

**Using Red Ryder® at ASU**

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## 1. INTRODUCTION

ASU Computing Services has created a series of compiled procedures that facilitate the use of the commercial communications program **Red Ryder**<sup>®</sup> with ASU Computing Services systems. This series of procedures is called the *ASU Red Ryder Shell*. To use the *ASU Red Ryder Shell* you will need **Red Ryder**<sup>®</sup> version 10.0 or greater. **Red Ryder**<sup>®</sup> includes the KERMIT file transfer protocol which is supported by most of the ASU systems. **Red Ryder**<sup>®</sup> is the recommended terminal program for **Apple**<sup>®</sup> **Macintosh**<sup>™</sup> microcomputers at ASU. The *ASU Red Ryder Shell* is provided for free from COMPASS (the Computing Assistance Center, located in Moeur 108).

This document will explain the use of **Red Ryder**<sup>®</sup> in conjunction with the *ASU Red Ryder Shell*. It is not intended to be a comprehensive manual for **Red Ryder**<sup>®</sup>. Please refer to the manual included with **Red Ryder**<sup>®</sup> for complete details on the program. This procedure along with several others included with it, were written by ASU Computing Services, Customer Support. You must purchase **Red Ryder**<sup>®</sup> in order to use the *ASU Red Ryder Shell*.

**To access ASU's systems, you will also need a modem or a hardwired connection to the ACSS broadband network. For additional help in using this procedure please see section 8 on FURTHER ASSISTANCE.**

## 2. ASU RED RYDER SHELL DISTRIBUTION INFORMATION

Although the *ASU Red Ryder Shell* is free and available to anyone who requests it, it may not be altered and then redistributed. Permission is granted to alter it for your own use. To receive the *ASU Red Ryder Shell* you need to bring in a formatted 3.5" diskette to COMPASS. If you would like the source code for the procedures, please bring in a second diskette and request the *ASU Red Ryder Shell Source* disk from COMPASS.

Instructions for altering the *ASU Red Ryder Shell* are contained in the **Red Ryder**<sup>®</sup> manual that comes with the program. Please read the manual carefully if you try to do this. ASU Computing Services will update the *ASU Red Ryder Shell* as needed due to changes in Computing Services systems, but will not assist in customizing it for you.

### 3. INITIALIZING THE ASU RED RYDER SHELL

In order to use the *ASU Red Ryder Shell*, you must set up a work disk, or create a new folder if you are using a hard disk. The following sections will guide you through this process.

#### 3.1 Copying the ASU Red Ryder Shell to a Two Floppy System

To install the *ASU Red Ryder Shell* on a floppy disk, you should first start your **Macintosh™** with your system disk. You first need to copy the **Red Ryder®** program from your original diskette to your *ASU Red Ryder Shell* diskette.

The **Red Ryder®** program icon looks like this:



Now you are setup to run the *ASU Red Ryder Shell* from this diskette. As a safety precaution, you should create a backup copy of this diskette.

#### 3.2 Copying the ASU Red Ryder Shell to a Hard Disk System

To install the *ASU Red Ryder Shell* on your hard disk, you should first create a new folder for **Red Ryder®**. You then should copy the **Red Ryder®** program from your original diskette to this folder.

The **Red Ryder®** program icon looks like this:



Next copy all the files from your *ASU Red Ryder Shell* diskette to this folder.

### 4. BEGINNING A TERMINAL SESSION

This section will acquaint you with the operation of the *ASU Red Ryder Shell*.

#### 4.1 Starting the ASU Red Ryder Shell

To start the Shell, open either the folder or the disk icon that you created in the last section. Double click on the *ASU Red Ryder Shell* icon to launch it. You will see the following screen:

**Provided by ASU Computing Services**

**please select one of the following host computers...**

- ☒ **Academic IBM Full-Screen (CMS & WYLBUR)**
- ☐ **Administrative IBM (PROFS, CUFS, FOCUS, & SIS)**
- ☐ **Academic VAX 8600 (VMS)**
- ☐ **WYLBUR Line Mode (Academic IBM)**
- ☐ **ASU Library Online Catalog**
- ☐ **ASU Bulletin Board Service**

**Current settings are:**  
**2400BPS, MODEM PORT, TOUCHTONE, 965 7001**

**Go Ahead**

**Change Settings**



**Quit Red Ryder**

There are three areas on this screen. The first area is the list of computer systems to chose from. The second area shows the current terminal settings. The third area has three buttons showing your choices.

