

# Host Mode

The Softerm Host mode provides a general-purpose, unattended, remote access mode which can be used interactively by other terminals and systems. This is similar to an electronic BBS.

## **Capabilities**

- o Automatically answer incoming calls (with optional password protection provided by the SOFTERM.PWD file created with the PWDEDIT utility program)
- o Send and receive files using any protocol supported by Softerm
- o Function as a server for the Kermit-Server and Softrans file transfer protocols (meaning that a command to initiate the file transfer is not required)
- o Process DOS-type commands, such as: DIR, TYPE, DELETE, RENAME
- o Process Script files automatically or on demand

## **Enter Host Mode**

Host mode is initiated by running the HOST() command from a Script file, such as:

**> HOST (20,30,hangup,yes,'automenu.scr')**

**Note:** Host mode will go into effect with the current Speed, Data Bits, Stop Bits, Parity and Duplex parameters.

### **Operation**

When Host mode is in effect, Softerm will wait for a connection to be established. If the optional logon processing is specified, a caller must supply a recognized username and password before Softerm displays the **READY** prompt and responds to valid commands.

Once initiated, Softerm will wait for a connection to be established if one is not already present, display a READY message after processing an optional logon, and wait for requests received through remote terminal interaction, or the Softrans or Kermit protocols.

A system in the Host mode functions in a passive manner, responding only to requests from the calling terminal or system. Host mode allows completely unattended operation. If logging is active, all commands processed, including error messages, will be recorded in the log file.

The **TIMEOUT** assignable system variable (in the Script language) does not affect file transfer operations initiated from the Host mode which has fixed or profiled timeout and retry parameters for all protocols supported. The Softrans and Kermit protocols and Xmodem receive operations use a 10-second timeout interval and allow for 5 retries. Xmodem send operations will timeout after approximately 70 seconds. The Character protocol uses a 30-second timeout on transmit and a 60-second timeout on receive.

The Host mode also provides an option to automatically run a script file on connecting after a successful login. This can be used to display user welcome messages, instructions on how to perform various user-defined operations, or a security automatic callback capability.

**Important:** To provide caller interaction, such as displaying a menu and waiting for a key, you will need to use the **XMIT:WAIT** Script file command. To simply display a welcome message, you could use the file transfer **SEND** command using Character protocol.

The **CALL** command is provided to run script files interactively when requested by remote users. The **TERMINATE** command lets a remote user terminate the Host mode to interact directly with the script file which initiated the Host mode.

Once the Host mode is initiated, it normally will remain active until terminated locally.

## Optional Logon and Password Processing

Softerm provides an optional logon security feature to restrict access to the Host mode. It includes the capability to assign a default directory to each user, and to restrict the type of commands each caller can process while using the Host mode.

To implement this feature, a special password file called **SOFTERM.PWD** must be created in the same directory as Softerm's system read files. The password file is created with **PWDEDIT.EXE**, a GUI utility program supplied with Softerm Modular.

**Note:** PWDEDIT is documented completely through the online Help system. Just press F1 or select the Help pushbutton.

SOFTERM.PWD is a fixed-format ASCII file that appears similar to the following if the DOS TYPE command is used:

```
C:\SOFTERM>TYPE SOFTERM.PWD
Jones, John      M_Ambrosius
<
```

Although access restrictions won't appear, names and passwords do.

Upper-case and lower-case characters, except spaces, are valid in the user name and password fields and must be matched exactly when entered by a remote user. Each user name must be unique. Multiple entries with the same user name are not valid and only the first occurrence can be matched.

When a remote user connects to a system in Host mode, and a SOFTERM.PWD file is found in the system directory, the following logon sequence is processed:

<b>Host displays</b>	User types
<b>Login</b>	Username followed by CR
<b>Password</b>	Password followed by CR (echo is suppressed during entry of the password)
<b>Ready</b>	Any valid host mode command

**Important:** Username and Password are case sensitive. For example, if the Username was created as SETH, it must be entered in upper- case characters.

If an error is made when entering the Username or Password, press Esc to cancel the entry and repeat the prompt. If either the Username or Password is invalid when entered, the logon sequence will be repeated. After four unsuccessful attempts to logon, a disconnect will occur.

Once a successful logon has been completed, any valid Host mode command or Softrans and Kermit file transfer can be processed subject to access restrictions indicated in the password file for the user. After a Host mode session is complete, the remote user can use the **BYE** command to terminate and disconnect, or the **LOGOUT** command to terminate and restart processing without disconnecting.

## **Host Mode Interactive Commands**

The Host mode responds to interactive commands which are entered in the terminal communications mode at the remote system or terminal. The READY prompt indicates it is ready to receive a command.

