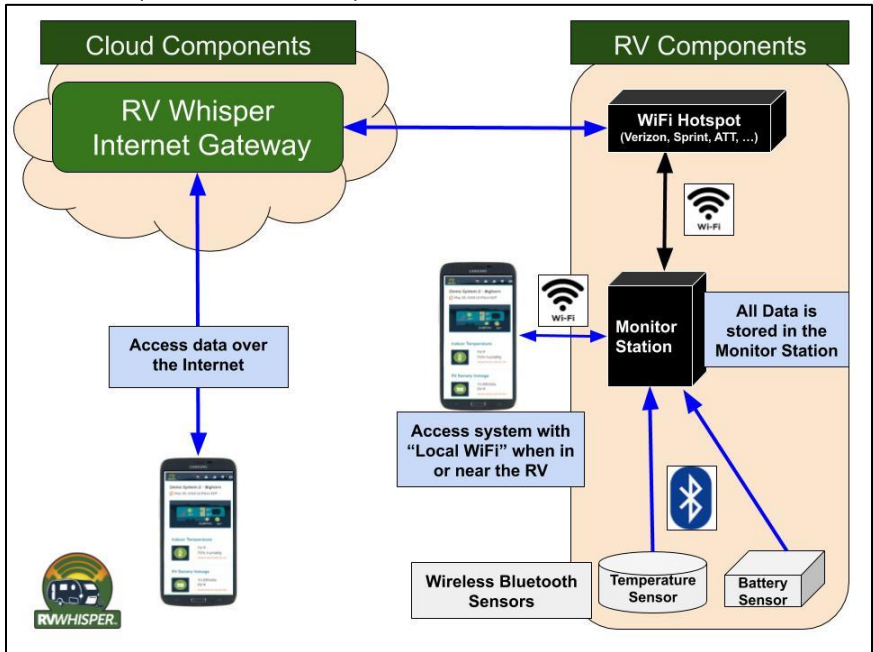# RVWHISPER™

User Manual

RV Whisper Monitor Station   *Version: September 30, 2019*

How it Works:

The RV Whisper Monitor Station is a small computer that runs inside your RV where it collects data from a number of Bluetooth wireless sensors. All sensor data is stored in the Monitor Station's microSD card so the data is always available when you are in or near the RV.

For internet access, the Monitor Station attempts to connect to a WiFi network running in the RV (typically a WiFi hotspot from a major cellular carrier). When Wifi with Internet Access is available, the Monitor Station automatically establishes a secure connection to the Gateway. Smart-phones connect to the Gateway also, and are securely connected to the Monitor Station running in their RV. Email and Text Message Alerts are sent from the Monitor Station throught the Gateway.

Section 1 – Gateway Registration: <u>Create User Account on RV Whisper Gateway</u>

1. From any browser go to **https://rvwhisper.com**

2. Click on "**Login to Gateway**" in the menu on the top right

3. Click on "New User? **Register Here"** and follow on-screen prompts.

4. Check your email and click on validation string

5. No need to login to Gateway now because your Monitor Station is not on WiFi yet. Close the Gateway Login screen.

6. Write down your new **Gateway username and password** here:

   a) Username: _____

   b) Password: _____

For convenience, write down your Monitor Station's Serial Number and "Local WiFi Password" from the printed label on your Monitor Station:

Monitor Station Serial Number (RVMn-XXXX): _____

Local WiFi Password (8 Characters): _____

Section 2 – Setup WiFi:
Setup WiFi on Monitor Station

1. Power up your RV Whisper Monitor Station with **included USB cable** and USB power adapter. The included AC power adapter can be used, but it is recommended to *connect to a 12 Volt USB power adapter for Pet Safety* such as a USB cigarette lighter adapter so the monitor station will operate without shore power.

2. There are 2 ways to setup WiFi on the Montior Station.

    a. Download and use the **RV Whisper Launcher** app from the google Play Store or Apple App Store
    b. Follow the manual instructions in this Section.

Phone App Setup Instructions for Android and iPhone Users:

1. Install **RV Whisper Launcher** app from Google Play Store or Apple App Store

2. Follow instructions in the App to connect to your Monitor Station and setup it's WiFi network connection.

3. Return to main screen of the phone app, Click on Gateway Login and enter the username and password you created in Section 1 above.

