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ALERTEX

WIRELESS CRITICAL ALERT SYSTEM

INSTRUCTION MANUAL

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Important Notes for Alertex System

- 1. Wireless System Rest Period:** After activating or testing the Alertex system, a six-minute rest period is required due to the wireless operation. This allows the system to recharge and stabilize.
- 2. Call Repeaters:** By default, Alertex units are not set to function as call repeaters. However, on larger sites, it might be necessary to designate at least one unit as a call repeater to ensure wider signal coverage. Refer to the system manual for instructions on configuring call repeaters.
- 3. Master Unit Reset:** Following a system reset initiated from the Master unit, the initial call point that triggered the alarm may continue flashing. To silence this call point, a manual reset is required using the provided black plastic key included within the unit.
- 4. Resetting Large Systems:** On extensive sites, resetting the entire system using the master unit might require multiple attempts. If the initial reset is unsuccessful, wait for approximately one minute before initiating another reset sequence from the master unit.
- 5. Sounder/Annunciator Top Removal:** Similar care should be exercised when removing the top of the sounder or annunciator/beacon to adjust the sound pattern or volume. Excessive force during this process can also lead to internal wire disconnections.

System Overview

The Alertex system provides a robust and versatile solution for critical alert communication. It utilizes a wireless mesh network comprised of Master and Slave units, allowing for seamless coordination across your facility.

Key Features:

- **Scalability:** Up to 64 units can operate together on a single site, all completely wireless and battery-powered.
- **Extended Coverage:** Each unit acts as a repeater, relaying the signal up to 16 times beyond the initial range. This ensures effective communication even in large or complex environments.
- **Standalone or Monitored:** The Alertex system can function independently or integrate with a centralized location through the Alertex IP Bridge. This bridge enables access to the Alertex Monitoring Platform webpage for enhanced control and monitoring.
- **Customizable Alerts:** Upon activation from a call point, key fob, or smoke/heat detector, Alertex sounder and annunciator units trigger an audible alert and flashing beacon light. Sounder units offer a selection of 32 distinct alert tones, while annunciator units can deliver a pre-recorded standard lockdown message or a custom message tailored to your specific needs.

Master Unit

To ensure the functionality of the Alertex system, it is imperative that each site is equipped with a minimum of one Master unit. The Master unit serves a critical role in enabling the system, reset post-activation, as well as facilitating silent testing procedures.

Without a Master unit in place, the Alertex system will be unable to be reset, potentially compromising its effectiveness in emergency situations. The Master unit is accompanied by a reset key, which should be securely stored in an easily accessible location for authorized staff members.

