

## Quick Start Guide

### Selectric Data-Collect Wireless Sensors and USB Gateway



### Information to Users

*This equipment has been tested and found to comply with the limits for a Class B digital devices, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of more of the following measures:*

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**WARNING:** Changes or modifications not expressly approved by Selectric could void the user's authority to operate the equipment.

**RF EXPOSURE WARNING:** To satisfy FCC RF exposure requirements for mobile transmitting devices, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation. To ensure compliance, operations at closer than this distance are not recommended. The antenna used for this transmitter must not be co-located in conjunction with any other antenna or transmitter.

### Inside the Box

You should find the following items in the box:

- Wireless Sensors
- Wireless USB Gateway
- Mounting Hardware
- Quick Start Guide
- Batteries

### System Requirements

- An Available USB Port
- Windows XP with 512 MB Memory (Windows 7 with 1024 MB Rec.)
- 20 MB Free Disk Space.
- ASP.NET 3.5

### Before You Plug In Your USB Gateway

- Unpack the contents of your kit(s) and become familiar with the types of sensors that were included and double check that all components are included.
- Before inserting the USB Dongle, you will need to install the USB Driver and Gateway software.

# 1. Software Installation

## ① USB Driver Installation

The latest USB drivers can be installed directly from the web or downloaded for manual installation. <http://www.selectric.us/driver/>

From the downloads page, click on *USB Driver Installer* to launch the web installer download. The driver file should automatically start downloading. If prompted to save the file, select a location that is easily accessible and click "Save".

When the file has completed downloading, browse to the folder where the file was saved. Double click the "*USB-Driver-Setup.exe*" file and select "Run". Select "Next" then follow the on-screen guide to install the drivers.

When the setup has finished, the program will automatically determine which drivers to install for your system and another guide will launch to walk you through the installation of the drivers. Click "Next" to install the drivers. When the drivers are done installing you will see a success screen. Click "Finish" to exit the installation program.

**Note:** To manually install the driver you can download the appropriate file from the downloads page and follow the included instructions.

## ② Gateway Application Installation

The gateway application allows your wireless sensors to communicate with the online sensor monitoring and notification system. (The online system allows you to view all your sensor data, sensor status' and configure all sensor parameters as well as setup notifications or alerts via sms text and email.)

To install the software, open a web browser and navigate to <http://www.selectric.us/gateway/>. From the downloads page, click on "*Data-Collect Gateway Application Installer*" to launch the web installer download. If prompted to save the file, select a location that is easily accessible and click "Save".

When the file has completed downloading, browse to the folder where the file was saved. Double click the "*DataCollectGatewaySetup.msi*" file, select "Run" when prompted then follow the on-screen instructions to complete the installation.

When installation is complete the program will automatically launch. You can now begin using your wireless sensors online.

**Note:** The gateway application needs to be running on your computer in order for the sensor data to be transmitted to the online system. If the gateway is not running your sensor data is not being recorded online and notifications based on sensor data cannot be sent from the system.

# 2. Using Your Wireless Sensors

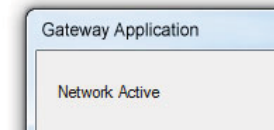
## ① Start the Gateway Software:

Double click on the Gateway Program icon on your desktop or select the program from the Windows "Start Menu" under Programs > Data-Collect.

**Note:** Sensor data will only be transmitted to the Online Sensor Monitoring System when the gateway software is running.

## 2 Insert Your USB Wireless Gateway

With the Gateway application running, insert the USB Gateway into your computer. The network status in the software should change to "Network Active" when the USB gateway is plugged in.



**Note:** If the status does not change, try unplugging and re-inserting the USB gateway.

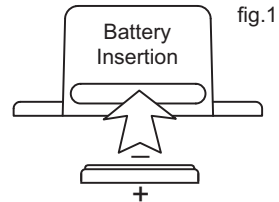
## 3 Insert Batteries Into Wireless Sensors

**Important:** Make sure your sensors are at least 3ft. away from USB Gateway.

Peel back the black sticker cover of the battery slot and slide the coin cell battery into the sensor as shown in fig.1. It will power on within 10-20 seconds. Once online, your sensor is ready to be deployed. If you wish to change a sensor configuration, change the parameter in the software. The new parameters will be transmitted to the sensor on the next heartbeat. If you need a more immediate response from the sensor, power cycle the sensor by removing, then re-inserting the battery.