4. Click NEXT to to connect to your Monitor Station over the Internet Gateway.

Manual WiFi Setup Instructions for laptops, phones, or tablets:

1. If you did not install and use the Phone App, then you can setup WiFi on the Monitor Station with these instructions.
2. **Temporarily** change your smartphone, tablet, or laptop WiFi connection:
   a. Select WiFi network that matches the "Local WiFi" printed on the label attached to your monitor station. (RVMx-xxxx)
   b. Use the "Local WiFi Password" printed on the label attached to your monitor station.
3. Open a browser on your smartphone, tablet, or laptop and go to: http://10.1.10.1
4. Accept End User License Agreement and Login with:
   a. Username: **rvadmin**
   b. Password: **rvadmin**
5. Configure your Monitor Station to connect to your RV WiFi network:
   a. Click on ⚙ (Settings), then select **"Network"**
   b. Click on ✎ (Edit), select the WiFi network name you use in your RV and enter your WiFi password
   c. Click "SAVE AND REBOOT"
6. **Restore the original WiFi settings** on your phone, tablet, or laptop.
7. If you also plan to use the "RV Whisper Launcher" phone app on the same device, then you need to also "**Forget This Network" for the RVMx-xxxx** network on your phone's WiFi Setings. If the phone app is not be able to connect to the Monitor Station via "Local Wifi", it could be due to the RVMx-xxxx network password already saved in your phone's WiFi Settings. Fix this by "forgetting" the RVMx-xxxx network in your phone's WiFi Settings.

Section 3 – Logging in:
Login to Gateway

If you followed the Manual WiFi setup, make sure your phone WiFi Settings are back to normal and NOT connected to the Monitor Station's RVM1-xxxx WiFi network.

There are several ways to Login to your Monitor Station over the internet. You can use any or all of the following methods:

1. **Phone App**. Android or iPhone users can use the **RV Whisper Launcher** app
    a. Click **"Gateway Login"**
    b. Enter your Gateway username and password

2. **Web Browser**. Use any web browser and go to: https://rvwhisper.com
    a. Click on **"Login to Gateway"**
    b. Enter your Gateway username and password
    c. Click on "**Go To My RV**"
    d. NOTE: You may want to enable your phone to "remember the username and password for this site" to make this easier to use.

3. **Web Browser Bookmark**. Follow the steps in the Optional Section 4 to create a Bookmark on your phone, tablet or laptop. Then click on the RV Whisper Bookmark / Shortcut icon you created. This will launch a browser to the Gateway.
    a. Enter your Gateway username and password
    b. Click on "**Go To My RV**"

c. NOTE: You may want to enable your phone to "remember the username and password for this site" to make this easier to use.

Section 4 – Optional Bookmark: Create Browser Bookmark or Shortcut on Your Phone

1. Android and iPhone users with the RV **Whisper Launcher** app should skip this section. Laptop users, Kindle user, or users that don't use the **RV Whisper Launcher** App can continue with this Section to create a browser Shortcut / Bookmark.
2. Click on 👁 to update the displayed web page
3. Create browser shortcut / favorite on phone or computer by following these steps, depending on which phone you use:
   - **Android**
     i. Chrome → ⋮ (Menu) → Add to Home Screen
   - **iPhone**
     i. Safari → ⬆ (Share) → Add to Home Screen
   - **Windows**
     i. Internet Explorer → Add to Favorites
     ii. Firefox → Bookmark this page

Section 5 – Name Your RV: Name Your System

1. Make sure you are logged into your RV Monitor station using any of the methods listed above (Android App, iPhone App, brower connection).

2. Click on 👁 to update the displayed page.

3. Under ⚙ (Settings), select **"General"**
   a) Enter a name for your RV (e.g. , "John's RV")
   b) Change Timezone, if necessary
   c) Click "Save"

Section 6 – Add Sensors:
Add a Temperature Sensor

Adding Temperature & Humidity Sensors – Model BTH1

1. Open the sensor anti-static bag with scissors.

2. Note unique serial number label (BTH1-XXXX) on the sensor.

3. Remove the battery pull tab

4. When logged into the App:

   - Click on 📊 (Sensor Settings)
   - Click **"Add Sensor"**
   - Under "Add Wireless Sensor" select **"BTH1-"** and enter last 4 digits of the sensor serial number
   - Click **"VALIDATE WIRELESS SENSOR"** and follow on-screen prompts to Register Sensor.

5. Click 👁 (Status) to update displayed sensor data

   - Scroll down to see all sensor data

6. Place sensors in RV with included hook and loop fasteners to prevent sensors from moving while traveling

Add other Sensors

1. When logged into the App:
2. Click on ▮▮▮ (Sensor Settings)
3. Click **"Add Sensor" -> "Add Wireless Sensor**
4. Click the list next to the "Enter Serial Number" box and choose the sensor type you want to add.
5. Read and follow the detailed instructions displayed in the app to add that type of sensor.