You should first look at the current settings. This shows you how **Red Ryder®** is currently set for communications. If these don't match your situation then you will need to click on the middle button, labeled "Change Settings", to correct the current settings.

#### 4.2 Changing the Terminal Settings

After clicking on the "Change Settings" button from the selection screen, you will see the following screen:

<b>Speed</b> <input type="radio"/> <b>300 BPS</b> <input type="radio"/> <b>1200 BPS</b> <input checked="" type="radio"/> <b>2400 BPS</b> <input type="radio"/> <b>9600 BPS</b>	<b>Port</b> <input checked="" type="radio"/>  <input type="radio"/> 	<b>Connection Type</b> <input type="radio"/> <b>Hardwired</b> <input checked="" type="radio"/> <b>TouchTone Dial</b> <input type="radio"/> <b>Pulse Dial</b>
		<b>Number to Dial</b> <span style="border: 1px solid black; padding: 2px 10px;"><b>965-7001</b></span>
<div style="border: 2px solid black; padding: 5px; display: inline-block;"><b>OK</b></div>		<div style="border: 1px solid black; padding: 5px; display: inline-block;"><b>CANCEL</b></div>

Here you should select the speed of your modem, or 9600 BPS if you have a hardwired broadband connection. Select the port that your cable is connected to, either the modem port with the phone icon, or the printer port with the printer icon. Then select the type of connection you are going to make, either hardwired broadband, touchtone dial-in, or pulse dial-in. Finally, you should enter the phone number you wish to dial if you are going to dial-in. The numbers for the available systems are as follows:

<b>SYSTEM</b>	<b>SPEEDS</b>	<b>PHONE NUMBERS</b>
<b>ASU ACSS Broadband</b> (Full-screen Academic CMS and WYLBUR, ASU Library Online Catalog, Academic VAX VMS)	2400, 1200, and 300 BPS 965-7002 965-7003 965-7004 965-7005 931-5011 931-0808 (westside)	965-7001      (westside)
<b>WYLBUR Linemode</b>	1200, and 300 BPS 931-0999 (westside)	965-7812
<b>ASU Bulletin Board Service</b>	2400, 1200, and 300 BPS	965-5670

If you are hardwired, you should delete the number in this box. After completing these steps, either click on the "OK" box if you want to keep the changes you have made, or click in the "CANCEL" box if you want the old settings kept.

#### 4.3 Connecting to a Host

When the current settings are correct, you are ready to select the computer host you wish to connect to. Just click in the circle next to the host you want. A black dot will appear in the circle and disappear from where it was. Now you should click in the "Go Ahead" button to start the procedures to connect to the host.

The program will then open a new window for your terminal session. You may see some codes typed on the screen. You must wait for the automatic procedure to finish. If some problem occurs that stops the procedure, try clicking on the "DONE" macro button on the top of the screen. If the procedure doesn't continue or you see the phrase "No Carrier", then click on the "Host Menu" button, and select your host again.

#### 5. ENDING A TERMINAL SESSION

To disconnect from the host computer that you have been communicating with, you need to do one of two things. If you are hardwired, you should click on the macro button labeled "DONE". If you have dialed-in, you should first click on the "DONE" macro button, then click on the "HANG UP" macro button.

To return to the menu, you should click on the "Host Menu" macro button. At the host menu, you may select another host and click on "Go Ahead" to connect to that host, or you can click the "Quit Red Ryder" button to quit the program.

## 6. EDITING THE MACRO KEYS

When you are in a terminal session, there is an area above the terminal window that contains buttons. This area is called the macro status bar and these buttons are macro keys. They allow you to click on a button to have the computer send a string of characters to the host you are connected to. As mentioned above, three of these have been setup for you, i.e. "DONE", "HANG UP", and "Host Menu". Ten of these will fit on the screen at any one time, but a total of thirty can be setup. You should refer to "The Macro Status Bar" chapter in your **Red Ryder®** to tell you how to edit these to add more convenience to the program.

