



Ham Basics Workshop

Get the most from your Handheld

Delvin R. Bunton, N7QMT

Key parts of a handheld

- Radio
- Power (usually battery)
- Antenna



Key controls and terms

- Power (on/off & levels)
- Audio volume
- Squelch
- VOX (voice actuated)
- VFO (variable freq osc)
- Channel steps
- Memory channels
- Signal mode
 - AM
 - Narrow FM
 - Wide FM
- PTT (push to talk)
- CTCSS (Continuous Tone Coded Squelch System)
- Scanning
 - Range (VFO scanning)
 - Memory

Repeater refresher

- Handheld or mobile
 - Transmits on 147.840
 - Listens on 147.240
 - If tone required by repeater, the radio sends tone on transmit
- Repeater 147.240 +
 - Listens on 147.840
 - Transmits on 147.240
 - If tone required by repeater, the repeater ignores signals without tone

Frequency Setup

- Four key settings
 - Offset amount [O]
 - Receive frequency [Rx]
 - Offset direction (plus, minus, zero) [D]
 - Tone [T]
- Example: 147.240 +
 - Call: W7AIA
 - O: 600 kHz
 - Rx: 147.240
 - D: +
 - T: none
 - Tx: 147.840 no tone

Repeater Directory

- 145.310- 123.0e W7EXH
 - Set receive = 145.310
 - Set offset = minus
 - Set tone = 123.0
 - Turn on tone tx
 - SQL tone prob off
- 147.240+ W7AIA
 - Set receive = 147.240
 - Set offset = plus
 - Set tone = whatever
 - Turn off tone tx
 - SQL tone prob off

Setup examples

- Example: 444.725 +
 - Call: K7BPR
 - O: 5 MHz
 - Rx: 444.725
 - D: +
 - T: 107.2
 - Tx: 449.725 107.2
- Example: 146.700 -
 - Call: KD7TFZ
 - O: 600 kHz
 - Rx: 146.700
 - D: -
 - T: 100.0
 - Tx: 146.100 100.0

More setup examples

- Example: 146.520
 - Call: national simplex
 - O: 600 kHz
 - Rx: 146.520
 - D: zero
 - T: none
 - Tx: 146.520
- Example: 445.000
 - Call: simplex
 - O: 5 MHz
 - Rx: 445.000
 - D: zero
 - T: none
 - Tx: 445.000

Operating modes

- VFO (Variable Frequency Oscillator)
 - Select band if necessary
 - Set receive frequency
 - Set duplex direction
 - Set tone if needed
 - Listen and talk
- Memory
 - Select band if necessary
 - Select memory channel
 - Listen and talk

Radio choices

- Mono band
- Dual band
- Multiple band
- Physical Size
- Battery capacity
- Features
 - Memory positions
 - Extended receive
- Intended uses

Power

- Standard battery
- AA battery pack
- External battery pack
- Connection to external power source
- NiCad
- Lilon
- AGM (aka gel cell)

Antennas

- Standard rubber duck
- Gain vertical
- Roll-up J-pole
- Mobile vertical
- Portable vertical
- Directional (yagi)
- Antenna choices depend on:
 - Intended use
 - Budget
 - What you have available
 - What you can borrow
 - Mission

Operating preparation

- Store area repeater frequencies in memory
- Store all standard simplex frequencies in memory
- Learn various operating controls for your radio

Accessories

- Speaker mike
- Headset with mike
- Software to load frequencies
- Gain antenna
- Copy of operator manual
- Quick operator guide

Power accessories

- AA battery pack
- Spare batteries
- Cigarette lighter power cord
- Battery charger for rechargeable battery pack

Activities to learn

- Parade
Communications
- Scout/family activities
- Mobile substitute
- Emergencies
- Satellite QSOs
- Check in on regular nets
- Contest operation, esp
VHF/UHF
- Fox hunting
- Mountain-topping

Questions and (hopefully) good answers