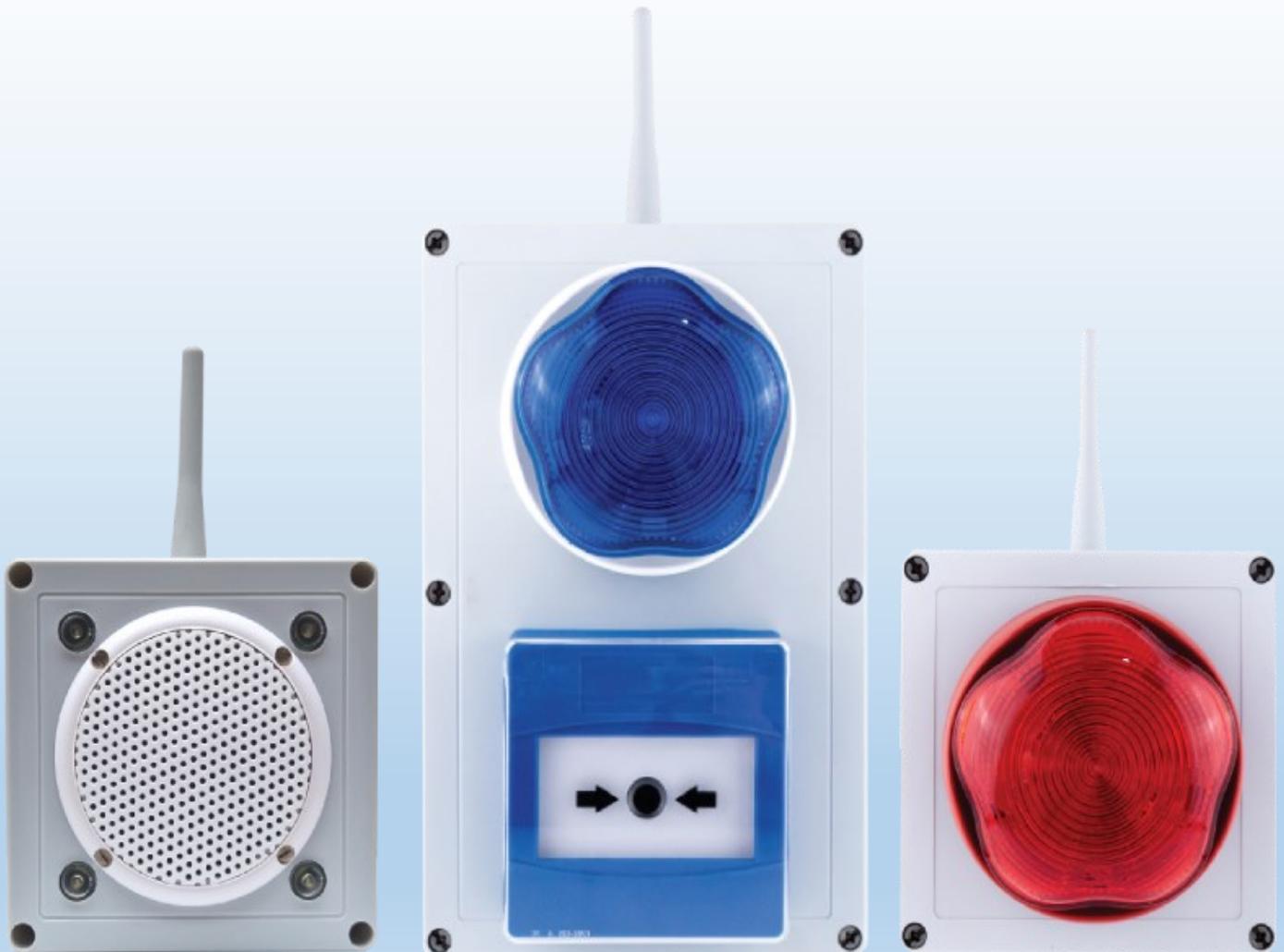
Slave Units

Upon activation by a call-point, Alertex Slave units are engaged to relay wireless transmissions throughout the Alertex mesh network. A notable feature of most Alertex units is their capacity to function as repeaters, boasting an impressive wireless transmission range of up to 1km.

The system's wireless transmission is capable of 'hopping' up to 16 times, allowing signals to reach units beyond the initial 1km range. This functionality expands the system's potential coverage to a maximum line-of-sight range of 16km. It is important to note that Alertex call-points, keyfobs, and smoke and heat detectors do not serve as repeaters within the network.

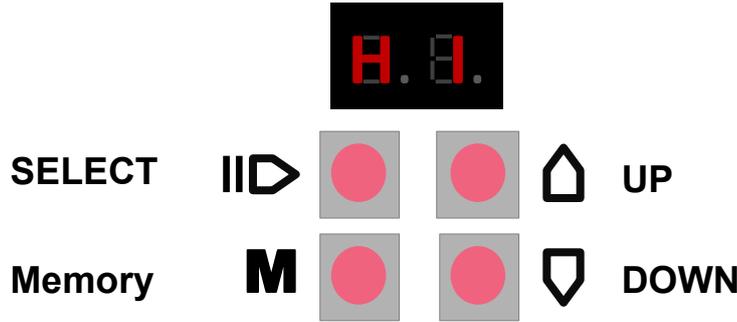
QUICK START GUIDE

1. Begin by removing the lid using a screwdriver to loosen the push and quarter-turn screws.
2. Inside the lid or enclosed in a plastic bag, you will find a black plastic reset key (intended for units with a fixed call-point). This key is specifically designed for resetting the call-point post-activation; however, it does not reset the entire Alertex system.
3. Insert the Lithium D cell batteries into the designated battery holders, ensuring correct polarity according to the markings on the PCB board. The positive terminal should be oriented towards the aerial at the top of the unit.
4. Upon successful battery installation, the LED screen will illuminate displaying 'HI', confirming that the unit is powered on.
5. If your units were ordered as a complete, pre-configured system, they are already programmed with individual unit numbers. Simply close the lid securely after battery installation, and the unit is ready for operation. Alternatively, proceed to configure the unit settings using the buttons located beneath the LED screen (refer to the next page for detailed instructions).
6. After configuring the settings, replace the lid securely and tighten the screws to complete the installation process.