## 7. TRANSFERRING FILES

This section will explain how to transfer files from your **Macintosh™** to any of the Computing Services machines and vice-versa.

**Red Ryder®** offers several file transfer options. The two primarily used at ASU are KERMIT and XMODEM. KERMIT is used with the VAX and CMS, while XMODEM is used on the ASU Bulletin Board.

ASU Computing Services has installed KERMIT on the IBM CMS and VAX VMS systems, however there is no KERMIT available for WYLBUR. Therefore the only file transfers to WYLBUR are through line-mode WYLBUR without error checking. If you have a CMS account, you should transfer your files to CMS with KERMIT error checking and then send them to WYLBUR internally.

### 7.1 CMS and VAX

File transfers to both the CMS and VAX systems are very similar and will be covered together. The major difference between the two is in the file name specifications. The following example will show you what is required when the instructions list "filespec".

Only "filename" and "filetype" are required in the specification, the rest of the parameters are optional. The **Macintosh™** will use the standard file dialog box to select files or name files.

IBM CMS :     **filename filetype filemode**  
                  example:       MYFILE FORTRAN A

VAX VMS :     **node::device:[directory]filename.filetype;version**  
                  example:       ACVAX: :DISK1:[ACAD.ATABC]MYFILE.FORTRAN;2

## Sending Files To Host (UPLOADING)

To send files to either IBM CMS or VAX VMS, you must first instruct the host that it should be ready to receive the file with its version of KERMIT. To do this you should type the following command: ("[]" means the item enclosed in brackets is optional):

### **KERMIT RECEIVE [filespec]**

where "filespec" is the host file specification. You can abbreviate the keyword "RECEIVE" to "REC".

At this point you should pull down the "File" menu and select "Send File - Kermit". This will bring up the standard dialog box for you to select the file you wish to send.

You will now see a window showing the progress of the transfer. When the transfer is complete, you must click the mouse to return to your terminal session.

The following summarizes the steps involved:

- |    |  |
|----|--|
| 1) | <b><u>KERMIT REC CMSFILE DATA&lt;return&gt;</u></b><br><b>{ wait for message on screen }</b>   |
| 2) | <b>Select "Send File - Kermit" from the "File" menu</b>  |
| 3) | <b>Choose the file to send from the dialog box</b><br><b>{ wait for transfer to complete }</b> |
| 4) | <b>Click mouse to return to terminal session</b>   |

## Receiving Files From Host (DOWNLOADING)

To receive files from either IBM CMS or VAX VMS, you must first instruct the host that it should send the file with its version of KERMIT. To do this you should type the following command: ("[]" means the item enclosed in brackets is optional):

### **KERMIT SEND [filespec]**

where "filespec" is the host file specification.

At this point you should pull down the "File" menu and select "Receive File - Kermit". This will bring up the standard dialog box for you to name the file you are receiving.

You will now see a window showing the progress of the transfer. When the transfer is complete, you must click the mouse to return to your terminal session.

The following summarizes the steps involved:

- |    |   |
|----|---|
| 1) | <b><u>KERMIT SEND CMSFILE DATA&lt;return&gt;</u></b><br><b>{ wait for message on screen }</b> |
| 2) | <b>Select "Receive File - Kermit" from the "File" menu</b>                                    |
| 3) | <b>Name the file to be received</b><br><b>{ wait for transfer to complete }</b>               |
| 4) | <b>Click mouse to return to terminal session</b>  |

## Binary File Transfers

Binary files are files that contain special characters that make the file difficult to transfer, and must be handled in a special way. Executable (program) files and word processing files are examples of binary files. Binary file transfers in KERMIT are done in almost the same way as normal text file transfers, except extra commands must be given. The procedures are listed below:

