

SERVICE BULLETIN NO. 20140902

September 2, 2014

SUBJECT **Missing Data on Download**

PRODUCT FAMILY **WatchDog 2000 Series Mini Stations**

AFFECTED UNITS WatchDog 2000 Series Mini Stations (models 2400, 2425, 2450 and 2475) when used with SMEC 300 Soil Moisture / EC / Temperature Sensor.

DETAILS

Under a specific set of circumstances, WatchDog Mini Stations can log data in a manner which hides it from the download process. This occurs only if all of the following circumstances are true.

1. The station is configured to read one or more SMEC 300 sensors.
2. Virtual Ports are enabled. Virtual Ports are automatically enabled if two or more SMEC 300 sensors are configured, or one SMEC 300 sensor is used on a model 2475 or 2450 station, or one SMEC 300 sensor is used with two or more other sensors of any type.
3. The station is used long enough that its internal memory is full, and "wraps" back to the beginning. The following chart shows approximately when that occurs.

Logging Interval (Minutes)	Memory Full (Days)
1	3
5	14
10	29
15	44
30	89
60	178

Once the station wraps, it can only download data stored since it wrapped. Previously logged data is inaccessible.

CIRCUMVENTION

Download data before the station wraps. After downloading data into SpecWare, perform the following:

1. In SpecWare, enter WatchDog Manager.
2. Click the "Advanced" button in the upper right corner.
3. Click the "Clear" button (labeled "Clear the data from the logger memory on a 2000 Weather or Mini Station").
4. This will restart logging at the beginning of the internal memory, and provide the greatest amount of time before memory is full (see above chart).

RESOLUTION

Replacement microcontrollers containing firmware version 4.1 are available from Spectrum Technologies. If you encounter this problem, and as a result have hidden data, contact Spectrum Technologies. A member of our technical support team will arrange for the required firmware upgrade and retrieval of your data.

REPLACING THE MICROCONTROLLER

1. Perform all the steps listed under "CIRCUMVENTION", above, including downloading the data from the station.
2. Remove the cover from the Mini Station.
3. Remove all batteries and disconnect all sensor wires from the ports on the circuit board.
4. Remove the 4 Phillips head screws on the front of the circuit board.
5. Pull the board straight out of the station enclosure.
6. Flip over the circuit board and locate the microcontroller chip in its socket. With a small screwdriver or knife, gently pry the chip out of the socket by alternating ends. Grasp the microcontroller by the ends of the black plastic, not the pins.
7. Align the new microcontroller with the socket (note the polarity markings on the microcontroller, the socket, and the circuit board). Be sure all pins are aligned with the socket, and press the chip firmly into place.
8. Place the circuit board back in the enclosure. Be sure the sensor connection pins at the top of the board are inserted into the socket in the enclosure.
9. Reinsert the batteries. The unit should beep when the last battery is inserted, and the display should show the model and serial number, and then ask that date and time be set. If not, double-check that the polarity of the microcontroller and socket match, and that the batteries were inserted properly.
10. Reinstall the cover onto the Mini Station.
11. Reset the date and time using the station buttons, or by connecting to a PC and using SpecWare to view the station's settings.

