PROGRAMMING HAM RADIOS

Things you need to know

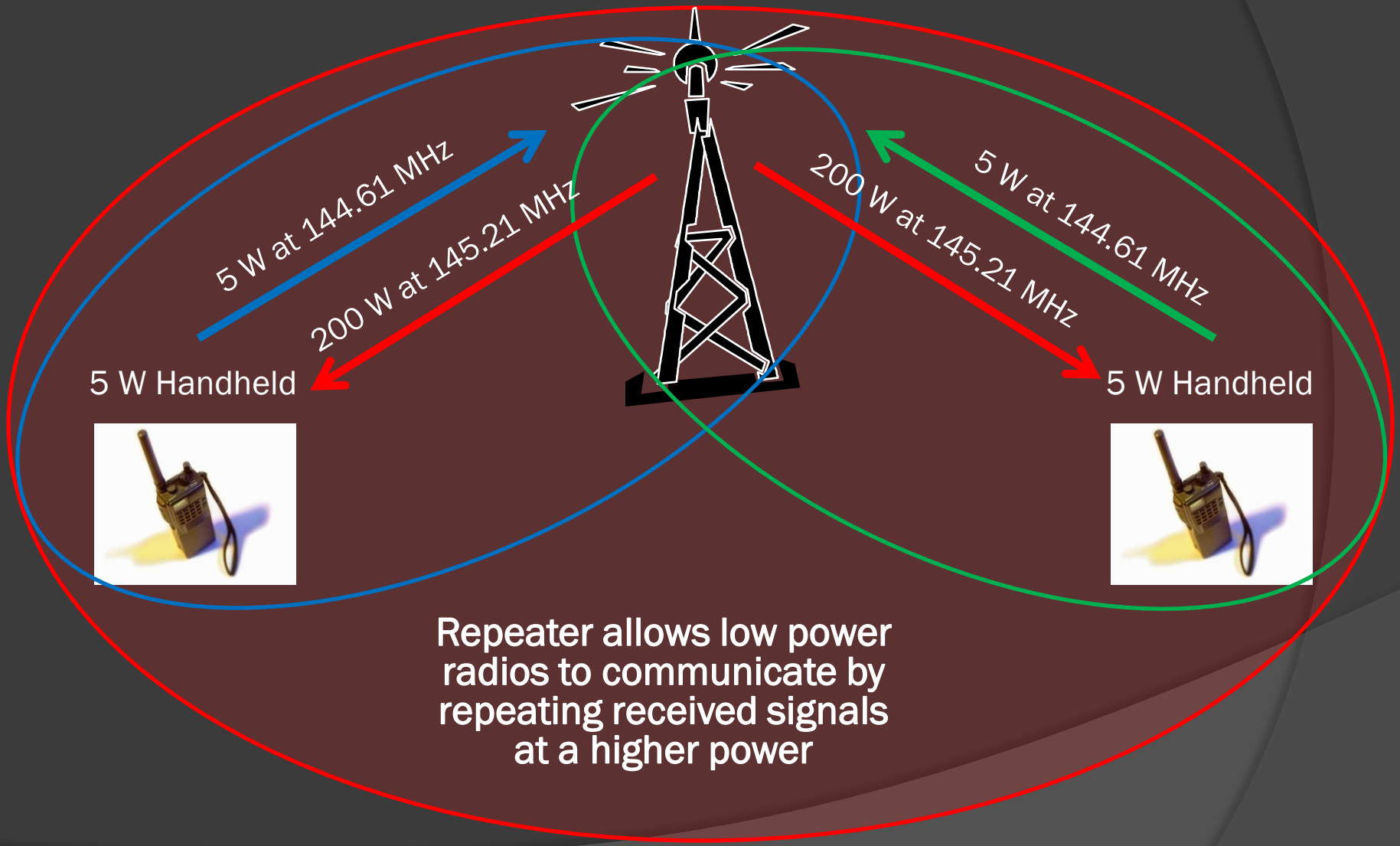
- Channel type: Simplex or Repeater ?
  - If Simplex, then you need to know the Frequency
  - If Repeater, then you need to know:
    - Frequency, Offset Frequency and Direction
    - De-squelch Tone type and Frequency if required
- Each Radio is Different, so the exact programming sequence will be unique
  - Consult your manual, purchase the programming software, or find someone who purchased the programming software