Section 7 - Alerts:
Create and Edit Alerts

RV Whisper Alerts can be configured to send email and/or text messages when specific conditions occur, such as the Indoor Temperature being above 78 degrees F.

How do Alerts work?
- Alert system is setup by creating one or more "Alert Triggers".
    - For example, Indoor Temperature greater than 78 degrees for more than 20 minutes.
- "Alert Trigger" includes a list of contacts (email addresses and/or cell phone numbers) to be notified when "Alert Trigger" is activated.
- Some sensors will automatically create Alert Triggers for you when you the sensor is added.   You can also create and edit custom Alert Triggers.

To **Add** an **Alert Trigger:**

1. Click ⚠(Alert Settings) -> "Alert Setup" -> "Add Alert Trigger"
    - Follow on-screen prompts to create Alert Trigger

To **Change** an **Alert Trigger:**

1. Click ⚠(Alert Settings) -> "Alert Setup" -> "Alert Triggers"
    - Choose action for each Alert in list

Congratulations. You have completed the basic setup of your RV Whisper Monitor Station. Now you can watch for email and text message alerts and remotely login to check current and historical data.

Additional Information

Multiple WiFi Networks Supported

Your RV Whisper Monitor Station can be added to multiple WiFi networks (Settings -> Network). Your Monitor Station will automatically attempt to connect to any available WiFi network that it has credentials for, with the last WiFi network added having the highest priority.

Every few minutes, the Monitor Station will check it's WiFi connection status and automatically attempt to connect to any WiFi network that is in range and that it knows the password for.

Use with No Internet Access

If your RV is in a location that does not have WiFi with internet access, you can still access the system locally. The RV Whisper Monitor Station has its own local WiFi network that you can connect your smartphone to. All data is stored in your Monitor Station in your RV.

To connect locally, either:
1. run the **"RV Whisper Launcher"** phone app and click on "LOGIN OVER LOCAL WIFI".
    - If the "LOGIN OVER LOCAL WIFI" button is not displayed, then:
        i. Click SETUP and make sure the Serial Number is correct, click NEXT
        ii. Verify Local WiFi Password is correct
        iii. Click NEXT to finish setting up the Local WiFi setup process.
        iv. If the local connection is successful, the "LOGIN OVER LOCAL WIFI" button will be enabled
2. Follow **Manual WiFi Setup** Instructions on Page 4 (steps 1 through 4).

Campground WiFi for Internet Access

Campground WiFi is often not usable by the RV Whisper Monitor Station to get internet access. Campground WiFi networks often use "Captive Portal" technology to keep devices like the RV Whisper Monitor Station from directly connecting to, and from staying connected to, their WiFi networks.

If your RV uses a WiFi "repeater/router" like the WiFi Ranger that can connect to campground WiFi with Captive Portals and create a stable WiFi network inside your RV, then you should be able to leverage campground WiFi for RV Whisper Monitor Station.

And if your campground does not use Captive Portal technology, then the Campground WiFI might work for your RV Whisper system to get reliable internet access.

Working with Alerts and Alert Triggers

Click ⚠(Alert Settings) to see "My Current Alerts".

The **Triggered Alerts** section lists all Alerts that are active.
- Users can "ACKNOWLEDGE" triggered Alerts to stop additional emails and text messages for that Alert instance.
    - Note the Alert will still be Active and will continue to be displayed as Active until the Trigger Condition is no longer true.
    - If the Alert Trigger Condition is no longer true the Alert is removed from the Triggered Alerts list.
        I. If the Trigger Condition is met again sometime in the future, the Alert will be triggered, and notification will start for that Alert instance.

In the **Alert Setup** section "Alert Triggers" displays Alert Triggers:
- **Active** Alert Triggers are fully operational
    - Click "DEACTIVATE" to deactivate the Alert Trigger
- **Inactive** Alert Triggers are not operational
    - Click "ACTIVATE" to activate the Alert Trigger
- Alerts can be deleted by clicking the trash can icon.

Alert Triggers can be edited. Click ⚠️(Alert Settings) -> Alert Triggers to displaly all defined Alerts Triggers. Click on the Pencil Icon of any Alert Trigger to change it.

There is no limit on the number of Alert Triggers and the number of email addresses and cell phone numbers for Alert Notifications.

Graphing Historical Data

Your RV Whisper Monitor Station retains historical data that is automatically displayed in graphs when you click on any sensor.

