

RADIONODE TIPS: UNDERSTANDING INSTANT ALARMS

KEY INSIGHTS ON SENSORS, COMMUNICATION, AND FACTORY OPERATIONS

IoT smart sensors, called Radionodes, have various and complex functions, making it sometimes difficult to understand.

To understand Radionodes, you need to grasp four things: understanding the sensors, knowledge of different communication methods, familiarity with the cloud, and understanding various industrial scenarios.

Those receiving this email are part of the special group I manage, and I will continue to send useful information to ensure you have sufficient understanding.

In this month's RADIONODE TIPS will cover the instant alarm notification feature supported by the RN17X series and the RN400-T2EX, H2EX products.

RADIONODE ALARM INSTANT SENDING FUNCTION

Generally, alarms sent from Radionode365 are dispatched according to the device's transmission interval. However, some Radionode products have a feature that allows instant alarm notifications when abnormal data is detected, regardless of the device's transmission interval. The RN17X series and RN400-T2EX, [RN400-H2EX](#) are among these products. These devices are designed to independently detect anomalies within the device by setting a normal range for the sensor, enabling them to send an immediate alarm when abnormal data is identified. Utilizing this instant alarm feature allows for quicker and more efficient responses to deviations.

HOW TO SET UP THE RN17X SERIES

1. Connect the RN17X device to your PC using a USB cable.

2. Open the Radionode Terminal software, and once the green appears, type “Radionode114” to begin the setup.

[\(Download Radionode Terminal\)](#)

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RadioNode's Terminal V3.04
Main View Configure Help

radionode114
ok(12)

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RADIONODE RN171 SERIES SYSTEM INFORMATION

PRODUCT MODEL      : RN171WC
HTTP INTERVAL      : 300 Sec.
DATA DESTINATION   : RADIONODE365.COM
ETHERNET MAC       : 000000000000
VIRTUAL MAC        : 004A37D9E85
CURRENT IP ADDR    : 0.0.0.0
MODBUS TCP PORT    : 502
BUILD VERSION      : Aug 18 2023
NVM PARAM SIZE     : 644
HTTP BACKUP DB     : 30856, Stored Samples(826)

SENSOR CARTRIDGE INFO.
MODEL NUMBER       : TOTAL # of CH. : 0
CALIBRATION DATE   :
CHANNEL INFO.
[]

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[Radionode RN170 Config Information.]
1.Network Setup.
2.System Setup.
3.Buzzer/Siren Setup.
4.HTTP Destination Setup.
5.MODBUS TCP Setup.
9.Quit(Back to normal Operation)

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MODBUS TCP PORT : 502
BUILD VERSION   : 20241009
NVM PARAM SIZE  : 706
WIFI FIRMWARE   : 19.7.6
HTTP BACKUP DB  : 8456 B, (0)/300 SMPL

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SENSOR CARTRIDGE INFO.
MODEL NUMBER    : TOTAL # of CH. : 0
CALIBRATION DATE : 01 January 1970
CHANNEL INFO.
[]

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[Radionode RN172 Config Information.]
1.Network Setup.
2.System Setup.
3.Buzzer/Siren Setup.
4.HTTP Destination Setup.
5.MODBUS TCP Setup.
9.Quit(Back to normal Operation)
3

[3.BUZZER&SIREN SETUP MENU.]
A.Set Alarm Trigger Mode [ CH1 ONLY ]
B.Set Alarm CH1 [ ] Normal [ -8.00 ~ 25.00 ]
C.Set Alarm CH2 [ ] Normal [ 0.00 ~ 0.00 ]
D.Set Alarm CH3 [ ] Normal [ 0.00 ~ 0.00 ]
E.Set Alarm CH4 [ ] Normal [ 0.00 ~ 0.00 ]
F.Set BUZZER Alert Enable [ SOUND ON ]
G.Set Remote SIREN DEVICES Enable [ OFF ]
(QLIGHT MODEL:ST56EL-ETNS-2-WS)
H.Set Remote SIREN DEVICE1 IP [ 192.168.1.201]
I.Set Remote SIREN DEVICE(1,2,3) Port [ 2000 ]
J.Set Remote SIREN DEVICE2 IP [ 0 ]
K.Set Remote SIREN DEVICE3 IP [ 0 ]
L.Set System Sound Mute [ SOUND ON ]
Q.Quit.

