

Zebo™ Trending and Communications, Inc.

Owners Manual

**Draft Version 1.2 – Still
under construction as of 07/07/2011**

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FCC Notice

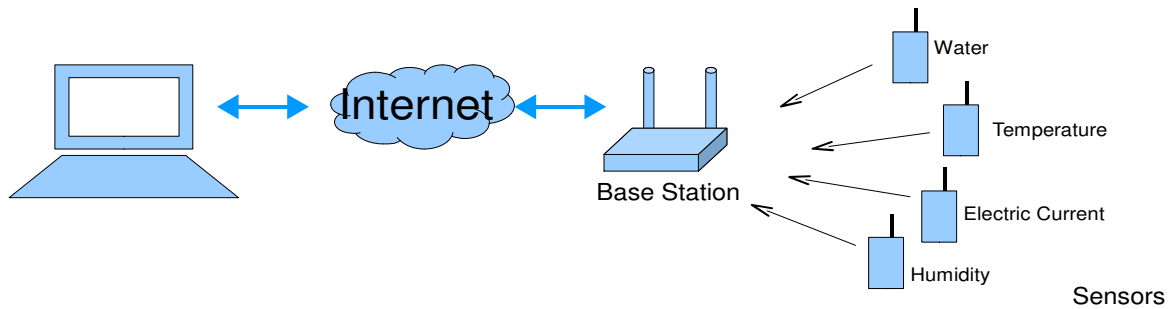
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, 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 instructions, 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 or 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.*

Notice: Changes or modifications not expressly approved by Zebo™ Trending and Communications, Inc. could void the user's authority to operate the equipment.

Section 1 – Commissioning Your System



System Overview

The Zebo System allows for the remote monitoring and data collection of an unlimited number of various sensors thru a simple web application that our customers can view through any web enabled computer or smart phone. A series of wireless, battery powered sensors of various types are placed throughout the location to be monitored along with a single base station to which the sensors transmit. Consisting of an entirely wireless solution, installation is simple and sensor placement is flexible. The base station sends the signals and information it receives from the sensors to the web application over a cellular internet connection. The customer may view the information, adjust settings, and create alarms with the web application.

Basic System Setup:

1. **Register as a new user** on the Zebo Web Application. This is typically done after ordering our product online during the checkout process or from the Sign In screen.
2. **Register your base station**, which is done by signing in to your account and clicking on 'Register a New Base Station'.
3. **Activate your base station** by entering the specific Base Station ID and Reference Code.
4. **Assign your sensors to the new base station** by pressing the “LRN” button on the base station and then powering your sensor on. Do this for each sensor to be added to the base station.
5. **Install the base station and sensors** throughout the location making sure each sensor is powered on.
6. **Configure and customize your sensors.** Sign in to your account and update settings for each sensor, assigning names and alarms according to your individual sensor placement and monitoring needs.

Step 1. Registering a New User

From the Login Page, click on the 'Register' link.



Choose a User Name and check its availability. Then continue to fill in your information. The email you enter will be the address to which your User Registration Confirmation email will be sent along with your temporary Sign In password.

Zebo™ Trending and Communications, Inc.

