

How to tell if you are licensed for narrow band



Non-compliance with FCC Rules and Regulations can be a scary thing! Fortunately, it doesn't have to be as scary as some would want you to believe.

A case in point is this thing called narrow banding. It may be a whole lot less complicated than you thought. Before you pay a lot of money to someone to upgrade your license to narrow band, take a look at your license (If you don't have or can't find your license, give us a call at 205.854.2611). Assuming you have and can find your license, you will see your frequency(s) listed along with an Emission Designator over on the left hand side.

If the Emission Designator is 20K3F3E, you are licensed for wide band (25 kHz) channel spacing. If your Emission Designator is 11K2F3E, you are already licensed for narrow band (12.5 kHz).

The first four digits of the Emission Designator refers to the authorized BANDWIDTH. As a general rule a 25 kHz channel will be limited to 20 kHz of bandwidth. The first two numbers specify the BANDWIDTH (For a 25 kHz channel, this would be 20. For a 12.5 kHz channel, this would be 11. For example, the designator of 11K2F3E refers to 11.25 kHz of occupied or authorized bandwidth for a 12.5 kHz narrow band channel. The 3rd and 4th digits refer to the highest modulating frequency. In our example, K2 as the 3rd and 4th digits means the highest modulating frequency is 3.125 kHz.

Most of us don't worry about the 3rd and 4th digits. That's for the technical folks. What we want to know is whether our current license is wide band (first two digits 20) or narrow band (first two digits 11) which tells us whether we need to modify our license and equipment.

The last three digits tell us the type of transmitted signal. The 5th digit "F" means Frequency Modulation or FM. The sixth digit "3" denotes the nature of the signal modulating the main carrier (more tech talk – don't worry about it), and the 7th digit refers to the type of information to be transmitted. An "E" means voice.

There are other symbols that are applicable for non-voice (data) communications. Additional information is available at <http://www.comsearch.com/articles/emission.pdf>.

If you are using, or contemplate using, digital 2-way radios such as DMR (MotoTRBO and Hytera), NXDN (ICOM and Kenwood) or P25, you may also want to check out our Blog at <http://falconinfo.blogspot.com/2008/12/fcc-license-emission-designators.html>.

The bottom line is that if your FCC license has an Emission Designator of "20" as the first two digits, you need to be making plans to convert to narrow band. If the first two digits are "11", no changes should be required UNLESS you are converting to digital or plan to make other changes such as a location modification or additions. If in doubt, give us a call at 205.854.2611. We are here to help!

There are some other FCC requirements that you may want to review in addition to narrow banding requirements. Additional information is available on our Blog site at <http://falconinfo.blogspot.com>. Just type in "FCC" in the search box at the left for other useful information.

The Falcon Team
At your service!