How to Program a Unit

For the Alertex system to work correctly, the units need to be on the same Site and Subnet but have unique Unit numbers.



1. Press and hold Select until the LED screen displays - - at the bottom of the screen
2. Press Select to first change the SITE value.
3. Use the Up and Down buttons to change the SITE value (SI)
4. Press Select again to save the value and move on to the SUBNET value (SU)
5. Use the Up and Down buttons to change the SUBNET value
6. Press Select again to save the value and move on to the UNIT value (UN)
7. Use the Up and Down buttons to change the UNIT number value .
8. To save the values, press and hold the Memory button until the LED screen displays - - at the top of the screen.
9. To cancel, press the memory once and it will be removed from of the settings Menu.

Alertex Menu Parameters

How to scroll through menu levels

1. Press and hold Select until the LED screen displays 'n1' on the screen.
2. Press Up Down button to scroll through the menu levels, i.e.,
 - I. n1 = Basic Settings
 - II. n2 = Voice Annunciator Settings
 - III. n3 = Commands.
3. Press the select button momentarily to scroll through the parameters of the menu level.



Menu Level 1

Name	Range	Default	Description
SI	1 — 32	1	Site Number
SU	1 — 8	1	Subnet Number
UN	1 — 64	1	Unit Number
CR	1 — 64	0	Call Repeat (Beginning of the Group)
CE	1 — 64	0	Call Repeat (Ending of the Group)
CP	1 — 99	60	Call Period : Call Period: Value increases in 1 minute increments up to 50. After 50 , value increases in 5 minute increments, ie. 55, 60, 65, etc.
tS	0 — 30	10	Time out Sounder (minutes)
Sd	0 — 1	1	Stop on Deactivation of fire switch
Fr	-b — 2	0	Frequency Range
An	0 — 1	0	Annunciator Mode (Enable = 1, Disabled = 0)

Site Number (SI)

Site codes separate one site from another. The site is the area covered by all the Alertex units on one system. Choose a number between 1 and 32 and set this on all units in the system. Nearby units will be detected by the system but as long as they are on a different site code, they cannot activate your system.

Subnet (SU)

Currently Alertex is set to default subnet 1. This is a future feature which is not currently used and should be left on the default settings.

Unit Number (UN)

Unit numbers identify individual Alertex units on the site. There are 64 unit numbers available which is the maximum number of Alertex units per site. If an IP Bridge is used with the system then this must have the same site number. Please note that keyfob counts as one of the 64 units.

Call Repeat (CR)

The Call Repeating feature extends the wireless transmission range by allowing units to act as repeaters. It's disabled by default to preserve battery life. Only enable it on units needed for a larger mesh network. Call Repeating is controlled by the Call Repeat (CR) setting, marking the starting point for units to be repeated. Ensure judicious use to balance coverage and battery life. For detailed CR configuration, refer to the Call Repeat section.

Call Repeat End (CE)

The "Call Repeat End" parameter signifies the last unit in the repeater sequence. Set this to zero if the unit is not functioning as a repeater.

Call Period (CP)

Determines how frequently the units will call in to the IP Bridge to give their status and provide updates such as low battery or poor signal notifications. The frequency of the call period can be set from 3 to 99 minutes and is set to 60 by default. From 3 to 50, the value can be increased and decreased in 1 minute increments (i.e.. 4, 5, 6, 7, etc...). From 50 to 99 minutes, the value can be increased and decreased in 5 minute increments (i.e.. 55, 60, 65, etc...). More frequent call periods can affect the battery life of Alertex units. By default a unit calls in every one hour and 40 minutes.

Timeout Sounder (tS)

Determines how long the sounder or annunciator will produce an audible alert. By default, it is set to 10 minutes. This means that after the initial 10 minute period is over, the units will stop creating an audible alert but will continue to produce a visible alert. The beacon can be set to produce an audible alert from 1-30 minutes. Setting the TS to 0 will cause the beacon to produce an audible alert indefinitely until the system is reset.