About Buy Support Contact Login

User Registration

User Name: * Available
Minimum User name is 8 characters

First Name: *

Last Name: *

Address: *

City: *

State: *

Zip Code: *

Phone Number: * Ex: - 9137828702 Enter a Valid Phone Number

Email Address: * **In Case If you forgot your User Name.**

Question: *

Answer: *

* Required

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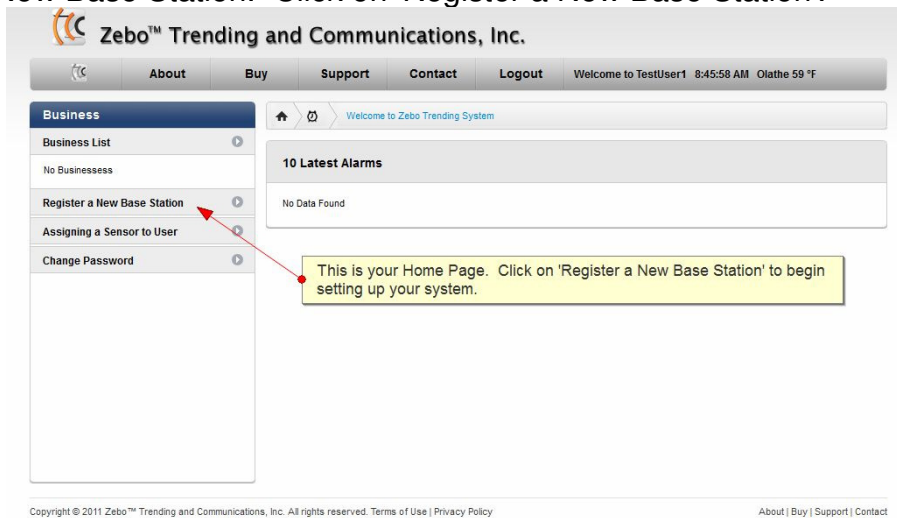
About | Buy | Support | Contact | Login

Check your email for your temporary password and then revisit the Login Page to enter your newly created User Name and temporary password. Click LOGIN and you will be brought to your home page.

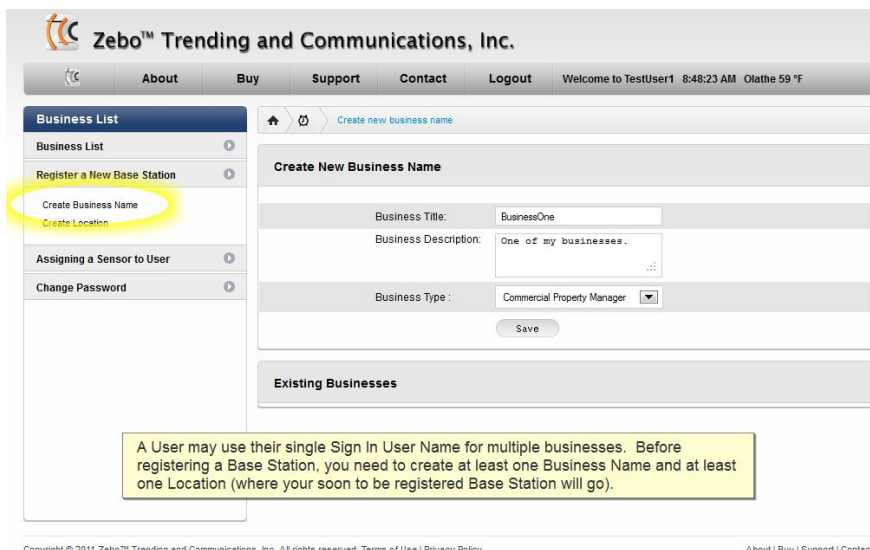


Step 2. Registering a New Base Station

The first step to getting your base station ready and receiving data from your sensors is to Register your New Base Station. Click on 'Register a New Base Station'.



You'll see links in that tab to create both a Business Name and Location, which you will want to do first. Click on 'Create Business Name' and complete the form.



Next, create a location where your new base station will be installed.

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About Buy Support Contact Logout Welcome to TestUser1 8:53:14 AM Olathe 59 °F

Business List

Business List

Register a New Base Station

Create Business Name

Create Location

Assigning a Sensor to User

Change Password

Create New Location

Business Name: BusinessOne

Location Name: FirstLocation

Address 1: 12345

Address 2:

Street: W. 100th Street

City: Olathe

State: KS

Zip Code: 66062

Save

Under each Business Name, a User may have many Locations. You should create at least one Location before registering your Base Station.

