MONNIT®

Monnit Wireless Local Alert User's Guide

Inside the Box

You should find the following items in the box:
- Monnit Wireless Local Alert
- Antenna
- 5V Power Supply
- Four AA Batteries

Monnit Wireless Local Alert Quick Start

1. Create an iMonnit user account.
2. Add wireless gateway(s) and sensor(s) to the network.
3. Add the Local Alert device to the sensor network.
4. Power on the gateway and verify it checks into iMonnit.
5. Power on the sensors.
6. Power on the Local Alert (batteries or line power).
7. Setup notifications to use the Local Alert.
8. Test Local Alert by triggering a notification.

IMPORTANT!
Powering off the Local Alert will delete any saved notifications or sensor readings; however, any configuration changes will be saved.

Local Alert - Principle of Operation

The Local Alert is a device capable of receiving notifications and sensor readings from iMonnit. The Local Alert receives notifications and sensor readings wirelessly through a gateway connected to the iMonnit server, so notifications can be received locally where someone is most capable of responding to a critical condition.

When the Local Alert receives a notification it can set off an audio-visual alarm comprised of a loud 90 dB buzzer, an ultra-bright red flashing LED, and an LCD display capable of displaying a custom message to alert the user of a critical condition in their sensor network.

After the alarm sounds, with a press of the button, the user can clear the alarm, view a custom notification, the time the notification was sent, and which device detected the critical condition. The button is also used to clear notifications and reset the device.

When notifications are cleared on the Local Alert an acknowledgement message is also sent to the server to clear that notification in iMonnit. The Local Alert can be set as a device to receive notifications using Monnit's standard notification interface. Within this interface the Local Alert's specific alarms (LEDs, buzzer, scrolling message) can be set along with all of the other standard notification features already available.

When the Local Alert hasn't received any notifications and is on line power it will display the status bar indicating the state of the Local Alert.

The Local Alert can also display sensor readings from any sensor on the same account. Sensor readings unlike notifications do not cause alarms to trigger, do not display automatically, and cannot override notifications already saved in memory. To view and scroll through sensor readings the user must press the button.

The Local Alert can save up to 10 notifications or sensor readings in memory at any given time. If it exceeds 10 notifications the oldest notification is deleted. Notifications take priority over sensor readings in the memory so when memory is full and a new notification is received sensor readings are deleted before deleting notifications. If the memory is full of notifications sensor readings will be ignored until there is an unoccupied memory slot or a slot with an older sensor reading.

The Local Alert can be reset by pressing and holding the button. This is the preferred reset method due to the fact that this will send a clear all message to the server prior to the reset, whereas turning the switch off only clears messages locally, thus the messages on the server remain.

Local Alert Features

- Three Alarm Types: Flashing red LED, buzzer alarm, and custom message display.
- Unique buzzer sequence when multiple notifications have been received.
- Each alarm is configurable through the edit tab of the Local Alert.
- Displays device name, custom message or sensor reading and time of notification/reading.
- Can save up to 10 notifications/readings at a time.
- The number of notifications and sensor readings saved on the Local Alert is reported in iMonnit.
- Battery powered, line powered, or both.
- Configurable alarm and snooze intervals.
- Configurable heartbeat and poll rate (how often the Local Alert checks gateway for notifications)
- Displays the status bar while on line power.
- Capable of instantly receiving notifications from the gateway (must be on line power and in a sleep state).
- When on battery power saving features automatically enabled to extend battery life.

The Monnit Wireless Local Alert

TOP

LEFT   FRONT   RIGHT   BACK

4.0 in.

4.0 in.   1.6 in.

