

# **FCC Narrowbanding (Refarming) of the Private Land Mobile Radio Services**

**Purpose:** Promote more efficient use of 150-174 and 450-512 MHz. bands

## **Key Dates:**

- 1992- Document Released
- 1995- Rules for spectrum efficiency & new technology issued. Narrowband interoperability channels become primary usage, adjacent secondary if wideband
- 1997- Accepting applications for narrowband channels
- 2003 - Prohibited new applications for wideband systems (20K0F3E)
- 2011 - New equipment must meet spectrum efficiency standards (narrowband)
- Jan 1, 2013 - Public Safety & business/Industrial migrate to narrowband. All systems must be narrowband compliant

**“Narrowband Compliant”** - Must be able to transmit at 2.5-KHz. deviation and program all narrow-band channels, including anomalies (a few channels do not result in a whole number when divided by 7.5 KHz. or 6.25 KHz.)

## **Requirements:**

- Wideband licensees must go through frequency coordination, even if not changing frequencies
- Equipment must be FCC type accepted for narrowband usage (11K0F3E voice). Most radios purchased in the last 6-8 years are capable
- Once the new license is obtained all base/mobile/handheld radios must be reprogrammed for the new requirements
- Make sure VHF radios are programmable “4 decimal places” and program every 2.5 KHz.

## **Issues:**

- When will Mutual Aid systems go narrowband?  
155.475 (National Law Enforcement emergency Channel)  
154.265, 154,280, 154.295 (Fire Mutual Aid Channels)
- When the Madison County Dispatch channel is narrowbanded pagers must be capable of decoding the reduced deviation
- The FCC will terminate your license if your agency is not in compliance with narrowbanding by January 1, 2013

**-----VHF Spectrum-----**

60 KHz.	30 KHz.	15 KHz.	7.5 KHz (Narrowband).
155.010			155.0175
		155.025	155.0325
	155.040		155.0475
		155.055	155.0625
<b>155.070</b>			155.0775
		155.085	155.0925
	155.100		155.1075
		155.115	155.1225
155.130			

**-----UHF Spectrum-----**

100 KHz.	50 KHz.	25 KHz.	12.5 KHz. (Narrowband)
453.725			453.7375
		453.750	453.7625
	453.775		453.7875
		453.800	453.8125
<b>453.825</b>			453.8375
		453.850	453.8625
	453.875		453.8875
		453.900	453.9125
453.925			

## Amateur Radios:

Typical Low Band Radio - 3.910.00 (display least count 10 Hertz)  
Tune in 10/100 Hertz steps or 1 KHz. steps

Typical VHF/UHF Radio - 146.820 / 443.350 (display least count 1 KHz.)  
Tune in 5 KHz or 25 KHz. steps

### **VHF radios typically program to 5 KHz.**

(Indiana Bandplan has standard channels with 15 KHz. spacing)

**146.820**

146.825

146.830

**146.835**

155.070

155.075      155.0775 → 2.5 KHz. off

155.080

### **UHF radios typically program to 25 KHz. (some to 5 KHz.)**

(Indiana Bandplan has standard channels at 25 KHz. spacing)

**443.350**

**443.375**

443.400

453.825

453.850      453.8375 → 12.5 KHz. off

453.875

### **Scanners:**

VHF – Usually program to 5 KHz. and display to 1 KHz.

UHF - Usually program to 25 KHz and display to 1 KHz.

Some program to 12.5 KHz but display only 3 digits.

### **New Requirements:**

**VHF – Program to 0.5 KHz & receive “Narrowband (2.5 KHz.) deviation”**

**UHF – Program to 12.5 KHz & receive “Narrowband deviation”**