Deactivate Sounder (Sd)

Deactivates the sounder on the particular unit when the call point is reset. Please note this is only to be used with call point sounder beacons or Master unit. By default it is set to be one.

Frequency Range (Fr)

434.525 MHz is the operational frequency by default. To lessen interference to and from other systems, this can be adjusted. Please be aware that for the time being, wireless call points and keyfobs only function at the default frequency. The following table displays the operational frequencies.

Annunciator Mode (An)

The device is pre-programmed to be either a voice annunciator or a sounder beacon hence this does not need to be changed. Please keep in mind that changing the value will result in inaccurate operation of the device.

Display	Operating Frequency
-b	433.150 MHz
-A	433.275 MHz
-9	433.400 MHz
-8	433.525 MHz
-7	433.650 MHz
-6	433.775 MHz
-5	433.900 MHz
-4	434.025 MHz
-3	434.150 MHz
-2	434.275 MHz
-1	434.400 MHz
0	434.525 MHz
1	434.650 MHz
2	434.775 MHz

Menu Level 2

Name	Range	Default	Description
PA	0 — 99	1	Playback on System Activation
Pd	0 — 99	2	Playback on System De-activation
PF	0 — 99	3	Playback on First — Aid
PE	0 — 99	4	Playback on First — Aid End
Pu	0 — 20	10	Playback Volume
PS	0 — 99	1	Strobe — Led Pattern
nA	0 — 99	3	Number of Repetitions / Time, Activation
Nd	0 — 99	3	Number of Repetitions / Time, Deactivation
nF	0 — 99	3	Number of Repetitions / Time, First—Aid Activation
nE	0 — 99	3	Number of Repetitions / Time, First—Aid End

Playback on System Activation (PA)

This setting determines the file index number to be played when the entire system is activated.

Playback on System Deactivation (Pd)

This setting determines the file index number to be played when the entire system is reset or deactivated.

Playback on First Aid Activation (PF)

This setting determines the file index number to be played when the first-aid button has been pressed.

Playback on First Aid End (PE)

This setting determines the file index number to be played when the first-aid situation has been resolved and cleared.

Playback Volume (PU)

The default value is 10. The voice annunciator can be made louder to up to 200% by setting the value as 20 and reducing to zero will make the annunciator almost mute.

Pattern Strobe Lights (PS)

This changes the flash pattern of the strobe lights.

Voice File Repetition Parameters

- **Activation (nA):** Adjusts audio repetition during system activation.
- **Deactivation (Nd):** Controls audio repetition when the system is deactivated.
- **First-Aid Activation (nF):** Sets the number of repetitions during First-Aid activation. (Fire/First Aid Unit only)
- **First-Aid End (nE):** Specifies the repetitions when First-Aid ends. (Fire/First Aid Unit only)

Repetition Count

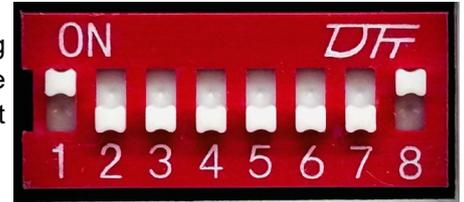
- **0:** Continuous playback, stops after 5 minutes.
- **1 — 40:** Repeat the audio the specified number of times.
- **41 — 60:** Playback time in seconds = (Parameter - 40).
- **61 — 99:** Playback time in seconds = ((Parameter - 60) * 10).

Examples

- **nA = 0:** Continuous audio during activation, stops after 5 minutes.
- **nA = 40:** Audio repeats 40 times after activation.
- **Nd = 5:** Audio plays 5 times upon system deactivation.
- **nF = 70:** Audio plays for 1 minute and 40 seconds during First-Aid activation.
- **nE = 99:** Audio plays for 6 minutes and 30 seconds when First-Aid ends.

Change the Sounder Volume and Pattern

On Sounder variants, the sound volume and sound pattern can be adjusted using the dip-switches on the back of the sounder. On Annunciator variants, only the sound volume can be adjusted. Sound files for the Annunciator must be provided at the time of ordering and cannot be changed once the unit has been sent out.



