

Lone-Worker Safety with Two-Way Radios: Emergency Button, Man-Down and GPS

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Security guards on night patrol, technicians on remote sites, housekeeping staff on empty floors and warehouse workers on late shifts all share one risk: if something goes wrong, nobody is there to see it. A two-way radio is already in their hands, and modern radios can turn it into a safety device that raises the alarm when the worker cannot.

This guide explains the main lone-worker features, how they work together, and how to set them up so an alarm actually reaches someone who can act.

The short answer. The core features are an emergency button, man-down detection, a check-in timer and GPS location. Most of them need digital (DMR) radios, and some need a control room or supervisor application. A feature only protects someone if radio coverage reaches every place they work and a named person is watching for alarms.

The Main Lone-Worker Features

Feature	What it does	Typical use
Emergency button	Sends an alarm to a dispatcher or group, and can open the microphone so the control room can listen	The worker is threatened or hurt and can still reach the radio

Man-down	A motion sensor detects that the radio has tilted past a set angle or has stopped moving, warns the user, then raises an alarm if there is no response	The worker has fallen or is unconscious
Check-in timer	Asks the user to confirm they are fine at set intervals, and raises an alarm if there is no response	Long periods alone with no radio traffic
GPS location	Reports the radio's position to the control room	Finding a worker across a large or outdoor site
Text messaging	Sends short alerts and replies without voice	Quiet or noisy situations where speaking is difficult

Available features vary by radio model, and several depend on digital (DMR) operation. Some analog radios offer basic emergency signalling, but the full set is a digital capability. See our comparison of [analog and digital DMR radios](#).

How an Alarm Reaches Help

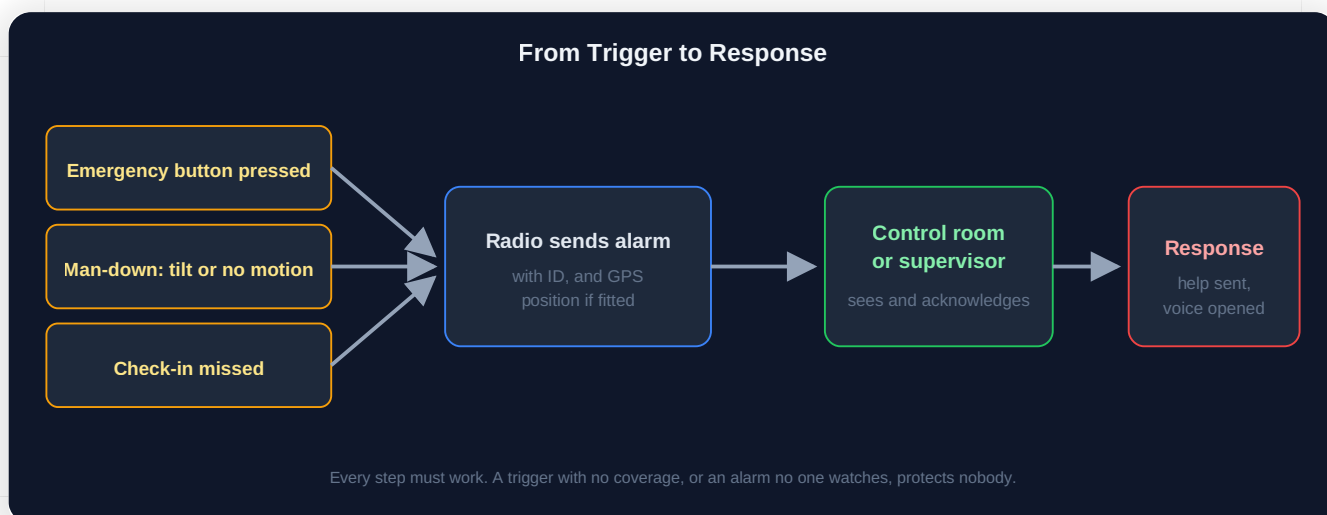


Figure 1 — Three kinds of trigger feed one alarm path. The weakest step decides whether help arrives.

Man-Down Without the False Alarms

Man-down is the feature most likely to be switched off after a week, because a radio set down on a bench can look like a fallen worker. Good configuration avoids that. A pre-alert tone warns the user first, and they can cancel it before any alarm goes out.