BOTTOM
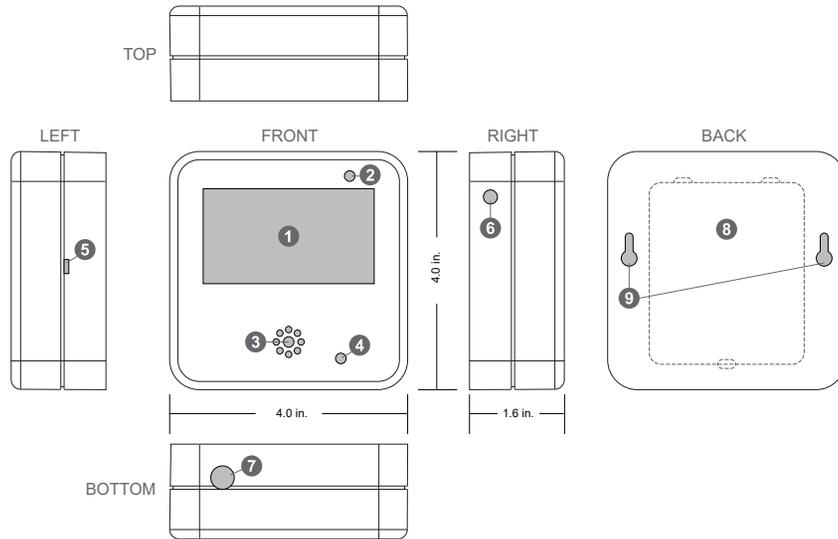
1. Backlit LCD (shows sensor readings and notifications).

2. LED light for visiual alerts.

3. Speaker for audible alerts.

4. Control button for viewing/deleting messages.

5. Power (on/off) switch.

6. SMA antenna port.

7. Line power supply port.

8. Battery compartment (four 1.5V AA type batteries).

9. Screw slots for wall mounting.

Using the Local Alert

1. Adding Local Alert to a Sensor Network

The Local Alert can be added to any Monnit sensor network through the iMonnit online sensor monitoring software the same way sensors are.

Do not power the Local Alert until it has been assigned to a network and a wireless gateway on the same network is already active.

Steps to add a wireless Local Alert to your sensor network.

• Choose "Manage" from the main navigation.
• Select the network you would like to add the device to.
• Find the bottom of the section "Sensor List / Assign Sensor".
• Enter the ID and Security Code from the back label of the Local Alert.
• Press the "Assign Sensor" button.
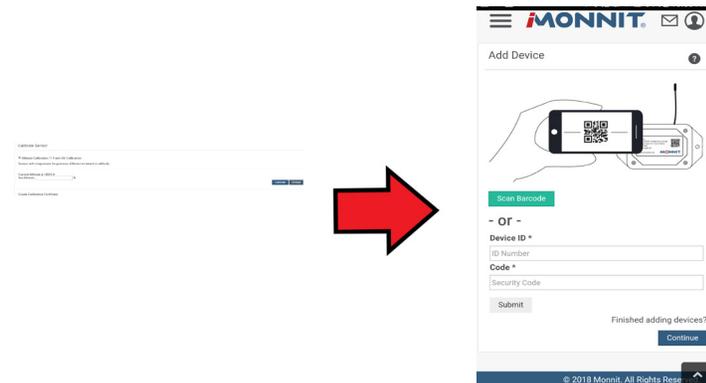
- Once the Local Alert has been added to your network, power cycle your gateway to ensure that it will recognize the Local Alert.
- Power the Local Alert by attaching and plugging in the power supply or inserting batteries, then turn the power switch to on.
- The LCD will display the message, "LINKING…"
- If the LCD should display the message, "LINKED TO : GW ID – #####". If the LCD displays the message "LINK FAILURE" then press the button after the message disappears to force the Local Alert to retry linking or cycle the power using the power switch.
- Once linked to a gateway, in the iMonnit online software, verify that data is being received by viewing the device's history tab in iMonnit.

- Each reading in the iMonnit software for the Local Alert will show the number of notifications and sensor readings stored on the Local Alert.

2. Local Alert Behavior

| LED	The LED will flash three times per notification saved in memory when a notification is received and the LED alarm is enabled on the Local Alert and in the notification.
	It will flash twice after the button has been held for two seconds or five times after the button has been held while viewing notifications/readings (see "Button" section).
	It will flash three times slowly after being held for 10 seconds right before resetting.

