Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

In the Matter of:

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FCC MAIL ROOM

Prohibition of certain modulation modes	)	
in the VHF and UHF ham radio bands,	)	
to protect weak signal operators.	)	**RM 9673**

Submitted by: Henry Ruh KB9FO

COMMENTS NOT IN FAVOR

In summary, the original petitioner, Central States VHF Society, requests that the FCC prohibit certain modulation modes from being used in certain band segments in order to favor other modulation modes preferred by the CSVHFS for the purposes of weak signal distant communication. This writer is opposed to such regulation and feels the petition should be dismissed. The request is in contradiction with the purpose of Amateur Radio and is a disincentive for license holders to gain experience, knowledge, and expand their operating prowess beyond simple FM telephony. It would degrade and diminish the enjoyment of the ham radio license privileges. The request seeks to divide the ham radio community into "haves" and "have nots" based upon selfish motivations, not unlike those proposed by other groups, namely the Illinois Repeater Association et al, known as NFCC that seeks to segregate and modify commission rules to exclude various modes and operations from certain bands and sub bands and is doing so on a fait acompli and defacto basis in violation of FCC rules. The issues brought before the Commission do not rise to the level requiring rule changes, only education, cooperation, inclusion and encouragement.

Qualifications of writer.

This writer has been a licensed ham since 1969. I have worked all modes on all bands, built and operated numerous facilities, repeaters and mobile station. I have frequently worked "weak signal" operation on 50, 144, 440, 1296 MHz and higher bands. My station currently has huge multiple yagi arrays on 50, 144, 440 and 1296 MHz with full legal power amplifiers for most bands, and mast mounted receive pre amplifiers, large Heliax cables, tall towers, modern multi-mode radio equipment and other accouterments of a modern VHF UHF DX or weak signal operation. My ARRL WAS (worked all states) certificate was earned on mostly VHF and UHF contacts. I have frequently worked all or nearly all states on VHF and UHF ham bands from various home locations in Michigan, Illinois, Indiana, Kansas, California, and Connecticut under call signs WB8HEE, WB9WWM, WA6QXY, WB0WFP, WB9YEO, WB9YEP, KB9FO and as a mobile/portable/airborne station and in other countries. I have had personal antenna arrays as high as 500 feet AGL, and multiple tower arrays of 165 feet and 120 feet. I have likely spent in excess of $50,000 on VHF and UHF operation, and another $20,000 on full legal power HF (160-10 meters). In short, an investment significant enough to be considered seriously involved in weak signal and other ham areas. I have also been published in all ham publication and ARRL Handbook, and authored a several books and magazines on ham radio. I also served the Commission from 1975-1980 for WARC. and a whole bunch more.

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The Central States VHF Society [CSVHFS] and its counterparts do a good job of promoting an area of ham radio many have not explored. It takes dedication, many hours of work, a good degree of knowledge of electronics and operating skill to be a VHF UHF or microwave band weak signal operator. For convenience lets call that DX in this context. There is great thrill and satisfaction to communicate over vast distances on frequencies that the vast majority consider short range or line of sight. It usually takes sophisticated equipment, much of which is often home built, beneficial propagation conditions, some of which are quite rare, and the luck of having the time to be on the air when the conditions are favorable. You just can't pick up your two meter mic and expect to communicate from Indiana to Texas or California.

The VHF DX'er is a special kind of ham, who is hard at work trying to do what most hams think is impossible to use a few watts and a big antenna to communicate hundreds or thousands of miles on frequencies most hams are happy to use for 10-30 miles using a commercial FM mode transceiver and mobile whip, perhaps with the aid of a local repeater. It is natural for anyone that has invested a lot of effort to take the hard route, to be upset when [to them] an unthinking ham plops down on [their] favorite DX frequency, or close enough and operates in a perfectly legal way, yet disrupts the DX'er who is trying to pick out a CW signal 2-3 db above the noise floor of the radio's RF noise figure, or a SSB signal that can barely be made out over galactic noise, or waverly sounding slow CW note from a moon reflection, Auroral event, meteor scatter, or trying to discern a weak TV signal with a few call letters on black and white screen, where it takes 26 db of signal/noise ratio just to see the first hint of a picture. Its not easy watching a 100 watt station from 350 or miles away or a balloon with a 1 watt transmitter and camera flying at 100,000 feet 400-500 miles distant. But this does not rise to the level requiring a rules change.

