

Rapid Lesson Sharing

Event Type: Radio Cloning Corruption – Possible Communication Issues

Date: Aug. 4, 2016

Location: Pioneer Fire, Idaho

99 Groups in your DPHX!

“What the heck? Is this a super radio? I have never seen a radio with 99 groups. How is this even possible?”

NARRATIVE

During the check-in process on the Pioneer Fire, a Firefighter stops at the communication tent to get his radio cloned. This incident was split into two branches. A full radio group was assigned to each branch.

The Radio Operator took the radio and hooked it up to the master radio for cloning. He successfully cloned the Branch One Group. But as the Radio Operator was trying to change to the second group, he pressed the number 4 key too many times—placing the radio into “Group 44.”

This confused the Radio Operator, who had nine years of experience, as well as the Firefighter, who had 26 years of experience. This was the first time either had heard of a DPHX radio with the capability of having more than 25 groups.

The Firefighter’s Bendix King DPHX radio was factory programed to only have 25 groups.



Bendix King DPHX Radio

The Communications Tech informed the Radio Operator that the radio was “corrupted” and needs to be pulled from service “Immediately.”

Baffled by the discovery of “Group 44” in the radio, the Radio Operator checked to see how many groups the radio had. It was discovered the radio had 99 groups! *“What the heck?”* proclaimed the Radio Operator. *“Is this a super radio? I have never seen a radio with 99 groups. How is this even possible?”*

Completely amazed that the radio had 99 groups, the Radio Operator finished the clone and pushed the Branch Two group. This clone was completed successfully and the Firefighter was sent on his way to finish the check-in process.

Having 99 Groups Due to a Virus

Now completely confused, the Radio Operator asked the Communications Tech in the tent what was up with 99 groups in a Bendix King DPHX radio? The Communications Tech informed the Radio Operator that the radio was “corrupted” and needs to be pulled from service *“Immediately.”*



USB/DB9 interface device

The Communications Tech ran out of the tent looking for the Firefighter. Luckily, the Communications Tech and the Firefighter knew each other and the Firefighter was quickly located.

The Communications Tech explained that having 99 groups was the result of a virus that was introduced into the radio programming system around 2010 and was identified in 2011. The virus resulted from the use of certain sub-standard USB/DB9 computer interface devices. Some of the USB/DB9 interfaces do not handle the data

How to Test YOUR Radio in the Field

1. Turn the radio on.
2. Press the # key to change groups.
3. Enter "99" as your group selection.
4. If "Group 99" displays, or it reads "99" for a split second before indicating "Disabled," your radio is corrupt.
5. If the radio flashes "Disabled," push pound and enter a valid group.
6. As soon as possible get your radio to a Communications Tech for a possible fix.

transfer properly between the computer and the DPHX radios. Data is corrupted during the data transfer, resulting in a corrupted memory and "group selection" data.

What To Do If "Group 99" is Displayed on Your Radio Screen

The only way to test the radio to see if there has been a corruption is to change the group setting on the radio to Group 99. If you get "Group 99" displayed on your radio screen, the radio is corrupt. Therefore, if it's discovered that your radio has 99 groups, you know that it is corrupted. Get the radio to the fire/unit Communications Tech immediately.

Not All Corrupted Radios Have Been Identified

Due to the pure volume of radios in the wildland fire community and the fact the corruption is passed from radio to radio unnoticed, not all radios with the corruption have been identified.

The radio in this incident was identified by a simple extra press of the number 4 key by mistake. The radio had even been serviced by the home unit Communications Tech four months prior to this incident and

the corruption was not detected.

It is unclear to the Firefighter or the Communications Tech as to when the radio received the corruption or how long the radio has been corrupted (possibly for a few years). Fortunately, in this incident, the problem was identified *before* the Firefighter, who was ordered to an overhead position, could hit the line and possibly pass the corruption on to other radios. The Firefighter was able to complete his assignment without issues by using another radio that was not corrupt.

LESSONS

- ✓ If the corrupted radio is used to clone other radios, the corruption is passed to the next radio—expanding the issue with each clone.
- ✓ A corrupted radio will still work, but there is a possibility the radio will unexpectedly stop working and have garbled transmissions. In addition, its groups may freeze up or its display may not respond quickly, making for incomplete, poor and/or inadequate communications while on the fireline.
- ✓ During the cloning process, this corruption has the potential of making one out of five radios being cloned totally unusable. This is called "Bricking"—making your radio as useful as a brick. Once a radio "Bricks" it must be sent back to the factory for reconditioning. There is no other way to fix a "Bricked" radio.
- ✓ If you have a corrupted radio you need to contact the fire/unit Communications Tech for a possible fix as soon as possible. The Communications Tech will need to hook the radio up to a computer and run ["The Relm Group 99 Patch"](#). If this patch does not clear the corruption, the radio will need to be sent back to the factory for reconditioning.

This RLS was submitted by:

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