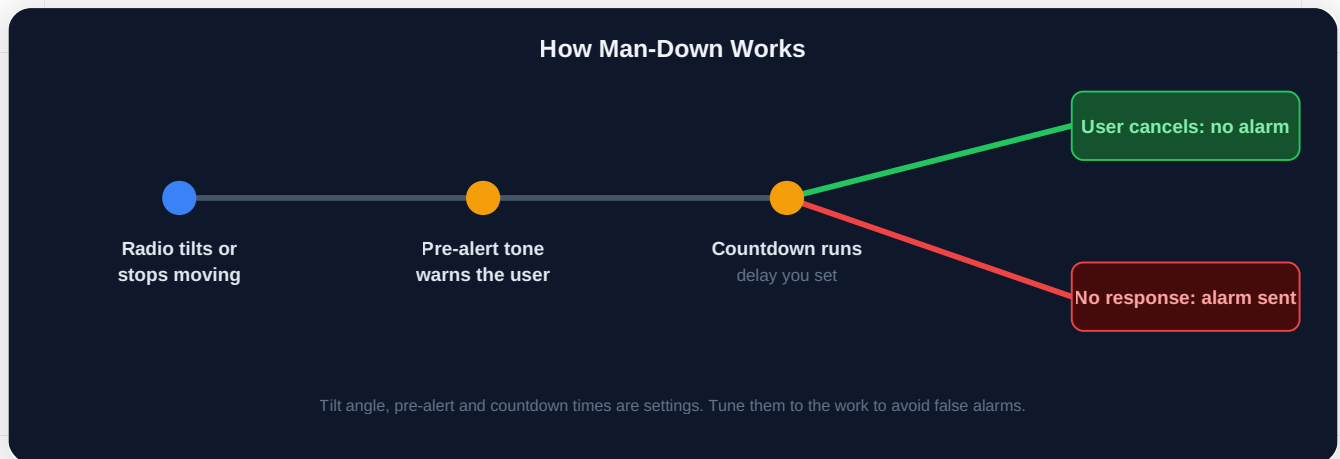


Figure 2 — The pre-alert and countdown give a moving worker time to cancel, while a worker who cannot respond triggers the alarm.

Setting It Up Properly

1. **Name who receives alarms and who responds**, including out of hours. An alarm with no one watching is useless.
2. **Choose radios with the features you need**, and check whether they need a control room or supervisor application.
3. **Tune the settings**. Set the tilt angle, pre-alert and countdown times, and the check-in interval to suit the work, so alarms are real and trusted.
4. **Confirm coverage everywhere the worker goes**, including stairwells, basements and plant rooms. See our guides to [planning coverage](#) and [repeaters vs direct mode](#).
5. **Plan the battery for a full shift** with GPS and alarms active. See [batteries and accessories](#).
6. **Carry the radio on the body**, not in a bag, and consider a [speaker microphone](#) so the emergency button is always within reach.
7. **Train and test on a regular schedule**, so workers know what each tone means and the control room knows what an alarm looks like.

GPS has limits indoors. A radio's GPS works best outdoors with a clear view of the sky. Inside buildings and basements it may be slow or inaccurate, and some systems add Bluetooth beacons for indoor location. Check what your system supports before you rely on location for an indoor site.

For harsh sites, choose radios with the right protection; see [rugged radios and IP ratings](#). Browse the [portable radio range](#) for models with these features.

Frequently Asked Questions

+ What is man-down on a two-way radio?

It is a motion sensor feature. If the radio tilts past a set angle or stays still for too long, it sounds a warning, and if the user does not respond within a set time it sends an emergency alarm.

+ Do I need digital radios for lone-worker features?

For the full set, yes. Features such as man-down, check-in timers, GPS reporting and acknowledged alarms are generally digital capabilities, and some analog radios offer only basic emergency signalling. Check each model's specification.

+ Does GPS work indoors?

Usually poorly. GPS needs a view of the sky, so it works best outdoors. Indoor location needs additional methods, such as beacons, if your system supports them.

+ How do I reduce false alarms?

Adjust the tilt angle and the pre-alert and countdown times to suit the work, train staff to cancel the pre-alert promptly, and have them wear the radio rather than set it down. Review the alarm log and adjust where needed.

Two-Way Radios for Safer Lone Working

Bravosatcom supplies two-way radios from Motorola, ICOM and Kenwood, with the accessories and cable to build a reliable system.

[Portable radios →](#) · [Speaker microphones →](#)