That "inconsiderate idiot" that just plopped his FM or packet signal near to the sacred DX'er has as much right to operate as the DX'er. The FM or packet station might just as easily be involved in a local communication, or participating in the band opening, chatting with stations just as distant as the CW or SSB operator. When conditions improve enough to permit wider forms of modulation, it is not uncommon for stations to progressively move from CW to SSB to FM to TV or other modes. To say that certain modes should be banned simply means to ignore the fact that at times not only can the experienced highly involved ham enjoy DX, but so can the neophyte or not so involved and invested ham. A lot of VHF DX activity happens in NBFM and other "wide" modes when the propagation conditions permit sufficient carrier to noise ratio to support such.

The use of modern design equipment, filters, sufficient head room amplifiers and such are good operating practice. I have on many occasion had simultaneous transmissions on the same or different bands, using different modes in the same antenna array. It is not unusual to be able to operate 432 SSB while operating 439 TV, or 144 MHz FM or SSB. Most ATV DX contacts use 439 MHz for video and some other frequency or band for audio to help coordinate and locate the TV operating stations.

That is not to say that it isn't a frustration when an FM signal appears in the TV receive passband and wipes the screen clear of any pictures! As in any ham communication, you live with the normal interference from other stations, change frequency or wait for the offending signal to go away.

There are already band segments set aside for CW work, and for weak signal work (ie 431-433 Mhz) that are hundreds even thousands of times wider than is needed for the few operators in these bands. Frequently these areas are only "congested" during a contest or special propagation conditions. Further expansion of these set asides is not necessary and simply places even more pressure on the band portions that are more used.

The ARRL contends in their announcements of this RM request that their band plans should be considered "good operating practice." ARRL also contends that a change in the rules is not necessary to provide further protection for those few stations using the already allocated band segments. I agree with ARRL on the latter issue. I also agree in part that ARRL band plans do constitute one aspect of "good amateur practice." However, even ARRL admits that the band plans are flawed. There have been attempts by other mode proponents, most vociferously the FM repeater groups represented by the NFCC, that have openly published that FM should be the only mode and other modes should be banned from certain bands. An idea equally misguided. The NFCC, using their own interpretation of the FCC rules and through their own corrupt actions, have been attempting to extinguish certain legal operating privileges and modes by caveat. CSVHFS is attempting to do the same by offering a rules change request.

Believe it or not, the ham bands have ample room for all modes and users. The mode wars that have sprung up over the past few years represent a frustration and lack of cooperation, understanding and education. Often non technical people try to promote operations that are technically in conflict, then attempt to circumvent the first rule of ham radio by making their own rules or asking that they be protected from the consequences of their own actions. CSVHFS is good intentioned in their request to be left interference free. The rest of ham radio would likely also want the same Federal protection. We would turn ham radio into a commercial operation, eliminate experimentation and exploration and 99% of the challenge of ham operations. We would become channelized CB operators.

The number one rule of ham radio should be cooperation. Unfortunately there are always those individuals and groups that feel that they are superior to others and should therefore be given special treatment. Not on grounds of technical compatibility, but for political or emotional reasons. Road rage on radio if you will.

