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**Innovative, Interoperable
Telecare Solutions**

Orion Quick Reference Guide

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How it Works

The Orion range extender is a signal booster. The range extender repeats telecare signals up to a line of sight range of 1km, ensuring alerts are less likely to be missed.

The Orion is mains powered. It also has a back up battery so will still be able to transmit in the event of a power cut or mains failure. When fully charged, the battery should provide up to 12 hours power, depending on usage.



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Installation

For best operation, and to make the most of the transmit and receive diversity, the two aerials should have different polarisation (set at 90 degrees).

Ideally the Orion should be inserted into an unused socket, and located in a discreet position away from possible interference.



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Turning On / Off

Turning On

Simply plug the Orion into a mains socket, it will automatically power up. Another method of turning on, is to press and hold the switch with a suitable instrument for approximately 10 seconds until the LEDs illuminate.

On power up, all LEDs will flash 4 times, immediately followed by flashing of the blue LEDs which indicate the mode setting (e.g. one flash for mode 1, two flashes for mode 2, etc), and flashing of the yellow LEDs which indicate the repeater number. A buzzer sound may also be heard, if it has been enabled.. The green LEDs will then flash slowly, indicating that the range extender is now ready to use.

Turning Off

Press the switch with a suitable instrument and hold for approximately 5 seconds until the LEDs stop flashing. The Orion will not switch off if there is a reception/transmission event occurring at that time.



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Programming the Modes / Options

The modes and options are listed on the Modes/Options page. Use the following method to adjust each setting:

- Press and hold the switch for two seconds then release.
- The yellow LED will illuminate, and the Orion will enter programming mode for a period of ten seconds. During this time, tap the switch the same number of times as the desired mode/option number i.e. once for mode 1, twice for mode 2, etc. The blue LEDs will flash every time the switch is pressed.
- When finished tapping the switch, the Orion will restart once the ten second programming period expires.
- When the Orion powers up, the blue LEDs will flash to confirm the mode number, followed by the yellow LEDs to confirm the repeater number. The sounder may also beep if it is enabled.



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Modes / Options

The Orion has four Modes, two Sound Options and three Repeater Options.

1. Mode 1. Repeats twice (Used with Notifier only). **(Default)**
2. Mode 2. Repeats once (Used with Notifier only).
3. Mode 3. Repeats twice - Incremental (Used with Notifier and dispersed unit).
4. Mode 4. Repeats once - Incremental (Used with Notifier and dispersed unit).
5. Sound Off.
6. Sound On **(Default)**.
7. Repeater 1. Repeats twice in modes 1 & 3 - after 2 secs and 4 secs. Repeats once in modes 2 & 4 - after 2 secs. **(Default)**
8. Repeater 2. Repeats twice in modes 1 & 3 - after 5 secs and 10 secs. Repeats once in modes 2 & 4 - after 5 secs (See 'Using multiple Orions together' page).
9. Repeater 3. Repeats twice in modes 1 & 3 - after 8 secs and 16 secs. Repeats once in modes 2 & 4 - after 8 secs (See 'Using multiple Orions together' page).



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Repeating

- By default, the Orion will repeat an incoming signal twice (Channel 1 after two seconds and Channel 2 after four seconds).
- If option 8 is chosen, the timings will change to five and ten seconds.
- If option 9 is chosen, the timings will change to eight and sixteen seconds.
- Repeating twice maximises the range of the Orion as the signal is transmitted from each aerial, and as they are at right angles to each other, the signals have more chance of penetrating further.
- This can be changed to repeat once only by changing the mode number to either modes 2 or 4.



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Using Multiple Orions Together

- If two Orions are to be used in the same installation, one should be set to Repeater 1 and the other to Repeater 2.
- If a third Orion is required, that should be set to Repeater 3.
- All of the Orions should be programmed to Mode 4; this mode reduces the amount of extraneous signals that can occur when using multiple Orions together.



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General and Operational Behaviour

General Behaviour

When the Orion is sitting idle, the only functioning indicators are the green LEDs which will flash slowly. They may flash in time with each other, or they may not, either is normal. If the Orion is operating on battery power, the green LEDs will flash quickly.

Operational Behaviour

When the Orion receives a signal from a sensor, the yellow LEDs on channels 1 & 2 will illuminate briefly, then the blue LED(s) will illuminate briefly at timed intervals, which vary depending on the repeater number.

- Both channel 1 and channel 2 LEDs will illuminate in modes 1 and 3, and channel 1 only in modes 2 and 4.
- If option 5 is selected, the Orion will be silent when the blue LED(s) illuminate.
- If option 6 is selected, the Orion will beep when the blue LED(s) illuminate.

(Default)



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Mains Fail Alert

- Ten seconds after a loss of mains power, the Orion will sound and send a radio signal. This radio signal can be assigned to a Notifier or dispersed unit if desired, to inform a carer or monitoring centre that the Orion has lost mains power.
- If the mode and / or repeater number are changing from the default setting, these should be programmed first before the mains fail alert is programmed into any receiving device.



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Thank you



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