

# CTerm 1.02

## Introduction

A while ago, I posted a message on Usenet asking if anyone knew of a software package that would allow a Macintosh to dial in to an **IBM** mainframe through **IBM's** 3708 protocol converter. Sure, this protocol converter can be configured to support most terminal emulators and terminals, but that requires administrative intervention. This software uses the default **3270** emulation that the protocol converters are pre-configured to support.

This software performs the same functions as **IBM's PC/Host (FTTERM)** software. It should support the following protocol converts (and any others that are compatible):

**IBM** 3174 Subsystem Controller with the Asynchronous Emulation Adapter Feature  
**IBM** 3708 Network Conversion Unit  
**IBM** 3710 PA-8 Network Conversion Unit  
**IBM** 7171 ASCII Device Attachment Control Unit  
**IBM** 9370 ASCII Subsystem

I have only been able to test this software on the **IBM** 3708 protocol converter. I do not have the other protocol converters at my disposal, so I cannot guarantee full functionality of this software on those other units.

This is a shareware product. If you find it useful, please register your copy by sending \$20 to one of the addresses below. This will enable me to send you information on improvements that I may add to the program and bugs I may fix.

If you have any comments, suggestions, etc., feel free to contact me by phone or electronic mail:

Michael Niehaus  
2800 South Main Apartment 209  
Findlay, OH 45840  
(419) 425-3032  
UUCP: mithomas@bsu-cs.bsu.edu  
CompuServe: 73760,171

Michael Niehaus  
Rural Route 1 Box 369  
Ferdinand, IN 47532

## Changes in Version 1.01

Version 1.0 lacked support for CR/LF processing, which is useful when having to select a terminal type from a menu upon connecting to a protocol converter. This version includes support for such processing.

Additional sequences are now supported by the program, enabling more accurate emulation of **IBM's** asynchronous 3270 emulation "standard" (which is really a strange combination of DEC VT52/VT100 sequences, ANSI color controls, and **IBM-specific** sequences).

Several small bugs were fixed as well, most of which weren't noticeable (unless you were really looking for them).

## Changes in Version 1.02

Version 1.01 sometimes would not correctly restore the communications settings from a prior session. This has been corrected in version 1.02. Version 1.01 also incorrectly assumed that you would always be using the Modem tool for your connection. It would allow you to change to a different tool, but when restoring the saved settings, it would reconfigure the modem communications parameters with those that may have come from a different tool, causing unpredictable results. Now the chosen tool is also restored properly, eliminating that problem.

Many people have noticed in past sessions that the program would beep several times and then exit. This was caused by errors in the initialization of the Communication Toolbox, usually caused by incomplete installation of the software. Now, more complete and information error checking is performed. If CTerm can determine the probable cause of the problem, an alert will be presented that describes the problem.

With the current CommToolbox installer, no tools are copied to the Communication Folder (which resides in the System Folder). There must be at least one connection tool in this folder for the software to function. (These tools can be found in the System Folder on the original installation disks. Copying these to your Communication Folder is all that is

required. Hopefully later versions of the CommToolbox will do this for you.)

## Requirements

This program requires a **Macintosh Plus** or better. Color support is achieved using standard **QuickDraw** (not **Color QuickDraw**). Memory requirements are small (I currently have it set around 200K, but I am sure that it could safely be lowered). A single floppy is sufficient to run the program.

Since this program uses the **Communications Toolbox** software, it must be obtained from **APDA** or Apple Software Licensing. (The program will display an alert if it finds that the CommToolbox is not installed.)

Some type of asynchronous connection to an **IBM** protocol converter (or some other compatible protocol converter) is also required.

This program has been tested at speeds up to 2400 baud, and should be able to support higher speeds without any problems.

## Setup

The first time you run the program, you will need to configure the communication parameters. These parameters are saved in the System Folder in a file named 'CTerm Config'.

The location of the terminal window is also saved in this configuration file. By default, the window is positioned in the upper left corner of the screen (so the whole window can be seen on a small screen). Be careful if running on multiple machines, since the saved window position could be off the screen on a different machine.

## Features

Cursor positioning can be achieved by holding down the Option key and clicking on the location to which you want the cursor to move. Notice that the pointer will change into a transparent rectangle to help you determine where the cursor will move when you click.

Copy and paste functions are supported. When selecting the text that you want to copy, the selection box will show the exact text that will be copied; no guesswork is required. Selections will always be rectangular, since that is the most useful method in an **IBM** environment (to eliminate sequence numbers, etc.).

Support for both monochrome and color **3270** emulations is included in the program (it will recognize either) ; color emulation is the preferred mode, however.

## Non-Features

One feature that is missing is file transfer (**IND\$FILE**) support. I have no information on this protocol. If you know of a source of this information (like an IBM part number), let me know. I would like to add this in the near future, but reverse-engineering this type of protocol is not a simple task.

## Key Mappings

| <u>3270 Key</u> | <u>Standard Keyboard</u> | <u>Extended Keyboard</u> |
|-----------------|--------------------------|--------------------------|
| PF1             | Option-1                 | F1                       |
| PF2             | Option-2                 | F2                       |
| PF3             | Option-3                 | F3                       |
| PF4             | Option-4                 | F4                       |
| PF5             | Option-5                 | F5                       |
| PF6             | Option-6                 | F6                       |
| PF7             | Option-7                 | F7                       |
| PF8             | Option-8                 | F8                       |
| PF9             | Option-9                 | F9                       |
| PF10            | Option-0                 | F10                      |
| PF11            | Option--                 | F11                      |
| PF12            | Option-=                 | F12                      |
| PF13            | Command-1                | Option-F1                |
| PF14            | Command-2                | Option-F2                |
| PF15            | Command-3                | Option-F3                |

|      |            |            |
|------|------------|------------|
| PF16 | Command-4  | Option-F4  |
| PF17 | Command-5  | Option-F5  |
| PF18 | Command-6  | Option-F6  |
| PF19 | Command-7  | Option-F7  |
| PF20 | Command-8  | Option-F8  |
| PF21 | Command-9  | Option-F9  |
| PF22 | Command-10 | Option-F10 |
| PF23 | Command--  | Option-F11 |
| PF24 | Command-=  | Option-F12 |

|                    |                     |                 |
|--------------------|---------------------|-----------------|
| Tab                | Tab                 | Tab             |
| Backtab            | Option-Tab          | Option-Tab      |
| ATTN               | Command-A           | Command-A       |
| Clear              | Clear               | Clear           |
| Enter              | Return              | Return          |
| Home               | Option-Cursor Up    | Home            |
| Left Cursor        | Left Cursor         | Left Cursor     |
| Right Cursor       | Right Cursor        | Right Cursor    |
| Up Cursor          | Up Cursor           | Up Cursor       |
| Down Cursor        | Down Cursor         | Down Cursor     |
| New Line           | Enter (keypad)      | Enter (keypad)  |
| Insert             | Command-I           | Command-I       |
| Insert (Alternate) | Option-Delete       | Option-Help     |
| Fwd Delete (x>)    | Option-Right Cursor | Fwd Delete (x>) |
| Erase EOF          | Command-E           | Command-E       |
| Reset              | Command-R           | Command-R       |
| Refresh Display    | Command-K           | Command-K       |
| PA1                | (Menu)              | F13             |
| PA2                | (Menu)              | F14             |
| PA3                | (Menu)              | F15             |

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