# RS232 Download using Shortridge ADM DataFlow Software

**General Discussion**
The readings stored in an ADM-880C may be electronically downloaded via an RS232 serial cable into a computer spreadsheet. The data communications utility program that performs the data download is Shortridge ADM DataFlow. DataFlow retrieves the data from the meter and saves it to a file on the computer in a format called comma separated value (CSV). This .csv file is a text file which can be directly imported into most popular spreadsheet applications, including Microsoft® Excel®.

**Operating Systems**
The DataFlow software has been tested on computers running the following Microsoft Windows operating systems: XP, Win2K, NT, and 98SE. Computers with Microsoft Me may also be used, although with slightly diminished functionality (less COM port visibility).

**Installing DataFlow**
Insert the DataFlow installation CD into the computer's CD or DVD/CD drive. If the drive is configured with Auto Insert Notification turned on, the installation will begin automatically within a few seconds. If the installation will not start, double left click the My Computer icon on the Desktop, right click the CD drive icon and choose Auto Play.

An InstallShield Wizard application will run, launching the installer for the Microsoft .NET Application Framework required by DataFlow. First, the .NET user agreement from Microsoft is presented. Select "I Agree", then click the "Install" button. After the .NET installation is complete, the InstallShield Wizard will prompt the user to install DataFlow. Click the "Next" button to continue, then follow the prompts.

**Using DataFlow**
The first step in downloading data from the ADM-880C is to establish a connection between the meter and the computer. Connect the ADM-880C serial port to a serial port on the computer using the supplied serial cable. The meter must be turned on and set for the Manual reading mode. Any Automatic, Trend, or Timed readings in progress must be halted before attempting to download data. The meter will download from any displayed message except [TIMED DONE]. From a [TIMED DONE] message, press ALT to cause the meter to display the last reading taken.

Launch DataFlow by double, left clicking the red Shortridge Instruments FlowHood icon on the computer desktop, or click: *Start->Programs->Shortridge Instruments->ADM DataFlow*

Click the "Connect" button on the right side of the DataFlow console. A list box will pop up, on first time use, displaying the computer's available COM ports. Highlight the port to which the ADM-880C is connected, and click "OK". The DataFlow software will communicate with the meter, and the status bar at the bottom of the console will report something similar to: *Connected to ADM-880C, Serial #MXXXXX, Ready to download 400 readings.*

Click the "Download" button. A standard Windows file selection dialogue will open, prompting the user for a file name for the downloaded data. The default folder where the file will be stored is My Documents\Shortridge ADM DataFlow. If the folder is changed, the new folder will become the default for future downloads. Enter a file name and click "Save". The download will begin automatically, and the status can be tracked via the progress bar which appears at the bottom of the console.

A pop-up window will appear when the download is complete. Click the "Download More Data" button to continue use of the application, or click "Exit DataFlow" to end the session. Downloading does not affect any information stored in the meter's memory.

**Importing Saved Data to a Spreadsheet**
The following example is for Microsoft Excel. Start Excel, and select File->Open. Navigate to the folder where the data file was saved. In the "Files of Type" box at the bottom of the Windows file dialogue box, select "Text Files" or "All Files" then select the file where the data was saved (it will have a .csv extension). The data will be imported into the Excel spreadsheet, which may be saved as an Excel file with a .xls extension.

A typical spreadsheet with data is shown on the next page. It may be necessary to adjust the column widths and cell justification settings to improve readability.