

Logging Data From Model 931A and Model 930A Using Tera Term Pro

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Introduction

Frequently 931A/930A users want to download data stored in memory, or download the measurement results directly to their computer. When equipped with extended memory, 931A/930A users should obtain a copy of the Windows program produced by Arbiter Systems called PowerCSV™. PowerCSV™ provides an easy tool for accessing and downloading 931A/930A data with extended memory. Without extended memory, most downloading may be done using a terminal emulation program such as HyperTerminal, or Tera Term Pro.¹

These instructions describe how to download two types of data - Bitmapped and Spreadsheet – from the Model 931A/930A using Tera Term Pro.

Downloading Tera Term Pro

1. Log on to the Arbiter Systems website at www.arbiter.com
2. Select Service/Support > Downloads > Miscellaneous Software Tools. The new page will list a number of software tools including Tera Term.
3. Next to Latest Version, select Tera Term_01Jan2010_23.
4. Download the file to your computer and install it. The program should be listed in your Start Programs directory and provide a shortcut.

Downloading Bitmapped Data

To download the actual data as it is displayed on the 931A/930A screen, you must choose to download it as a Bitmapped file. This is selected from the Menu options on the 931A/930A keyboard.

Screen shots in these instructions were downloaded from this procedure.

1. Check the communication parameters on the 931A/930A found under MENU > RS-232 Port Setup. Write down these settings if necessary. Note that Flow Control can be set for either Xon/Xoff or Data Ready.
2. Press the ESCAPE button once and move the cursor down to Print Selections and press ENTER. Change the settings to those shown below, if necessary. Set to Bitmap.

```
                PRINT SELECTIONS
Print Screen:  Ascii Format
               Graphics (FX-80)
               +Bitmap (Xmodem Transfer)

Spreadsheet:  Send Spreadsheet
              (Comma Delineated)
```

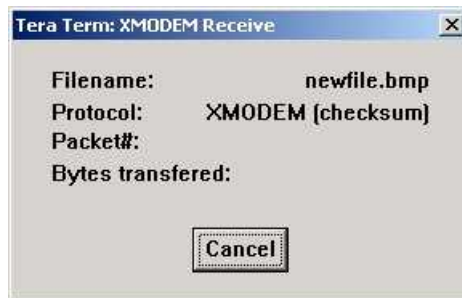
3. Set up the 931A/930A to view the data you wish to have copied as a bitmapped file.
4. Open Tera Term Pro and verify that the communication parameters match those of the 931A/930A. From the main menu in Tera Term Pro, select Setup > Serial Port. Flow Control should be set to None.

¹Available for free download from the Arbiter website, www.arbiter.com.

- From the main menu in Tera Term Pro, select File > Transfer > Xmodem > Receive. A SaveAs window should appear for you to type in the name of the file you will download. *Always name it with the .bmp extension. Also, the CRC and Binary fields should be checked.*



- Press Enter, or click the Open button and a XMODEM Receive window should appear that shows bytes received. None should be received yet.



- Press the PRINT button on the 931A/930A. At this time you should see the XMODEM Receive window indicate approximately 2048 bytes being transferred. The XMODEM Receive window should disappear after the data transfer is complete.
- Your screen shot should be stored in the TTERMPRO directory under Program Files, unless you chose to store it in a different directory.
- These .bmp files may be pasted directly into documents, or viewed in Paint or other bitmap viewers. Alternatively, you may wish to convert them into smaller more efficient file formats, like JPG.

Downloading Spreadsheet Data Using Tera Term Pro

To continually log data from the 931A/930A to a computer, use the Log Data feature found in Tera Term Pro, or similar terminal programs. There are two ways to send spreadsheet data to a file on a connected computer: (1) using the PRINT key repeatedly, and (2) using the Print Broadcast Mode. The Print Broadcast Mode continually broadcasts the data specifically selected to the display at a rate selected when setting up that feature. The first section discusses using the PRINT key and the second section discusses the Print Broadcast Mode.

