R ZERO - UVC WorkPoint Sensor Manual

11 APRIL 2022

PMN: Room workpoint
HVIN: SW9126

Above Ceiling-Mount UVC WorkPoint Sensors

PURPOSE //

Information on how to use R ZERO's UVC WorkPoint Sensor

DEFINITIONS //

UVC WorkPoint Sensor

R ZERO "UVC WorkPoint s" are battery-powered occupancy sensors that use passive infrared sensors for detecting human activity, a UVC photo diode in order to detect high level of UVC in a room and as well a temperature and humidity sensor. While UVC WorkPoint s are traditionally used to provide high-res occupancy data on workstations, these devices may also be used to monitor small meeting spaces where the number of occupants is not needed.

• UVC WorkPoint s are always "on" meaning, if there's a battery in the device, they're sending out data. All sensors will ship to installers with batteries installed. The data are UVC level, temperature, humidity and occupancy.

• UVC WorkPoint s include a double-stick backing that allows for a simple installation.

• UVC WorkPoint s have a Label with an ID and barcode

UVC WorkPoint Versions:

   V5 - Version 5 (2024+) UVC WorkPoint Sensor that uses a digital passive infrared sensing, UVC photo diode, temperature and humidity sensor.

DEVICE SETTINGS & CONFIGURATION //

R ZERO UVC WorkPoint s do not have any configurable elements to the physical devices. They simply carry out the instructions provided by the firmware. Otherwise, the devices are able to turn on and off as well as send a notification.

Powering On/Off:

UVC WorkPoint s do not have an on/off switch. To power on a UVC WorkPoint , simply insert the battery. To power off, remove the battery.

Notifications:

To send a notifications packet from the UVC WorkPoint , press the button using a pinhole press tool. This will illuminate the LED and force the device to advertise a packet.

FIRMWARE AND FLASHING //

R ZERO UVC WorkPoint s ship pre-flashed with the latest firmware. For updates to the firmware, the device must be attached to an installer's computer using a JTAG connector, wherein the firmware revision can be flashed onto the device. Firmware updates are not commonly done on production devices.
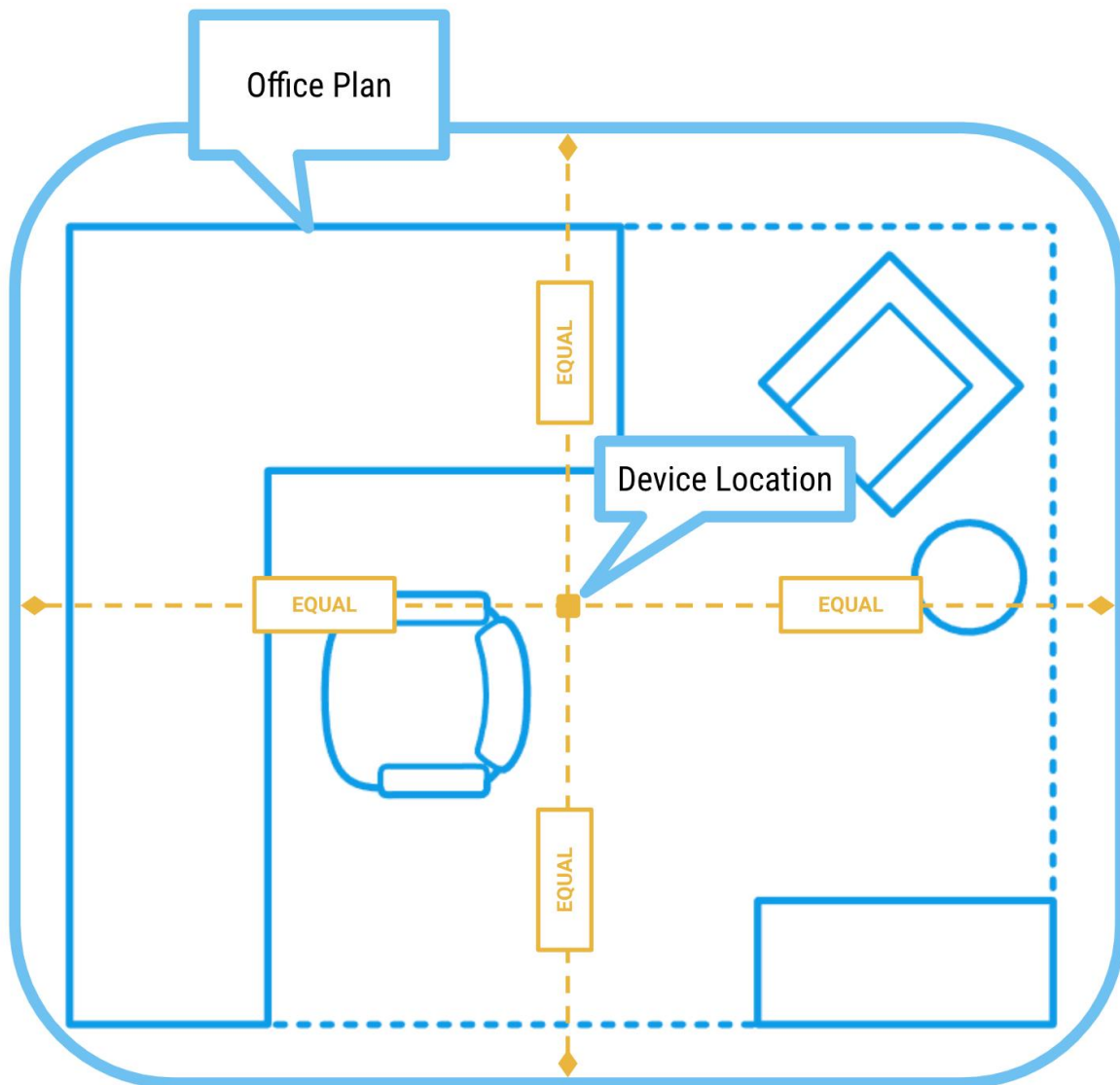
INSTALLATION //