Display	While the Local Alert is inactive and on line power the status bar will be displayed along with the current time.
	While the Local Alert is inactive and only on battery power the display will be off to save power.
	A notification message will appear on the display automatically after receiving a notification if the display alarm is enabled in the Local Alert configurations and in the notification.
	After a notification or sensor reading is received, pressing the button once will cause the notification/reading to be displayed.
	While snoozing or in display sleep (goes into display sleep after 1 minute of inactivity while viewing messages) the display will be blank.
Buzzer	If the buzzer alarm option is enabled in iMonnit and the buzzer alarm is enabled in the notification the buzzer will turn on when the Local Alert receives a notification.
Backlight	The backlight will be on while information is displayed on the screen when the backlight configuration is enabled in the Local Alerts edit tab.
	While notifications/readings are being viewed after pressing the button the backlight will always turn on for enhanced readability. After thirty seconds of viewing a notification/reading without any user interaction the backlight will turn off automatically. Pressing the button at this point will turn it back on.
Button	Pressing the button while the Local Alert is alarming will turn the alarm off and display the most recent notification message. While viewing notifications/readings pressing the button will scroll to the next notification/reading.
	Pressing the button while the device is sleeping (display and alarms off or only the status bar is visible) will cause the display status bar to appear along with a message indicating no messages.
	Holding the button for 2 seconds (till the LED flashes twice rapidly) will clear the current notification/reading being viewed.
	Holding the button for 5 seconds (till the LED flashes five times rapidly) will clear while viewing notifications/readings will clear all notifications/readings.
	NOTE: The LED must finish flashing when hold for the clear command to be accepted.

Memory	The Local Alert has 10 memory slots to hold notifications or sensor readings.
	The most recent notification takes priority in this memory space. If a new notification is received and the memory is full, the oldest sensor reading will be deleted first to make room for the notification if there are no sensor readings the oldest notification will be deleted. If there are open memory slots nothing will be deleted unless the reading or notification is cleared by the user.
	If a new sensor reading is received and the memory is full, the oldest sensor reading will be deleted to make room for the new reading, but if there are only notifications in memory the sensor reading will be discarded.

For a flowchart of the Local Alert's behavior, see Appendix A.

3. Configuring the Local Alert

In the iMonnit edit tab for the Local Alert there are several configurable options.
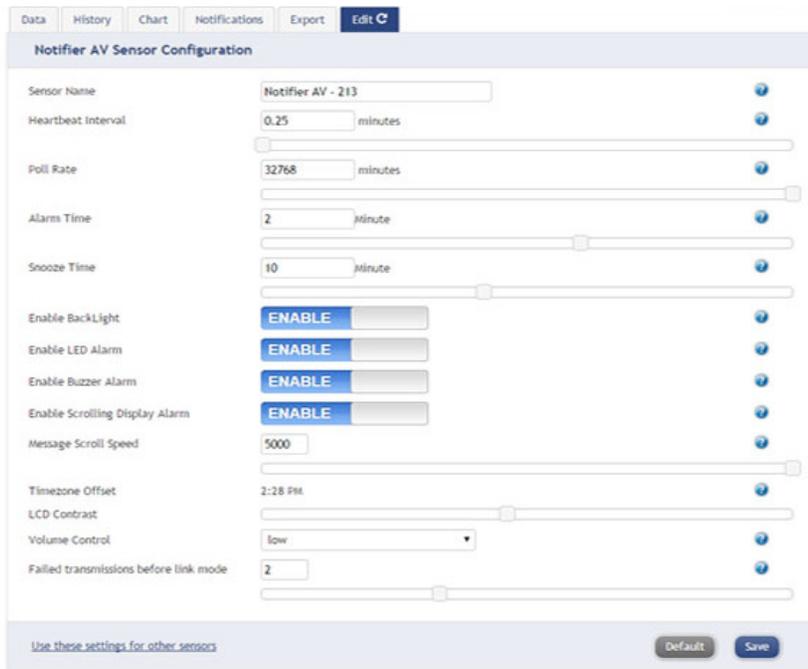
Heartbeat Interval: How often the Local Alert checks in with the server.

Poll Rate: How often the Local Alert checks the gateway for notifications.

Alarm Time: How long the alarm sounds before it snoozes.

Snooze Time: How long the Local Alert snoozes before alarming again.

Enable Backlight: This controls the LCD backlight when displaying time and when scrolling messages during alarms.

Enable LED Alarm: Enables flashing LED in the Alarm On state.

Enable Buzzer Alarm: Enables buzzer alarm in the Alarm On state.

Enable Scrolling Display Message: Enables notification messages in the Alarm On state.

Message Scroll Speed: How long a message is displayed in the Alarm On state before scrolling to the next message.

Time Zone Offset: Sets the time on the Local Alert to the same time as the account.