### Notes:

- If the sensor status indicator does not change, reset the sensor by removing the battery.
- Wait 60 seconds then re-insert the battery.
- When inserting the battery, make sure to push the battery all the way back using a paper clip.
- Note the proper orientation of battery in fig.1



**Warning:** Your sensors ship with a 5 minute heartbeat.

It is recommended that unless you are using the AA battery solution, you should set the heartbeat to no faster than one hour to preserve battery life. When changing a sensor's heartbeat, the new configuration information will be sent to the sensor on it's next heartbeat. If you want to update the sensors immediately you can reset them manually.

### Manual Sensor Reset Process:

- 1 - Using the end of a paper clip, push the batteries out of the sensors through the small hole in the top of the sensor
- 2 - Change the sensor heartbeat through the online system
- 3 - Re-insert the batteries into the sensors

## 4 Check That Sensors Are Communicating With The System

As the sensors power up, they will begin communicating with the wireless gateway application. Your gateway window should start displaying sensor data similar to this:

```
06/24/2011 09:44:57.939: RX: Sensor Data: Device: 10721 SensorType: Temperature[2],  
RSSI: -21 / -31, Volts: 2.96V, STS: 16, Data: 72.3° F  
06/24/2011 09:44:57.375: RX: Status Indication: Device: 10721 has joined network  
06/24/2011 09:44:42.274: RX: Network Status: APN: 2116, NetCNT: 4, Channel: 4,  
NetID: 248, MODE: "ACTIVE/RESUME"  
Network Active
```

### 3. Using The Online Wireless Sensor System

#### 1 Login to The Online System

Open your favorite web browser and go to <https://alert.selectric.us>. You will be prompted to login to the system. Enter your username and password at this time. Your username is a combination of your firstname and lastname separated by a period. If it is your first time logging into the system, your default password is "password".

**Login Information**

User name	<input type="text" value="firstname.lastname"/>
Password	<input type="password" value="password"/>
	<input type="checkbox"/> Remember me?

**Note:** You will be prompted to change your password when you login for the first time.

#### 2 The Online Interface

When you have logged into the online system this is the default view.

The screenshot shows the Selectric Data Collect Wireless Sensors Portal. The interface includes a navigation menu with 'Network Overview', 'My Account', and 'Reports'. The main content area is divided into two sections: 'Sensor List' and 'At a Glance'. The 'Sensor List' section shows a list of four temperature sensors, each with a green checkmark and an edit icon. The 'At a Glance' section shows a table of sensor data, including sensor name, data, and last check in time. Annotations include: 1. Menu System (pointing to the navigation menu), 2. Sensor Network 'At a Glance' (pointing to the 'At a Glance' section), 3. Sensor List (pointing to the 'Sensor List' section), and 4. Sensor Status Indicators (pointing to the green checkmarks in the 'Sensor List' section).


#### 1. Menu System

- Network Overview* - Click to return to "Home" view.
- My Account* - Click to display and edit account information.

#### 2. Sensor Network "At a Glance"

Displays the most current readings for every sensor in the selected network, all on one easy-to-read page.

#### 3. Sensor List

Displays all sensors that are currently assigned to your sensor network. Clicking on the sensor names allows you to view information for that specific sensor. Clicking the edit button  by a sensor's name allows you to change the sensor specific settings such as sensor name and heartbeat (report interval).

**Note:** All information stored on the sensor will be downloaded to the sensor on the next sensor heartbeat (Check-in). If you make a change to any setting, you will need to wait until the sensor has downloaded the new information before you can edit the configuration settings again.




When you have selected a sensor from the "Sensor List" this is the sensor view.