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Step 3. Activate Base Station

When both a Business Name and Location have been completed, click back on the 'Register a New Base Station' tab. You will need the Base Station ID, found on the bottom of the base station, and the Reference Code, found in the documentation you received with your base station when you received it.

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About Buy Support Contact Logout Welcome to TestUser1 7:12:45 AM Olathe 45 °F

Business List

Business List

Register a New Base Station

Create Business Name

Create Location

Assigning a Sensor to User

Change Password

Register a New Base Station

Business Name: BusinessOne

Location Name: FirstLocation

Base Station ID: 001.000.000.000.006

Reference Code: 6E208FA1-C570-4121-99C9

Base Station Name: BaseOne

Time Zone: Central Standard Time - (GMT-06:)

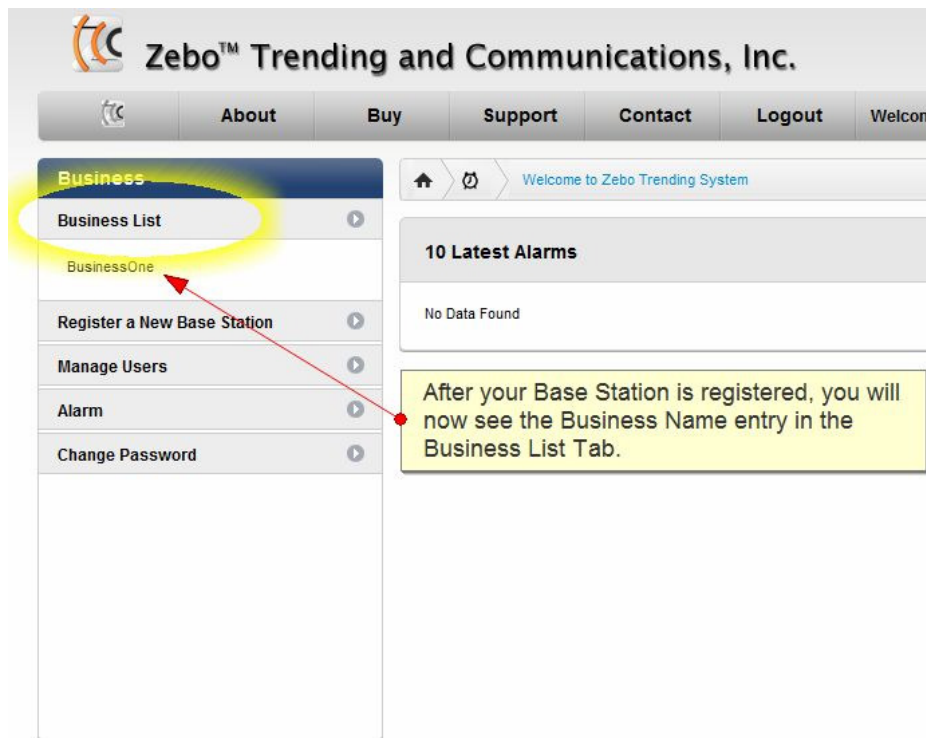
Submit

Select a Business Name and Location. Included are the Names and Locations you created in the step before.

The Base Station ID can be found on the bottom of the Base Station. The Reference Code needed for activation is included in the documentation you received with your Base Station.

Choose a Base Station Name that gives an indication of its physical location or intended purpose. Click "Submit" when finished.

You will get a 'Registration Complete' message after clicking on 'Submit'. Now you will be able to see a list of business you have created in the 'Business List' tab at the top left of your screen. This is how you will navigate to your newly registered base station to view sensor data.



At this point, you now have a registered user account and a registered base station ready to have sensors assigned to it.

Step 4. Assigning a Sensor to a Base Station

Your sensors come ready to assign/learn to a base station. The Base Station must be powered on and receiving a steady cellular signal before sensors can be learned or unlearned.