Repeater Operation Review

- Repeaters re-transmit signals they receive
- Allows low power handhelds to be heard over large areas
- Repeaters receive on one frequency and re-transmit on another at the same time
- The output (TX) of the repeater is usually specified by its frequency
- The input (RX) of the repeater is specified by a frequency offset relative to the output frequency
  - Repeater RX frequency is your Radio's TX frequency in repeater mode
  - Repeater TX frequency is your Radio's RX frequency in repeater mode

200 W Repeater

at 145.21 MHz
with -600 kHz Offset



Repeater allows low power radios to communicate by repeating received signals at a higher power

Repeater Examples

- KBARA Mica Peak 2 meter repeater
  - TX Frequency: 147.38 MHz
  - RX Offset: +600 kHz (repeater receives the input signal to be repeated at 147.98 MHz)
  - No Tone required
- Agilent 2 meter repeater
  - TX Frequency: 145.21 MHz
  - RX Offset: -600 kHz (repeater receives the input signal to be repeated at 144.61 MHz)
  - 100 Hz CTCSS Tone required

Memories

- Radios have non-volatile storage locations for your favorite channels
- Once you have the required data, you must enter it into one of your radio's memory locations
- The Yaesu FT-60 has 1000 memories that can be organized into 10 banks

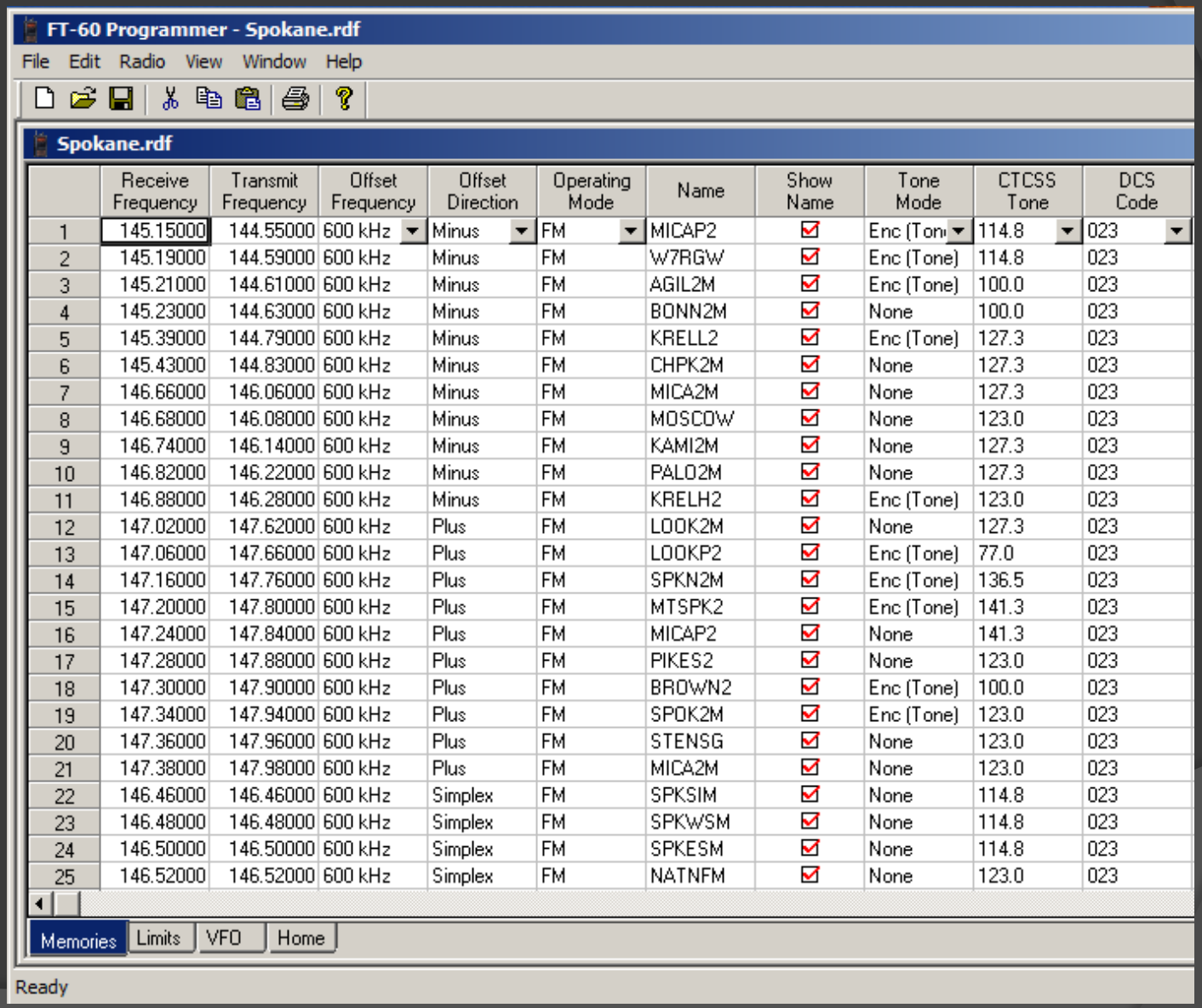
Yaesu FT-60 Programming Example

- Select the desired frequency while operating in the VFO mode. Be sure to set up any desired CTCSS or DCS tones, as well as any desired repeater offset.
- Press and hold in the [F/W] key for one second.
- Rotate the DIAL knob to select the desired memory location (0 to 999)
- Press the [F/W] key once more to store the frequency into memory

Yaesu FT-60 Recall Procedure

- While operating in the VFO mode, press the [V/M(PRI)] key to enter the Memory recall mode
- Rotate the DIAL knob to select the desired channel