### Binary Transfer Using IBM CMS:

- 1) **KERMIT <return>**
- 2) Kermit-CMS>**SET FILE BINARY <return>**
- 3) Kermit-CMS>**SEND filespec<return>** -or- **RECEIVE filespec<return>**
- 4) **Select "Receive File - Kermit" from the "File" menu** -or-  
**Select "Send File - Kermit" from the "File" menu**
- 5) **Name the file to be received** -or-  
**Choose the file to send from the dialog box**  
**{ wait for transfer to complete }**
- 6) **Click mouse to return to terminal session**
- 7) Kermit-CMS>**QUIT <return>**

### Binary Transfer Using VAX/VMS:

- 1) **KERMIT <return>**
- 2) Kermit-32>**SET FILE TYPE BINARY <return>**
- 3) Kermit-32>**SEND filespec<return>** -or- **RECEIVE filespec<return>**
- 4) **Select "Receive File - Kermit" from the "File" menu** -or-  
**Select "Send File - Kermit" from the "File" menu**
- 5) **Name the file to be received** -or-  
**Choose the file to send from the dialog box**  
**{ wait for transfer to complete }**
- 6) **Click mouse to return to terminal session**
- 7) Kermit-32>**QUIT <return>**

## 7.2 WYLBUR (MVS)

You cannot do file transfers in full-screen WYLBUR. However, you can do line by line transfers of text files without error checking while using WYLBUR linemode.

**NOTE: ASU Computing Services recommends that whenever possible, you send WYLBUR files to CMS and use KERMIT file transfers between CMS and your microcomputer. Procedures for sending files between WYLBUR and CMS can be found in the write-up entitled "FILE TRANSFER - Transferring Files Between CMS and MVS", which is available in COMPASS.**



Before trying to send or receive text files be sure that two preferences have been selected. The first is for sending text files and is in the "Keyboard Mapping Preferences..." under the "Customize" menu. Make sure that the circle in front of "Carriage return and linefeed" is selected. The second is for receiving text files and is in the "Text File Transfer Preferences..." under the "Customize" menu. Make sure there is a checkmark in front of "Strip control characters from received files". The following is a summary of the commands needed to do text file transfers with WYLBUR linemode.

#### Sending Files To Host (UPLOADING)

- 1) COMMAND? SET LENTH 230<return>
- 2) COMMAND? COLLECT CLEAR UNN<return>
- 3) Select "Send Text File..." from the "File" menu
- 4) Choose the file to send from the dialog box  
    { wait for transfer to complete }
- 5) Click mouse to return to terminal session
- 6) <CTRL/D>
- 7) COMMAND? SAVE #filename<return> -or- SAVE filename NEW<return>

NOTE: The SET LENGTH 230 command can be added to your #LOGON member so that it will execute every time you log on to WYLBUR. The <CTRL/D> indicates that you should hold down the control key and press the D key. On the MAC SE and MAC II keyboards there is a control key, on the earlier keyboards you can choose which key will be used as the control key in "Keyboard Mapping Preferences..." under the "Customize" menu.

#### Receiving Files From Host (DOWNLOADING)

- 1) COMMAND? USE #filename CLE<return>
- 2) Choose "Capture Incoming Data To Text File..." from the "File" menu
- 3) COMMAND? LIST UNN<return>  
    { wait for file listing to complete }
- 4) Choose "End File Capture" from the "File" menu

NOTE: You will need to edit the file on your **Macintosh**<sup>™</sup> when the transfer is completed, because the first line ("LIST UNN") and the last line ("COMMAND?") will also be stored in the **Macintosh**<sup>™</sup> file.

