

Comm7 Utility Program

Comm7 is a Windows-based diagnostic utility created by Watlow for use with their controllers. Comm7 can be used to upload/download controller configurations or log data via RS-232.

Preparation

- 1) Install Comm7 by double clicking comm7.exe.
- 2) Connect the computer's serial port to the chamber's 9-pin connector with a NULL-MODEM cable (pins 2 and 3 swapped).
- 3) Run Comm7. The program and computer's serial port must be configured to match the baud rate of the controller on the chamber. The controller is configured by TestEquity for 9600 baud.
 - a) Set the computer's serial port to 9600 baud.
 - b) In Comm7, select "File > Port Settings", enter the computer's port number that you are using and the baud rate of 9600. The click "Save changes and Exit".

Upload or Download Settings for F4 Controller

Comm7 will download the entire configuration from the controller, which includes all setup values and profiles. You cannot download/upload only the setup values or the profiles. This is generally not a problem, with the exception of the real-time clock setting if the chambers are in different time zones.

Saving a configuration from the controller

- 1) In Comm7, select "Special Options > Upload/Download Configuration". This will open the Save/Restore Setup window.
- 2) Click "Download". A Save As file open dialog box will open. Change the file name and file location if desired, then click "Save".
- 3) The controller will begin downloading to this file.
- 4) When finished, you will see "Download Complete". Click "OK".

Uploading a configuration to the controller

- 1) In Comm7, select "Special Options > Upload/Download Configuration". This will open the Save/Restore Setup window.
- 2) Click "Upload". A file open dialog box will open. Navigate to the desired file, then click "Open".
- 3) You will see "This erase all current settings. Do you want to continue?". Click "Yes".
- 4) The controller will begin uploading this file to the controller.
- 5) Ignore Read/Write errors.
- 6) When finished, you will see "Upload Complete". Click "OK". However, if you get a "Comm Error!" dialog, click "Retry" until "Upload Complete" appears.

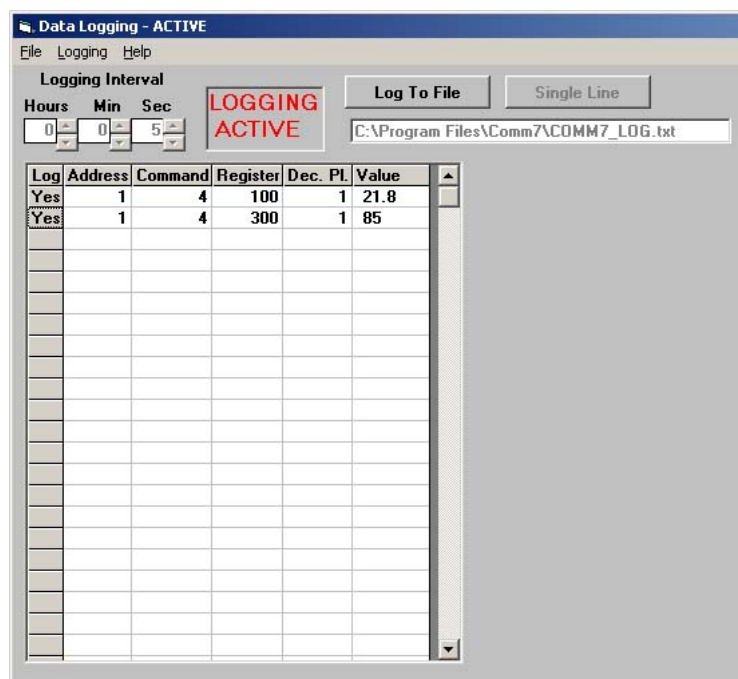
NOTE: TestEquity factory configuration files for each chamber model are located in the "TestEquity F4 Configuration Files" folder on this CD. These files can be used to restore the setup of F4 controllers back to the configuration as shipped from TestEquity.

Quitting Comm7 after Upload or Download

To quit Comm7, you must first stop logging and close the Save/Restore Setup window or press the Exit button. Then, you can close the Comm7 window or select "File > Exit".

Comm7 can be used to continuously log data to a text file via RS-232.

- 1) In Comm7, select “Special Options > Data Logging”.
- 2) Set the interval between recording data points in Logging Interval by selecting the desired time in Hours, Min, and Sec.
- 3) Click the Log To File button. Enter the desired file name and path in the box below, or keep the existing file name.
- 4) Enter each parameter that you want to monitor in the space below. Each parameter is identified by a Modbus Register number. As a minimum, most people want to monitor the temperature set point (Register 100 if running manually or 4122 if running a profile) and the actual chamber temperature (Register 300). Enter the controller Address (usually 1), Command (enter 4), Register (enter as desired), and Dec. Pl. (TestEquity chambers ship configured for 1 decimal place). Repeat these series of entries for each monitored parameter.
- 5) To start logging, select “Logging > Start Logging”. You should see Logging Active and the monitored values indicated in the Value column.
- 6) To stop logging, select “Logging > Stop Logging”.



- Actual chamber temperature reading: 100.
- Actual chamber humidity reading: 104. (Model 1007H, 1207C only)
- Static temperature set point: 300.
- Static humidity set point: 319. (Model 1007H, 1207C only)
- Temperature set point during a profile: 4122. (Except model 105 with 97 controller)
- Temperature set point during a profile: 5009. (Model 105 with 97 controller only)
- Humidity set point during a profile: 4123. (Model 1007H, 1207C only)

The entire listing of Modbus registers for the Series 96 Controller are found in the Series 96 User's Manual, pages 7.7 and A.3.

DaLogging Results

Locate the text file containing the logged results. The default directory is at the root folder of the Comm7 program file, but it could be wherever you specified it to be saved.

Example, two lines of readings for two monitored registers:

```
08-23-2004, 10:50:14, 1, 100, 23.1, 1, 300, 19.3  
08-23-2004, 10:50:19, 1, 100, 23.1, 1, 300, 21.5
```

The comma delimited format is: Date, time, address, register, reading, address, register, reading.

You can import the text file into a program like Excel to parse the data and create graphs if desired.

Quitting Comm7 after Data Logging

To quit Comm7, you must first stop logging and close the Data Logging window or select “File > Exit Data Logging”. Then, you can close the Comm7 window or select “File > Exit”.