

# COMMUNICATE CLEARLY IN LOUD ENVIRONMENTS



MOTOROLA NOISE SHIELD 2 FOR XTS AND XTL ASTRO® 25 RADIOS



# THE THROBBING OF DIESEL ENGINES. THE ROAR OF PUMP PANELS. THE CHAOS OF CROWDS.

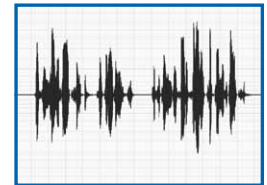
At best, background noise is a nuisance. At worst, it's a hazard that can impede communication and threaten first responder safety. That's why Noise Shield 2, Motorola's advanced noise reduction software with PASS (Personal Alert Safety System) Intercept, is vital to reducing the impact of ambient noise during radio transmissions. A PASS device, worn by firefighters, sounds a loud audible alert to notify others in the area that the firefighter is in a possible distress situation due to lack of movement.

Whether you use ASTRO® 25 XTS portables or XTL mobiles<sup>1</sup>, make sure every word is heard and clearly understood in the noisiest environments. Noise Shield 2 cuts the clamor and makes your work safer.

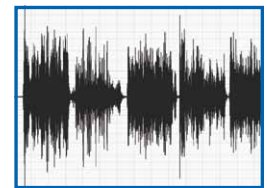


Noise Shield is available on all XTS/XTL 5000, 2500 and 1500 portables and mobiles.

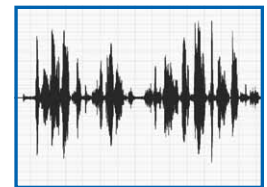
FEATURE	MOTOROLA	COMPETITORS	WHY IT IS IMPORTANT
Vocoder Independent Noise Suppression	Yes	No	Noise Shield 2 keeps noise out and the vocoder performing optimally to encode speech effectively.
Analog and digital noise suppression software	Yes	No	Unlike competitors, Noise Shield 2 works with both analog <b>and</b> digital radios. <sup>2</sup>
Adaptable programming parameters	Yes	No	Unlike competitors with one-size-fits-all software, Motorola's Customer Programming Software (CPS) offers 20+ configurable audio settings.
Noise suppression engages in less than a second	Yes	No	Unlike competitors, Motorola radios reduce background noise significantly faster.



Clear Speech (Digital/P25)



Speech + Scott PASS Alarm – NO PASS Intercept (Digital/P25)



Speech + Scott PASS Alarm – PASS Intercept ACTIVE (Digital/P25)

Note: Not all PASS alarms sound the same and because of these acoustical differences, the effectiveness of the radio PASS alarm filter may vary.

**Why is Noise Shield 2 so effective?** We built upon our noise reduction technology with added noise filtering specifically targeted at the audio produced by PASS devices. By cascading noise reduction technologies, you get additional noise reduction without giving up the benefits of Noise Shield. The result is a greater signal-to-noise ratio of the user's voice before it reaches the vocoder—greatly improving the intelligibility of the audio.

Your users can also configure the audio parameters to help increase audio clarity when they're in an environment with high background noise. We created this innovative technology in conjunction with our

radios—including the custom design of microphones and speakers—to optimize performance in the noisiest environments.

We thoroughly test radios using TIA methods for audio performance. Additionally, Motorola tests above the standards using advanced natural and artificial speech tests to simulate the most challenging conditions. Since Noise Shield 2 is backwards compatible, it operates in both analog and digital modes.<sup>2</sup> Used in conjunction with industry-recommended techniques—such as the IAFC's Digital Project Working Group Best Practices—Noise Shield 2 can minimize or eliminate background noise in extreme environments.<sup>3</sup>

<sup>1</sup> Contact your local sales representative for CPS/Firmware version needed to support Noise Shield 2.

<sup>2</sup> PASS intercept is only active in digital mode.

<sup>3</sup> Recent studies have shown communication systems can be affected by certain high noise sources such as alarm systems in self-contained breathing apparatus or chainsaws in fireground environments.

For more information on reducing noise and improving safety, visit [www.motorola.com/sayitloud](http://www.motorola.com/sayitloud)