

Results of YCDES Field Testing

Scenario	Test Apparatus or Equipment	Parameters	Results	
			Portable w/ SMA	Portable w/out SMA
Standing next to an apparatus running at “high idle”	Hazmat 91-A (CAT C7, 7.2 liter diesel engine)	Less than 3 feet from engine compartment	Radio transmission was very clear and understandable	Radio transmission was muffled, but understandable
Standing next to a K-12 saw running at full throttle	STIHL K-12 saw	Less than 3 feet from saw operator	Radio transmission was very clear and understandable	Radio transmission was muffled, but understandable
Standing next to a chain saw running at full throttle	STIHL chain saw	Less than 3 feet from saw operator	Radio transmission was very clear and understandable	Radio transmission was muffled, but understandable
Full firefighter turn-out gear, including full face mask without air supply activated	MSA full face mask	SMA attached to gear	Radio transmission was very clear and understandable	Radio transmission was muffled, but understandable
Full firefighter turn-out gear, including full face mask with air supply activated and functional	MSA full face mask and back mounted air tank	SMA attached to gear	Radio transmission was very clear and understandable	Radio transmission was muffled, but understandable
Full firefighter turn-out gear, including full face mask with air supply activated and PASS device activated	MSA full face mask, back mounted air tank, and PASS device	SMA attached to gear	Radio transmission was cut out when the PASS device was active, but was clear and understandable between activations	No test performed. Due to diminished quality of the radio transmissions via the SMA during PASS activations, it was determined that a secondary test without the benefit of the SMA would only result in even lower quality radio transmissions.
Full firefighter turn-out gear, including full face mask with air supply activated	MSA full face mask and back mounted air tank	SMA attached to gear; straight water stream from 1.5 inch fire hose sprayed directly at chest area of firefighter	Radio transmission was broken when water stream aimed directly at the SMA, but was clear and understandable when water stream aimed directly at firefighter, but away from the SMA	No test performed.

Radio Technical Staff Observations and Comments

- 1) The equipment tested operated reasonably well overall under the testing parameters.
- 2) The use of the SMA provided a significantly improved overall audio quality with regard to the clarity of the radio transmissions made and received.
- 3) The equipment did well overall, filtering background noises caused by the test parameters. The filtering allowed for understandable radio transmissions.