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3. When the menu list appears, press the number key 3 and then Enter to access the Buzzer/Siren Setup.

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WIFI FIRMWARE : 19.7.6
HTTP BACKUP DB : 8456 B,(0)/300 SMEL
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SENSOR CARTRIDGE INFO.
MODEL NUMBER : TOTAL # of CH. : 0
CALIBRATION DATE : 01 January 1970
CHANNEL INFO.
[ ]
-----
[Radionode RN172 Config Information.]
1.Network Setup.
2.System Setup.
3.Buzzer/Siren Setup.
4.HTTP Destination Setup.
5.MOVBUS TCP Setup.
9.Quit(Back to normal Operation)
3
-----
[3.BUZZER&SIREN SETUP MENU.]
A.Set Alarm Trigger Mode [ CH1 ONLY ]
B.Set Alarm CH1 [ Normal[ -8.00 ~ 25.00 ]
C.Set Alarm CH2 [ Normal[ 0.00 ~ 0.00 ]
D.Set Alarm CH3 [ Normal[ 0.00 ~ 0.00 ]
E.Set Alarm CH4 [ Normal[ 0.00 ~ 0.00 ]
F.Set BUZZER Alert Enable [ SOUND1 ON ]
G.Set Remote SIREN DEVICES Enable [ OFF ]
(QLIGHT MODEL:ST56EL-ETNS-2-WS)
H.Set Remote SIREN DEVICE1 IP [ 192.168.1.201]
I.Set Remote SIREN DEVICE(1,2,3) Port [ 2000 ]
J.Set Remote SIREN DEVICE2 IP [ 0 ]
K.Set Remote SIREN DEVICE3 IP [ 0 ]
L.Set System Sound Mute [ SOUND ON]
Q.Quit.
a
a
0.NO ALARM, 1.CH1, 2.CH2, 3.CH1 AND CH2, 4.CH1 OR CH2, 5.CH1:4-OR(MANUAL), 6.UA Default Setting
Enter Alarm Trigger Mode:1

```

4. In the Buzzer/Siren Setup menu, use Menu A to select the channel for which you want to enable instant alarms. To set an alarm only on Channel 1, press 1 to assign the alarm to CH.1.
5. Use Menus B, C, D, and E in the Buzzer/Siren Setup menu to define the normal range for each sensor from Channel 1 to Channel 4 connected to the RN17X device.
6. To set the normal range for Channel 1, press the B key and then Enter.

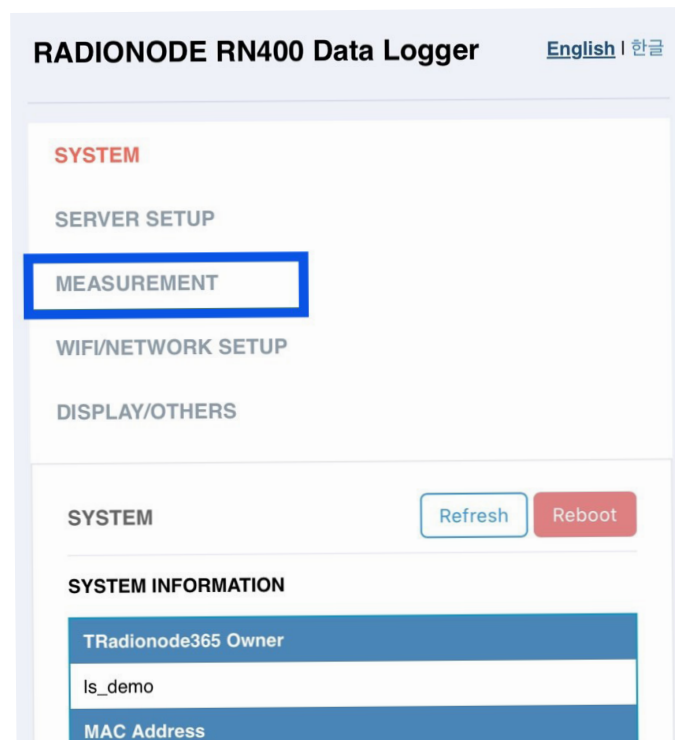
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B.Set Alarm CH1 [ Normal[ -8.00 ~ 25.00 ]
C.Set Alarm CH2 [ Normal[ 0.00 ~ 0.00 ]
D.Set Alarm CH3 [ Normal[ 0.00 ~ 0.00 ]
E.Set Alarm CH4 [ Normal[ 0.00 ~ 0.00 ]
F.Set BUZZER Alert Enable [ SOUND1 ON ]
G.Set Remote SIREN DEVICES Enable [ OFF ]
(QLIGHT MODEL:ST56EL-ETNS-2-WS)
H.Set Remote SIREN DEVICE1 IP [ 192.168.1.201]
