

# How to Program Your Radio – Outline for Follow-on Class

- Basic Controls, on your radio and others
  - On/Off
  - Volume, Squelch
  - PTT, Monitor, Flashlight, FM Radio
  - Band Selection
  - Display Selection (A/B, upper/lower), single display, dual display
  - VFO (Frequency Mode), Memory (Channel Mode)
- Simplex Frequencies
  - <http://www.tasma.org/bandplan.pdf> - 2m band plan
  - <http://www.scrba.org/BandPlans/440-450.pdf> - 70cm band plan
  - <http://rprrlist.w6jpl.ampr.org/> - W6JPL repeater list and simplex frequencies
- VFO Mode (Frequency Mode)
  - Entering a simplex frequency: 145.555MHz
    - Kenwood: 1st press Enter
    - All others, just key in frequency
  - Verification using a directed net, hands-on exercise using your radio
  - Entering a simplex frequency: 446.500MHz
  - Verification
- Repeater Frequencies and Parameters
  - Review of how repeaters work and the required parameters
    - Offset: 2m = 0.600MHz, 70cm = 5.000MHz
    - Direction: plus or minus
    - CTCSS Tone: T, Tone (Code), or T-CTCS
    - Squelch Type or Tone Mode (T, TSQ, R-CTCS)
  - Hands-on Repeater Lab
    - Listen to 200+ Hz tones
    - Observe frequency offset on Tx
    - K6DCS Repeater: 147.225, plus, 0.600MHz, Tone = 94.8Hz
    - Calabasas Repeater 445.520MHz, minus, 5.000MHz, Tone = 94.8Hz
    - Verification using a directed net, hands-on exercise using your radio
  - Review: "What could go wrong?" and "Why doesn't anyone hear me?"
- ARRL and Local Repeater Directories and On-line Sources (Google Search)
- PAPA System: <http://papasys.com> (register to gain access to frequencies and tones)
- ARES Operations: <http://www.arrllax.org/index.php?page=operations> (ARES LAX on the DARN System)

## ITU Phonetic Alphabet

<b>A</b> --Alfa	<b>H</b> --Hotel	<b>O</b> --Oscar	<b>V</b> --Victor
<b>B</b> --Bravo	<b>I</b> --India	<b>P</b> --Papa	<b>W</b> --Whiskey
<b>C</b> --Charlie	<b>J</b> --Juliett	<b>Q</b> --Quebec	<b>X</b> --X-ray
<b>D</b> --Delta	<b>K</b> --Kilo	<b>R</b> --Romeo	<b>Y</b> --Yankee
<b>E</b> --Echo	<b>L</b> --Lima	<b>S</b> --Sierra	<b>Z</b> --Zulu
<b>F</b> --Foxtrot	<b>M</b> --Mike	<b>T</b> --Tango	
<b>G</b> --Golf	<b>N</b> --November	<b>U</b> --Uniform	

### Why doesn't anyone reply to my calls?

Here are the most frequent reasons for no one replying to your calls, when calling through a repeater. These apply when you can hear people talking, but no one replies to your calls. If you can't hear anyone talking, it just could be that no one is talking. Be patient - most activity occurs during commuting hours. But on Wednesday night, at 7pm, there *\*will\** be activity on all PAPA Repeaters!

If you call net control, or reply when someone gives their call sign, and you get no reply, it could be one of the following reasons:

1. You have the wrong **offset**, or **no offset**. The frequency on the display should change when you transmit. The amount it changes should be the offset for the repeater. All the PAPA repeaters have a -5 MHz offset, so, for example, when transmitting through PAPA 1, the display should change from 446.580 MHz to 441.580. If you do not see a shift, then either you are set for simplex operation (no offset), or the offset isn't set to 5.00 MHz. Or, you might have the offset set to +, in which case the display would be 5MHz higher (the wrong setting for a PAPA Repeater).
2. You have the **wrong tone** for the repeater, or **no tone**. Almost all repeaters in Southern California require a CTCSS tone. On most radios, there will be a "T" displayed, or the word "Tone" - on the TH-F6A, for example, there's a dark icon with the letter displayed light against the dark background. You have to do two things on most radios: set the 'tone type' and also the 'tone frequency.' On the Chinese radios, you only have to set the T-CTCS to the proper frequency, and you should see "CT" displayed when you transmit - you don't have to set the tone type on the Chinese radios.
3. You might just be **out of range** of the repeater. Wait until no one is talking, and then press the PTT, wait a second or two, and then say your call sign. When you release the PTT, you should hear nothing, and then a short beep, or two beeps. These are 'courtesy tones' that tell the next person that he's waited long enough for a breaking station and may now transmit. It's good practice to wait a second after the beep, just in case someone is slow breaking in. If you hear nothing when you release the PTT switch, revisit #1 and #2 above. Try going outside, or standing on higher ground or take a walk to a high point in your neighborhood.
4. You might have been **too late, or too early** with your transmission. Either way, the other stations won't hear you. If you transmit too early, the other station will still be transmitting and might 'cover' your signal - the strongest signal wins. If you transmit too late, the next station might have already started talking. There's brief moment when you can insert your call sign and expect to be heard - it's when someone turns control over to another station, but *\*before\** the courtesy tone. Do *\*not\** wait a second before transmitting when you're trying to break - the repeater is already transmitting and the other person's receiver is receiving, so the advice about pressing PTT and waiting does not apply to breaking in.
5. You might not be talking clearly, or slowly enough, for someone to understand your call sign. Say your call sign a little slower than normal talking speed, and repeat your call sign using ITU Phonetics.
6. If you've tried 1 through 5, and still no one is replying, try begging for a reply - that sometimes works - say that you're a new ham and would really like someone to be your first contact. That'll usually get someone off their chair to cross the room and pick up the radio.