The host will respond to **Ctrl S** requests to stop the display of data and **Ctrl Q** requests to resume the display of data (such as when a file is TYPEd).

If you wish to cancel the entire command line, just press Esc. Host mode will "beep", and display a new READY prompt for any command not recognized. To cancel the display of a typed file or directory list, press Ctrl C. If you press Ctrl S to stop the display of a typed file or directory list, the Host mode will timeout after 30 seconds and redisplay the READY prompt.

Many of the Host mode interactive commands require arguments. The command and argument must be separated by at least one space.

**Important:** All commands are issued by the caller and tell Host mode to do something. For instance, to send a file, the caller must instruct Host mode to prepare to receive a file.

### **Exceptions to the Rule**

Because Host mode acts as a server for the Softrans and Kermit-Server file transfer protocols, there are no commands to send and receive using those protocols. The caller simply needs to initiate the file transfer operation.

Unless stated otherwise, the following will be true for all operations:

1. If no path is specified, file transfers will use the current directory.
2. If the optional Host mode logon processing is in effect, the command is restricted by the access restriction code and the path specified for the file is validated for the current username.
3. Unless supported by the protocol, wildcard characters ( \* and ? ) should not be used in the Source field on SEND operations.

## **Interactive Commands**

The following commands are entered by the caller to the Host system:

### **ACCEPT [-,&] d:\path\filename**

Used by the caller to send a file using character protocol. The filename argument specifies the name of the file to receive the data.

If the very first character of the path\filename is a hyphen (-), the file will replace a file of the same name on the Host system. Example:

```
ACCEPT -C:\SOFTHOST\TEST.TXT
```

If the very first character of the path/filename is an ampersand (&), the file will append to a file of the same name on the Host system. Example:

```
ACCEPT &C:\SOFTHOST\TEST.TXT
```

If a file of the same name exists and neither special character is used, the transfer will fail.

The host will display a **GO>** prompt when the system is ready to accept data. Characters can be typed by the caller or a file can be transferred using character protocol.

The ACCEPT command is terminated by a **Ctrl Z** character or a 60-second timeout.

### **BYE**

Terminate the current Host mode session and dis-connect.

### **CALL d:\path\filename 1='string1'...5='string5'**

Run a script file and then return to the Host mode. If logon processing is in effect, all subsequent commands will observe the access restrictions for the current user.

**Note:** We recommend that the CALLED script file does not end with the **CONVERSE** command. This command places the Host Mode machine in Online terminal emulation mode with unpredictable results.

The command line may include optional switches to specify the contents of the Script Variables **SV1-SV5** used in the script file as follows:

#### **Switch    Function**

1='string'    Replaces SV1 in script file

. . . . .

5='string'    Replaces SV5 in script file

**Note:** The quote marks are optional and would be necessary only if the string contained embedded spaces.

Up to 5 strings can be specified which are substituted for dummy arguments in the script file when the script file is run. Each string may be up to 64 characters in length. A dummy argument is defined in the script file as SV followed by a number

from 1 through 5. Thus, wherever SV1 occurs in the script file, it will be replaced by the string defined for the SV1= switch in the CALL command line.

**Note:** The maximum length of the command line is restricted to 128 characters.

#### **CD d:\path**

Change the current default directory used for file names specified in file transfer operations used in the Host mode. The new default directory, including a drive specifier and directory path, is entered as an argument on the command line. If the optional Host mode logon processing is in effect, the command is restricted by the access restriction code for the current username.

#### **CURRENT**

Display the default directory for file transfer operations used in the Host mode. It initially is set to the current default directory when the HOST() command is processed, or to the subdirectory in the password file for the current user.

#### **DELETE d:\path\filename**

Remove an unwanted file from disk. If no drive or directory path is entered, the file is deleted from the current directory. You can use the wildcard characters ? and \* in the filename and in the extension.

This command can be abbreviated to DEL.

#### **DIR d:\path\filename**

The DIR command displays a list of the filenames in a specified directory. If no drive or directory path is specified, all files in the current default directory will be listed. The wildcard characters \* and ? may be used in the filename and extension parameters to list a subset of the files in the specified directory.

#### **ECHO <On or Off>**

This command turns echo mode for the ACCEPT command on or off. If the argument is specified as ON, characters transmitted to the host using an ACCEPT command will be echoed back to the remote terminal or system for visual confirmation. If the argument is specified as OFF, characters received are not echoed. The echo mode defaults to ON.

#### **HELP**

If the HOSTMODE.HLP file is available, the HELP command will display information about using the host mode and a list of commands.

