

V and Wireless Microphones (Intercoms)

discussed and written about wireless microphones (intercoms) and their DTV environment. While the issues are complex, the solutions are simple and are actually little different than proper frequency determination in the past...that is, **to select frequencies not occupied by a nearby** to utilize RF systems which are technologically competent.

DTV FACTS

is authorized and is encouraging the use of Digital Television (DTV). All and educational holders of a current television broadcast channel (NTSC) granted a second channel for DTV somewhere between VHF channel 7 and channel 69 and are eligible to operate both until Dec 31, 2006. This does not apply to low power TV or TV boosters and translators. Many complicated "Reports" have been issued with later changes and ongoing rule modifications still in progress. There are many outstanding legal, technical, and marketplace issues to be settled such as what to do with displaced translators and low power receiver compatibility, and the "must carry" rules for cable TV. Rulings on these matters can be read in full at <http://www.fcc.gov/dtv/>.

As of 1999, a total of 309 (18%) of eligible TV stations have filed DTV Channel Change Permit (CCP) applications. Of those, 178 have been granted and of the granted CCP's, 45 are on the air.

It is figured such that the entire band is utilized, however, the signal density at any frequency within the channel is less than the equivalent peak power of an analog station at its center frequency.

Because of the expense of building a full coverage DTV station to full authorized power, stations are building relative low power transmitters to go on the air at this time. Lower power transmitters result in a much shorter coverage distance. The budget approach has been further encouraged by the relatively little DTV program material and the minuscule amount of DTV receivers actually in use in many areas (receivers still cost in the thousands of dollars and may not yet be available with all of the various DTV formats authorized).

The DTV rule has reallocated UHF channels 63, 64, 68, and 69 to public safety use. In some areas of the country public safety usage of these channels is already

is could cause conflicts with existing wireless mics as several
e sold (**and continue to sell**) products in these reallocated bands. **No
Voice wireless microphones or intercoms have ever been sold in the
nals.**

Jan 1, 2007, UHF channels 60 - 62, and 65 - 67 will be used for various
nonbroadcast commercial use.

roadcast spectrum is used by the additional DTV allotments, however
ed channels in every geographic area due to the fact that not all of the
nals can be used simultaneously by broadcast TV without mutual

lex successfully coordinated the 64 frequency wireless intercom system
s system simultaneously used 32 different frequencies at every NFL
each NFL city. This coordination effort considered **all existing NTSC
is, and all DTV allotments** and is a demonstration of frequency
ompatibility with DTV in demanding RF environments with the proper
quipment.

on of wireless microphone (intercom) frequencies

en the case, wireless frequencies should be selected to be compatible
for multiple frequency systems) and to avoid local TV transmitters.
encies are shown in the applicable Telex/EV price lists and are also
acting sales representatives.

pdated list of DTV applications and grants is available from the FCC at
<http://www.fcc.gov/mmb/vsd/files/dtvpnd.html>. The complete table of DTV allotments
(C 98-315) is available from the FCC at <http://www.fcc.gov/dtv/>. Telex
es will also help identify TV stations in your area.

etroVoice wireless products are compatible with DTV. Whether VHF
quency, frequency agile, or synthesized, avoidance of strong local TV
dination of multiple frequency systems is the key to successful
istence with DTV. Strong RF design has been and continues to be the
and EV wireless products and is an absolute requirement in today's

quency coordination, we recommend avoiding DTV allotted frequencies which are active or for which an application is in process.

less systems on UHF channels 68 and 69 (794 - 806MHz) is highly these frequencies are already being used for public safety in some areas.

l systems are touted as better for DTV than others because of their bandwidth. This could actually turn out to be detrimental due to the lowered TV transmitters that could be in the area within the basic front of the system causing the system to be less sensitive to the desired