Install Overview

Sensors are installed in locations specified by R ZERO. Sensors have an ID that is used to find where each device should be installed on a provided, pre-designed floor plan that is issued by R ZERO.

Use the (included) floor plans to locate each sensor. Sensors are typically ordered numerically so the installer should be able to make a continuous path through the floor plan while installing sensors in the order of the devices in the box.

Use the floor plans to plan how you will deploy yourself or your team to make the best use of your time.

Using a UVC WorkPoint Sensor install the device by sticking it to the ceiling, facing downwards. Any movement in the entire room will trigger an occupancy reading. If a room is longer than 10 ft (3m) we suggest using 2 UVC WorkPoints.

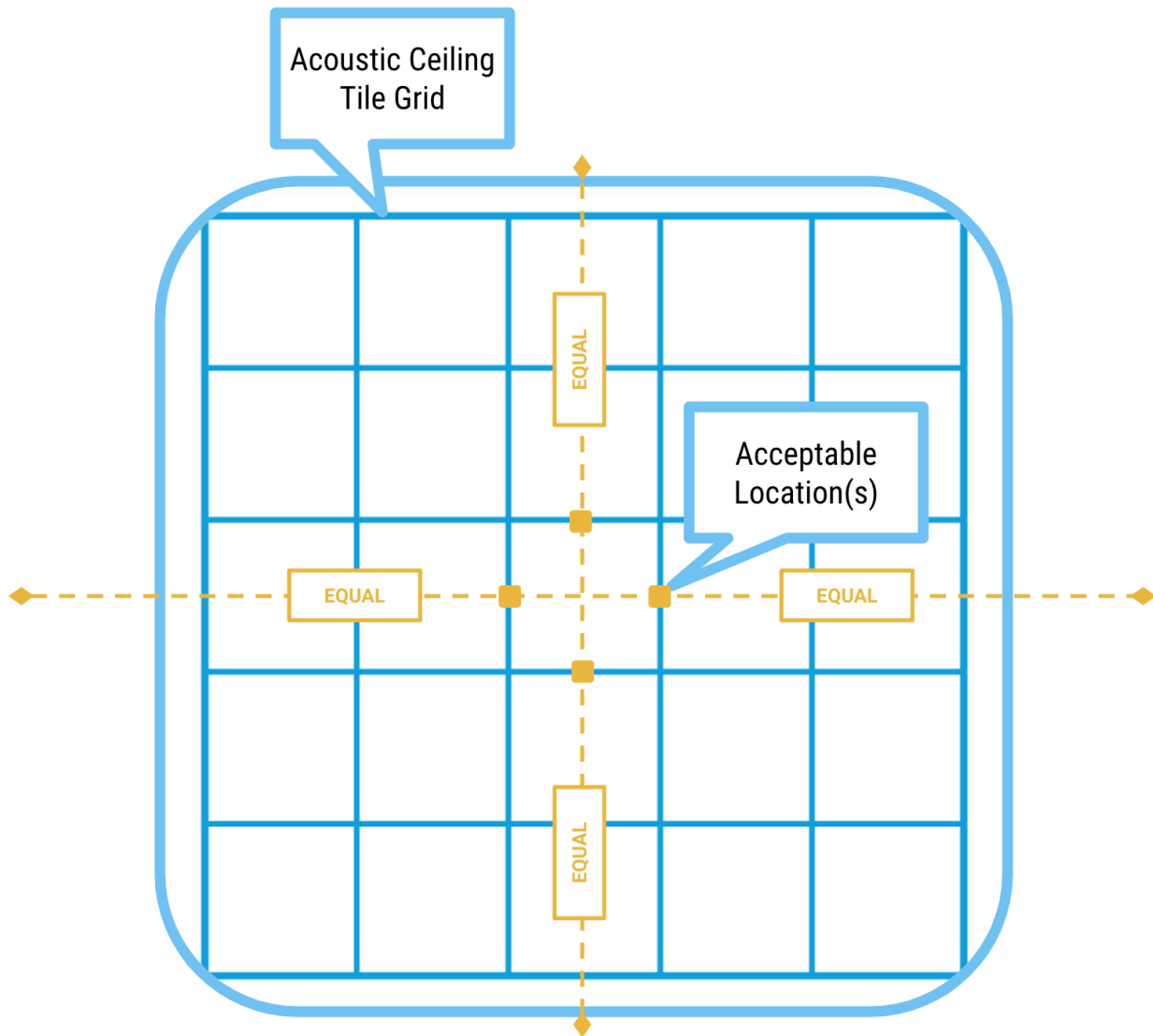**Room Type 1: Standard Room with Gypsum, Metal, or Wood Ceiling**

Install the Sensor using the drawings to the right and checklist below as guidelines for specific placement.

- ❏ Center the sensor on the space. The sensor location on the plan should indicate if the sensor is centered on the room or above a specific area of the room.

- ❏ No Orientation of the Sensor is required (it's spherical)

- ❏ Wipe the surface free of any oils

- ❏ Peel off the adhesive backing

❏ Stick the sensor to the location and hold in place, applying pressure, for at least 10 seconds.

Room Type 2: Standard Room on ACT Frame

Acoustic Ceiling Tile Grid

EQUAL

Acceptable Location(s)

EQUAL

EQUAL

EQUAL

EQUAL

Install the Room Sensor using the drawings to the right and checklist below as guidelines for specific placement.

❏ Center the sensor on the space. The sensor location on the plan should indicate if the sensor is centered on the room or above a specific area of the room.

❏ Locate the Sensor on the ACT Frame. This may be slightly off-center of the room.

- ❏ Do not Mount Sensors to ACT Tiles

- ❏ No Orientation of the Sensor is required (it's spherical)

- ❏ Wipe the frame free of any oils

- ❏ Peel off the adhesive backing

- ❏ Stick the sensor to the frame and hold in place, applying pressure, for at least 10 seconds.