- To return to the VFO mode, press the [V/M(PRI)] key

Yaesu FT-60 Programming Software



	Receive Frequency	Transmit Frequency	Offset Frequency	Offset Direction	Operating Mode	Name	Show Name	Tone Mode	CTCSS Tone	DCS Code
1	145.15000	144.55000	600 kHz	Minus	FM	MICAP2	☑	Enc (Ton	114.8	023
2	145.19000	144.59000	600 kHz	Minus	FM	W7RGW	☑	Enc (Tone)	114.8	023
3	145.21000	144.61000	600 kHz	Minus	FM	AGIL2M	☑	Enc (Tone)	100.0	023
4	145.23000	144.63000	600 kHz	Minus	FM	BONN2M	☑	None	100.0	023
5	145.39000	144.79000	600 kHz	Minus	FM	KRELL2	☑	Enc (Tone)	127.3	023
6	145.43000	144.83000	600 kHz	Minus	FM	CHPK2M	☑	None	127.3	023
7	146.66000	146.06000	600 kHz	Minus	FM	MICA2M	☑	None	127.3	023
8	146.68000	146.08000	600 kHz	Minus	FM	MOSCOW	☑	None	123.0	023
9	146.74000	146.14000	600 kHz	Minus	FM	KAMI2M	☑	None	127.3	023
10	146.82000	146.22000	600 kHz	Minus	FM	PALO2M	☑	None	127.3	023
11	146.88000	146.28000	600 kHz	Minus	FM	KRELH2	☑	Enc (Tone)	123.0	023
12	147.02000	147.62000	600 kHz	Plus	FM	LOOK2M	☑	None	127.3	023
13	147.06000	147.66000	600 kHz	Plus	FM	LOOKP2	☑	Enc (Tone)	77.0	023
14	147.16000	147.76000	600 kHz	Plus	FM	SPKN2M	☑	Enc (Tone)	136.5	023
15	147.20000	147.80000	600 kHz	Plus	FM	MTSPK2	☑	Enc (Tone)	141.3	023
16	147.24000	147.84000	600 kHz	Plus	FM	MICAP2	☑	None	141.3	023
17	147.28000	147.88000	600 kHz	Plus	FM	PIKES2	☑	None	123.0	023
18	147.30000	147.90000	600 kHz	Plus	FM	BROWN2	☑	Enc (Tone)	100.0	023
19	147.34000	147.94000	600 kHz	Plus	FM	SPOK2M	☑	Enc (Tone)	123.0	023
20	147.36000	147.96000	600 kHz	Plus	FM	STENSG	☑	None	123.0	023
21	147.38000	147.98000	600 kHz	Plus	FM	MICA2M	☑	None	123.0	023
22	146.46000	146.46000	600 kHz	Simplex	FM	SPKSIM	☑	None	114.8	023
23	146.48000	146.48000	600 kHz	Simplex	FM	SPKWSM	☑	None	114.8	023
24	146.50000	146.50000	600 kHz	Simplex	FM	SPKESM	☑	None	114.8	023
25	146.52000	146.52000	600 kHz	Simplex	FM	NATNFM	☑	None	123.0	023