

## Frequently Asked Questions - ICIS Radio System

**1. *Sometimes my radio honks when I try to transmit, even though it shows four bars. Does this mean I have no coverage at my current location?***

No, since you have four bars, your coverage is fine; the honking means someone else in your talk group is currently transmitting. After the honk, you should receive their transmission, if it was audible (keying the radio without speaking also locks out others in the same talk group, except the dispatchers, who have priority).

This is due to the Busy-Channel-Lock-Out (BCLO) function, which prevents two transmissions at the same time on the same talk group. This function is necessary in a digital radio system because when two digital signals collide, nothing is heard except an annoying screeching sound (see Q6 below). Inside the radio, the processor has to take the digital signal and reconstruct it into analog sound. When two people speak simultaneously, the bit error rate detected by the radio is too high, so without BCLO it would choose to ignore both transmissions. Our radios have the BCLO function, which enables the first person to speak and requires the second person to wait until the channel is free.

**2. *Sometimes when I go underground, into a parking garage or other subterranean structure, I lose coverage and the radio honks at me.***

In the “old” conventional radio system, we would only know that we were out of range if we tried to talk and got no response. The new ICIS network provides the advantage of advanced warning of coverage issues by audibly informing us (honking) when we are outside of coverage range.

**3. *In the old system, when I was out of range, I would switch to direct/talk-around and my people on the street would hear me just fine. Why can't I do that now?***

Although the ICIS network brings many advantages, one function that is not included is the option to go direct on all of our channels; we can only go direct on certain conventional channels now. The RIC Committee is working on an Area C-wide SOP that will direct all personnel to a specific direct analog conventional channel, depending on the location of the incident.

In a centralized trunked radio system, radios that are not actively involved in a call are monitoring the control channel for direction. If a radio was set for direct operation while on a trunked channel, it would be like two people talking at the same time; the two digital transmissions would cancel each other out and nothing would be heard.

**4. *When I am assigned to RIC, I have to monitor two channels just for Emergency Triggers, along with the Command Channel and various TAC channels. Why?***

All the other channels were monitored before the new system; the only change is the monitoring of the RIC E-trigger. Before implementing ICIS, there was a great deal of discussion about whether the personnel moving off the trunked network (onto a conventional, analog, direct Fireground channel) should have the ability to have emergency trigger operation. Other agencies that operate trunked radio systems simply do not operate e-triggers outside of their network. If a firefighter in one of these other systems is in an area that is not covered by the trunked system and hits the e-trigger, nothing happens. This was not an acceptable

solution for Area C; the consensus was that it would be worthwhile to monitor an additional radio to provide the added level of firefighter safety.

**5. *The echo that I hear when I am transmitting while I am near my crew is very distracting. What can I do about that?***

The best solution is to be aware of your surroundings, and if someone else close to you is transmitting, turn your volume down. The echo is being caused by the digital part of the radio decoding the information over the air and making it into the audio that you can hear through the speaker.

**6. *Sometimes I only hear “digital static” on my radio. What is that?***

Occasionally, two people access the system at exactly the same millisecond and the collision of the two data streams results in this noise. The radio is attempting to process the signal picked up by the receiver and output it as audio before the bit error rate gets too high and the radio re-mutes. To resolve this, turn your radio off, then on again.

**7. *Sometimes when I am on VMUT (B.C. Page) and Verdugo pages me out, I don’t get the call.***

Make sure your radio is not scanning; it needs to be on the control channel so it can receive the data that tells it to un-mute the speaker so you can hear the page. The new radios are paged over the ICIS control channel, the same way that the stations are toned out as part of the backup alerting system that is tested at 0700 and 1900. Whenever a radio is placed on VMUT for paging, you need to make sure that Scan is turned off.