

October 22, 1999

Federal Communications Commission
Chief, Experimental Licensing Branch
New Technology Development Division
Office of Engineering Technology
Attention: James Burtle
445 12th St. S.W.
Washington, DC 20554

Dear Sir:

In the matter of a request by the County of Los Angeles, California for experimental authority to operate airborne television transmitting equipment in the 2.4 GHz band I wish to point out that their intended operation would seriously interfere with existing Amateur Radio television repeaters and links in the 2390 to 2450 MHz band.

I am an advanced class Amateur Radio operator, W6ORG, and have operated the television mode (ATV) in Southern California for over 3 decades. I am an American Radio Relay League (ARRL) Technical Advisor for spectrum management and ATV, wrote the ATV section in the ARRL Radio Amateurs Handbook, and also serve as the ATV bands manager for the Southern California Repeater and Remote Base Association (SCRRBA).

Over the past 10 years I have demonstrated and helped the Los Angeles County install and operate ATV in their helicopters and ground units for emergency operations under the RACES provisions of the FCC Rules - 97.401 through 97.407. Local ATV repeater owners have always cooperated with emergency service groups to provide wide area video coverage back to the emergency operations centers. However, many public service agencies have said that they would prefer to fully own and control the repeater systems, not have to have their helicopter observers get amateur radio licenses, and expand from RACES drills to other police, fire and local government operations.

There simply are no amateur radio frequencies available in the geographical area they wish to cover that are not already coordinated to amateurs for mountain top repeaters and auxilliary links. I have discussed this with some of the local public safety agencies as well as the

limitations in the FCC Rules that prohibit other than actual emergency or RACES operations in the amateur bands by public safety agencies - 97.113 and 97.111.

There are 3 high ATV repeater sites all above 5000 ft overlooking the Los Angeles County area that have a coordinated input on 2441.5 MHz that would key up and repeat the video out on the 33 or 23 cm Amateur bands if Los Angeles County transmitted on the 2426 to 2436 or 2438 to 2448 MHz channels they have asked for. The coordinated channel is 17 MHz wide and 4 MHz deviation is used. More ATV repeater inputs on this band are planned.

In addition, there are 7 high ATV repeater sites, one of which is on a same mountain top as they wish to use, that use 2417.5 MHz for automatically controlled auxiliary video linking. If Los Angeles County came on the proposed 2414 to 2424 MHz or 2402 to 2412 MHz channels, there is a high probability that they would get into the link receivers and would again result in the unwanted video interfering or being repeated out over many ATV repeaters. Some of these Amateur Radio links could get into Los Angeles Counties receivers also. Amateur Radio operators are prohibited, with few exceptions, to retransmit other services - 97.113(e).

The 2400 to 2410 MHz is set aside in the local band plan for satellite use and there is an Amateur Radio satellite planned to be launched next year that will make significant use of this segment of the amateur band. Amateur Radio is also primary in the 2390 MHz - 2400 MHz and 2402 MHz - 2417 MHz segments.

Los Angeles County did not contact SCRRBA, the local Amateur Radio frequency coordinators before making their brief tests nor would just a spectrum analyzer looking in one direction in the 2.4 GHz band address the fact that Amateurs will be transmitting to high ATV repeater sites with directional antennas, not within range of Los Angeles Counties test location, and repeating out on another Amateur Radio band.

I must question the occupied bandwidth as being 10 MHz given the stated 3.6 MHz deviation and a 4.830 audio subcarrier. Unless the sound subcarrier injection is turned way down below normal ratios, the occupied bandwidth would be greater. I note they did not submit a spectrum

analyzer photo to demonstrate the -26 dB mean power occupied bandwidth definition.

Therefore, I cannot see any segment in the 2390 to 2450 MHz band that Amateur Radio could exist with Los Angeles Counties proposal, their brief test has little engineering value to the true interference potential and that nothing can be gained by their further experimentation in this Amateur Radio band for Part 90 applications.

I appreciate your serious consideration of our position in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas R. O'Hara". The signature is fluid and cursive, with the first name "Thomas" being the most prominent.

Thomas R. O'Hara
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