1. Click 👁 to display all current sensor data
2. Scroll down the page and click on any sensor (e.g. "Indoor Temperature" sensor)
   - Scroll down to see historical graphs for all data values from that sensor
1. **Past 3 Hours** is the default for historical data graphs
   - Change the number of hours (e.g. change to Past 24 Hours), click the arrow or hit Return
   - Scroll down to see the new graphs
2. Changing the time frame for the graphs can also be done by:
   - click the gear icon ⚙ next to "Past N Hours"
   - Click the calendar icon next to Start Date to choose start Date for historical data graph
   - **Leave the End Date blank if you want "Current Time" as the End Date.**
     i. Or click Calendar icon and select "End Date"
   - Click yellow arrow or hit Enter

Sensor Batteries

Most battery operated sensors, like the BTH1 (Bluetooth Temperature & Humidity Sensor), report their battery status to the RV Whisper Monitor Station for logging. To see Sensor Battery status, click on any sensor to display a series of graphs for that sensor. Scroll down the list of graphs to see if there is a graph of "Sensor Battery Status" available for that sensor type.

Note that the BTH1 sensors use CR2032 coin cell batteries and last about 1 year. The Sensor Battery status is NOT temperature compensated, so you will see artifically low Sensor Battery status for BTH1 sensors that are used in the Freezer or Fridge. If you want to know the acutal Sensor Battery status, remove the sensor from the fridge or freezer for several hours and then check the senor Battary Status data.

Sensor Radio Signal Strength Indicator (RSSI)

When wireless sensors have obstructions between them and the RV Whisper Monitor Station, the radio signal strength
RSSI values of (-40 dB) to (-90db) indicate a strong signal. RSSI values from (-100dB) to (-105db) indicate a weak signal. Often, moving the sensor or the Monitor Station just a few inches can have a dramatic effect when the radio signal is weak between them. You can monitor the RSSI values for a sensor, and try is reduced. The radio signal strength for most sensors is stored as the RSSI value and can be seen in the list of graphs when you click on an individual sensor.

moving the sensor or Monitor Station to improve the signal strength between them which results in less "missing data" for that sensor.

Connect to Monitor Station with any Browser

The RV Whisper Gateway provides secure access to your RV Whisper Monitor Station over the internet. In addtion to using the RV Whisper Launcher phone app, you can use any browser on the internet to access the same data.

To login to your Monitor Station over the internet from any browser:
1. Go to https://gateway.rvwhisper.com
    a. Or… go to https://rvwhisper.com and click on "Login to Gateway"
2. Login with your Gateway Username and Password.
3. Click on "Go To My RV"
4. You are now connected to your monitor station so you can check the status from anywhere.

Note that you can create additional Gateway users linked to your Monitor Station in case you want to allow someone else to remotely connect to your RV Monitor Station.

Adding Users

The RV Whisper Gateway provides secure access to your RV Whisper Monitor Station over the internet. Users can be added from the RV Whisper Gateway.

Note that there are two types of User Roles:
- **"RV Admin"** can make changes to the App

- **"RV Viewer"** can see data but not make changes

To add a new User:
- Use a browser to Login to:
  https://gateway.rvwhisper.com
  with your **Gateway username and password.**.
  - If you are already logged into your Monitor Station:
    - Click on ⚙ (Settings)
    - Click on **"Users"**
    - Click on Edit and add Users from the "**RV Whisper Gateway**"
- On RV Whisper Gateway, Click on **"Dashboard"**
- Click **"Create user"**
  - Fill out fields and select appropriate **Role**
  - Click **"Create"**
- On the Dashboard, next to the newly created user:
  - **"Actions"** > **"Change User Password"**

There is no limit to the number of Gateway users you can create for your RV.

For Pet Safety:

POWER for Monitor Station and RV WiFi Device:

- Use a 12 Volt USB power adapter (such as a USB cigarette Ligher Adapter) so the monitor station will operate even when shore power is lost
- Your RV WiFi device must also be able to operate without shore power so email and text alerts can be sent out over the internet

TIMESTAMPS ON TEMPERATURE DATA:

- Look at the TIMESTAMP displayed with all data to make sure you are not looking at old data.

Safe Shutdown Procedure:

1. When logged in:
   - Click on ⚙ (Settings)
   - Click on **"Advanced"**
   - Click on **"SHUTDOWN"**
2. Wait 30 seconds before unplugging the USB power cable.
   - Note: Green light inside RVM2 Monitor Station will flash while system is shutting down
   - When Green light stops flashing and stays off it is safe to disconnect power

https://rvwhisper.com
https://rvwhisper.com/sensors

support@rvwhisper.com
RV Whisper Phone: 410-286-3060