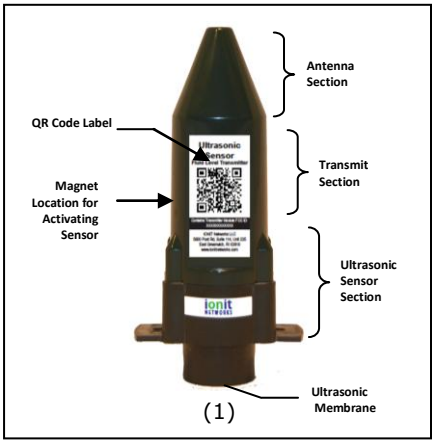
Site Installation Instructions for ION-9501/ION-9502 Remote Monitoring Kit

Version 1.8 – 11/29/2015

Prior to beginning installation, please scan the QR code to the left, or download and print the most current instructions from our site here: http://www.ionitnetworks.com/pdf/ion-9502-install-guide.pdf. Then, please **read through the entire set of instructions** and verify that you have all of the items needed for installation.



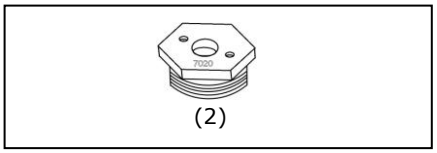
(1)

Intended Use of Equipment

The VisiTank® system by IONIT Networks is designed to provide remote monitoring capabilities of liquid levels in storage tanks. Typical applications include fuel, water, chemicals and waste oils.

Components Included in ION-9502 VisiTank® Kit by IONIT Networks

(1) ION-9071 Ultrasonic fluid level sensor/transmitter w/screws and foam gasket
(2) ION-9401 Broadband Internet Hub Receiver
(3) ION-9421 USB DC Power Supply Adapter for Hub (Not shown)
(4) ION-9430 Ethernet Cable-7ft for Hub (Not shown)
(5) ION-9020 2" NPT Tank Adapter (not included with ION-9501 kit)
Optional bung adapters are available for tanks with 1½" or 1¼" bung and Roth-type.

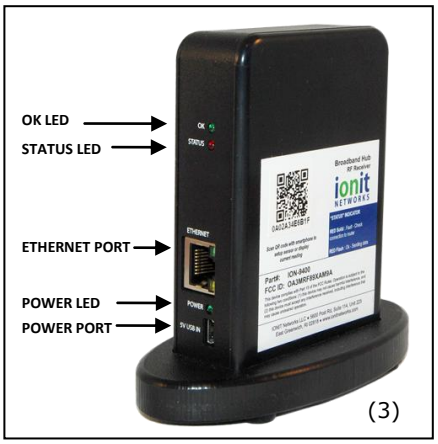

(2)

Tools and Optional Test Equipment

- ☐ Large pipe wrench to remove tank plug
- ☐ Screw driver (Philips or Slotted) to fasten Sensor to Tank Adapter
- ☐ Magnet for activating the sensor
- ☐ Smart phone with Internet connectivity

Installation Steps

1. **Install Hub:** Find a suitable location for the IONIT Hub. Connect the USB power supply securely to the Hub, and plug the AC cord into an un-switched AC outlet. The OK (top) and Power (bottom) LED indicators on will light green and the Status (middle) LED will flash red to indicate that the device is ready.



(3)

2. **Setup Hub:** Using your smart phone, scan the QR code on the Hub. When prompted log into your IONIT Networks account (click "Remember Me"). Click '+Device Configuration' button, then scroll down. Next, click 'Get Current Location' (figure 4) to use your phone's GPS to get your position (ensure your GPS is turned on). Next, enter any other details that uniquely identify this device for this customer (e.g. Customer ID or a Customer Label such as Mr. Jones House). Lastly, click the 'Set Device Configuration' button to save all your inputs.

(4)

STOP

Note: All devices shipped after 3/1/2015 via ground methods will be pre-activated. Skip step 3.

3. **Activate Fluid Level Sensor:** Move to the location where you can see the LED lights on the installed Hub. Scan the QR code on the fluid level sensor (#9071) and bring up the device on the mobile web app. Swipe a magnet over the black dot on the sensor for 1 second (figure 1) – you should now see the RED Status and GREEN OK LEDs on the Hub flash every second. Refresh the page of the mobile web app and you should see the device is in a state "Hibernate – NOT ACTIVE!" Count 8 flashes of the RED/GREEEN LED and put the magnet on the black dot for ~8 to 15 seconds then remove it. Refresh your mobile browser and the device should now read "FAST ACTIVE MODE" (and the 9071 sensor will be reporting a reading every second for about 2 minutes). Swipe the magnet for 1 second over the black dot again, and the device should now be in "Active Mode" (figures 5 & 6). Alternatively, if you leave the device in "FAST ACTIVE MODE" it will fall back to "Active Mode" in about 2 minutes. If it displays any message other than "Active Mode", repeat this step 3.

4. **Setup Fluid Level Sensor:** Using your smart phone, scan the QR code on the #9071 and bring up the mobile web app for the device. Click '+Device Configuration' button, then scroll down. Next, select your tank size from the 'Attached To' button. Then click 'Get Current Location' (figure 4) to use your phone's GPS to get your position (ensure your GPS is turned on). Enter any other details that uniquely identify this device for this customer (e.g. Customer ID or a Customer Label such as Mr. Jones House). Lastly, click the 'Set Device Configuration' button to save your entries. If the fuel tank is located in a basement, you may need to step outside to get good cellular signal on your phone in order to get your current position with your GPS.

