1F
	2	+0020,21	+0022,23
	3	+0024,25	+0026,27
	4	+0028,29	+002A,2B
	5	+002C,2D	+002E,2F
	6	+0030,31	+0032,33
	7	+0034,35	+0036,37
	8	+0038,39	+003A,3B
	9	+003C,3D	+003E,3F

The file boundaries are located in a 36 byte area of memory starting at address ORG+001CH. Memory locations ORG+001CH and ORG+001DH contain the low and high bytes respectively of the beginning address of file 1. Memory locations ORG+001EH and ORG+001FH contain the low and high bytes respectively of the ending address + 1 of file 1. The next four bytes in memory starting at ORG+0020H contain the beginning and ending addresses of file 2 and so on.

If the user wishes to recover part of a file that consistently loads with a CRC error, he may use the Monitor DU command to inspect memory and determine the end of the file that loads successfully. Then the user may modify the end address of one of the files to include the partially loaded file.

Similarly if the user wishes to merge two files, he may do so by manually modifying the addresses of the file boundaries. The user is cautioned that modifying file boundaries may cause unforeseen results. In particular, if the file boundaries overlap, unpredictable consequences may result. A file may be "killed" by setting its beginning and ending addresses equal.

If all files are empty, the beginning of file space may be altered simply by setting the beginning and ending addresses of file 1 to the desired location. This method can be used to make more room for user routines in the low memory version.

To make more room for user routines below the origin of the high memory versions of the terminal program, the user may alter the top of file space. This is done by altering the bytes at memory location ORG+0086H and ORG+0087H.

These two bytes set the highest address in RAM for user files.

There are six "wormholes" near the beginning of the terminal program that are jump instructions to key terminal program routines. The table below contains the addresses of each of these six wormholes together with a brief description of the function of each of the program routines to which they point.

ADDRESS	FUNCTION
ORG + 0002H	Printer routine
ORG + 0005H	Video character out and reformatting routine
ORG + 0008H	Keyboard character in routine
ORG + 000BH	Serial send routine
ORG + 000EH	Serial receive routine
ORG + 0043H	Store comm in file routine

Each of the first five routines uses register A to send or receive, and all six are terminated with a RET (Z80 instruction C9H). The video character out routine must place the listed byte (initially in register A) in register C upon return. This will make the video out routine compatible with the store communications in file routine which has its input in register C.

To use one of these wormholes, place a jump instruction at the listed address. The jump instruction should jump to the user routine located in free space and the user routine should terminate with a RET.

BJK version
To suppress generation of a LF with each CR from WP go to ↓
ORIG + ØC and change Ø7 to Ø4. (ORG + ØB, ØC, ØD should then read C3 Ø4 6B).

ACKNOWLEDGEMENTS

The author wishes to express his appreciation to the many users who have offered suggestions for improving the Smart Terminal program. This help has led to the incorporation of several features that should prove useful and to the elimination of a number of flaws and shortcomings. Particularly helpful in the development of this program were Dennis Babin and Dave Landram.

ZIM

Bud Board 561-6311

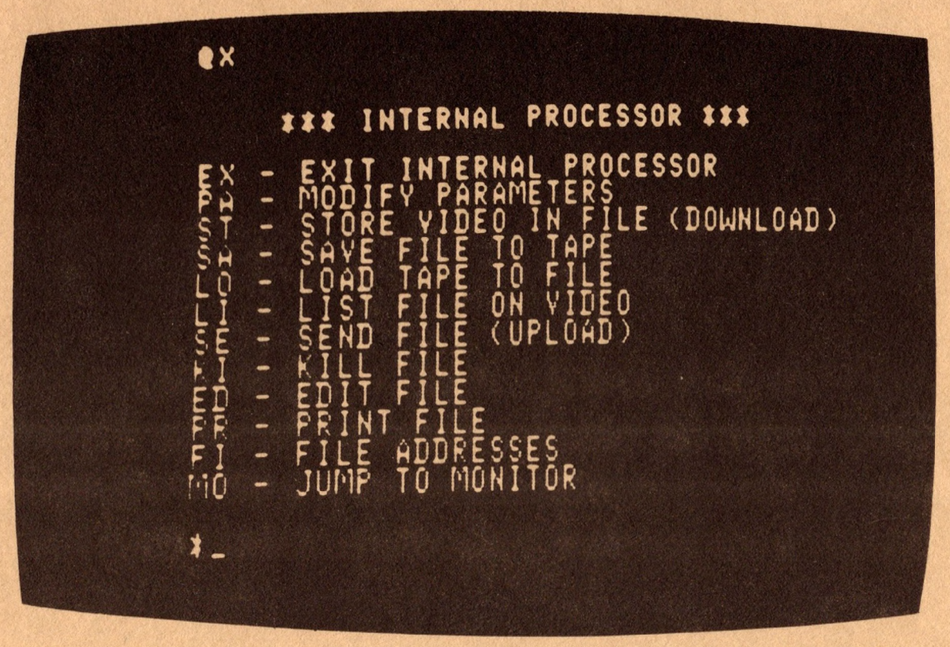
) Start

2 Stop

Even parity ?

Deep FC

Stty - modes



QS SMART TERMINAL

A program to communicate easily and efficiently with other computers.

For the Exidy Sorcerer

By Bob Pierce

A product of QS QUALITY SOFTWARE

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QS SMART TERMINAL

Convert your Sorcerer to a smart terminal. Used with a modem, this program permits you to communicate easily and efficiently with other computers including The Source. Savings in connect time alone should make this program a tremendous bargain.

The program formats incoming data that exceeds the 64 characters per line available for the Sorcerer video. Words are rarely broken by a carriage return.

Incoming data may be stored in any one of nine files in RAM. Files, including programs, may be saved to or loaded from cassette, listed on the video, printed, transmitted out through your modem, or edited with an onboard text editor.

The onboard text editor contains commands to delete and insert lines, to find character strings, and to change character strings.

The QS Smart Terminal program provides for easy adaptation to serial or parallel printers, selection of 300 or 1200 baud rates for cassette or serial printer operation, and selection of communications parameters such as parity, stop bits, and word length.

The program comes with thorough documentation including instructions on how you can insert your own printer driver routine.

QS QUALITY SOFTWARE
6660 Reseda Blvd., Suite 202, Reseda, CA 91335
(213) 344-6599