4. Setting Notifications / Alerts

1. Notifications can be associated with the Local Alert by selecting the Local Alert device under the Devices to Notify tab in the notification and moving it into the right pane using the double right arrow button.
2. Once moved to the right pane various alarms can be enabled by clicking on them so they are green.
   - From left to right LED Alarm, Buzzer Alarm, and Display Alarm.
   - Keep in mind that the test notification (paper airplane) may not send the notification to the Local Alert.
3. Changes made in this screen take effect immediately there is no save button that needs to be pressed.
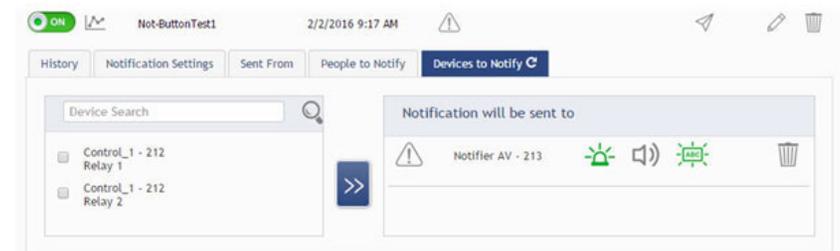
5. Associating Sensor Readings

1. Go to the "Overview" screen.
2. Click on the Local Alert.

Monnit Wireless Local Alert Specifications

Power

Standard Operating Range	5 - 8 VDC (can be powered by line power or batteries.)
Power Options	- 5.5 VDC @ 900 mA power supply (included) - 4 x AA sized 1.5 V batteries
Current Consumption	10 uA (sleep mode) 20 mA (buzzer) 20 mA (radio RX mode) 520 uA (LCD) 37 mA (radio TX mode) 30 mA (LCD backlight)

Operation

Radio Frequencies	Available: 900, 868, and 433 MHz
Antenna	Connector: SMA | Gain: 5.0 dBi
Wireless Range	250 - 300 ft. non-line-of-sight
Wireless Communication	Messages are sent from software through gateway (no direct sensor to device communication is supported)*
Message Storage / Memory	10 messages (notifications or sensor readings)

Mechanical

|	
Display	LCD (8 lines of text) | 128 x 32 pixels | 71.55 mm (diagonal) Transflective (visible in sunlight without backlight)
LED	One Ultra Bright Red LED (1630 mcd, 110° x 45 ° Viewing Angle)
Buzzer	90 dB 2.5 KHz (105 dB 3.5 KHz optional)
Enclosure	ABS plastic
Dimensions	4.0 x 4.0 x 1.6 in. (101.6 x 101.6 x 40.64 mm) Excluding antenna
Weight	11.2 ounces (with batteries installed)

Environmental

Operating Temperature	-18° to +55° C (0° to +130° F) **
Storage Temperature	-20° to +70° C (-4° to +158° F)
Certifications	FC CE 🇨🇦 Industry Canada 900 MHz product; FCC ID: ZTL- RFSC1 and IC: 9794A-RFSC1. 868 and 433 MHz product tested and found to comply with: CISPR 22:2008-09 / EN 55022:2010 - Class B and ETSI EN 300 220-2 V2.4.1 (2012-05).

* Monnit local alert units require a Monnit wireless gateway for operation.