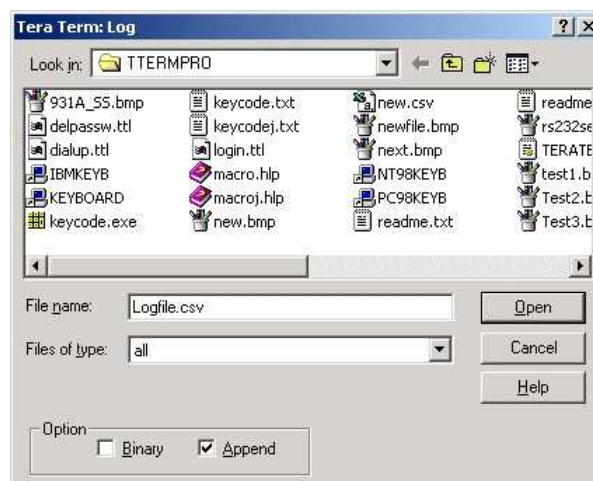
Using the PRINT Key Function

1. Check the communication parameters on the 931A/930A found under MENU > RS-232 Port Setup. Write down these settings if necessary. Flow Control may be set for Xon/Xoff or Data Ready.
2. Press the ESCAPE button once and move the cursor down to Print Selections and press ENTER. Change the settings to those shown below, if necessary. Set to Send Spreadsheet. Press the ENTER and the ESCAPE keys.

```
                PRINT SELECTIONS
Print Screen:  Ascii Format
               Graphics (FX-80)
               Bitmap (Xmodem Transfer)

Spreadsheet:  *Send Spreadsheet
              (Comma Delineated)
```

3. Set the 931A/930A to the data type you wish to record, e.g. Volts/Amps.
4. Open Tera Term Pro and verify that the communication parameters match those of the 931A/930A. From the main menu in Tera Term Pro, select Setup > Serial Port. Flow Control should be set to None.
5. From the main menu in Tera Term Pro, select File > Log. A “TeraTerm:Log” window should appear for you to type in the name of the downloaded file. Always name it with the .csv extension. Also, the Append field should be checked. Click the Open button and check for a Log File indicator (e.g. Tera Term:log) to be open on the Taskbar.



6. Press the PRINT button and one record of comma separated data should appear in the Tera Term Pro terminal window and simultaneously be recorded in the Tera Term:log file.

7. When logging data in Tera Term Pro, the Log File window indicates that the file named above will continue to be open for appending data. Subsequent presses of the PRINT button on the 931A/930A will send and append that data to the same data file while it remains open.
8. To close the log file, click the Tera Term:log button on the Taskbar and click the Close button in the log file window.
9. After closing, data in the data file may then be imported into spreadsheets like Excel.

Using the Print Broadcast Mode

To broadcast spreadsheet data, set up as described above, except you will not need to press the PRINT key to log data. The Log Data feature will continue to broadcast data until stopped in the 931A/930A. To set up the 931A/930A to broadcast,

1. Press the MENU key > Print Broadcast Mode, choose the broadcast interval from the selection and press ENTER.
2. The 931A/930A will immediately begin broadcasting the values which are selected in the 931A/930A display.
3. To terminate the broadcast, press MENU > Print Broadcast Mode, select Broadcast Off and press ENTER.

Selecting Tera Term Window Size

So that each record of data takes up only one line in the spreadsheet, it may be necessary to adjust the window size. If not adjusted, it is possible that one record of data may end up on two or more lines in the spreadsheet. Adjust as follows:

1. In the Tera Term window, select Setup > Terminal and adjust the “Terminal size” to something that will allow a one record of data to fill one line, not two or more.
2. For example, in standard data, the window size may need to be set to 105×24 .
3. For three-phase, four-wire, three-element data, set the window size to 273×24 .
4. Other types of data may require you to resize the Terminal window. It may take some experimentation to get the correct size.
5. Check the “Auto Window Size” box if you want the terminal window to automatically adjust to the width of data.
6. If one record is too long to fit on the computer screen, do not check the “Auto Window Size” box. The data will still fit in one line per record even if it is not shown in the terminal window.