5. **Install Fluid Level Sensor:** Prepare the tank by removing one of the unused top tank plugs and installing the appropriate Tank Adapter. Inspect the opening to ensure there are no obstructions that could interfere with the sensor (see Do's and Don'ts below). Note the fuel level. Thread the Tank Adapter into the plug hole. Secure the #9071 sensor to the tank adapter (figure 2) using the foam gasket and screws provided. Tighten screws until the gasket is slightly compressed. **Do NOT** over tighten screws.

(5)

6. **Verify Signal Strength:** While viewing the 9071 sensor on your mobile phone and selecting the RSSI sensor from the blue drop-down button (Figure 5), place the magnet over the black dot on the #9071 for 1 second. This will place the 9071 in FAST ACTIVE MODE as noted in the yellow bar at the top of the mobile web app, and will report a reading every few seconds for ~2 minutes. The gauge will display the signal strength between the #9071 sensor and the Hub. Ensure the 'Last Update' date and time is current. If the time is not current, or the signal strength is not in the green zone (between -100db and -20 db), then you do not have good signal and will need to move the Hub. Elevate the Hub if possible (higher the better) or move it a few feet in either direction while watching the RSSI gauge on your smart phone until it reads in the green. Obstructions like metal filing cabinets and other objects can reduce the signal strength. Once the RSSI indicator is in the green zone, place the Hub there.

7. **Verify Install:** Using your smart phone, scan the QR code found on the 9071 sensor. Confirm the tank level reading is current by observing the Last Update time, and confirm the tank level reading is approximately what you observed during Step 5 (figure 6).

Installation has been successful!

(6)

Technical Specifications

The VisiTank® system by IONIT Networks is designed to operate under the following environmental conditions:

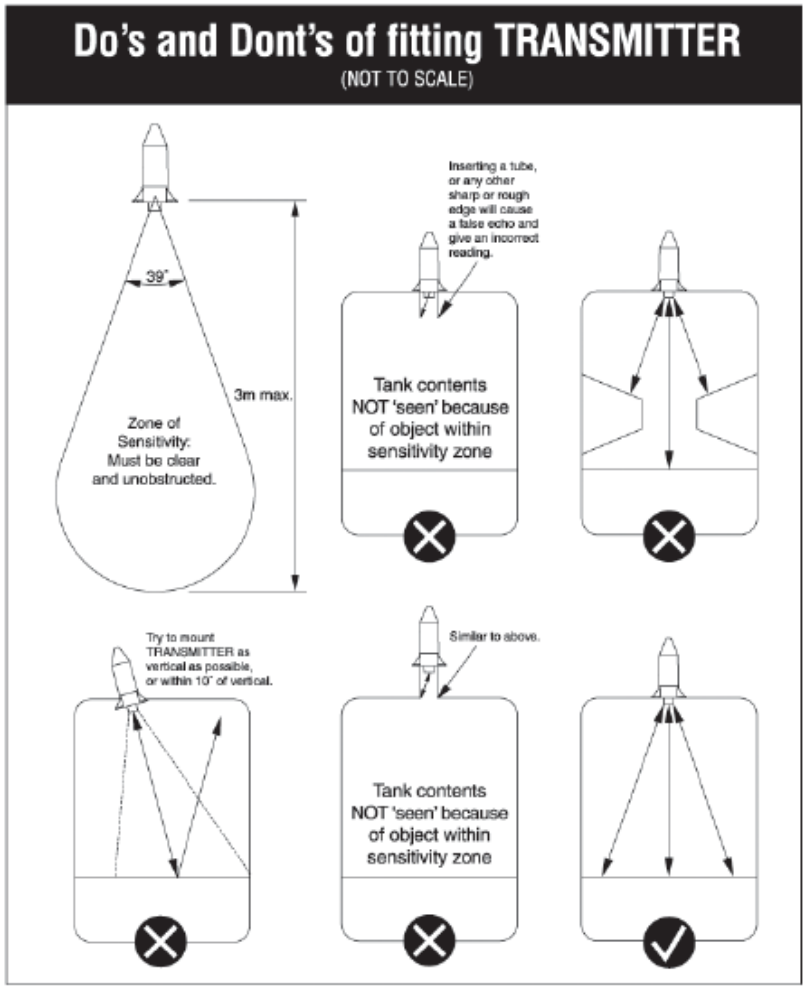
9401 Hub:

Risk of electrical shock

The Hub is for indoors only, and is powered by a UL listed Class 2 power supply. The Hub connects to the consumer's broadband Internet router with a standard RJ45 connector. Replacement power supply (#9421) is available from IONIT Networks.

9071 Sensor:

The Sensor is for indoor and outdoor use, with operating temperature range of 14°F to 140°F (-10°C to 60°C), at 15% to 95% relative humidity. It is powered by a 3V DC Lithium cell battery, CR2430, which should last 5+ years under normal circumstances. Note that sustained exposure to temperatures over 68°F (20°C) may reduce battery life.



IMPORTANT INFORMATION

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.

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.

Do not change or modify the device. Any modifications will void your authority to operate the equipment.

NOTE: The images of the devices and smart phone screens shown herein may differ slightly in reality from the actual products.