** At temperatures above 100°C, it is possible for the board circuitry to lose programmed memory.

APPENDIX A – BEHAVIORAL FLOWCHART
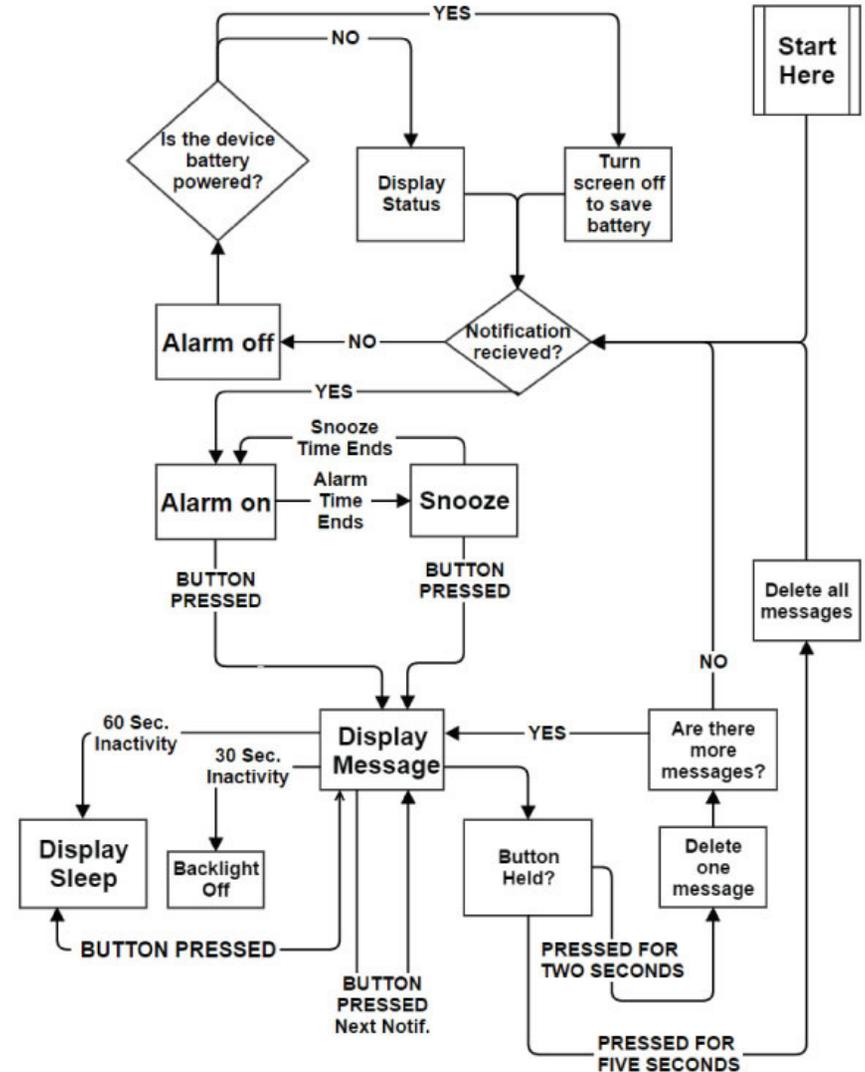
Warranty Information

(a) Monnit warrants that Monnit-branded products will be free from defects in materials and workmanship for a period of one (1) year from the date of delivery with respect to hardware and will materially conform to their published specifications for a period of one (1) year with respect to software. Monnit may resell sensors manufactured by other entities and are subject to their individual warranties; Monnit will not enhance or extend those warranties. Monnit does not warrant that the software or any portion thereof is error free. Monnit will have no warranty obligation with respect to Products subjected to abuse, misuse, negligence or accident. If any software or firmware incorporated in any Product fails to conform to the warranty set forth in this Section, Monnit shall provide a bug fix or software patch correcting such non-conformance within a reasonable period after Monnit receives from Customer (i) notice of such non-conformance, and (ii) sufficient information regarding such non-conformance so as to permit Monnit to create such bug fix or software patch. If any hardware component of any Product fails to conform to the warranty in this Section, Monnit shall, at its option, refund the purchase price less any discounts, or repair or replace non-conforming Products with conforming Products or Products having substantially identical form, fit, and function and deliver the repaired or replacement Product to a carrier for land shipment to customer within a reasonable period after Monnit receives from Customer (i) notice of such non-conformance, and (ii) the non-conforming Product provided; however, if, in its opinion, Monnit cannot repair or replace on commercially reasonable terms it may choose to refund the purchase price. Repair parts and replacement products may be reconditioned or new. All replacement products and parts become the property of Monnit. Repaired or replacement products shall be subject to the warranty, if any remains, originally applicable to the product repaired or replaced. Customer must obtain from Monnit a Return Material Authorization Number (RMA) prior to returning any Products to Monnit. Products returned under this Warranty must be unmodified.

Customer may return all Products for repair or replacement due to defects in original materials and workmanship if Monnit is notified within ninety (90) days of customer's receipt of the product. Monnit reserves the right to repair or replace products at its own and complete discretion. Customer must obtain from Monnit a Return Material Authorization Number (RMA) prior to returning any products to Monnit. Products returned under this Warranty must be unmodified and in original packaging. Monnit reserves the right to refuse warranty repairs or replacements for any products that are damaged or not in original form. For products outside the ninety-day warranty period repair services are available at Monnit at standard labor rates for a period of one year from the Customer's original date of receipt.