FREQUENTLY ASKED QUESTIONS //

My UVC WorkPoint isn't responding when I press the notification button, what's wrong?

- Was this UVC WorkPoint previously assigned to another FloorPlan? The UVC WorkPoint will need to be "Recycled" from its previous FloorPlan before it will show up on a new FloorPlan. Once it is recycled, it will show up on the new FloorPlan's list of unassigned devices.

- If it's not being used at another location, try opening the device to manually press the button on the board.

- If manually pressing the button doesn't result in the LED illuminating, check the battery.

- If replacing the battery does not work, please contact @R ZERO and we'll send you a replacement.

A UVC WorkPoint is showing offline on our FloorPlan, what can I do?

- If it's a single UVC WorkPoint amongst multiple other online UVC WorkPoints, it's likely the battery. Remove the UVC WorkPoint from its case and try replacing the battery. If swapping the battery does not resolve the issue, please contact R ZERO and we'll send you a replacement.

- If multiple UVC WorkPoint s are offline:
  - The UVC WorkPoint s may be out of range of the nearest Hub, try moving a Hub closer or a UVC WorkPoint closer to the Hub to test its connection. Sometimes a UVC WorkPoint 's signal may be blocked depending on its installed location. Please reach out to R ZERO via chat or email if you think an extra Hub is needed.

  - The nearest Hub may be offline. Check the nearest Hub on the FloorPlan to ensure it is online.

Can UVC WorkPoint Sensors pick up workers on the other side of glass walls or windows?

- No, the majority of glass used for partition walls will not allow UVC WorkPoint Sensors to capture objects in motion on the opposite side. Other clear materials, such as polycarbonate or acrylic, may allow for partial detection of motion but the device's sensitivity will be greatly reduced.

Are UVC WorkPoint Sensors dangerous to human health?

- UVC WorkPoint Sensors use Bluetooth Low Energy (BLE) to communicate. The output power of R ZERO Bluetooth Low Energy devices is so low, the FCC does not require them to be tested for Specific Absorption Rate (SAR), a measure of the rate at which energy is absorbed by the human body when exposed to RF radiation, including microwave radiation. Cellphones and laptops, on the other hand, must pass strict SAR testing requirements, since they operate at higher power levels.

How do I know if UVC WorkPoint Sensors are collecting data?

- UVC WorkPoint Sensors are always on. As long as the battery is charged, the device will broadcast data. It may appear that a UVC WorkPoint Sensor is offline, however, if the connection to R ZERO's cloud (your Hub) has been disconnected or powered off.

FCC Statement

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 radiates 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.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

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.

RF Exposure Information

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

ISED Statement

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

The digital apparatus complies with Canadian CAN ICES-3 (B)/NMB-3(B).

This device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 and compliance with RSS 102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment.

RF Exposure Statement:

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Cet appareil contient un émetteur/récepteur exempt de licence conforme aux normes RSS (Règlements sur le spectre radio) exemptées de licence d'Innovation, Sciences et Développement économique Canada. Son utilisation est soumise aux deux conditions suivantes :

(1) Cet appareil ne doit pas causer d'interférences.

(2) Cet appareil doit accepter toute interférence, y compris celles susceptibles de provoquer un fonctionnement non désiré de l'appareil.

L'appareil numérique est conforme aux normes canadiennes CAN ICES-3 (B)/NMB-3(B).

Cet appareil respecte l'exemption des limites d'évaluation régulière énoncées à la section 2.5 du RSS 102 et est conforme à l'exposition aux RF du RSS 102. Les utilisateurs peuvent obtenir des informations canadiennes sur l'exposition aux RF et la conformité.

Cet équipement est conforme aux limites d'exposition aux radiations établies pour un environnement non contrôlé au Canada

Déclaration d'exposition aux RF:

Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et votre corps.