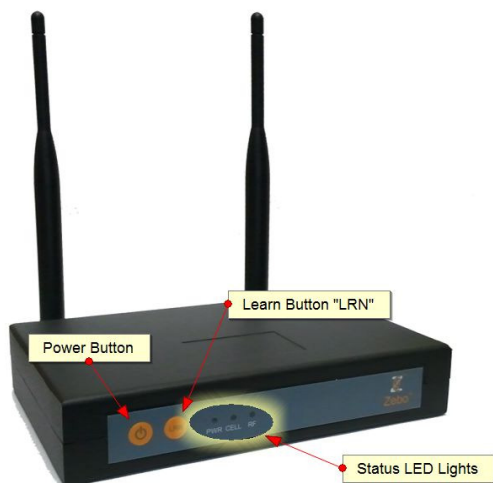
LEARN

1. Power on the Base Station and wait for the Cell Status light to stop blinking and remain off meaning it has attached to a cellular network.
2. Press the 'Learn (LRN)' button on the front of the base station. The RF status light will begin to blink.
3. Within 30 seconds, hold your sensor near the base station and power it on. The base station will beep indicating that it successfully received the sensor.
4. The sensor will now display a rapidly blinking status light, meaning it is properly learned to the base station. Power the sensor off.

The next time you power the sensor on, it will begin its normal mode of operation and communicate its data to the base station. The sensor ID and its data will automatically start to show in the web application under this base station.

UNLEARN

1. Hold the sensor near the base station and power it off.
2. Press the 'Learn (LRN)' button on the front of the base station. The RF status light will begin to blink.
3. Press the 'Learn' button on the sensor and hold it down while you power the sensor on. Continue to press the 'Learn' button until the base station beeps, indicating that it successfully received the sensor.
4. The sensor will now display a slow, blinking light (3 sec.), meaning it is properly unlearned from the base station. You may now power the sensor off and learn it to another base station if you'd like.



Base Station



Sensor

Section 2 – Configuring Your System

Once a sensor has been learned to a base station, and the sensor is powered on, it will begin its normal mode of operation and send its data into the web application via the base station. You will be able to view the data, set alarm parameters, and more thru the web application.

The default names for sensors will be in a number format. To assign meaningful names and information about where and what each sensor is, you must individually configure each sensor. To begin configuring your sensors, click on your Business Name. You are now on the Business Page.

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Business

- Business List
- BusinessOne**
- Register a New Base Station
- Manage Users
- Alarm
- Change Password

Locations

Your location within this business will show in this box.

FirstLocation

Business Information

Below, you can edit the information for this Business Name.

Business Title:	BusinessOne
Description:	One of my businesses.
Business Type:	Commercial Property Manager

Edit

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About | Buy | Support | Contact

Click on your Location. You are now on the Location Page and can see the base station in the list box.

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Locations

- Locations List
- FirstLocation
- Register a New Base Station
- Manage Users
- Alarm
- Change Password

Base Stations

The base stations registered for this location show in this area.

TestBaseStation BaseOne

* Deactivated Base Stations

Location Information

Below, you may edit the details of this location.

Location Name:	FirstLocation
Address 1:	12345
Address 2:	W. 100th Street
Street:	W. 100th Street
City:	Olathe
State:	KS
Postal Code:	66062

Edit

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Click on your Base Station. You are now on the base station screen. Notice the breadcrumb menu now showing along the top of your window. You are now on the base station page and will see the list of learned sensors in the sensor area.

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About Buy Support Contact Logout 46 °F

BusinessOne FirstLocation BaseOne

Base Stations

Base Stations List

TestBaseStation
BaseOne

Register a New Base Station

Assigning a Sensor to User

Alarm

Change Password

Sensors

002.000.000.000.000

Base Station Information

Base Station Code: 001.000.000.000.006

Base Station Name: BaseOne

Time Zone: Central Standard Time

Edit Alarm On

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Note: The Base Station screen contains the Master Alarm Button. When 'On' you will receive all alarms from this base station. When 'Off', all alarms will be turned off and you will not receive any alarms from this base station.