(b) As a condition to Monnit's obligations under the immediately preceding paragraphs, Customer shall return Products to be examined and replaced to Monnit's facilities, in shipping cartons which clearly display a valid RMA number provided by Monnit. Customer acknowledges that replacement products may be repaired, refurbished or tested and found to be complying. Customer shall bear the risk of loss for such return shipment and shall bear all shipping costs. Monnit shall deliver replacements for Products determined by Monnit to be properly returned, shall bear the risk of loss and such costs of shipment of repaired products or replacements, and shall credit Customer's reasonable costs of shipping such returned Products against future purchases.

(c) Monnit's sole obligation under the warranty described or set forth here shall be to repair or replace non-conforming products as set forth in the immediately preceding paragraph, or to refund the documented purchase price for non-conforming Products to Customer. Monnit's warranty obligations shall run solely to Customer, and Monnit shall have no obligation to customers of Customer or other users of the Products.

Limitation of Warranty and Remedies.

THE WARRANTY SET FORTH HEREIN IS THE ONLY WARRANTY APPLICABLE TO PRODUCTS PURCHASED BY CUSTOMER. ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. MONNIT'S LIABILITY WHETHER IN CONTRACT, IN TORT, UNDER ANY WARRANTY, IN NEGLIGENCE OR OTHERWISE SHALL NOT EXCEED THE PURCHASE PRICE PAID BY CUSTOMER FOR THE PRODUCT. UNDER NO CIRCUMSTANCES SHALL MONNIT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES. THE PRICE STATED FOR THE PRODUCTS IS A CONSIDERATION IN LIMITING MONNIT'S LIABILITY. NO ACTION, REGARDLESS OF FORM, ARISING OUT OF THIS AGREEMENT MAY BE BROUGHT BY CUSTOMER MORE THAN ONE YEAR AFTER THE CAUSE OF ACTION HAS ACCRUED.

IN ADDITION TO THE WARRANTIES DISCLAIMED ABOVE, MONNIT SPECIFICALLY DISCLAIMS ANY AND ALL LIABILITY AND WARRANTIES, IMPLIED OR EXPRESSED, FOR USES REQUIRING FAIL-SAFE PERFORMANCE IN WHICH FAILURE OF A PRODUCT COULD LEAD TO DEATH, SERIOUS PERSONAL INJURY, OR SEVERE PHYSICAL OR ENVIRONMENTAL DAMAGE SUCH AS, BUT NOT LIMITED TO, LIFE SUPPORT OR MEDICAL DEVICES OR NUCLEAR APPLICATIONS. PRODUCTS ARE NOT DESIGNED FOR AND SHOULD NOT BE USED IN ANY OF THESE APPLICATIONS.

Certifications

United States FCC

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 Monnit could void the user's authority to operate the equipment.

RF Exposure

⚠ **WARNING:** To satisfy FCC RF exposure requirements for mobile transmitting devices, the antenna used for this transmitter must not be co-located in conjunction with any other antenna or transmitter.

Monnit Wireless Local Alert Contains:

FCC ID: ZTL-RFSC1

This device has been designed to operate with an approved antenna listed below, and having a maximum gain of 5.1 dBi. Antennas not included in this list or having a gain greater than 5.1 dBi are strictly prohibited for use with this device. The required antenna impedance is 50 ohms.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that required for successful communication.

Approved Antennas
The following antennas are approved for use with Monnit devices.

- Hyperlink HG905RD-RSP (5.1 dBi Rubber Duck)
- Pulse W1063 (3.0 dBi Rubber Duck)
- ChangHong GSM-09 (2.0 dBi Rubber Duck)

Canada (IC)

English

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

The radio transmitter (IC: 9794A-RFSC1) has been approved by Industry Canada to operate with the antenna types listed on previous page with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

French

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

Le présent émetteur radio (IC: 9794A-RFSC1) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne figurant sur la page précédente et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, méme si le brouillage est susceptible d'en compromettre le fonctionnement.

Error Reporting, Troubleshooting and Support

For technical support and troubleshooting tips please visit our support library online at
http://www.monnit.com/support/. If you are unable to solve your issue using our online
support, email Monnit support at support@monnit.com with your contact information and a
description of the problem, and a support representative will call you within one business
day. For error reporting, please email a full description of the error to support@monnit.com.

Additional Information and Support

For additional information or more detailed instructions on how to use your Monnit Wireless
Sensors or the iMonnit Online System, please visit us on the web at
http://www.monnit.com/support/.

For additional information or more detailed instructions
on how to use your Monnit Wireless Sensors or sensor
monitoring software, please visit us on the web at
http://www.monnit.com/support/.

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