### 7.3 BULLETIN BOARDS

Most bulletin boards, including the ASU Bulletin Board Service operated by Computing Services, do not allow file transfers using the KERMIT protocol. Instead, you must use the XMODEM protocol. To send or receive files from the ASU Bulletin Board Service, first tell the host that you are going to use XMODEM (type "**T X**<return>" at the ASU Bulletin Board prompt). You only have to do this once, the host will remember your choice. The following is a summary of the commands needed to do XMODEM file transfers with the ASU Bulletin Board Service:

#### Sending Files To Host (UPLOADING)

- |    |  |
|----|--|
| 1) | <b>U filespec&lt;return&gt;</b>  |
| 2) | <b>Select "Send File - Kermit" from the "File" menu</b>                                  |
| 3) | <b>Choose the file to send from the dialog box<br/>{ wait for transfer to complete }</b> |
| 4) | <b>Click mouse to return to terminal session</b>   |

#### Receiving Files From Host (DOWNLOADING)

- |    |   |
|----|---|
| 1) | <b>D filespec&lt;return&gt;</b>   |
| 2) | <b>Select "Receive File - Kermit" from the "File" menu</b>                |
| 3) | <b>Name the file to be received<br/>{ wait for transfer to complete }</b> |
| 4) | <b>Click mouse to return to terminal session</b>                          |

#### 8. FURTHER ASSISTANCE

For more details on using **Red Ryder®**, please see the **Red Ryder®** manual. Additional information on using your microcomputer to access the ASU computers can be found at COMPASS. COMPASS is located in Moeur 108. If you have any questions about using the *ASU Red Ryder Shell* with the ASU computers, contact Micro & Communications Consulting at 965-1084.

## APPENDIX A: Keyboard Tables for Red Ryder VT100 Mode

<b>VT100 Keyboard Definition Table for Red Ryder</b>			
<b>KEY NAME</b>	<b>FUNCTION</b>	<b>KEY SEQUENCE</b>	<b>OPTIONAL KEY</b>
CLEAR	Clear the Screen	[Enter] (keypad)	[Esc] O M
RESET	Protocol Converter master reset	Opt/G	
Toggle Insert Mode	Toggle insert/overwrite mode	[.] (keypad)	[Esc] O n
DELETE	Delete the next character	[Backspace]	
Erase EOF	Erase to the end of field	[Esc] [Backspace]	
ENTER	Send screen to HOST	[Return]	
Restore CR/Newline	Make [Return] act like ENTER	[Esc] ` E	
Reverse Newline/CR	Make [Return] act like Newline	[Esc] ` e	
Newline	Move cursor to start of next line	Opt/J	
HOME	Move cursor to home position	Opt/H	
Cursor Up	Move cursor up one line	[Up Arrow]	Opt key w/ mouse
Cursor Down	Move cursor down one line	[Down Arrow]	Opt key w/ mouse
Cursor Right	Move cursor right one character	[Right Arrow]	Opt key w/ mouse
Cursor Left	Move cursor left one character	[Left Arrow]	Opt key w/ mouse
Field Tab	Tab right one field	[Tab]	
Field Back-Tab	Tab left one field	[Esc] [Tab]	
PA1	PA1 definition	[Esc] ,	
PA2	PA2 definition	[Esc] .	
PF1	User-defined function 1	[Clear] (keypad)	[Esc] 1
PF2	User-defined function 2	[=] (keypad)	[Esc] 2
PF3	User-defined function 3	[/] (keypad)	[Esc] 3
PF4	User-defined function 4	[7] (keypad)	[Esc] 4
PF5	User-defined function 5	[8] (keypad)	[Esc] 5
PF6	User-defined function 6	[9] (keypad)	[Esc] 6
PF7	User-defined function 7	[4] (keypad)	[Esc] 7
PF8	User-defined function 8	[5] (keypad)	[Esc] 8
PF9	User-defined function 9	[6] (keypad)	[Esc] 9
PF10	User-defined function 10	[1] (keypad)	[Esc] 0
PF11	User-defined function 11	[2] (keypad)	[Esc] -
PF12	User-defined function 12	[3] (keypad)	[Esc] =
Exit to Broadband	Exit to Broadband "#" prompt	[Esc] Opt/H	
Drop Broadband	Drop the Broadband session	[DONE] macrobutton	

### NOTES:

- 1) On the Macintosh Plus and 512K, the [Esc] key is the top left key with the tilde(~) and accent(`).
- 2) If you do not have a numeric keypad or arrow keys, use the optional sequence.
- 3) For cursor movement without the arrow keys, hold down the Option key and position the cursor with the mouse, click the mouse and **Red Ryder®** will send the proper codes to move the cursor.