When the 70 cm band (420-450 MHz) was first used by hams, the only frequency occupied was 432.00MHz. plus or minus a few kilohertz. This was because the common way of getting [there] from two meters or a lower band was to use a frequency multiplier. In the same manner 1296 MHZ and so on for higher bands. The frequency was shared by all modes, CW, FM, AM, and TV. As more stations became active the TV signal operators moved to 439.25, and often the same operator used multiple modes. When FM mode became popular, converted commercial radios provided easy operation in the 440-450 MHz band, and the FM stations mainly stayed to the upper portion of the band. Satellite users filled in between TV and "weak signal" at 435-438 to provide a region I II and III area. By and large, all of these pioneers were able to satisfy their own hobby pursuits and minimal interference prevailed. No one is guaranteed zero interference. Repeaters used the 420-430 MHz band for links and remote bases. All was good and happy in ham land.

The popularity of ham radio in VHF UHF grew. Manufacturers started providing radios that would tune more of the 70 cm band. Operators growing weary of the clutter in FM repeaters moved their simplex and packet and other digital signals away into areas already in use by other modes. In short, the gentlemen's agreement began to vaporize. A new license holder that does not have knowledge of the band uses can easily stray into areas where they do cause interference, even though they likely don't know they are causing it! CW and SSB signals often do not show up in an FM receiver. A person thinks the frequency is not is use, because his radio does not unsquelch to receive the signal. Often the new or casual user is using a less sophisticated antenna system, and equipment not as sensitive and thinks that the band is not used because they don't hear a signal, whereas if they had a larger antenna, of the right polarity, low loss coax, mast mounted preamps and such, they would hear dozens of signals. This is a problem of education, not regulation.

It is unfortunate that only about 25% of the ham license holders subscribe to a ham radio publication! I had previously petitioned the Commission to change the nature of the license structure to

place more emphasis on actual operating, not memorized Q&A's as the ARRL used to publish in the 50's, then discredited in the 80's. I would be in support of one rule change that would be better for all of ham radio and benefit all ham license holders, not just the few weak signal operators or other sub group. That one rule would be:

All license holders must subscribe to a ham radio publication that regularly publishes information on band plans, operating procedures and promotes cooperation between all mode users. Following a national band plan formulated to provide minimal interference *for all modes* that provides for all modes and operations shall constitute good amateur practice. Such band plan shall not discriminate against any modulation mode nor prevent simplex or repeater operation for any modulation permitted and must be devised with equal input from representatives of all modes and agreed to by all mode representatives. The band plan must also accommodate the introduction of new technologies and shall not extinguish any current day technologies. Coordinating groups shall maintain an open database that can be searched by any license holder to search for unused frequencies for any new ham radio operation.

In a nutshell, the above rule would promote education and awareness, reduce potential interference to all users, guarantee a level playing field among all license holders, modes and operations, and eliminate the mode range wars the the CSVHFS request for rulemaking exemplifies. As an alternative, " must maintain an awareness and knowledge of band uses and band plans" for those that object to a forced commercial subscription. Personally if you can afford a $500 radio, you can afford a $35/yr subscription.

SUMMARY:

An old saying goes, 'if common sense is so common, how come so few people possess it?' It seems society has fully embraced the idea that if there is a problem, make a law. If you're clumsy, stupid or fail to follow 'common sense' blame the manufacturer, store or whomever and sue them. Passing more laws and making more specific rules to protect certain special interest groups at the expense of everyone else, just creates more problems and the need for more rules and laws. The rules already encompass special set asides for repeaters, OSCAR/AMSAT, RACES, weak signal, CW only, and other operations and modes. That is not to say these are not beneficial and needed. But standing back from the trees a few hundred yards, all that is really needed is education, cooperation and inclusion. New operators need to be included and informed about all aspects of ham radio. Whether this is at the point of license exam, license study, or continuing education. More hams need to appreciate the contributions of other modes and operations and partake in them. We need to encourage individual development and responsibility. If nothing else, a simple pamphlet packed with each radio sold that shows the national band plan and a little information about avoiding certain operating conflicts with other band users may suffice.

Respectfully submitted via First Class Mail

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