

# Newcomers Guide to 902 FM Radios

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# Getting on the 902 Band

- Most important: It's easier than you think to get on the 902 repeaters
- Forget the ham radio stores (They won't have 902 radios)
- You will need a modified commercial radio

# Getting on the 902 Band

- Radio modifications
  - Hardware mods
  - Software mods
  - Combination of software & hardware mods

# Getting on the 902 Band

- Radios known to work in 902 ham band
  - Motorola
    - Spectra
    - Maxtrac
    - MCS2000/MTS2000/MTX9000
    - GTX (mobile/portable)
    - LCS2000/LTS2000
    - MTX9250
    - XTS1500/XTL1500

# Getting on the 902 Band

- Radios known to work in the 902 ham band
  - Kenwood
    - TK-981/TK-481
    - TK-941

# Getting on the 902 Band

- Easiest path
  - Radios that function properly when programmed via software modification
- Hardest path
  - Radios that function properly after hardware AND software modification

# Getting on the 902 Band

- The easy path
  - Motorola
    - GTX
    - MCS2000/MTS2000/MTX9000
    - MTX9250
    - LCS2000/LTS2000
    - XTL1500/XTS1500
  - Kenwood
    - TK-981/TK-481

# Getting on the 902 Band

- The harder path
  - Motorola
    - Spectra
    - Maxtrac
  - Kenwood
    - TK-941

# Getting on the 902 Band

- Kenwood TK-941 (cont'd)
  - Does not require hardware modification, but has a convoluted transmit/receive programming scheme

# Getting on the 902 Band

- Most popular radios (no particular order)
  - GTX (mobiles and portables)
  - MTX9250
  - MTX9000

# Getting on the 902 Band

- Things to consider
  - Radio costs vary widely
  - Finding someone to program your radio
  - Channel memories (4 to 250)
  - Accessories

# Getting on the 902 Band

- Examples of radio costs
  - MTX9000 ~\$50 to \$70
  - GTX handheld & low power mobile ~\$70
  - Kenwood TK-481 ~\$100
  - 30 watt Maxtracs ~\$30
  - 30 watt MCS2000 (Version 3) ~\$250

# Getting on the 902 Band

- Finding someone to program your radio
  - Ask around
  - Other 902 users know who can program which radios

# Getting on the 902 Band

- Channel memories
  - Non-keypad GTX handheld has 4 memories
  - Partial & full keypad MCS2000/MTS2000 has 160 memories
  - Later Kenwood TK-981/TK-481 has 250 memories

# Getting on the 902 Band

- Accessories

- Some radios have limited accessories
- Public safety purposed radios tend to have many accessories for a wide variety of purposes
- Have you standardized on a particular radio family and already have accessories?

# Getting on the 902 Band

- Making that first purchase
  - Be sure you are buying a 900 MHZ radio
  - Check the model number

# Getting on the 902 Band

- Motorola model numbers
  - Maxtracs/Spectra's
    - D27MWA5GB7AK (3<sup>rd</sup> digit must be “7”)
  - MCS2000/MTS2000/MTX9000/etc
    - H01WCF4PW1CN (4<sup>th</sup> digit must be “W”)
  - MTX9250
    - AAH25WCH4GB6AN (6<sup>th</sup> digit must be “W”)

# Getting on the 902 Band

- Motorola
  - Look for that “7” on older radios
  - Look for the “W” on newer radios
  - Avoid trunking only Maxtracs

# Getting on the 902 Band

- Kenwood
  - TK-981/TK-481/TK-941 are 900 MHZ only
  - Caution: TK-980/480/940 are 800 MHZ
  - Version 1 radios program with DOS software
  - Version 2 radios use Windows based software

# Getting on the 902 Band

- Kenwood

- Programming software has not been hacked
- Either enter so-called channel numbers then individually hex edit frequencies (laborious) or,
- Use automated hex editing program KW900EZP by N2MCI (highly recommended)

# Getting on the 902 Band

- Questions?