



National Interagency Incident Communications Division



March 19, 2012

To: Radio Users

From: Stephen M. Jenkins, Chief, National Interagency Incident Communications

Subject: Federal Communications Commission Frequency Narrowbanding Incompatibility

The Federal Communications Commission (FCC) has begun issuing narrowband VHF-FM frequencies to states, local governments, and private organizations on which some federal land management agency VHF-FM radios cannot operate. This may prohibit federal land management agencies from communicating on these frequencies.

Background

The FCC began transitioning from 15 kHz (wideband) to 7.5 kHz (narrowband) channel spacing in 2005 for the 150 to 174 MHz frequency band.

The FCC-controlled 150 to 174 MHz frequency band is used by states, local governments, and private organizations in the same manner as the federally-controlled 162 to 174 MHz frequency band. FCC's narrowbanding plan (15 kHz to 7.5 kHz channel spacing) is separate from the largely-completed federal narrowbanding plan (25 kHz to 12.5 kHz channel spacing). The federal narrowbanding plan is controlled by the National Telecommunications and Information Administration (NTIA). The FCC manages frequency use for states, local governments, and private organizations while the NTIA manages frequencies for federal users. NTIA's narrowbanding plan was completed in 2005, while the FCC plan began in 2005 and is expected to be completed for public safety users on January 1, 2013.

This issue first manifested itself on the Sweat Farm Road fire in Georgia where a local 7.5 kHz-type frequency was being used. The fire could not use NIFC fire cache-assigned B/K EPH radios because B/K EPH radios would not operate on these newly-issued 7.5 kHz-spaced frequencies. The fire was immediately sent B/K DPH replacement radios. When the Oregon Department of Forestry activated

several new mountain repeater sites utilizing recently-issued 7.5-kHz spaced channels, the same problem occurred with locally-owned USFS radios. As the FCC may be issuing 7.5 kHz-spaced channels in the future, incompatibility issues with existing federal radios will only increase.

Symptoms of Incompatibility

Any radio experiencing 7.5 kHz channel spacing incompatibility will not be able to have the new 7.5 kHz-spaced frequencies programmed into them. There are many new FCC frequencies resulting from this channel spacing plan. Three of the new 7.5 kHz-type frequencies are 151.1525, 158.7825, and 159.2925. Users should attempt to program any of these three frequencies into a radio to determine 7.5 kHz compatibility. A quick radio test will confirm whether the radio successfully operates.

Affected Equipment

Radios *designed* before 1997 will probably be 7.5 kHz-*incompatible*. Radios manufactured after 1997, using a *pre-1997 design*, will also likely be *incompatible*. However, radios designed since 1997 should be 7.5 kHz-compatible. Of primary concern are B/K EPH model radios. The B/K EPH radio is widely used by federal land management agencies and **is not** 7.5 kHz-channel-compatible. Take note that it is a radio's design date and not the radio's manufacture date which is important. NIFC's fire cache has several B/K EPH radios built and purchased in 2002 which are 7.5 kHz-*incompatible*.

The following radios are known to be 7.5 kHz-**incompatible**:

- B/K models: LPH and EPH
- Eureka Radio: ERS96000
- Northern Airborne Technologies (NAT): NPX138
- Wulfsberg Electronics: 9600

The following radios are known to be 7.5 kHz-**compatible**.

- B/K models: GPH, DPH, and KNG-P150
- Cobham: NPX136D
- Datron: Guardian
- EF Johnson: 5113, 5123, and 5133
- Midland: STP105B
- Motorola: XTS2500 and XTS5000
- NAT: NTX138

- Technisonic Industries: TFM-138B, TDFM-136, TDFM-136A, and TDFM-136/NV
- Thales (Racal): P25

Note: Some individuals are able to program a NAT NPX138's display to show 7.5 kHz-channel-spacing operation. NAT is aware of this and has said while the display shows 7.5 kHz operation the radio will continue to operate on the nearest non-7.5 kHz frequency. NAT disavows this work-around and reiterates that the NPX138 is not 7.5 kHz-channel-capable.

Correction of Problem

Local communications personnel should determine if their state and/or local governments have recently been issued VHF-FM 7.5 kHz frequencies from the FCC. This information must be provided to dispatch centers so appropriate action can be taken. Resources responding to an area (where the use of 7.5 kHz-spaced channels plays an important role in a local communications plan) must be informed of any radio limitations prior to the resource's arrival.

Interagency fire aviation resources have already dealt with this issue by converting to P25 digital radios. All P25 digital radios (aviation, mobile, and portable) are 7.5 kHz-channel-spacing compatible. Ground resources will have to transition to newer 7.5 kHz-compatible radios as conditions and funding permit.

Questions concerning radios on this list can be directed to: Bob Dukart (208-387-5852) bdukart@blm.gov.

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