Adjusting the Volume

Twist the sounder beacon. You will see 8 dip switches. Switches 1 to 5 are concerned with the alert sound and switches 7 and 8 are to adjust the volume

- When both switches are in the UP position this is the maximum sound level.
- Switch 7 UP and switch 8 DOWN will reduce the sound by 10 decibels.
- Switch 7 DOWN and switch 8 UP will reduce the sound by 20 decibels.

Changing the Sound

There are 32 different sounds to choose from and you can adjust these using dip switches 1 to 5. All 5 switches DOWN will give you the regular banshee sound. All 5 in the UP position gives a bell tone. Here is a full list of all 32 variants.

No	Sound Frequencies and Pattern	Code	Description
1	800 Hz to 950 Hz swept at 120 Hz	DDDDD	Banshee Buzz LF
2	800 Hz to 950 Hz swept at 9 Hz	UDDDD	Banshee Fast Sweep LF
3	800 Hz to 950 Hz swept at 9 Hz	DUDDD	Banshee Slow Sweep LF
4	Continuous at 900 Hz	UUDDD	Banshee Continuous LF
5	830 Hz to 970 Hz swept at 9 Hz	DDUDD	Banshee Fast Sweep LF
6	830 Hz to 970 Hz swept at 1 Hz	UDUDD	Medium Sweep LF
7	Continuous at 950 Hz	DUUDD	Continuous LF
8	Intermittent at 950 Hz 1 sec on, sec off	UUUDD	Back Up Alarm LF
9	Alternating 800 Hz / 100 Hz at 1 Hz	DDDUD	Alternate LF
10	800 Hz to 100 Hz swept at 0.5 sec	UDDUD	Medium Sweep LF
11	Alternating Tones 800Hz/950Hz at 3 Hz	DUDUD	Alternate LF
12	2400 Hz to 2900 Hz at 120 Hz	UUDUD	Banshee Buzz HF
13	2400 Hz to 2900 Hz at 9 Hz	DDUUD	Banshee Fast Sweep HF
14	2400 Hz to 2900 Hz at 3 Hz	UDUUD	Banshee Slow Sweep HF
15	Continuous 2900 Hz	DUUUD	Banshee Continuous HF
16	2450 Hz to 3100 Hz swept at 9 Hz	UUUUD	Banshee Fast Sweep HF (New)
17	Intermittent at 2900 Hz 1 sec on, 1 sec off	DDUUD	Back Up Alarm HF
18	Alternating Tones 2400 Hz / 2900 Hz at 3 Hz	UDDDU	Alternate HF
19	500 Hz rising to 1200 Hz over 3.5 sec, silence 0.5 sec	DUDDU	Slow Whoop
20	1200 Hz falling to 500 Hz over 1 sec, silence 10 mS	UUDDU	Din Tone (DK)
21	554 Hz for 100 mS and 440 Hz over 1 sec, silence 10mS	DDUDU	French Fire Sounder
22	420 Hz repeating 0.65 sec on, 0.625 sec off	UDUDU	Australian Alert Signal
23	500 Hz to 1200 Hz sweeping 3.75 secs on, 0.25 secs off	DUUDU	Australian Evacuation Signal
24	950 Hz for 0.5 sec on, 0.5 sec off for 3 phases, silence for 1.5 sec	UUUDU	US Temporal Tone LF
25	2900 Hz for 0.5 sec on, 0.5 sec off for 3 phases, silence for 1.5 sec	DDDUU	US Temporal Tone HF
26	Intermittent 660 Hz 150 mS on, 150 mS off	UDDUU	Swedish Tone (Fire)
27	Continuous 660 Hz	DUDUU	Swedish Tone (All Clear)
28	Intermittent 970 Hz 500 mS on, 500mS off	UUUUU	ISO8201 LF
29	Intermittent 2900 Hz 500 mS on, 500mS off	DDUUU	ISO8201 HF
30	Yodel 800 Hz / 100 Hz, 0.25 sec	UDUUU	BT Banshee (FP1063.1)
31	Continuous 100 Hz	DUUUU	BT Banshee (FP1063.1)
32	Bell Tone	UUUUU	Bell Tone