To begin configuration, click on the Sensor ID to view the Sensor Page (shown below) where names can be assigned, data may be viewed, alarms set, and more.

Zebo™ Trending and Communications, Inc.

About Buy Support Contact Logout Welcome to LarrySeitter 8:34:00 PM

BusinessOne OlatheNorthHS BaseOne 002.000.000.050

Sensors

Sensors List

002.000.000.050

Register a New Base Station

Manage Users

Alarm

Change Password

002.000.000.050

Settings Alarms Updates

List: 3 Hours | 12 Hours | 24 Hours | 1 Week | Showing: 1 Day(s)

Narrow Data to between (mm/dd/yyyy)

From Date: To Date: Go

No Data Found

Trending Graph

(Total Count:0) Graph Primary Data

The screen below will appear showing the default numeric name for the sensor. Additionally other text boxes appear allowing you to describe the sensor as well as listing email addresses of those who will require notification in the event of an alarm occurrence. Custom text messages can be created here which will be broadcast via email and SMS text message with alarms notifications.

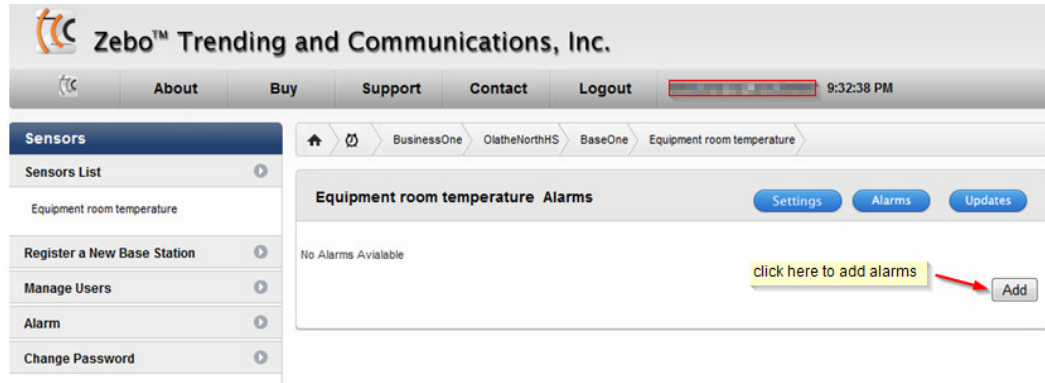
Fill in the text boxes and click "Update Records."

The screenshot shows the Zebo™ Trending and Communications, Inc. web interface. The top navigation bar includes links for About, Buy, Support, Contact, and Logout, along with a welcome message and current time/temperature. The main content area is titled "002.000.000.050 Settings" and contains several input fields: "Sensor Name" (pre-filled with 002.000.000.050), "Sensor Description", "Alarm e-Mail(s)" (with a note "can enter multiple emails with ',' seperated."), and "Alarm Text(s)". There are also buttons for "Settings", "Alarms", "Updates", and "Update Records".

Below is an example of a completed sensor description.

The screenshot shows the Zebo™ Trending and Communications, Inc. web interface with a completed sensor configuration. The main content area is titled "Equipment room temperature Settings". The "Sensor Name" field is filled with "Equipment room temperature". The "Sensor Description" field contains "east building equipment room". The "Alarm e-Mail(s)" field is filled with "serviceman@service.com". The "Alarm Text(s)" field contains "east bldg equip rm temp". A yellow callout box with a red arrow points to the "Alarms" button, with the text "click here to configure sensor alarms".

The Alarm setting screen appears below and indicates that no alarms have been configured yet. To create a custom alarm for the Equipment room temperature sensor, click the Add button.



The alarm screen below prompts for the following user input:

Alarm Type: This menu provides a list of predefined types of typical alarms. Chose the one that best matches your needs.