The screenshot shows the Selectric Data Collect Wireless Sensors Portal. At the top, it says 'Welcome User! [ Log Off ] Account Number: User'. The main navigation bar includes 'Network Overview', 'My Account', and 'Reports'. The 'Sensor List' section on the left shows four sensors: Temperature 1, 2, 3, and 4, each with a green checkmark. The 'Temperature 1' view is selected, showing a current reading of 81°F, a last check-in of 8/15/2011 9:58 PM, and a battery level of 100%. Below this is a table with columns for Date, Signal, and Battery, and a 'Chart' window showing a line graph of sensor readings over time.

1. Menu System  
 2. Sensor List  
 3. Sensor List  
 4. Sensor Status Indicators  
 5. Current Sensor Information  
 6. Sensor Data Window  
 7. Sensor Charts

#### 4. Sensor Status Indicators

Displays the status for each individual sensor.

-  Sensor is checking in and within user defined safe parameters.
-  Sensor has met or exceeded a user defined threshold or triggered event.
-  Sensor has not checked in.

#### 5. Current Sensor Information

Displays the most current information of the selected sensor, including: last check-in, signal strength, battery power and last sensor reading.

#### 6. Sensor Data Window

Select a tab to change between:


- History* - Displays a history of the selected sensor's data.
- Notifications* - Allows you to view, add, edit or delete notifications for the sensor.
- Chart* - Displays a graphical view of the selected sensor's data.
- Export* - Allows you to archive data by exporting as a .csv file.
- Edit* - Allows you to change settings such as sensor name and heartbeat.

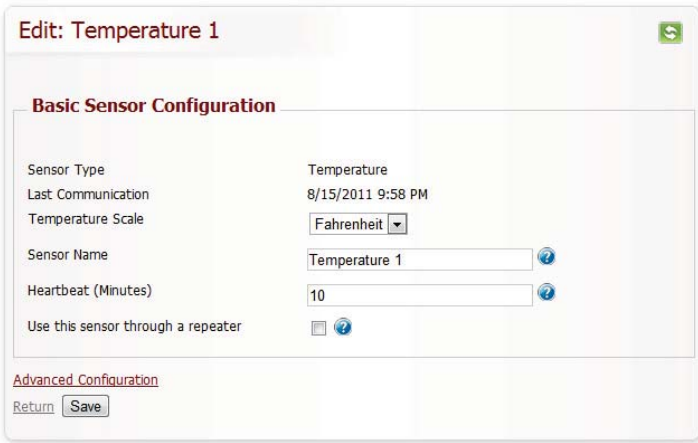
The tab highlighted in blue is your current selection.

#### 7. Sensor Charts

Displays visual charts / graphs for the selected sensor(s) during a specific time period. Charts and graphs can be printed from this view.

### 3 Configuring Sensors

Click the “Edit” icon  next to the name of the sensor that you would like to configure.




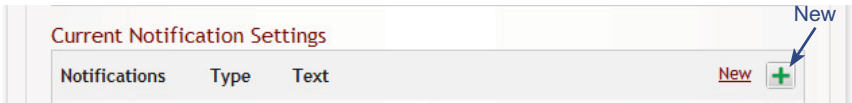
The sensor configuration window allows you to set the primary configurations for each sensor. Within this window you can change the name of the sensor, set the heartbeat (how often the sensor checks-in with the software - default is every 10 minutes), and change the unit of measurement. When you have finished making changes, press the “Save” button at the bottom of this section.

**Note:** Be sure to click the “Save” button anytime you make a change to any of the sensor parameters. *All changes made to the sensor settings will be downloaded to the sensor on the next sensor heartbeat (check-in). Once a change has been made and “Saved,” you will not be able to edit that sensor’s configurations again until the sensor has downloaded the new setting.*

### 4 Setting Up Notifications

Clicking on the “Notifications” tab within the sensor data window will allow you to do the following: create a new notification, edit a notification, delete a notification, or view a history of sent notifications.

To create a new notification, click on the “New”  icon at the bottom right of the window. To edit or delete an existing notification, click on the “Edit” icon or the “Delete” icon.