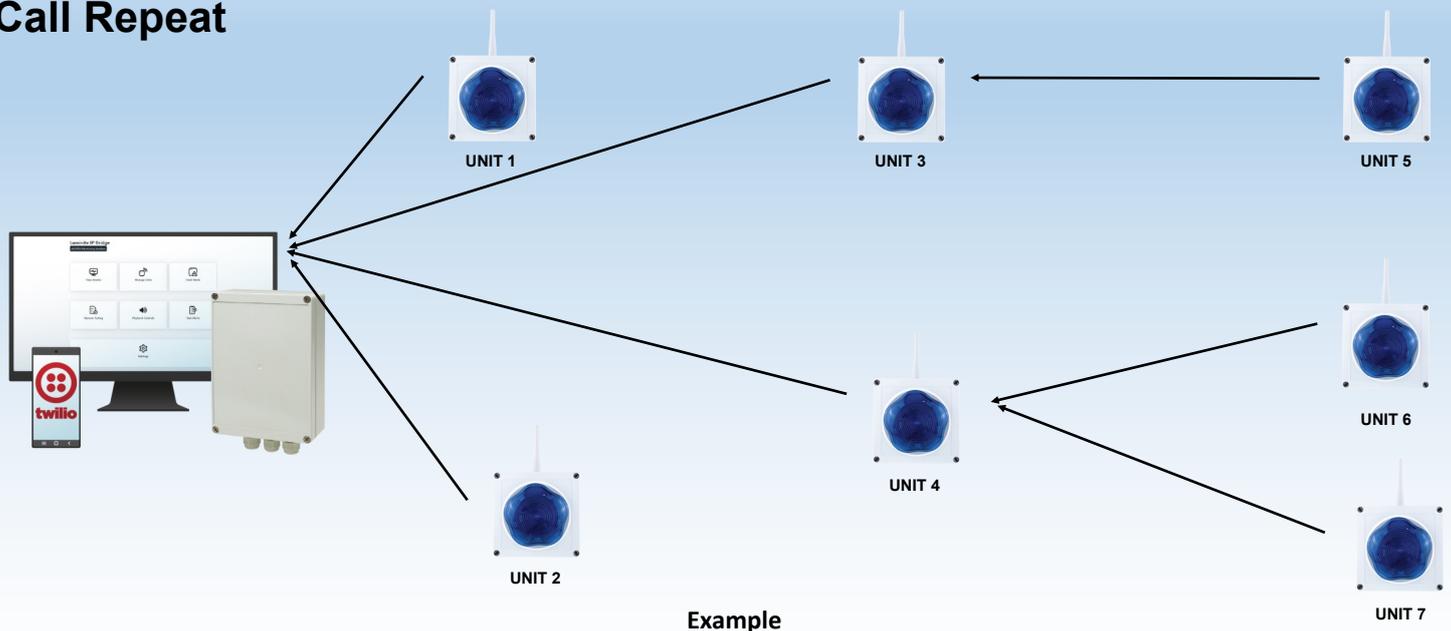
* U = UP, D=Down

Voice file list for Voice Annunciator



1. Assistance has been requested (female).
2. Siren + Assistance has been requested (female).
3. Lockdown Alarm, please follow the lockdown procedure (male).
4. Siren + Lockdown Alarm, please follow the lockdown procedure (male).
5. There has been a security breach, please leave the building immediately (male).
6. Siren + There has been a security breach, please leave the building immediately (male).
7. There has been a security breach, please vacate the site immediately (female).
8. Siren + There has been a security breach, please vacate the site immediately (female).
9. Gong + There has been a security breach, please remain in the building and follow the lockdown procedure.
10. Gong + All clear, lockdown has now ended, all clear.
11. Lockdown alarm, please follow the lockdown procedure (female).
12. Siren + Lockdown alarm, please follow the lockdown procedure (female).
13. There has been a security breach, please leave the site immediately (female).
14. Siren + There has been a security breach, please leave the site immediately (female).
15. All clear, thank you for your attention (female).
16. Siren + All clear, thank you for your attention (female).
17. Siren.
18. Lock down alarm, follow the lockdown procedure (male).
19. All clear (female).
20. There is a fire on the premises, please follow the evacuation procedure (female).
21. Siren + There is a fire on the premises, please follow the evacuation procedure (female).
22. There is a fire on the premises, please follow the evacuation procedure (male).
23. Siren + There is a fire on the premises, please follow the evacuation procedure (male).
24. First aid Alarm has been registered and assistance has been requested (female)..