I.Set Remote SIREN DEVICE(1,2,3) Port [ 2000 ]
J.Set Remote SIREN DEVICE2 IP [ 0 ]
K.Set Remote SIREN DEVICE3 IP [ 0 ]
L.Set System Sound Mute [ SOUND ON]
Q.Quit.
a
a
0.NO ALARM, 1.CH1, 2.CH2, 3.CH1 AND CH2, 4.CH1 OR CH2, 5.CH1:4-OR(MANUAL), 6.UA Default Setting
Enter Alarm Trigger Mode:1
-----
[3.BUZZER&SIREN SETUP MENU.]
A.Set Alarm Trigger Mode [ CH1 ONLY ]
B.Set Alarm CH1 [ Normal[ -8.00 ~ 25.00 ]
C.Set Alarm CH2 [ Normal[ 0.00 ~ 0.00 ]
D.Set Alarm CH3 [ Normal[ 0.00 ~ 0.00 ]
E.Set Alarm CH4 [ Normal[ 0.00 ~ 0.00 ]
F.Set BUZZER Alert Enable [ SOUND1 ON ]
G.Set Remote SIREN DEVICES Enable [ OFF ]
(QLIGHT MODEL:ST56EL-ETNS-2-WS)
H.Set Remote SIREN DEVICE1 IP [ 192.168.1.201]
I.Set Remote SIREN DEVICE(1,2,3) Port [ 2000 ]
J.Set Remote SIREN DEVICE2 IP [ 0 ]
K.Set Remote SIREN DEVICE3 IP [ 0 ]
L.Set System Sound Mute [ SOUND ON]
Q.Quit.
B
Enter Min,MAX for CH1 Noarmal Range:-8,25]

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7. A prompt will appear to enter the minimum and maximum values for the channel's normal range. To set the range from -8°C to 25°C, type -8, 25 and press Enter.
8. You will see that the normal range for Channel 1 has been successfully set to -8°C to 25°C.
9. Press Q to exit the setup.

HOW TO SET UP THE RN400 SERIES



1. Enter AP mode on the RN400-T2EX or RN400-H2EX.

[\(How to Enter AP Mode\)](#)

2. Go to the Measurement menu.

SENSORS

CH Info (Channel Count: 4)

CH1: EX_TEMP, CH2: EX_TEMP, CH3: DOOR, CH4: RELAY

DOOR CONTACT

Enable Disable

DRY CONTACT (RELAY AND BUZZER SETTING)

Target Channel

CH1 (Ex-temp)

Normal Range

-100 ~ 25 IS OUT OF

Relay and Buzzer

RELAY ON (MAX: 30VDC - 1A)

3. In the Dry Contact (Relay and Buzzer Setting) menu at the bottom, set the target channel and normal range for which you want instant alarm notifications.
4. . Activate the “BUZZER SOUND ON” option in the Relay & Buzzer menu.
5. Press the REBOOT button to exit AP mode settings.

For further information on [Radionode](#), or to find the ideal solution for your application-specific needs, contact a CAS Data Logger Application Specialist at **(800) 956-4437** or www.DataLoggerInc.com.