**Notification for: Temperature 1**

**Fields**

Person to Notify [Add New](#)

Type of Notification

Notification Text

Notify when sensor temperature reading is  (to)  degrees

**Advanced**

Alert Between  :  :

and

:  :

Don't notify again for  minutes

Notification is on

[Cancel](#) [Create](#)

### Person to Notify

Start typing a name into the box and the system will automatically populate the name of a user within your sensor network. If there are already multiple users on the network, a drop down list of names will appear. Select the name of the user for the notification. If the person to be notified does not have an account on the network, you may quick add them by selecting the “Add New” link and entering in their contact information.

### Type of Notification

Allows you to choose whether to send the notification by e-mail, SMS text message to a cell phone, or both.

### Notification Text

This is a user defined message that will be emailed or texted to the recipient when the conditions have been met and the notification is sent. Please limit your message to 50 characters (including spaces).

### Notify When Sensor...

This area allows you to set the conditions that must be met to trigger a notification from the system. The conditions are dependant upon what type of sensor is being used.

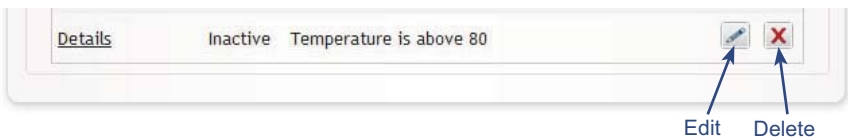
### Notify Again After

Allows you to define how frequently you want to be notified if the sensor condition is still met or exceeded. For example, if the temperature is still above 80° you can be notified every 10 minutes until you have addressed the issue.

### Notification is On

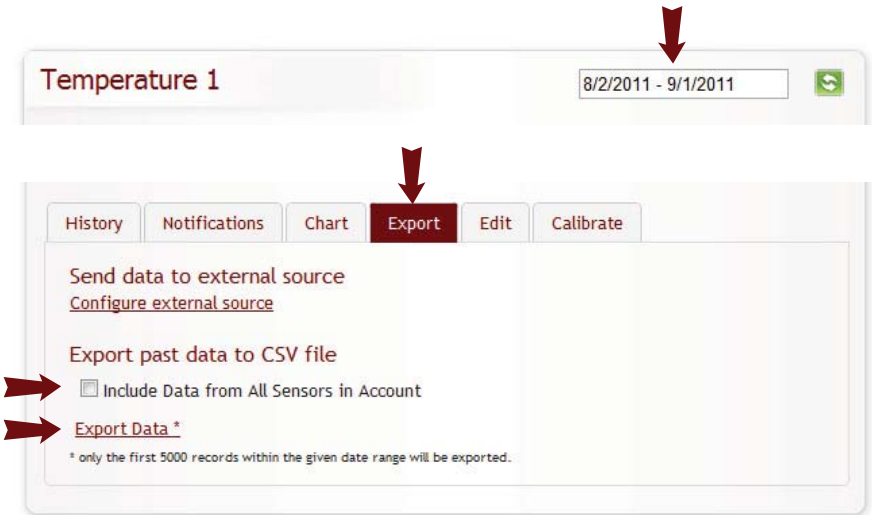
Allows you to turn off a notification temporarily, without deleting it.

**To edit or delete notifications that have already been created, click on the appropriate button next to the notification.**



### 3 Exporting Data

Clicking on the “Export” tab within the sensor data window allows you to export sensor data to a comma separated value (.csv) file or send the sensor data to an external web source.



To export sensor data you must first select the date range for the data you want to export. Once the date range is selected, determine whether you want sensor data from the selected sensor only or click the checkbox if you would like to include data for all sensors in the network. When you are finished, click on “Export Data” at the bottom of this window. The data will be exported to a comma separated value (.csv) file for use in spreadsheet software such as Microsoft Excel®. Depending on your browser settings you may be prompted for a save location. If not, the file will be downloaded to your browser’s default download directory.

**Note:** Only the first 5,000 records within the selected date range will be exported.

**Selectric**  
Integrated / Wireless Systems

For additional information or more detailed instructions on how to use your Selectric Data Collect Wireless Sensors, please visit us on the web at [www.selectric.us](http://www.selectric.us).

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