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# Code Red Dual PTT Overview



The concept of a Dual PTT is simple: you have two separate radio channels you want to monitor simultaneously while wearing a single headset and communicate using a single microphone. Easy to understand, right? Well, the implementation of that concept can be confusing to the novice and the actual use with the radios currently on the market can get complex, even to the advanced user. We will try to break it down for you in the tech bulletin and explain the nuances of usage.

## DUAL CHANNEL BASICS

Why would you want to have the ability to monitor two separate channels? The most common usage is on a tactical team where someone at supervisory level may need to support 2 or more teams in the field working in a coordinated fashion. Some examples might be a large-scale response to an emergency spread over a large geographic area or, in the military, the ability to coordinate an aerial strike with ground troops in the same general vicinity. An example in the corporate or academic security worlds might be the supervision of a security force on a large campus. Fundamentally, a single person may need to have instantaneous communication with similar, but separate, teams and control those resources.

The easiest way to do this is to have Team 1 on Channel 1, Team 2 on Channel 2, etc. If your radios do not have Dual Channel Monitoring Mode (more on this later) you will need two separate radios to monitor the channels. Let's keep it simple and call them Radio 1 and Radio 2. You could have Radio 1 on your left side, Radio 2 on your right side and keep track of it that way. For many tactical or security operations a team will want to use a single headset or acoustic tube earpiece to keep their communications private.



## PRACTICAL USE

So, you have two radios, each dedicated to a separate team. With our **Dual PTT** you can plug one headset into the PTT unit and connect each of the two down leads into the individual radios. The gray PTT button breaks in the conversation on the radio connected to the gray connector down lead, black button to black connector. The tricky part is knowing which team is talking to you and which team you want to communicate with. Simple audio cues like “Team 1 here” will help identify where the chatter is coming from. After that it is up to you to know which button breaks into which “team”. Practice and setting up standards for communication will greatly simplify the implementation.



Now we are going to take it to the next level. Some radios, like the **Baofeng UV-5R**, and most of the Btech offering, have what is called **Dual Channel Monitoring Mode**. It may be referred to by other names, but basically it gives the user the ability to simultaneously monitor 2 channels. This, in effect, is similar to having a dual PTT: it allows you to hear and reply to 2 channels simultaneously through one radio and headset. In this scenario you will have 1 PTT button, either on the radio or on your headset. There will be an **A/B button** on the radio so you can toggle your PTT priority from A to B channel so you are breaking in on the appropriate channel. This is hard to keep track of so make sure you know how your radio works and what channel you are currently set to. To make this more difficult, some radios will maintain the A/B priority until you physically switch it with the A/B button, but some radios will automatically switch to prioritize based on which channel last communicated to you. That can be difficult to keep track of since it is a little out of your control.



Figure 1: Baofeng UV-5R Diagram (Baofeng Tech)

So, at this point we have covered **Dual PTT** usage as well as **Dual Channel Monitoring Mode**. The next step in the evolution is to combine these features. If you have 2 radios capable of Dual Channel Monitoring and you have the codeRED Dual PTT, you can simultaneously monitor and participate on 4 channels. This is just an extrapolation of the usages detailed above, but with twice the complexity. As you can imagine, consistent usage standards and extensive training of your teams will make this mode workable. Sloppy habits will quickly frustrate all the users on these channels so make sure you keep it as simple as possible working with the team members you have.

## **THE BAOFENG UV-82HP**

The **Baofeng UV-82HP** is a relatively new handheld radio. Like most Baofeng (or the Btech company) radios, it has Dual Channel Monitoring Mode. It comes with a dual PTT so you do not have to switch the A/B channel button to communicate on the 2 channels. It can also use a headset with the standard Kenwood 2-Pin connector, our K connector. Btech makes some of their accessories with a dual PTT button so you can easily switch back and forth. Unfortunately, there are not many other headsets or accessories on the market that use this same standard for the secondary PTT. Do not despair. If you already have a headset with the K connector you can still use it on the UV-82HP, you just will not have the secondary PTT button on your headset. You will have to reach down to the radio to break into conversations on the B channel, but this is not that much of a detraction. Typically, you will want to participate on one channel primarily while monitoring the second channel. When you need to break into the B channel, it is simple and easy to remember, to reach down and press the secondary PTT on the radio.



## **CONCLUSION**

I am sure this is all “clear as mud” at this point. It can get confusing, and it takes some practice to master using 2 or more channels simultaneously. If you need it, it is invaluable so take your time, read this tech bulletin a couple of times and refer to your radio manual, and practice, practice, practice.

*GOOD LUCK!*

**codeRed Tech Support**