BaseStation ID: No input required here, simply displays the name of the BaseStation which the sensor is associated with.

Sensor ID: shows the default numeric number assigned to your sensor.

Display Name: enter the name you wish displayed in your SMS or email message

Description: enter a description of the alarm

Value: enter the trip point value at which you want your alarm to occur. For example, if the alarm type is “Reading Higher than a Value,” and the sensor is measuring temperature, a value entry of 90 will generate an alarm if the measured temperature exceeds 90 degrees.

All Days: the next several boxes are used for defining the periods of time you wish the alarm to be active. Clicking the All Days box will activate the alarm seven days of the week.

Alarm Start Time: choose the hour of day you wish the alarm to be active

Alarm end Time: choose the hour of day you wish the alarm to be deactivated

Alarm on Days: if the alarm is only to be active on certain days, select those days here

Recurring Alarm Delay: In order to minimize repeated alarm messages, choose a time value here for delay between recurring alarm messages. For example, a setting of 2 hrs will.....**need explanation**

Consecutive Alarm Delay: In order to minimize repeated alarm messages, choose a time value here for delay between recurring alarm messages. For example, a setting of 2 will.....**need explanation**

Send e-Mail: check box if you desire an email notification of an alarm event

Send Text: check box if you desire a text notification of an alarm event

Save: when finished, click this box to save your alarm settings

Create New Alarm Setting

Alarm Type :	--Select--	▼
BaseStation ID:	Basestation1	
Sensor ID:	002.000.000.000.058	
Display Name:		
Description:		
Value:		
All Days:	<input type="checkbox"/>	
Alarm Start Time:	0:00	▼
Alarm End Time:	23:00 PM	▼
	Duration:	
Alarm on Days: <i>[Press Ctrl to Hold multiple selection]</i>	Sunday Monday Tuesday Wednesday Thursday Friday Saturday	
Reoccurring Alarm Delay:	1 hr(s)	▼
Consecutive Alarm Delay:	0	▼
Send e-Mail:	<input type="checkbox"/>	
Send Text:	<input type="checkbox"/>	

Save Close

The following screen shows an example of a saved alarm. To edit the alarm, click on the small pencil icon. To delete the alarm, click on the trash can. To add another alarm, click on the Add button. The following screen shows an example of a saved alarm. To edit the alarm, click on the small pencil icon. To delete the alarm, click on the trash can. To add another alarm, click on the Add button. The following screen shows an example of a saved alarm. To edit the alarm, click on the small pencil icon. To delete the alarm, click on the trash can. To add another alarm, click on the Add button. To update the data collection rate, click the Update button.

Zebo™ Trending and Communications, Inc.

Home About Buy Support Contact Logout 7:39:16 PM

BusinessOne > OlatheNorthHS > BaseOne > Equipment room temperature

Equipment room temperature Alarms Settings Alarms Updates

Alarm Type	Value1	Value2	Alarm Start Time	Alarm End Time	Alarm On Which Days	Alarm Status
Reading is HIGHER than a VALUE	90	NA	12:00 AM	11:00 PM	S M T W T F S	ON

Add

Zebo™ Trending and Communications, Inc.

Home About Buy Support Contact Logout 7:40:23 PM

BusinessOne > OlatheNorthHS > BaseOne > Equipment room temperature

Equipment room temperature Updates Settings Alarms Updates

BaseStation ID: 001.000.000.000.016

Sensor Name: Equipment room temperature

Existing Update Type: 2-Success |

Update Type: --Select--

click when finished making changes → Update Records

click here to configure the rate of data collection

Section 3 - Viewing Data from Sensors

Once a sensor has been learned to a base station, each time the sensor is powered on, it will begin its normal mode of operation and send its data into the web application via the base station. You will be able to view the data, set alarm parameters, and more thru the web application.

Click on your Business Name. You are now on the Business Page.

