2. Working with DataStation

When appropriately configured, the radio enabled Em50R data loggers can transmit data collected to a DataStation. A DataStation can receive data from multiple Em50R data loggers simultaneously. However, the logger data from the DataStation still requires configuration and entry into DataTrac 3, which is handled differently than when connecting to an individual logger. In order for all of this to happen, the DataStation has to be connected to a computer/laptop and properly configured first. It needs to have the radio channel and sub channel set before it can collect data from loggers. The section below details how to connect, configure and download data from DataStation in DataTrac 3 (Decagon Devices, Inc. 2013).

    a. **Connecting to a DataStation**

− Connect the DataStation to the computer's Communications port via an RS232 cable.

− Open DataTrac and select the appropriate COM port from the "Connect Via" drop-down list, and click the "Connect" button.

− After establishing connection with the DataStation, the DataStation will be added under the New Devices list in the device directory.

    b. **Configuring the DataStation**

− Select DataStation in the device directory and click on "Configure" on the toolbar or from the Setup menu in DataTrac 3 to enter Device Setup (Figure 2).

− The DataStation name in the "Device Name" box can be changed if desired.

− Press the "Set Time" button to synchronize DataStation clock to the time on the computer.

− Press the "Erase Data" button to erase any data stored on the DataStation before.
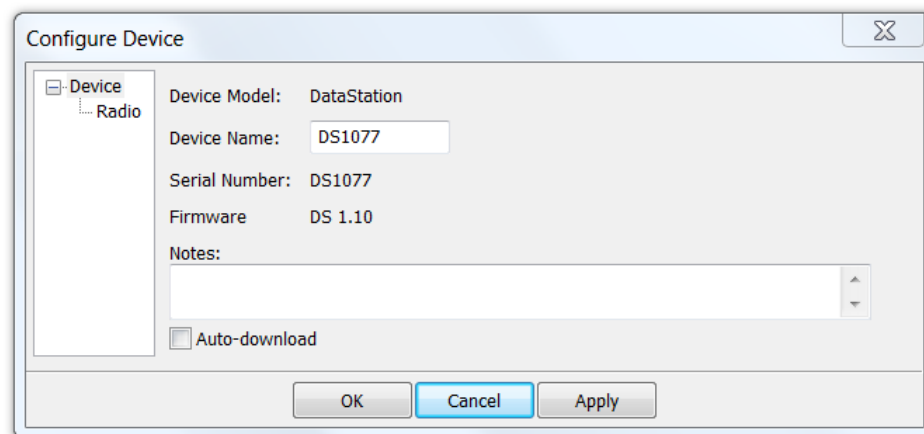

Figure 2. The Device Setup screen.

- Double click on the radio sub-menu to configure your radio properties (Figure 3). The channel and sub channel have to be set to the same channel and sub channel as the Em50R's to collect data from at this DataStation.
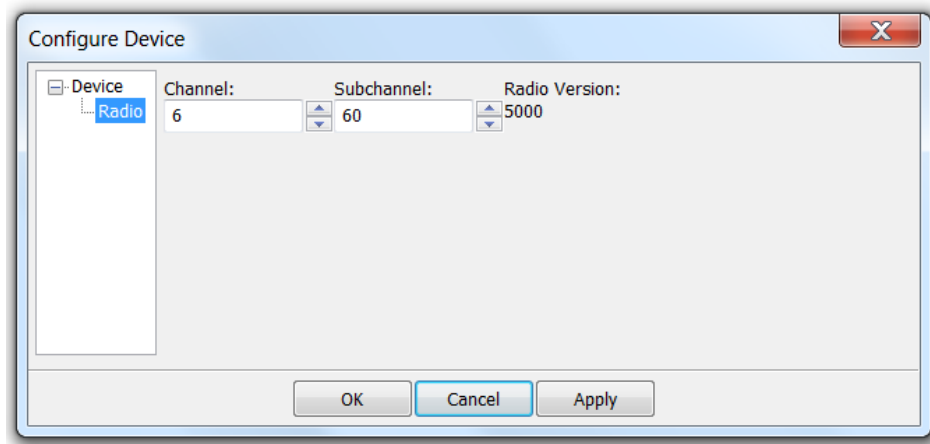

Figure 3. Channel and subchannel configuration in Device Setup

c. Downloading data from DataStation

The DataStation is a listen only device so there is no need to set the radio mode, which is set when Em50R loggers are configured. Once the loggers are properly configured and collecting data, the data transmitted to the DataStation can be downloaded into DataTrac using the steps below.

- Connect to the DataStation.
- Once connected, click the "Download" icon.
- When the new data is read in, it will appear in the chart when that particular logger is selected in the device directory.

Data can also be automatically downloaded from DataStation to DataTrac 3 by checking the "Auto-download" box in the "Device Setup" window (Figure 2). However, DataTrac 3 must be running and the DataStation connected to the computer through a COM port for this to work.

When using Em50G data loggers, DataTrac 3 will automatically download data from any Em50G subscription every time the program is initiated.

Belayneh, B.E. 2014. Using DataTrac 3 Software. *In*: Managing Irrigation through Distributed Networks Knowledge Center. M. Chappel, P.A. Thomas and J.D. Lea-Cox. (Eds.). Published online at http://myelms.umd.edu/courses/1110350. 20p.