#### **KSEND d:\path\filename**

Prepare the Host system to send a file using the Kermit protocol. This command can be used by remote Kermit programs unable to access a Kermit server. The command is equivalent to a Kermit protocol SEND command. The wildcard characters \* and ? may be used in the filename or extension to allow multiple files to be sent using a single command.

**LF <On or Off>**

This command turns the line feed mode for the TYPE and ACCEPT Host mode commands on or off. If the argument is specified as ON, the host will add line feed characters after carriage returns in transmitted or echoed data. If the argument is specified as OFF, no line feed characters are added. The line feed mode initially is set to ON.

**LOGOUT**

Terminate the current Host mode session and restart with logon processing without a disconnect.

**RECEIVE <profile\_name or protocol\_name> filename**

Prepare the Host system to receive the designated file using the specified File Transfer profile or File Transfer Protocol. If a profile and a protocol share the same name, the command will use the profile.

**Note:** This method lets you use the Honeywell- Kermit protocol with the desired GCOS Mapping setting by using the appropriate profile.

**RENAME d:\path\filename1 d:\path\filename2**

Change the name of a file in the current or a specified directory. The first file name entered with optional drive and path specification is the file to be renamed, and the second file name is the new name. A drive or path specification is not allowed in the new filename. The ? and \* wildcard characters are allowed.

This command can be abbreviated to REN.

**SEND <profile\_name or protocol\_name> filename**

Prepare the Host system to send the designated file using the specified File Transfer profile or File Transfer Protocol. If a profile and a protocol share the same name, the command will use the profile.

**Note:** This method lets you use the Honeywell- Kermit protocol with the desired GCOS Mapping setting by using the appropriate profile.

**TERMINATE**

Terminate Host mode processing to interact directly with the script file from which the HOST() command was started. If the optional Host mode logon processing is in effect, the command is restricted by the access restriction code.

**TYPE d:\path\filename**

Cause a file to be typed or displayed by the Host system. The command is equivalent to a character protocol SEND command. The display can be cancelled by entering Ctrl C.

**XRCV d:\path\filename**

Prepare the Host system to receive the designated file using the Xmodem protocol. The filename specifies the file to receive the data.

**Note:** The caller may send the file using Xmodem, Xmodem-CRC or Xmodem(Large Block) and the Host system will detect and adjust for the error correction method and block size.

**XSEND d:\path\filename**

Prepare the Host system to send the designated file using the Xmodem protocol.

**X1KSEND d:\path\filename**

Prepare the Host system to send the designated file using the Xmodem (Large Block) protocol.

**YGRCV [d:\path\filename]**

Prepare the Host system to receive the designated file using the Ymodem-G protocol. The wildcard characters \* and ? may be used in the filename or extension to allow multiple files to be transferred using a single command.

If the optional drive, path and file name are not specified, the command will use the data in the protocol header block.

**YRCV [d:\path\filename]**

Prepare the Host system to receive the designated file using the Ymodem protocol. The wildcard characters \* and ? may be used in the filename or extension to allow multiple files to be transferred using a single command.

If the optional drive, path and file name are not specified, the command will use the data in the protocol header block.

**Note:** The caller may send the file using Ymodem or Ymodem (Large Block) and the Host system will detect and adjust for the block size.

**YSEND d:\path\filename**

Prepare the Host system to send the designated file using the Ymodem protocol. The wildcard characters \* and ? may be used in the filename or extension to allow multiple files to be transferred using a single command.

**Note:** The caller may specify Ymodem-G to receive the file and the Host system will detect and adjust for the block size and transmission method.

**Y1KSEND d:\path\filename**

Prepare the Host system to send the designated file using the Ymodem (Large Block) protocol. The wildcard characters \* and ? may be used in the filename or extension to allow multiple files to be transferred using a single command.

**Note:** The caller may specify Ymodem-G to receive the file and the Host system will detect and adjust for the block size and transmission method.

**ZSEND d:\path\filename**

Prepare the Host system to send the designated file using the Zmodem protocol. The wildcard characters \* and ? may be used in the filename or extension to allow multiple files to be transferred using a single command.

## **Softerm-to-Softerm File Transfers**

System-to-system file transfers using Softerm are accomplished by placing a port on one of the two systems in the Host mode using the HOST() command. The other system then can establish a connection with the agreed upon serial parameters. Once connected, the system in Host mode will transmit the READY message to the other system.

The system in Host mode will respond to commands entered by the remote system through terminal interaction, or to Softrans and Kermit file transfer commands SEND and RECEIVE entered from the File Menu or script file processing.