Zebo™ Trending and Communications, Inc.

Company | Products | Support | Shop | Contact | Sign Out | Welcome to Business1 4:19:21 PM

Business

Business List

Business Test
jaya intotech

Register a New Base Station

Manage Users

Alarm

Change Password

Business Test

Available locations within this business are shown here

Locations

Location1 Location2

Business Information

Business Title: Business Test

Description: My Buildings

Business Type: Commercial Property Maintenance

Edit Business info can be edited here

Click on your Location. You are now on the Location Page and can see the base station in the list box.

Zebo™ Trending and Communications, Inc.

Company | Products | Support | Shop | Contact | Sign Out | Welcome to Business1 4:32:17 PM Olathe 86 °F

Locations

Locations List

Location1
Location2
hitech

Register a New Base Station

Manage Users

Alarm

Change Password

Business Test > Location1

The breadcrumb tabs allow you to easily return to the previous screens

Base Stations

Basestation1

Basestations registered for this location are shown here

* Deactivated Base Stations

Location Information

Location Name: Location1

Address 1: 1234 Main St

Address 2:

City: Olathe

State: KS

Postal Code: 66061

Edit details for this location can be edited here

Click on your Base Station. You are now on the base station page and will see all learned sensors in the sensor area.

Zebo™ Trending and Communications, Inc.

Company | Products | Support | Shop | Contact | Sign Out | Welcome to Business1 4:45:32 PM Olathe 86 °F

Business Test > Location1 > Basestation1

Sensors All learned sensors appear here

000.255.255.255	002.000.000.000.021	002.000.000.000.042	002.000.000.000.049
Temperature 055	Temperature 058	Bldg One 3rd floor	002.000.000.000.070
002.000.000.000.071	sensor1	Sensor 301	002.000.000.000.999
Temp Sensor	Elec Current 010	Water Sensor 004	Tilt Sensor 6

Base Station Information

Base Station Code: 001.000.000.000.005
 Base Station Name: Basestation1
 Time Zone: Central Standard Time
 Master Alarm: On
 Emails:

The Base Station screen contains the Master Alarm Button. When 'On' you will receive all alarms from this base station. When 'Off', all alarms will be turned off and you will not receive any alarms from this base station.

Click on the Sensor name of interest to view the Sensor Page where data may be viewed, alarms set, and more.

Zebo™ Trending and Communications, Inc.

Company | Products | Support | Shop | Contact | Sign Out | Welcome to Business1 11:42:47 AM Olathe 76 °F

Business Test > Location1 > Basestation1 > Bldg One 3rd floor

Sensors hover mouse over sensor name for more details

Sensors List

- 000.255.255.255
- 002.000.000.000.021
- 002.000.000.000.042
- 002.000.000.000.049
- Bldg One 4th floor
- Bldg One 3rd floor
- Bldg One 1st floor
- 002.000.000.000.070
- 002.000.000.000.071
- sensor1
- Sensor 301
- 002.000.000.000.999
- Temp Sensor
- Elec Current 010
- Water Sensor 004
- Tilt Sensor 6

Bldg One 3rd floor Settings Alarms Updates

List: 3 Hours | 12 Hours | 24 Hours | 1 Week | Showing: 1 Day(s)

Narrow Data to between (mm/dd/yyyy)

From Date: To Date:

select start and end date for data you wish to view

Data Type	Sensor Data	Created TimeStamp	ElapseAge
Primary Data	72.5 °F	11:37 AM 07/07	0
Primary Data	71.7 °F	11:36 AM 07/07	0
Primary Data	71.2 °F	11:35 AM 07/07	0
Primary Data	71.2 °F	11:33 AM 07/07	0
Primary Data	71.2 °F	11:32 AM 07/07	0

most current sensor data on top of list

Trending Graph

Temperature (Total Count:5) (Avg: 71.56) (Min:71.2) (Max:72.5)

to instantly graph data, click here