Call Repeat



Example

To extend the reach of our wireless network, you have the option to enable a feature called "Call Repeating" on certain units. This function allows units to act as repeaters, forwarding wireless transmissions to cover longer distances. It's important to note that Call Repeating is turned off by default, as it can impact battery life. You should only activate it on units where it's necessary to create a larger mesh network.

Scenario 1:

Let's consider a scenario where we have several units: 1, 2, 3, 4, 5, 6, and 7. Units 1 to 4 can communicate with the IP bridge, but units 5, 6, and 7 are out of range. To ensure communication with the IP bridge, you'll need to use the Call Repeating function.

Enabling Call Repeating for Unit 3:

Issue: Unit 5 is close to Unit 3 but cannot communicate with the IP bridge.

Solution: Enable Unit 3 to repeat calls from Unit 5.

- Access Unit 3's menu settings.
- Navigate to Menu Level 1.
- Set the "CR" (Call Repeat starting point) to 5 and "CE" (Call Repeat ending point) to 5.

Now, Unit 3 will repeat all calls from Unit 5, focusing on relaying those specific calls and ignoring others in its vicinity. This helps ensure Unit 5's messages reach the IP bridge.

Enabling Call Repeating for Unit 4:

Issue: Units 6 and 7 cannot communicate with the IP bridge but are near Unit 4, which can.

Solution: Enable Unit 4 to repeat calls from Units 6 and 7.

- Access Unit 4's menu settings.
- Navigate to Menu Level 1.
- Set "CR" to 6 and "CE" to 7.

Now, Unit 4 will act as a repeater for all calls from Units 6 and 7, ensuring their messages reach the IP bridge. It will disregard any other calls it receives.

Scenario 2:

In this scenario, we'll set Unit 4 to repeat calls from all nearby units, including Units 6, 7, and 2. This can be achieved by setting "CR" to 1 and "CE" to 0 for Unit 4.

Enabling Call Repeating for Unit 4:

Objective: Unit 4 will act as a repeater for all nearby units.

- Access Unit 4's menu settings.

- Navigate to Menu Level 1.
- Set "CR" (Call Repeat starting point) to 1 and "CE" (Call Repeat ending point) to 0.

With this configuration, Unit 4 will now repeat all calls it receives from Units 1 to 7. Any calls received from these units will be forwarded by Unit 4.

Conclusion:

By strategically enabling Call Repeating on Units 3 and 4, You've extended the reach of the network. Unit 3 now relays calls from Unit 5, while Unit 4 repeats calls from Units 6 and 7. This configuration helps us create a more robust wireless mesh network, improving overall coverage and connectivity to the IP bridge.

Remember, while Call Repeating enhances coverage, it does impact battery life. Use it judiciously where needed to optimize network performance.

How to do a Silent Test

A silent test can be initiated either from a Master unit or from the IP bridge. **To initiate a silent test from the IP bridge, please refer to the IP bridge instructions.**

To conduct a silent test follow the steps:

1. Turn the key to the horizontal position and leave it in this position.
2. After 10 seconds, all units in the system will start flashing, indicating they are in test mode.
3. The LED on the call point will display a solid red light during the test.
4. Proceed to inspect each unit to ensure they are all functioning correctly.
5. When the red LED on the call point starts flashing once every second, this indicates that the system is ready to be re-set.
6. To reset the system, turn the key back to the vertical position. All units will stop flashing, indicating the successful completion of the test.

How to reset an Alertex System

After the Alertex system has been activated, follow these steps to reset it using an Alertex Master unit:

1. Insert the provided reset master key into an Alertex Master unit.
2. Turn the key clockwise for 3 seconds, and then return it to the vertical position.
3. Upon turning the key, all units on the same site will begin the reset process.
4. For larger sites, the system may require an additional reset. If so, wait for 1 minute and then proceed to reset the system from the Master unit again.

How to reset all the settings

1. Navigate to Menu Level 3 (n3).
2. Scroll to parameter dS.
3. Set dS to 1 and save the changes.
4. The unit will restart, and all parameters will be set to their default values.